European Commission

Copernicus User Uptake

Engaging with public authorities,
the private sector and civil society

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Engaging with public authorities, the private sector and civil society

ABSTRACT

The objective of this report is to provide the building blocks of an effective user engagement strategy for the Copernicus programme, in light of its gradual entry into the operational phase. The Copernicus programme is expected to provide important strategic, social and economic benefits to the European Union. Therefore it is paramount to deploy an effective strategy for stimulating the uptake of Copernicus data, services and information.

The report provides a comprehensive user uptake initiative inventory, describing and assessing 450 user uptake activities across Europe according to standard evaluation framework. The inventory is summarised per Member State or participating country to provide a quick insight into the user uptake initiative maturity level.

Drawing from the synthesis at Member State level, the study team identified key findings which are consecutively addressed by key recommendations and a toolbox of concrete actions. These actions are detailed together with their expected benefits, schedule and cost.

An overarching recommendation of the report is to build the extended Copernicus User Uptake Network, consisting of traditional partners such as existing thematic or geographic networks and industry, as well as new entities such as the Copernicus Contact Points and the Copernicus Academy.

Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs
Space Data for Societal Challenges and Growth

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EXECUTIVE SUMMARY

The Copernicus programme is expected to provide **important strategic, social and economic benefits to the European Union**. In order to ensure that the programme delivers its benefits according to the set expectations, it is essential to deploy an **effective user engagement strategy for stimulating the uptake** of Copernicus data, services and information.

Many user uptake initiatives have been undertaken over the past years or are currently under development, many of which supported by the European Commission. Past experience has proven, however, that there is a clear need of a **systemic and integrated framework** to ensure **continuity and sustainability of these initiatives**. Furthermore, the **diversity of the (potential) user communities in public and private sectors** and the **dispersion of users at different geographic levels within public authorities**, cause user uptake initiatives to be complex to manage.

The report at hand identifies and proposes the development of key activities to enable, promote and encourage the Copernicus user uptake amongst a wide range of user communities, within the frame of a defined **comprehensive and integrated user engagement strategy** which drives a coherent implementation roadmap with priorities and action plans identified.

User Uptake Initiative Type	Examples
Start-up initiatives	▪ ESA BICs
Events	▪ Intergeo
Promotional activities	▪ Copernicus website
Networks	▪ EARSC
User feedback, training & education	▪ National User Fora
Funding instruments	▪ Regional R&D programmes Bavaria
Data access	▪ EO Innovation Platform Testbed Poland
Contact points	▪ Nationale Ansprechpartner in Germany

Table 1: User Uptake Initiative Types

The starting point of the strategy definition consists of a **user uptake initiative inventory**, which is the result of comprehensive mapping exercise in EU-28 and the participating countries to the Copernicus programme (Iceland, Norway and Switzerland). The inventory describes in a coherent and categorised manner **450 user uptake activities** (see used segmentation of initiatives in Table 1), and is

complemented with an assessment of the initiatives according to a defined **evaluation framework**. In order to provide meaningful insights for the formulation of the engagement strategy, the evaluation identified best practices in existing structures and tools, as well as areas of improvement. The individual initiative mapping cards can be found in the annex of this report, providing deeper analysis of each initiative.

The outcome of the user uptake initiative inventory is **summarised in two-pagers per Member State** (or participating country), and provides a quick insight into the user uptake initiative maturity of that country; it does not, however, depict the actual state of user uptake itself. The **'maturity level'** of the user uptake activities is synthesised in a spider diagram per country. The European average of the user uptake initiatives at national level shows a relative strength in Networks and User Feedback, Training & Education initiatives whereas Data Access is weaker. Nevertheless, the country-specific results vary widely among Member States.

Figure 1: European average of maturity of Copernicus user uptake initiatives at national and regional level

Drawing from the synthesis at Member State level, the study team has identified seventeen key findings which are directly **addressed by key recommendations and a toolbox of concrete actions**. The prioritised actions are detailed together with their expected benefits, schedule and rough order of magnitude (ROM) cost. In addition, in order to allow monitoring of the action effectiveness during implementation, KPIs are proposed to measure the future action impacts.

The recommendations are categorised by user uptake initiative maturity level, ranging from raising awareness for the Copernicus programme, to informing and educating Copernicus users, up to engaging Copernicus users. Data access, as a prerequisite for the successful user uptake of Copernicus data and information is discussed separately.

The first recommendation relates to the setting-up of an overarching architecture that addresses the need for a broad, coordinated and sustainable user uptake initiatives landscape. To build an extended Copernicus User Uptake Network, it is paramount to establish a **Copernicus User Uptake Support Office**, which would coordinate and support the development and the implementation of the **Copernicus User Uptake Core Tools**, a toolbox aiming to stimulate user uptake.

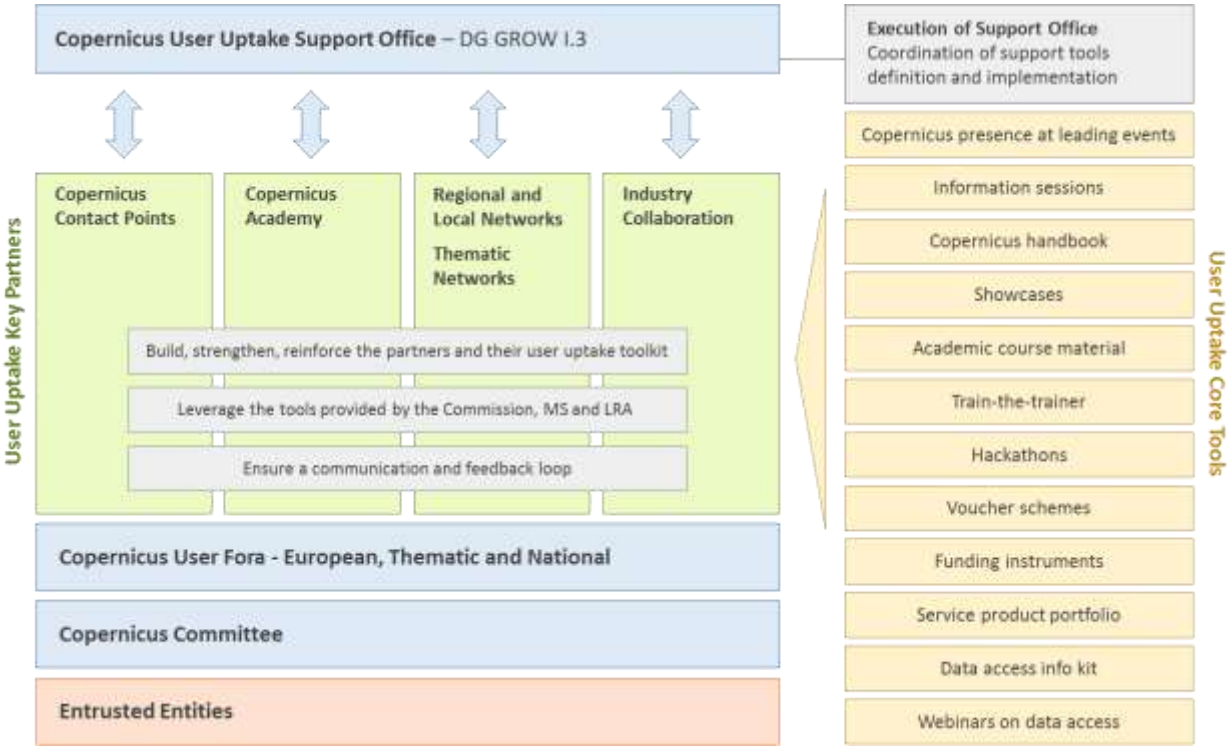


Figure 2: Copernicus User Uptake Network Architecture

The User Uptake Support Office liaises and develops partnerships with the various **User Uptake Key Partners**, most notably the Copernicus Contact Points, the Copernicus Academy, networks and industry. The support office maintains an action plan at European level and supports the development of national action plans for user uptake initiatives, in close coordination with User Forum delegates and the Copernicus Contact Points.

The **Copernicus Contact Points** are designated and mandated contact persons from which (potential) Copernicus users can request both non-technical and technical

information, and which organise national or regional events or workshops. The creation of a funding instrument to stimulate the creation of Contact Points or to fund additional activities of existing ones is highly recommended. In countries where a national solution is not emerging, the support office can take over, complemented with a helpdesk at European level.

The **Copernicus Academy** coordinates, supports and implements curricula in the academic world to enlarge the pool of Copernicus-savvy graduates. Furthermore, the Copernicus Academy develops and maintains online trainings for the private sector, as well as onsite training for public administrations.

Lastly national, regional and local **networks** and those ones at thematic level, as well as **industry players** are important actors to partner with, foremost to act as a multiplier lever for the user uptake initiatives and to increase its impact. The National User Fora should be reinforced as a replication of the existing User Forum at European level, but it is advisable to also (re)create thematic User Fora to stimulate knowledge exchange and sharing of best practices.

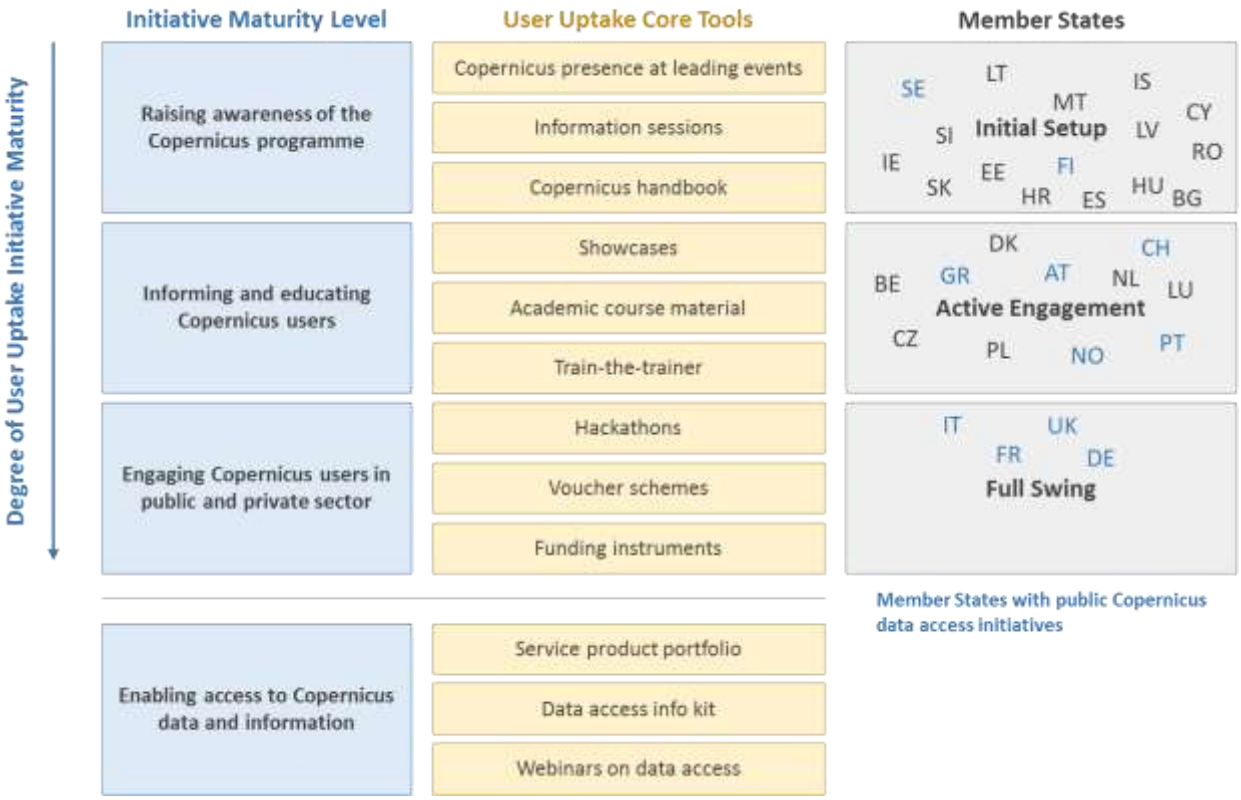


Figure 3: User Uptake Core Tools by Degree of User Uptake Level

In order to further raise awareness for the Copernicus programme the following set of recommendations and associated actions are formulated. The **presence of Copernicus**

in the greatest possible number of relevant conferences and events has to be ensured, by identifying those conferences that are relevant, by designing and building a modular Copernicus exhibition kit, by deploying a User Corner where existing users demonstrate/ show case their processes, by an increased Copernicus topic presence in the speaker programme, and by organising piggy-back events.

The awareness of Copernicus but especially **its technical and economic benefits should be raised within public administrations** by targeting the decision makers within civil servant staff pools. On-site presentations to the current staff, as well to the future generation of civil servants at specific universities and educational facilities will create the complementary buy-in from the hierarchy.

Awareness raising by national and regional 'activists' could be **leveraged by strengthening the toolkit at their disposal**. The Copernicus Handbook or thematic Copernicus Brochures are proposed actions that could serve this objective.

The effectiveness of existing communication channels such as the **Copernicus website and social media accounts could be enhanced**, by adapting website content to the knowledge level of the visitors and with different information streams. The private sector and especially the start-up eco-system, for example, are currently not sufficiently addressed. A centralised web repository of the exiting user uptake resources would make information more accessible.

As a further step in creating user engagement, the objective of the following set of recommendations and actions is to create further interest and desire with potential users to integrate Copernicus data or information in their work processes. The tools for this are foremost centred on informing and educating. **Marketing the actual achievements 'enabled by Copernicus'** is considered vital, focussing marketing on real showcases and on their demonstrated advantages in economic, operational, efficiency or policy terms. In areas where success has not yet been achieved, creating showcases by selecting a pilot project for an end-to-end pilot demonstration implementation could be considered. Additionally, liaising with EU 'power users' that "own" the applicable reporting directives can prove invaluable to generate endorsement from within, and spread the understanding of how Copernicus can support their policies.

The **private sector should be informed about Copernicus and its enabled market segments and trends**. An *Earth Observation Market Report* could serve this purpose, in analogy with the GSA's GNSS Market Report. Developing partnerships with leading

geospatial companies could certainly leverage the outreach to the private user community.

The aforementioned **Copernicus Academy can enlarge the pool of Copernicus-savvy students and researchers**, by developing a set of course material under an open license, by developing a systemic plan to organise Copernicus lectures and by forming the Copernicus Universities Alliance to stimulate knowledge exchange and Copernicus-related research. Online training opportunities to complement the academic courses or to attract the **private sector course takers** would be most effective. **Dedicated and recurring training opportunities for users in the public sector are advisable**, using the train-the-trainer concept to ensure onsite and recurring training. The Entrusted Entities should lead the activity for their domains, supported by the Copernicus Academy for transverse training activities or in cases in which resources are limited.

To strengthen the interest with Local and Regional Authorities, as well as to serve as a multiplier of national and European activities, a **network of Regional Contact Offices (RCOs) could be built or strengthened**. Support to the ones already existing and which have found a sustainable model should be contemplated as well as developing new offices. Amongst others RCOs could assist with identifying grass root successes and widening the impact by transposing those to other Member States or regions.

Turning the interest and desire of a potential user into an action – engaging a user to integrate data or information into their work process - is the last step in the engagement strategy. A particular focus is given to **stimulating the creation of start-ups using Copernicus to develop their services offering**, as a key source of growth for the Copernicus economy. For example, hackathons would be a compelling manner to inform potential entrepreneurs about the possibilities provided by EO data and information, and help to attract ICT entrepreneurs. Similarly, idea competitions would support building an entrepreneurial eco-system for Copernicus; the existing idea competitions could be further expanded by adding a regional aspect or by focussing on a particular theme. A cloud-based platform for integrated services at reduced price or for free could reduce the initial hurdle for start-ups and SMEs in developing their concepts.

A barrier for start-ups and SMEs for the uptake of Copernicus data or information in their solutions, is access to finance. To ease the funding constraint, the development of a better understanding of private investment opportunities, such as venture capital on the one hand, and the national and EU funds on the other hand, is deemed

necessary. In addition, it could be considered to compartmentalise a dedicated part for Copernicus in existing funding instruments, such as the SME instrument. Lastly, one or a series of inducement prizes can further stimulate the use of Copernicus in new processes or an improvement of workflows related to EO data from acquisition to distribution to the end-user.

Similarly, **public administrations may also experience budgetary hurdles in their implementation of Copernicus data or information into their work processes**. Instilling a business mentality when assessing whether Copernicus could be useful for a public administration by means of a feasibility study analysing both the technical implementation and the economic advantage, would certainly foster the potential implementation scheme as proposed. A funding instrument for public administrations to implement brand new processes which require a significant development, could be setup in the form of innovation procurement instruments and may allow to establish sustainable supply chains for the public sector.

Lastly, **data access is considered a prerequisite for the successful user uptake of Copernicus data and information**. Apart from potential technical improvements in data access currently being investigated, **more information on the data and information would be useful**, and should be made accessible to beginners, but with enough depth for users with intermediate knowledge. Generally, the focus on data and information access in the promotional material could be increased. An integrated product portfolio for all Copernicus Services, as part of a *Copernicus Handbook* is deemed necessary. Communication material should also address topics such as the Copernicus data policy, the future of Copernicus (sustainability or continuity of data) and the border between Copernicus Services, as funded by the Commission and private initiatives.

Data and information access should be made easier by providing a Data Access Information Kit to potential users at conferences and events, by enabling open data discovery functions on the data portals, by publishing webinars focused on data access, by enabling access to historical data and by improving the data portals from a users' perspective. Furthermore, insight in the data access statistics could help to improve the offer and the navigation on the portals.

These recommendations and associated prioritised actions are described in more depth and details regarding ROM costs, benefits, KPIs and schedule are provided.

Furthermore, the **actions are plotted on a timeline, establishing the necessary base structures and enabling the piloting of some of the more sophisticated actions**.

SYNTHESE

Le programme Copernicus devrait produire **d'importants bénéfices stratégiques, sociaux et économiques pour l'Union européenne**. Pour faire en sorte que ces bénéfices répondent aux objectifs fixés, il est essentiel de déployer une **stratégie efficace d'engagement des utilisateurs afin d'encourager l'utilisation** des données, des services et des informations fournis par Copernicus.

De nombreuses initiatives en faveur de l'adhésion des utilisateurs ont été menées ces dernières années, ou sont en cours de mise en œuvre, et nombre d'entre elles sont soutenues par la Commission européenne. L'expérience démontre cependant l'existence d'un besoin manifeste de mettre en place un **programme systématique et intégré** visant à garantir **la continuité et la pérennité de ces initiatives**. En outre, l'hétérogénéité **des communautés d'utilisateurs (potentiels) qui appartiennent aux secteurs public et privé** ainsi que la **diversité des communautés d'utilisateurs situés à différents niveaux géographiques au sein des pouvoirs publics** accentuent la complexité de la gestion des initiatives visant à promouvoir l'adhésion des utilisateurs.

Le présent rapport recense les initiatives passées et en cours et propose la mise en place d'activités clés visant à faciliter, promouvoir et encourager l'utilisation des données et des informations générées par Copernicus par un large éventail de communautés d'utilisateurs, dans le cadre d'une **stratégie globale et intégrée d'engagement des utilisateurs** bien définie, qui serve de fondement à une feuille de route cohérente, établissant des priorités claires et des plans d'action opérationnels.

Type d'initiative en faveur de l'adhésion des utilisateurs	Exemples
Initiatives en faveur des entreprises naissantes	▪ ESA Business Incubation Centres (BIC)
Événements	▪ Intergeo
Activités promotionnelles	▪ Site web de Copernicus
Réseaux	▪ EARSC
Retour d'expérience, formation et éducation des utilisateurs	▪ Forums nationaux d'utilisateurs
Instruments de financement	▪ Programmes régionaux de R&D en Bavière
Accès aux données	▪ EO Innovation Platform Testbed en Pologne
Points de contact	▪ Nationale Ansprechpartner en Allemagne

Tableau 2: Types d'initiatives en faveur de l'adhésion des utilisateurs

Le point de départ de la définition de la stratégie consiste à dresser **un inventaire des initiatives existantes en faveur de l'adhésion des utilisateurs**, à partir des résultats d'un exercice de recensement détaillé portant sur les 28 pays de l'UE et sur les pays

participants au programme Copernicus (Islande, Norvège et Suisse). L'inventaire décrit de manière cohérente et répertorie par catégories **450 activités en faveur de l'adhésion des utilisateurs** (voir la segmentation des initiatives dans le Tableau 2). Il est complété par une évaluation des initiatives selon un **cadre méthodologique** bien défini. Afin de fournir un éclairage utile qui alimente la formulation de la stratégie d'engagement, l'évaluation a recensé les bonnes pratiques mises en œuvre dans les structures et outils existants, ainsi que les domaines dans lesquels des améliorations sont souhaitables. Le descriptif correspondant à chaque initiative figure en annexe au présent rapport et fournit une analyse plus approfondie de chaque initiative.

Le résultat de l'inventaire des initiatives en faveur de l'adhésion des utilisateurs fait l'objet d'un **résumé en deux pages pour chaque État membre** (ou pays participant) et fournit un aperçu de la maturité des initiatives pour le pays considéré ; toutefois, il ne fournit pas une mesure quantitative du niveau d'adhésion des utilisateurs. Le **'niveau de maturité'** des activités en faveur de l'adhésion des utilisateurs est résumé dans un schéma en toile d'araignée pour chaque pays. La moyenne européenne des initiatives en faveur de l'adhésion des utilisateurs au plan national révèle une situation relativement satisfaisante en ce qui concerne les réseaux et le retour d'expérience de la part des utilisateurs, ainsi que dans le domaine de la formation et des activités éducatives, tandis que l'accès aux données constitue encore un point plus faible. Néanmoins, les résultats par pays révèlent de grandes disparités d'un État membre à l'autre.

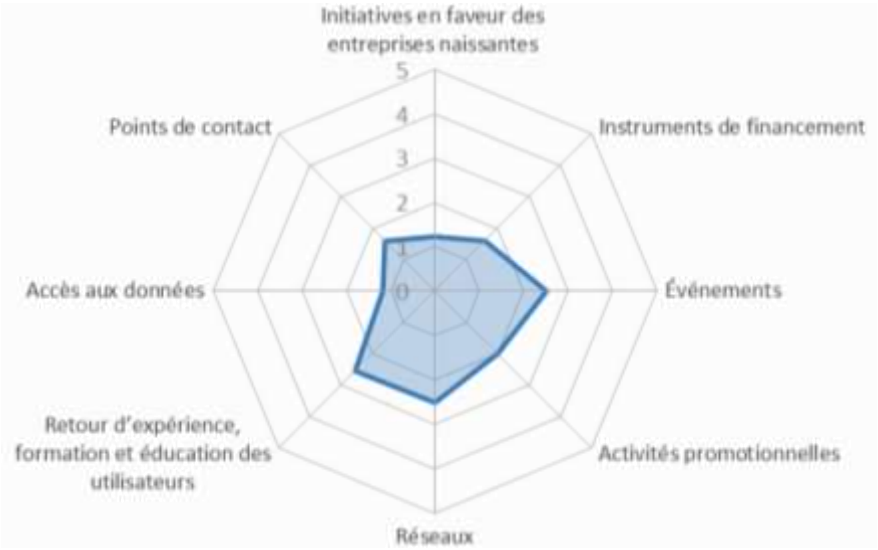


Figure 4: Moyenne européenne de la maturité des initiatives en faveur de l'adhésion des utilisateurs de Copernicus au plan national et régional

L'équipe ayant mené l'étude s'est fondée sur les synthèses par État membre et a produit dix-sept conclusions principales qui sont directement **déclinées en recommandations clés et en une boîte à outils composée d'actions concrètes**. Les actions prioritaires sont exposées de manière détaillée, leurs bénéfices escomptés présentés, ainsi qu'un calendrier et un ordre de grandeur approximatif des coûts associés. En outre, afin de permettre un suivi de l'efficacité des actions au cours de leur mise en œuvre, des indicateurs clés de performance (ICP) sont proposés afin de mesurer les résultats des actions dans l'avenir.

Les recommandations sont réparties en fonction du niveau de maturité des initiatives en faveur de l'adhésion des utilisateurs, selon qu'elles sensibilisent au programme Copernicus, qu'elles informent ou forment les utilisateurs de Copernicus, ou encore qu'elles stimulent l'engagement des utilisateurs de Copernicus. L'accès aux données fait l'objet d'une analyse distincte, dès lors qu'il constitue une condition préalable au développement de l'utilisation des données et des informations de Copernicus.

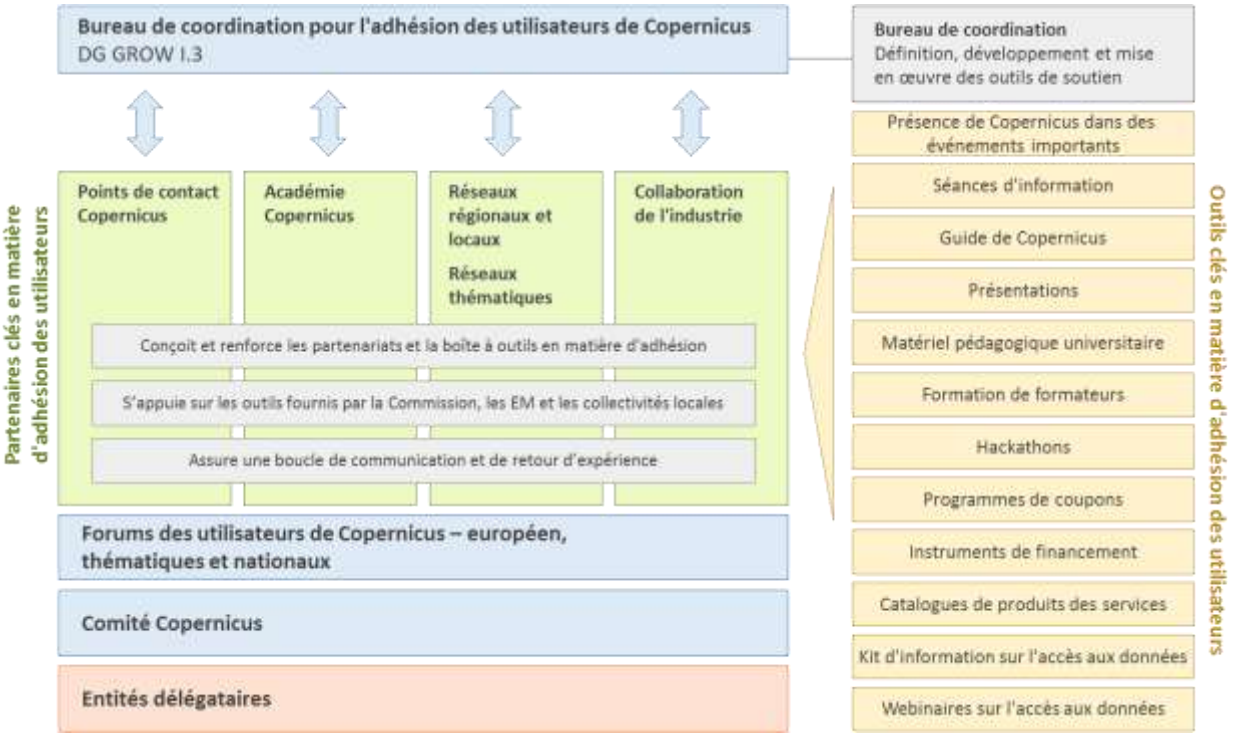


Figure 5: Architecture du réseau en matière d'adhésion des utilisateurs de Copernicus

La première recommandation porte sur l'établissement d'une architecture générale qui réponde au besoin d'un large éventail d'initiatives coordonnées et pérennes en faveur de l'adhésion des utilisateurs. Afin de tisser un réseau étendu en matière d'adhésion des utilisateurs de Copernicus, il est primordial de créer un **bureau de coordination pour l'adhésion des utilisateurs de Copernicus**, qui coordonnerait et

soutiendrait la conception et la mise en œuvre des **outils clés en matière d'adhésion des utilisateurs de Copernicus**, une boîte à outils destinée à stimuler l'adhésion des utilisateurs.

Le bureau de coordination pour l'adhésion des utilisateurs sert de liaison et noue des partenariats avec les différents **partenaires clés en matière d'adhésion des utilisateurs**, et principalement avec les points de contact Copernicus nationaux, l'Académie Copernicus, les réseaux et l'industrie. Le bureau de coordination administre un plan d'action au niveau européen et soutient l'élaboration de plans d'action nationaux pour les initiatives en faveur de l'adhésion des utilisateurs, en étroite coordination avec les délégués du forum des utilisateurs et les points de contact Copernicus nationaux.

Les **points de contact Copernicus** sont des personnes désignées et mandatées auprès desquelles les utilisateurs (potentiels) de Copernicus peuvent solliciter des informations aussi bien techniques que non techniques et qui organisent des événements et des ateliers nationaux ou régionaux. La création d'un instrument de financement permettant de favoriser la création de points de contact ou de financer des activités complémentaires de points de contact existants est fortement recommandée. Dans les pays où une solution nationale n'est pas mise en place, le bureau de coordination peut prendre le relais, avec le concours d'un service d'assistance au niveau européen.

L'**Académie Copernicus** coordonne, soutient et met en œuvre des programmes d'étude dans le monde universitaire afin d'élargir le nombre de diplômés familiers avec Copernicus. Par ailleurs, l'Académie Copernicus met au point et administre des formations en ligne à destination du secteur privé, ainsi que des formations sur site pour les administrations publiques.

Enfin, les **réseaux** nationaux, régionaux et locaux, et également les réseaux thématiques, ainsi que les **acteurs de l'industrie** sont des acteurs importants avec lesquels il convient de nouer des partenariats, principalement dans le but d'agir en tant que levier multiplicateur dans le cadre des initiatives en faveur de l'adhésion des utilisateurs, et d'accroître leur efficacité. Les forums nationaux d'utilisateurs devraient être renforcés à l'instar du forum des utilisateurs existant au niveau européen, mais il est recommandé de (re)créer également des forums d'utilisateurs thématiques afin d'encourager l'échange de connaissances et le partage des bonnes pratiques.

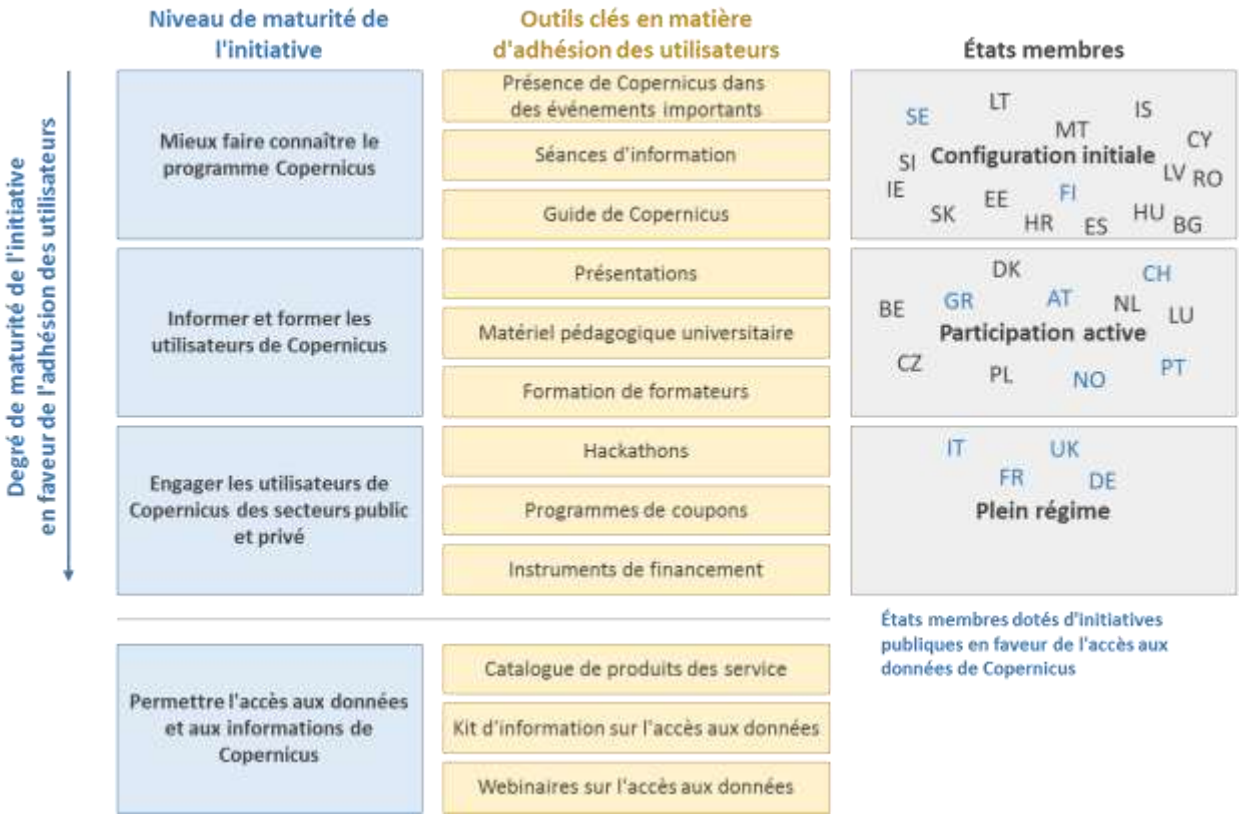


Figure 6: Outils essentiels en matière d'adhésion des utilisateurs, par degré de niveau d'adhésion des utilisateurs

Les recommandations suivantes sont formulées afin de mieux promouvoir le programme Copernicus, et elles sont accompagnées des actions correspondantes. La **présence de Copernicus dans le plus grand nombre possible de conférences et d'événements pertinents doit être garantie**, en recensant les conférences pertinentes, en concevant et construisant un kit d'exposition modulaire relatif à Copernicus, en déployant un espace dédié aux utilisateurs à l'endroit où des utilisateurs avertis font la démonstration de leurs méthodes, en favorisant l'intégration de la thématique de Copernicus dans le programme des interventions et en organisant des événements connexes.

Le degré de notoriété de Copernicus, et en particulier celui de **ses bénéfices techniques et économiques, devrait être renforcé au sein des administrations publiques**, en ciblant les décideurs parmi le personnel de la fonction publique. Des présentations au personnel en place, ainsi qu'à la génération future de fonctionnaires dans certaines universités et certains établissements d'enseignement spécialisés, permettraient de surcroît d'obtenir l'assentiment de la hiérarchie.

La sensibilisation par des ‘militants’ nationaux et régionaux pourrait être **améliorée en renforçant la boîte à outils dont ils disposent**. Un guide de Copernicus ou des brochures thématiques relatives aux applications rendues possibles par Copernicus figurent parmi les actions proposées qui pourraient servir cet objectif.

L'efficacité des canaux de communication existants, tels que le **site web de Copernicus et les comptes sur les réseaux sociaux, pourrait être améliorée** en adaptant le contenu du site web au niveau de connaissance des visiteurs et en le dotant de différents niveaux d'information. Le secteur privé, et en particulier l'écosystème des entreprises naissantes, par exemple, n'est actuellement pas suffisamment ciblé. Un répertoire centralisé en ligne des ressources existantes en matière d'adhésion des utilisateurs rendrait les informations plus accessibles.

À titre de mesure complémentaire visant à engager davantage les utilisateurs, l'objectif de l'ensemble de recommandations et d'actions ci-dessous consiste à susciter plus d'intérêt et d’adhésion chez les utilisateurs potentiels pour les inciter à intégrer des données et des informations de Copernicus dans leurs processus de travail. Les outils pour ce faire sont essentiellement axés sur l'information et l'éducation. **Mettre en exergue les véritables résultats « rendus possibles par Copernicus »** est considéré comme vital, en concentrant l'approche marketing sur des présentations d’applications réelles et sur leurs bénéfices avérés sur le plan économique, opérationnel et en termes d'efficacité et de politique. Dans les domaines où le succès n'est pas encore manifeste, la création de vitrines en sélectionnant des projets pilote pour réaliser des démonstrations pilote de bout en bout pourrait être envisagée. Par ailleurs, une collaboration avec des ‘utilisateurs chevronnés’ au sein des organes de l’Union Européenne qui ont la responsabilité des directives générant des obligations de déclaration peut se révéler précieuse afin de stimuler l'adhésion de l'intérieur et de faire comprendre de manière plus large la manière dont Copernicus peut soutenir la mise en œuvre des politiques de l’Union.

Le **secteur privé devrait être mieux informé au sujet du programme Copernicus, des segments de marché qui en bénéficient et des tendances émergentes**. La publication d’un *rapport sur le marché de l'observation de la Terre* pourrait servir cet objectif, à l’instar du rapport sur le marché publié par l'Agence du GNSS européen. Nouer des partenariats avec les principales entreprises du secteur géo-spatial pourrait assurément améliorer la notoriété de Copernicus auprès de la communauté des utilisateurs privés.

L'**Académie Copernicus susmentionnée pourrait contribuer à élargir le nombre d'étudiants et de chercheurs informés des potentialités offertes par Copernicus**, en rédigeant un ensemble de matériels pédagogiques sous licence ouverte, en élaborant un plan systématique afin d'organiser des conférences sur Copernicus et en formant une *Alliance des universités Copernicus* afin de stimuler l'échange de connaissances et la recherche liée à Copernicus. Des possibilités de formation en ligne afin de compléter les cours universitaires ou d'attirer des **participants du secteur privé** pourraient s'avérer très efficaces. **Des possibilités de formations spécialisées et récurrentes à destination des utilisateurs du secteur public sont recommandées**, en s'appuyant sur le concept de 'formation de formateurs' en vue de garantir une formation sur site et récurrente. Les 'entités délégataires' devraient mener les activités pour leurs domaines thématiques respectifs, avec l'aide de l'Académie Copernicus pour les activités de formation transversales ou en cas de ressources limitées.

Pour renforcer l'intérêt des autorités locales et régionales, ainsi que pour servir de multiplicateur des activités nationales et européennes, un **réseau de bureaux de contact régionaux pourrait être mis en place ou renforcé**. Il conviendrait d'envisager un soutien aux bureaux existants qui ont trouvé un modèle durable, mais aussi d'en créer de nouveaux. Les bureaux de contact régionaux pourraient notamment aider à recenser les succès enregistrés sur le terrain et à augmenter les retombées en les transposant à d'autres États membres ou régions.

Le dernier volet de la stratégie d'engagement consiste à transformer l'intérêt et le désir d'un utilisateur potentiel en une action, c'est-à-dire faire en sorte que l'utilisateur intègre des données et des informations dans son processus de travail. Il convient tout particulièrement de **stimuler la création d'entreprises utilisant Copernicus afin de développer leur offre de services**, car il s'agit d'une source essentielle de croissance de l'économie Copernicus. Par exemple, l'organisation de hackathons permettrait d'informer les entrepreneurs potentiels des possibilités offertes par les données et les informations d'observation de la Terre, et contribuerait à attirer des entrepreneurs du domaine des TIC. De même, les concours d'idées aideraient à bâtir un écosystème entrepreneurial pour Copernicus ; les concours d'idées existants pourraient être développés en adjoignant un compartiment régional ou en mettant l'accent sur un thème particulier. Une plate-forme axée sur l'informatique en nuage, permettant de fournir des services intégrés à prix réduit ou gratuits, pourrait réduire les obstacles initiaux auxquels les jeunes entreprises et les PME sont confrontées lors de la mise en œuvre de leurs concepts.

L'accès au financement est un obstacle pour les entreprises naissantes et les PME en ce qui concerne l'inclusion de données ou d'informations de Copernicus dans leur offre. Afin d'assouplir les contraintes liées au financement, favoriser une meilleure compréhension des possibilités relevant de l'investissement privé, telles le capital-risque, d'une part, et de celles résultant de sources de financement nationales ou européennes, d'autre part, peut s'avérer utile. En outre, il pourrait être envisagé de réserver un compartiment dédié à Copernicus dans les instruments de financement existants, tels que l'instrument en faveur des PME. Enfin, un ou plusieurs prix d'encouragement pourraient contribuer à stimuler l'utilisation de Copernicus dans de nouveaux processus ou à améliorer opérations utilisant des données d'observation de la Terre, de l'acquisition de celles-ci à leur diffusion à l'utilisateur final.

De même, **les administrations publiques sont elles aussi susceptibles d'être confrontées à des obstacles budgétaires lors de l'intégration dans leur processus de travail de données ou d'informations provenant de Copernicus**. L'instauration d'une approche commerciale lors de l'évaluation de l'utilité de Copernicus pour une administration publique, au moyen d'une étude de faisabilité analysant à la fois la mise en œuvre technique et les bénéfices économiques, favoriserait certainement les opportunités de mise en œuvre. Un instrument de financement permettant aux administrations publiques de mettre en œuvre des processus novateurs qui nécessitent des développements conséquents pourrait être mis en place sous la forme d'instruments pour la passation de marchés publics axés sur l'innovation et également permettre de créer des chaînes d'approvisionnement pérennes pour le secteur public.

Enfin, **l'accès aux données constitue une condition préalable au succès de l'adoption des données et des informations de Copernicus par les utilisateurs**. Hormis les développements techniques actuellement à l'étude en matière d'accès aux données, **il serait utile de développer l'information disponible sur les données et les informations Copernicus** et de la mettre à la disposition des « débutants », en prévoyant toutefois un niveau de profondeur suffisant pour intéresser et satisfaire les utilisateurs intermédiaires. De manière générale, il serait utile de centrer davantage les supports promotionnels sur l'accès aux données et aux informations. Un catalogue intégré des produits générés par les services de Copernicus, dans le cadre d'un *Guide de Copernicus*, est jugé nécessaire. Le matériel de communication devrait également aborder des sujets tels que la politique de données de Copernicus, l'avenir de Copernicus (pérennité et continuité des données) ou mieux présenter la délimitation

entre les services fournis par Copernicus, et financés par la Commission, et les initiatives privées du secteur aval.

Il convient de simplifier l'accès aux données et aux informations en mettant à disposition des utilisateurs potentiels un kit d'information sur l'accès aux données destiné à être distribué lors de conférences ou d'événements, en intégrant des fonctions de *découverte de données* ouvertes sur les portails d'accès aux données, en publiant des webinaires axés sur l'accès aux données, en facilitant l'accès aux données d'archives et en améliorant l'interface utilisateur des portails de données. Par ailleurs, une analyse des statistiques en matière d'accès aux données pourrait aider à améliorer l'offre et la navigation sur les portails.

Ces recommandations et les actions prioritaires qui en découlent sont décrites de manière plus détaillée et des informations sur les coûts estimatifs, les bénéfices, les critères d'évaluation de l'efficacité des actions proposées, ainsi que le calendrier envisageable sont par ailleurs fournies. Enfin, **les actions sont placées dans une perspective chronologique, afin de mettre en place les structures de base nécessaires et de permettre le pilotage de certaines des actions les plus complexes**.

ABBREVIATIONS AND ACRONYMS

Acronym	Description
A^2S	French Programme Alsace Aval Sentinelle
AAI	Austrian Aeronautics Industries Group
ADN	Air Quality Data Network
AFIGEO	French Association for Geographic Information
AG	Corporation Limited by Share Ownership (German)
AGEO	Austrian Umbrella Organization for Geographic Information
AGIT	Applied Geoinformatics (Austrian event)
AIAD	Italian Industries Federation for Aerospace, Defence and Security
AIPAS	Italian Business Association for Space Activities
Airbus DS	Airbus Defence and Space
ALICE	Adaptive Layers for Information and Collaboration in Emergency system
ALR	Austrian Space Agency
AMRA	Italian Centre of competence in the field of Analysis and Monitoring of Environmental Risk
AP	Ambassador Platform
ARPAB	Italian Regional Agency for Environmental Protection
ASAS	Italian Association for the services, applications and ICT technology for Space
ASI	Italian Space Agency
ASITA	Italian Federation of Scientific Associations for Territorial and Environmental Information
AZO	Anwendungszentrum Oberpfaffenhofen
BELSPO	Belgian Science Policy Office
BEOP	Belgian Earth Observation Platform
BESSG	Baltic Earth Science Steering Group
BEYOND	Building a Centre of Excellence for Earth Observation based monitoring of Natural Disasters
BIC	Business Incubation Centre
BIG	Belgian Interferometric Group
BMVI	German Federal Ministry for Transportation and digital Infrastructure
BMVIT	Austrian Federal Ministry for Transportation, Innovations and Technology
CBRN	Chemical, Biological, Radiological and Nuclear
CCMC	Euro-Mediterranean Centre for Climate Change
CDTI	Spanish Centre for Development Industrial technology
CE Space-SI	Slovenian Centre of Excellence for Space Sciences and Technologies “Space-SI”
CEA	French Atomic Energy Commission
CENIA	Czech Environmental Information Agency
CEREMA	Centre of Studies and Expertise on Risks, Environment, Mobility and Development
CINES	National Computing Center for Higher Education
CIRAD	Organisation for international cooperation in agricultural research for development
CLAS	Basilicata Cluster of Aerospace
CMEMS	Copernicus Marine Environment Monitoring Service
CNES	French National Centre for Space Studies
CNR	Italian National Research Council
CNR-IBAM	Italian National Research Council - Institute for Archaeologists and Monumental Heritage

CNR-IMAA	Italian National Research Council - Institute of Methodologies for Environmental Analysis.
CNRS	National Centre for Scientific Research
CollGS	Collaborative Ground Segment
CoR	Committee of Regions
CORDIS	Community Research and Development Information Service
CORE-CLIMAX	COordinating Earth observation data validation for RE-analysis for CLIMAte ServiceS
CORINE	Coordination of information on the environment
COSPACE	State-Industry Concertation Committee on Space
CP	Contact Point
CPER	Plan contract State-Region
CPMR	Conference of Peripheral and Maritime Regions
CRP	Centre of Public Research
CSCDA	Copernicus Space Component Data Access
CSL	Centre Spatial de Liège
CTNA	Italian Cluster of Aerospace Technology
CUF	Copernicus User Forum
CUS	Urban Community of Strasbourg
DCE	Danish Centre for Environment and Energy
DDGI	German Association for Geoinformation
DFD	German Remote Sensing Data Centre
DFG	German Research Foundation
DG GROW	Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs
DG MOVE	Directorate-General for Mobility and Transport
DKN	German Committee for Sustainability - Research in Future Earth
DLR	German Aerospace Centre
DLR ZKI	German Aerospace Centre – Centre for Satellite Based Crisis Information
DMV	German Marketing Association
DPC	Italian Civil Protection Department
DRCT	Portugal Regional Directorate for Science and Technology
DTA	Apulian Aerospace District
EAA	Environment Agency Austria
EARSeL	European Association of Remote Sensing Laboratories
EARSC	European Association of Remote Sensing Companies
EBM	Ecosystem-Based Management
EE	Enterprise Estonia
EEA	European Environment Agency
EC	European Commission
ECGS	European Centre for Geodynamics and Seismology
ECSAT	European Centre for Space Applications & Telecommunications
ECSL	European Centre for Space Law
EGIDA	Coordinating Earth and Environmental Cross-Disciplinary Projects and Promote GEOSS
EGNOS	European Geostationary Navigation Overlay Service
EGTC	European Grouping of Territorial Cooperation
EGU	European Geosciences Union
EIONET	European Environment Information and Observation Network
ELMF	European LiDAR Forum
EMMIA	European Mobile and Mobility Industries Alliance

EMS	Emergency Management Services
EMSA	European Maritime Safety Agency
ENGEES	National School for Water and Environmental Engineering
ENSG	French National School of Geographic Sciences
EO	Earth Observation
EO3S	Earth Observation Science & Society Symposium
EOC	Earth Observation Centre
EODC	Earth Observation Data Centre for Water Resources Monitoring
EOST	French School and Observatory for Earth Sciences
EPA	Environmental Protection Agency
ERDF	European Regional Development Fund
ERRIN	European Regions Research and Innovation Network
ESA	European Space Agency
ESERO	European Space Education Resource Office
ESIP	Earth Science Information Partners
ESTEC	European Space Research and Technology Centre
EstSO	Estonian Space Office
EU	European Union
EU-28	The group of European Union Member States, currently 28
EUMETNET	Network of 31 European National Meteorological Services
EUMETSAT	European Organisation for the Exploitation of Meteorological Satellites
EUROGI	European Umbrella Organisation for Geographic Information
e.V.	Registered association (German)
FFG	Austrian Research Promotion Agency
FMI	Finnish Meteorological Institute
FORMITMI	FORest management strategies to enhance the MITigation potential of European forests
FP7	Seventh Framework Programme for Research and Technological Development
FUI	Interministerial Unique Fund
FWC	Framework Contract
GBN	GeoBusinessNederland
GDI	Graphics Design Interface
GDP	Gross Domestic Product
GIFT	Geosciences Information For Teachers workshop
GEO	Group on Earth Observation
GeoSPS	Geo-enabled smart processes and services
GEOSS	Global Earth Observation System of Systems
GFZ	German Research Centre for Geosciences
GI	Geographic Information
GI_FORUM	Geoinformatics Forum
GIFAS	French Aerospace Industry Association
GiN	Geoinformatics in Northern Germany
GIN	Geo-Informatie Nederland
GIO	GMES Initial Operations
GIS	Geographical Information System
GIT	Geographical Information Technology
GIW	Commission for Geoinformation Industry
GLaSS	Global Lakes Sentinel Services
GLIC	Global Space Innovation Conference

GmbH	Company with Limited Liability (German)
GMES	Global Monitoring for Environment and Security
GNSS	Global Navigation Satellite System
GOOS	Global Ocean Observing System
GRAAL	FP7 project - GMES for Regions: Awareness and Access Link
GRNET	Greek Research and Technology Network
GSA	European GNSS Agency
GSC	European GNSS Service Centre
GSG	Geological Society of Greece
GSRT	Greek General Secretariat for Research & Technology
H2020	Horizon2020, the biggest EU Research and Innovation (2014-2020)
HAMAC	Hellenic Association of Mobile Application Companies
HASI	Hellenic Association of Space Industry
HCRM	Hellenic Centre for Marine Research
HQ	Headquarters
HR	High Resolution
IAASARS	Greek Institute for Astronomy, Astrophysics, Space Applications and Remote Sensing
IAP	Integrated Application Promotion
IBI	Atlantic-European South West Shelf-Ocean region
ICA	International Cartographic Association
ICOS	Integrated Carbon Observation System
ICOS-INWIRE	ICOS improved sensors, network and interoperability for GMES
ICT	Information and Communications Technology
ICT4S	Information and Communications Technology for Sustainability
ICZM	Integrated Coastal Zone Management
iDiv	German Centre for Integrative Biodiversity Research Halle-Jena-Leipzig
IEEE GRSS	Institute of Electrical and Electronics Engineers - Geoscience & Remote Sensing Society
IEEE AESS	Institute of Electrical and Electronics Engineers - Aerospace and Electronic Systems Society
IEOS	Irish Earth Observation Symposium
IFREMER	French Research Institute for Exploitation of the Sea
IGD	German Institute for applied research in Visual Computing
IGiK	Institute of Geodesy and Cartography
IGN	French National Institute of Geographic and Forest Information
IGS	Innovation Growth Strategy
IIASA	International Institute for Applied Systems Analysis
IMDatE	Integrated Maritime Data Environment
IMF	Remote Sensing Technology Institute
IMGS	Irish Mapping and GIS Solutions
INGV	Italian National Institute of Geophisics and Volcanology
INRA	French National Institute for Agricultural Research
INSEE	French National Institute for Statistics and Economic Studies
IPGP	Institute of Earth Physics of Paris
IPN	Pedro Nunes Institute
IPR	Intellectual Property Rights
IRD	French Research Institute for Development
IRLOGI	Irish Organisation for Geographic Information
IRSTEA	French National Institute of Sciences and Technology for Environment and

	Agriculture
ISIG	Irish Space Industry Group
ISPRA	Italian Superior Institute for protection and research of the environment
ISPRS	International Society for Photogrammetry and Remote Sensing
ISS	Information Session Series
ISZO	Croatian Environmental Information System
JRC	Joint Research Centre
KPI	Key Performance Indicator
LBS	Location-Based Services
LCA	Local Competent Authority
LP	Land Planning
LRA	Local and Regional Authority
LSA	Lithuanian Space Association
MACC	Monitoring Atmospheric Composition and Climate (pre-operational Copernicus Atmosphere Service)
MAGI	Malta Association of Geographic Information
MCS	Marine Core Services
MCST	Malta Council for Science and Technology
MEDDE	French Ministry of Ecology, Sustainable Development and Energy
MENESR	French Ministry of Higher Education and Research
MEPA	Malta Environment and Planning Authority
MESSS SR	Ministry of Education, science, research and sport of the Slovak Republic
MIoS	Malta Institution of Surveyors
MI SR	Ministry of Interior of the Slovak Republic
MITA	Malta Information and Technology Agency
MITA	Lithuanian Agency for Science, Innovation and Technology
MOE SR	Ministry of Environment of the Slovak Republic
MOOC	Massive Online Open Course
MS	Member State
MSP	Marine Spatial Planning
MUAS	Mapping Urban Areas from Space
NAV	Navigation
NEREUS	Network of European Regions Using Space Technologies
NGO	Non-Governmental Organisation
NIBS	Networking and Internationalisation of Basilicata Space
NILU	Norwegian Institute for Air Research
NOA	National Observatory of Athens
NOAA	National Oceanic and Atmospheric Administration
NPoC	National Point of Contact
NRSP	National Remote Sensing Programme
NSC	Norwegian Space Centre
NSO	Netherlands Space Office
NTTI	National Technology Transfer Initiative
NWG	National Working Group
NWO	Netherlands Organisation for Scientific Research
NWP	Numerical Weather Prediction
OBIS	Ocean Biogeographic Information System
OBSERVE	Strengthening and development of Earth Observation activities for the Environment in the Balkan area
ONERA	French national aerospace research centre

OSC	Open Source Community
OeWF / ÖWF	Austrian Space Forum
PADUA	Product Archiving, Distribution and User Access programme
PASODOBLE	Promote Air Quality Services integrating Observations Development Of Basic Localised Information for Europe
PBL	Netherlands Environmental Assessment Agency
PCP	Pre-commercial Procurement
PECS	Plan for European Cooperating States
PEER	Partnership for European Environmental Research
PhD	Doctor of Philosophy
PEPS	French Exploitation Platform for Sentinel Products
PICO	Presenting Interactive COntent
PNF	Permanent Networking Facility
POLSA	Polish Space Agency
R&D	Research and Development
R&I	Research and Innovation
RA	Région Alsace
RCO	Regional Contact Offices
RICS	Malta Royal Institution of Chartered Surveyors
RLS	Swiss Remote Sensing Laboratory
RMCA	Royal Museum of Central Africa
ROM	Rough Order of Magnitude
ROSA	Romanian Space Agency
RPAS	Remotely Piloted Aircraft Systems
S5PVT	Sentinel-5 Precursor Validation Team
SAFER	Services and Applications For Emergency Response
SAR	Synthetic Aperture Radar
SASSCAL	Southern African Science Service Centre for Climate Change and Adaptive Land Management
SATIDA	SAtellite Technologies for Improved Drought-Risk Assessment
SEA	Slovak Environment Agency
SEA	Slovenian Environment Agency
SEN3APP	Processing Lines And Operational Services Combining Sentinel And In-Situ Data For Terrestrial Cryosphere And Boreal Forest Zone
SERTIT	French Regional Service for Image Treatment and Teledetection
SGAC	Space Generation Advisory Council
SGPBF	Swiss Network of Geospatial Imaging Experts
SHMI	Slovak Hydrometoerological Institute
SHOM	Naval Hydrographic and Oceanographic Service
SIG	Special Interests Groups
SME	Small and Medium Enterprises
SNAP	Sentinel Application Platform
SPG	Science Park Graz
SRC	Space Research Centre
SSGP	Space for Smarter Government Programme
ST	Space Technologies
STAR	Space Technology and Advanced Research Programme
STEM	Science, Technology, Engineering and Math
STEREO	Support to the Exploitation and Research in Earth Observation data
SYKE	Finnish Environment Institute

TACR	Technology Agency of the Czech Republic
TBC	To Be Confirmed
TBD	To Be Determined
TEB	Tender Evaluation Board
TEP	Thematic Exploitation Platforms
TNO	Netherlands Organisation for Applied Scientific Research
TUM	Technical University Munich
U2U	User to User
UAR	User Assessment Reports
UCLA	University of California – Los Angeles
UF	User Forum
UFZ	Helmholtz-Centre for Environmental Research
UL	University of Latvia
UNEP/GRID	United Nations Environmental Programme - Global and Regional Integrated Data
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNISTRA	University of Strasbourg
UR	User Requirements
URD	User Requirement Definitions
VDV	Association of German Transport Companies
VHTP	Ventspils High Technology Park
VRI	Flemish Space Industry
VUB	Vrije Universiteit Brussel
WFG BGL	Economic Development Corporation Berchtesgadener Land
WG	Working Group
WSL	Wallonia Space Logistics
WUSTL	Washington University in St. Louis

1. INTRODUCTION

1.1 Context of the study

The Copernicus programme is expected to provide important strategic, social, economic and environmental benefits to European public authorities and the civil society in general. Therefore, it is crucial that it delivers according to the set expectations. In this regard developing **a strategy to effectively stimulate Copernicus user uptake is fundamental** for implementing and monitoring relevant policies in the European Union (EU) and its Member States (MS), stimulating the achievement of a sustainable impact on jobs and growth in the EU by fostering the development of value-added downstream services tailored to the needs of specific users, and of new business models based on space-application technologies. The Commission aims to ultimately achieve the "maximum uptake" of Copernicus products by public authorities in order to maximise societal and environmental benefits, and by industrial sectors (e.g. insurance, agriculture, etc.) as well as by downstream service providers to deliver Copernicus-based services and applications to the end users.

Many user uptake initiatives have been undertaken over the years and/or are under development to date. Some of them carried out by the European Commission (e.g. GIO User Uptake FWC), some by ESA, some by Member States (e.g. annual user conference in Romania or Czech Republic, User information days in France, etc.), some by FP7 projects (e.g. Copernicus4Regions initiative under the GRAAL and DORIS_Net projects, user uptake activities within MyOcean or MACC) and lastly, some by specialised industrial or institutional actors such as EARSC, EURISY, NEREUS, etc.

These activities have **often lacked continuity and/or sustainability** (e.g. Copernicus4Regions initiative paused since the end of the supporting FP7 projects), **coordination** (e.g. no mechanism in place to ensure sharing of best practices), and have suffered from the **absence of a strategic plan** for the uptake of Copernicus data and products which would have enabled better coordination at EU level, cross fertilisation amongst initiatives at Member State or regional level, etc.

The study at hand highlights the further development of activities to enable, promote and encourage the use and uptake of Copernicus data and information amongst a wide range of user communities, making the most of the existing EU-funded

activities and initiatives. It forms the foundation of an integrated strategy to be implemented by the Commission across EU-28 at a later stage.

Users are located at various levels. Only few will be able to use Copernicus raw data, some will want to see data with a certain level of pre-processing, while others will develop value added products or work on the basis of Copernicus products. Users come from different sectors of the economy, they work in the EO industry, as service providers for public institutions or private industry or on the other hand see the management of large datasets as their primary business.

Users can be public or private, end users or intermediate users, users of data (in particular from the Sentinels) or of products/services (e.g. a SME building a localised app on the basis of Copernicus Marine Environment Service). They can be users having already understood that they can benefit from Copernicus data and products, or users not even aware of the existence of an EU's Earth Observation programme. They can be SMEs or large corporations, at Member States' national government level or at local level, they can be involved in R&D or scientific applications, or in need of operational products in near real time (e.g. Civil Protection Agencies). **Copernicus is currently focusing on institutional users through its service portfolio, while the industrial "market" has not been actively tackled yet.**

The user categories above differ in their requirements for user uptake activities as many potential users are still to be made aware of Copernicus availability and benefits. The diversity, heterogeneity and complexity of the Copernicus target user base underpins the need to develop a strategic plan, driving an implementation roadmap with priorities and action plans clearly identified.

1.2 High-level objectives

The ultimate objective of the study is to **provide recommendations for a comprehensive and integrated strategy to reinforce Copernicus user uptake towards public authorities and civil society**. Particularly, the study will propose concrete implementation actions, providing a work plan for the coming years, as well as highlighting the potential qualitative benefits and associated Rough Order of Magnitude (ROM) costs.

In order to achieve this overall objective the following outcomes / study objectives are integral part of the study:

#	Study Objectives
1	Categorised mapping of existing user uptake initiatives across the EU
2	Evaluation of existing initiatives according to a standardised assessment framework (incl. best practices, areas for improvement and gap analysis)
3	Recommendations for a comprehensive and integrated strategy

Table 3: Study Objectives

The overarching objective of this effort is to reinforce user uptake amongst public authorities and civil society with concrete actions.

2. METHODOLOGY & TYPOLOGY

2.1 Overview of the study methodology

In order to achieve a comprehensive mapping of the existing user initiatives and to be able to properly evaluate their effectiveness, an extensive data gathering activity has been performed at the start of the study. The mapping exercise, evaluation and formulation of recommendations underwent validation by internal and external experts, whilst keeping in mind the wider Copernicus context and the user uptake objectives of the European Commission. The outcome of the mapping and evaluation is consolidated and presented according to the concept of 'service level maturity' in the different Member States. Key elements of the study approach and its expected outcomes are illustrated in Figure 7 below.

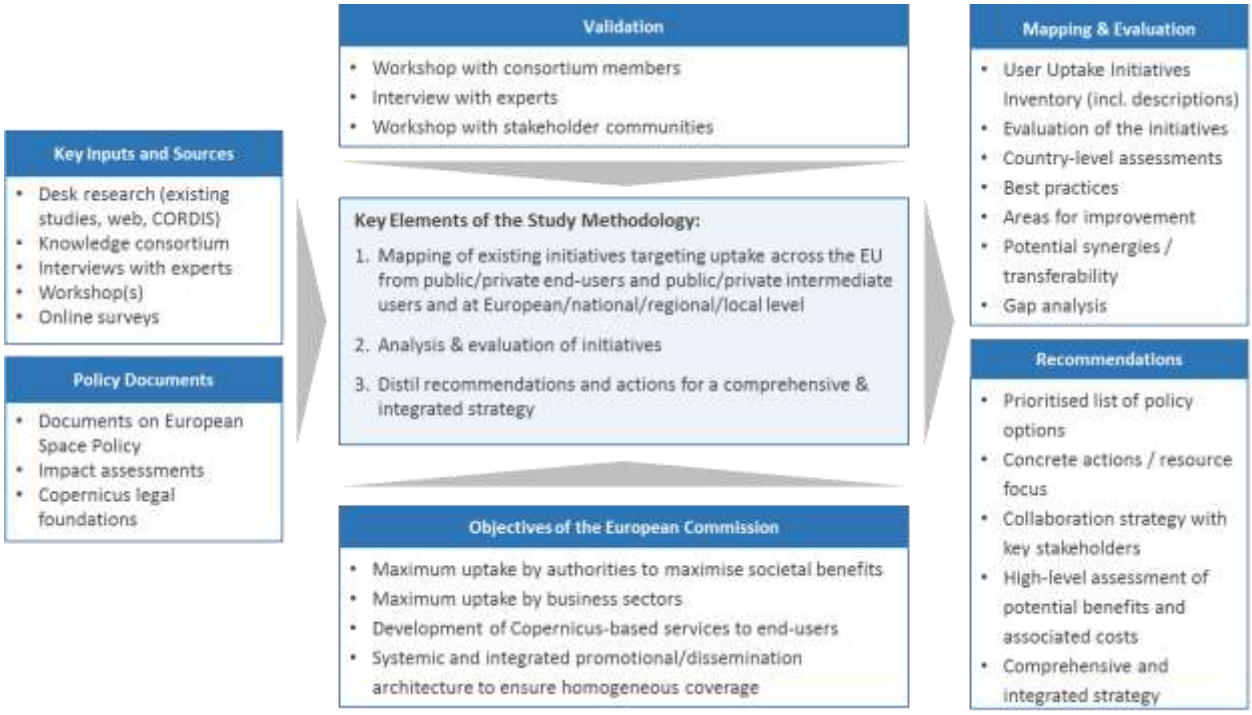


Figure 7: Context and expected outputs

The actions for enhancing and improving existing user uptake initiatives are proposed and framed within a coherent and comprehensive strategy, based on the service level maturity in specific Member States. The expected impact of the proposed recommendations is described qualitatively and Key Performance Indicators (KPIs) are proposed for monitoring purposes. The toolbox of proposed instruments are further detailed with ROM costs and an overall schedule of actions.

Mapping of existing structures and tools

In a first step the existing structures and tools dedicated to the uptake of Copernicus products across the EU are investigated for:

- Intermediate and end user communities
- Public authorities at European, national, regional and local level
- Civil society (e.g. business associations, clusters, private sector/industry, incubators, research centres, universities)

Specific templates are designed to properly describe in a coherent manner the structures and the tools developed by those structures. The mapping exercise of the study team includes vertical (geographic level) and horizontal (initiative type) focused research, in order to maximise coherently the output of the involved pool of experts.

The user uptake initiatives are categorised by initiative type, grouping those that have a similar objective and work on a similar axis of user uptake.

Evaluation of existing initiatives and gap analysis

The effectiveness and impact of the existing initiatives in place are evaluated in order to provide meaningful analysis for the formulation of the engagement strategy. In addition, the evaluation allows to subsequently identify:

- Best practices in existing structures and tools
- Areas for improvement or better support
- Gaps in user uptake instruments, tools or initiatives

The evaluation is performed using a standardised evaluation framework which ensures an impartial and coherent evaluation of the initiatives. The objectives of the Commission in user uptake, serve as the background for the development of the framework and associated individual evaluation template of a specific initiative. A larger set of experts are involved in the validation of the evaluations to ensure the correctness and completeness of the exercise.

The best practices in the Member States are identified in order to initiate similar success elsewhere (horizontal fertilisation) or to ensure an integrated approach in a certain Member State by coherently expanding the service offering (integration measurements). Understanding the success and limiting factors of the initiatives will ensure recommendations in a later phase are valid and effective.

Next to the identification of best practices, the evaluation will equally uncover areas for improvement in user uptake initiatives, when enablers are not in place, initiatives are not fully effective or do not adequately address the targeted user community. The evaluation will similarly lead to a gap analysis, identifying gaps in a specific user uptake initiative type, geography, and user type or user domain.

The mapping and evaluation forms for each of the individual initiative identified can be found in Annex of this report. A summary of the analysis per Member State is provided in the next chapter.

Recommendations for a comprehensive and integrated strategy

The study concludes with providing recommendations regarding the different options to be considered in order to reinforce Copernicus user uptake in a comprehensive and integrated strategy, further detailed with an action plan. The toolbox of instruments outlined are developed and deployed according to the maturity of Copernicus engagement.

A large workshop with experts provided more inputs for the concrete actions and recommendations, complementing the early recommendations stemming from the mapping and evaluation exercise. The resulting toolbox of concrete actions is further detailed with the expected benefits, schedule and costs. In addition, as a measure for those impacts at a later point in time, KPIs are proposed, in order to allow monitoring of the effectiveness during its potential implementation.

The resulting toolbox of concrete actions is plotted at a timeline and a calendar is developed of existing Copernicus and user events, overlaid with the plan for user uptake initiatives.

2.2 Typology & frameworks

The user groups defined in this report are the intermediate and end users, further categorised by stemming from the public authorities or the private sector. The link between these categories and the more granular typology of the Copernicus regulation, as well as, other ongoing activities at the Commission is depicted below.

	Public	Private
Intermediate Users	Public entities supporting development of Copernicus products: ▪ Public research centres ▪ Public agencies ▪ Clusters of public organisations Copernicus Regulation and UR FWC: ▪ EU Institutions and Bodies ▪ Copernicus Entrusted Entities ▪ International Organisations and Bodies ▪ National/MS Institutions and Bodies ▪ Regional and Local Public Authorities ▪ Research and Academic Organisations	Private entities using Earth Observation data or information as part of the service they provide: ▪ Private companies ▪ Clusters of private companies Copernicus Regulation and UR FWC: ▪ Participants to EU Research Projects ▪ Downstream Value-Added Service Providers
End-Users	Public entities potentially using Copernicus products. Copernicus Regulation and UR FWC: ▪ EU Institutions and Bodies ▪ Copernicus Entrusted Entities ▪ International Organisations and Bodies ▪ National/MS Institutions and Bodies ▪ Regional and Local Public Authorities ▪ Research and Academic Organisations	Private entities using solutions based on Earth Observation data or information: ▪ Private companies Copernicus Regulation and UR FWC: ▪ Participants to EU Research Projects ▪ Downstream Industry End Users

Figure 8: User groups

The user uptake initiatives identified are categorised into the following types, which aid to synthesise the results of the mapping exercise as well as the recommendations. Naturally, some initiatives are cross-cutting and this is properly reflected in the evaluation.

Initiative Type	Description	Examples
Start-up initiatives	Start-up initiatives focusing space applications in general or Earth Observation specifically. Initiatives supporting the creation or early stages of start-up companies, such as incubators and accelerators, including those from university, possibly also called technology transfer programmes.	▪ ESA BICs ▪ Startup Weekend Bremen / Gdansk ▪ Copernicus Masters
Events	Physical or virtual events with the main objective to network, share non-technical information on own activities (commercial activities, use cases, general outreach of research projects and best practices) and to do business development. Typical examples would be trade shows, sales conferences, and other industry-driven events. It could a non-technical side event of a larger conference.	▪ Intergeo ▪ European Space Solutions Conference
Promotional activities	Materials, physical or virtual events dedicated to raise awareness on Earth Observation, the Copernicus programme, specific services or thematic areas (agriculture, energy, water management, etc.)	▪ European Space Expo ▪ Copernicus website
Networks	Committees, clusters, industry association, etc. These can be networks of governments, public agencies, industry or users.	▪ EARSC ▪ EUGOGI ▪ NEREUS
User feedback, training & education	Physical, virtual or written events and materials that have as a main objective to improve the technical skills and knowledge on the use of Earth Observation data and products. These could be technical side events of larger non-technical conferences. This includes also user demonstrations, product training or feedback sessions.	▪ ESA EO Summer School ▪ Technical national working groups ▪ National User Fora ▪ EARSeL
Funding instruments	Public or private funding mechanisms which have a space application focus, such as grants, prizes, pre-commercial procurement, PPP, etc. This includes funding guides and informational workshop on access to finance.	▪ Regional R&D programmes Bavaria ▪ EMMIA voucher scheme
Data access	Any platform that facilitates the access to Copernicus data	▪ Sentinel Scientific Data Hub ▪ EO Innovation Platform Testbed Poland
Contact points	Public or privately designated Copernicus contact points (either general or thematic) where potential users can request more non-technical or technical information.	▪ Nationale Ansprechpartner in Germany ▪ NEREUS *Regional Contact Offices*

Table 4: List of user uptake initiatives and examples

The evaluation framework below ensures an impartial and objective evaluation of the identified initiatives across Europe. The service level maturity by initiative type ranges from level 1 – beginner to level 5 – full swing.

Initiative type	Level 1 Beginner	Level 2 First Traction	Level 3 Active Engagement	Level 4 Advanced Progress	Level 5 Full Swing
Start-up initiatives (S)	Initiative not targeting space or satellite applications whatsoever, but space-related companies have been seen participating in this initiative	Initiative targeting individuals or start-up companies of the wider space industry	Initiatives targeting satellite applications in general with good representation of EO application domains	Initiative specifically targeting the EO satellite application domains with moderate reach or satellite applications initiatives with large reach in EO community	Advanced initiative with EO and Copernicus applications domains as a focal point and with a large reach in its target community
Events (E)	Generic ICT event without any focus on space or satellite applications, but with sporadic presence of space-related companies	Event targeting the wider space or satellite applications sector	Event targeting satellite applications in general with a good representation of EO application domains	Event specifically targeting the EO satellite applications domains or events for satellite applications in general with strong emphasis and reach into relevant EO communities	Dedicated EO and Copernicus events, with high number of attendance or large reach in its target geography
Promotional activities (P)	Generic promotional activities relevant neighbouring domains, highlighting anecdotal space or space application themes	Promotional activities focusing on the space or satellite application sector	Promotional activities focussing on satellite applications with a representative section on EO application domains	Promotional activities targeting specifically EO satellite application domains or satellite applications activities with strong emphasis on EO and large impact	Promotional activities focused specifically on EO and Copernicus application domains with high impact and large reach in its target geography

Networks (N)	Networks focussed on neighbouring areas where space or satellite application companies are included	Networks for space or satellite application sector	Networks targeting space applications with the EO satellite application domains well represented	Networks targeting specifically EO satellite application domains or general satellite application networks with emphasis on EO and large reach	Networks targeting specifically EO and Copernicus satellite application domains with large reach in its target geography
User feedback, training & education (U)	No space or space applications related courses, technical or user feedback sessions available, however, some elements are once in a while touched upon in the frame of other topics	Events or material for improving the technical skills and knowledge of the space or satellite application sector	Events or material for improving the technical skills and knowledge specifically targeted at the satellite applications with the EO domains well covered	Events or material for improving the technical skills and knowledge specifically targeted at the satellite applications with the EO domains well covered or satellite applications in general with large reach	Advanced events and material focused on improving technical skillset of using EO and Copernicus data with wide reach in its target geography. Gathering frequent and detailed user feedback and practice sharing
Funding instruments (F)	General ICT financial support mechanisms that have supported space application companies in the past	General support mechanisms known to have included space application alumni	Single financial support mechanism with a space application focus	Advanced set of financial support mechanisms for space applications in general	Advanced set of financial support mechanisms with a specific focus on EO and Copernicus
Data access (D)	Data access platform that is not well known, has limited usage and is restrictive in its use	…	…	…	Well known, frequently visited and easy-to-use platform with rich EO and Copernicus raw data or data products, available free or with commercial access.

Contact point (C)	Informal contact point for space and satellite applications exists but is not well known in the community	Formal contact point for satellite applications exists but is not well known in the community or has not all relevant non-technical information available	Formal contact point for satellite applications exists with non-technical information available on EO satellite applications	Formal dedicated contact point for satellite applications exists with non-technical information available on EO satellite applications and good reach within the community	Formal Dedicated contact points for EO and Copernicus satellite applications, products and services, providing information about non-technical and technical topics.

3. Overview of the user uptake initiatives landscape

3.1 Introduction to the user uptake initiative landscape

About 450 user uptake initiatives were identified and described to understand the current landscape of user uptake initiatives, to identify the best practices, areas for improvement as well as to perform a gap analysis. The analysis performed on each of the individual user uptake initiatives is summarised in the **country two-pagers** in the section. Additionally, to be able to address the highest needs and priorities, the analysis is further **distilled in key findings**, described in the last section of this chapter. These findings drive one-to-one the recommendations formulated in the next chapter and their associated actions.

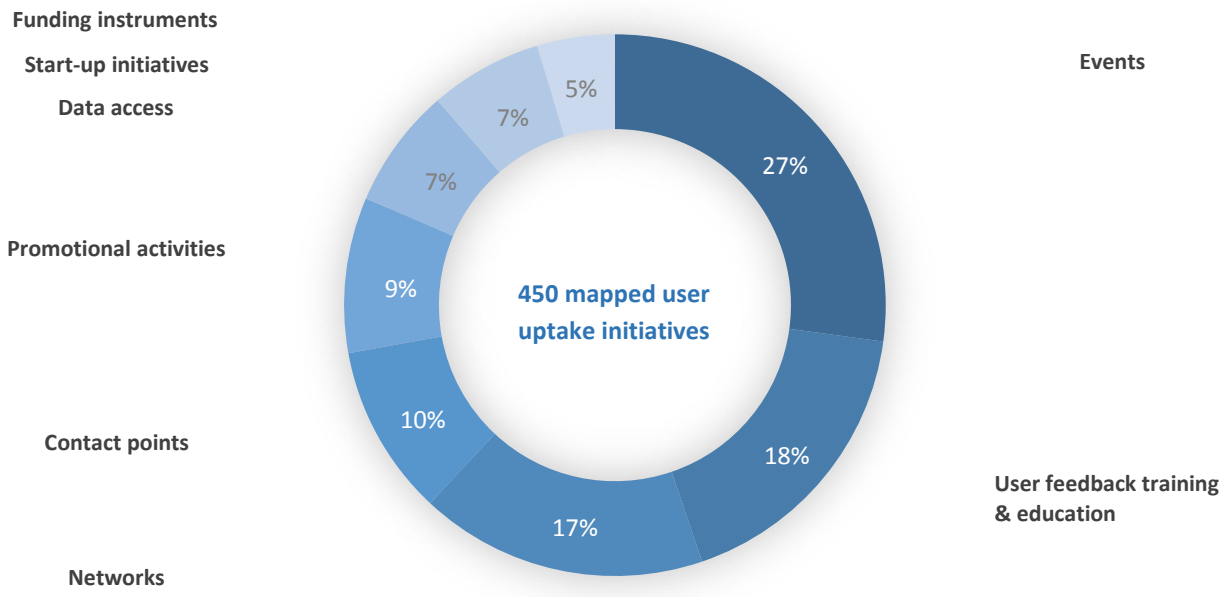


Figure 9: Distribution of user uptake initiative types

The predominant identified user uptake initiative types are events, followed by user feedback, training & education, and networks. Start-up initiatives and funding instruments are less numerous, but the quality and achieved impact of an initiative is naturally more important than quantity in itself.

Nevertheless, looking at the achieved impact of the initiatives and evaluated in terms their geographical reach, an analogous conclusion can be drawn. The European average of the user uptake initiatives at national level shows **a relative strength in Networks and User Feedback, Training & Education initiatives** whereas Data Access is

lagging together with Funding Instruments and Start-up Initiatives, although it should be noted that the country specific results vary widely, and the cross-border initiatives are omitted from this statistic.

Figure 10: European average of maturity of user uptake initiatives at national and regional level

The next section synthesises the mapping and evaluation, starting with the initiatives with European reach or cross-border regional intent, to be followed by the Member State specific state-of-play.

3.2 Landscape of the user uptake initiatives by geography

3.2.1 European & international initiatives

Summary of Best Practices	▪ Many European networks working as multiplier of awareness in their respective communities ▪ Funding instruments like PCP introducing the idea of close cooperation between public and private sector ▪ Outreach to the general public through the European Space Expo
Areas for improvement	▪ More cross-cutting activities involving new communities, addressing multiple services ▪ More visibility of the Copernicus programme in social media as well as in press
Gap identification	▪ European Copernicus helpdesk ▪ Involvement of the EC in sector specific initiatives e.g. Oil and Gas, Insurance, Renewable energy, etc.

The section includes European and international initiatives that address the European or international community and/or that are organised by a European or international actor, for instance the European Commission or the European Space Agency.

A large number of initiatives have been launched across Europe, to raise awareness as well as to foster the user uptake of data and data products of Earth Observation satellite programmes and/or of the Copernicus programme itself. These initiatives are covering all Copernicus services (e.g. climate change, emergency management, land, marine, etc.) with a vertical focus; while some of them can be considered more horizontal. Most of the initiatives target end users from the public sector, but a considerable effort has also been made in stimulating the so called private downstream market through initiatives such as the ESA Business Incubators Centres or the Copernicus Masters.

Several **networks** are relevant at European level and act as either umbrella organisation or group of interest for a specific category of the space industry or an application domain. The main actors involved in those networks are public/private users, research institutes as well as service providers. For example, **EARSeL** is a network of European remote sensing institutes that brings together users from both academia and industry. The network holds an annual symposium (e.g. for 2016 in Bonn) and a series of dedicated workshops across Europe addressing each service or special interest. **EUROGI** is example of a network of networks that is constructed to maximise the availability, effective use and exploitation of Geographic Information (GI), and as such is an important actor active in the Copernicus community. Not surprisingly, EUROGI specifically names Copernicus and INSPIRE in its organisation's objective

around datasets and services. Last but not least, **EARSC** promotes the use of EO technology and especially the companies in Europe which offer EO-related products and services, as the association of service providers. EARSC has organised or contributed to several Copernicus relevant user uptake initiatives such as the innovation procurement workshop which recently took place, outreach to the Oil & Gas industry to promote the use of EO incl. Copernicus, the development of economic assessments of Sentinel data and several other workshops.

Besides the Sentinel collaborative ground segment, several national initiatives have been established in order to facilitate **data access**. In Austria for example, the Earth Observation Data Centre for Water Resources Monitoring (EODC) raises awareness of Copernicus in a specific field with a bottom-up approach. An international collaboration between the public (namely the Department of Geodesy and Geoinformation within the Technical University of Vienna) and private sector was formed. EODC has already operational data access and processing capabilities, a cloud platform and supercomputing capabilities. In addition, funding is secured to expand the storage capability to about 20 Petabyte until 2018, which will facilitate the uptake of Sentinel-1, Sentinel-2 and Sentinel-3 data on a global scale.

The European Civil Protection Forum is a prominent **event,** taking place every two years in Brussels and is considered to be the main forum within the emergency and civil protection community. Copernicus is definitely a key contributor to this community through its Emergency Management Service. Booths of the Copernicus Emergency Management service are always present providing a good level of visibility to the thousands of participants which include key international actors. This is a good example on how Copernicus could be well integrated in non-space conferences where Copernicus could be relevant (e.g. GIS, Agriculture, Cultural Heritage, Oil&Gas, Biodiversity, etc.).

When it comes to **user feedback, training and education** most of the initiatives at EU level are organised by ESA. Each year, ESA organises a multi-day workshop dedicated to the use of one of the Sentinel's data. This year a Sentinel-3 for Science Workshop has been organised to raise awareness within the scientific community as well as several other user categories on the availability of Sentinel data and data sets.

As for **promotional activities**, it goes without saying that the Copernicus.eu website is a leading initiative promoting the programme. The website features several webpages, each of them related to a different categories, sharing information about events, news

and invitations to tender as well as general information on the programme and its relation with the main societal challenges. The website also acts as the central point for the single thematic sub websites.

The EU R&D programme, Horizon 2020, is a **funding instrument** which has calls that directly relate to fostering the downstream sector in EO through the so-called pre-commercial procurement (PCP) instruments. This is considered to be a highly efficient funding instrument, which involves federating the public sector in dedicated buyer groups to steer the development of new solutions directly geared towards buyer groups' needs. At the same time, by sharing the risks and benefits of designing, prototyping, and testing new products and services with the suppliers, it encourages private sector to take part into those challenges.

The Space App Camp initiated by ESA is conceived as both a promotional activity as well as a **start-up initiative**. The aim is to create awareness for the business opportunities offered specifically by Copernicus to enrich mobile application development and to scale up usage of Copernicus data on smartphones, with ready to use applications. There is a great still unexploited potential behind this scheme, especially because it brings together non-traditional space application communities such as ICT, effectively addressing new target groups.

At European level there are currently no **Contact Points** for users in the transversal domains, however, user support is included in the task set of the Entrusted Entities.

3.2.2 Cross-regional initiatives

Summary of Best Practices	▪ Cross-regional networking and cooperation ▪ Regional Contact Offices (RCOs) as regional contact points for Copernicus ▪ Fostering links between Copernicus expert groups, regional development agencies and funding sources ▪ Dedicated events and educational and training activities involving or led by potential end users adapted to the regional needs
Areas for improvement	▪ Enlarge participation group, reaching both academia and private sector ▪ Enlarge geographical coverage of ERDF-funded activities (not focusing on a single region) ▪ Better marketing of events and promotional activities as well as follow-up from initiatives and increased emphasis on stronger cross-regional exchanges and collaboration ▪ Organising series of conferences (as opposed to one-off events), with a stronger focus on EO and Copernicus
Gap identification	▪ One-off initiatives, such as publications; studies of regional capabilities; online catalogues; etc. need to be updated and maintained up-to-date alongside the progress of Copernicus to achieve greater impact ▪ Suitable funding programs to support cooperation between regional public agencies, research institutes and service providers ▪ Data access points are not well represented in the regions, although there are regional platforms

A regional approach has a large potential for promoting Copernicus services, to increase user uptake and to provide regionally adapted information and services. **Regional networks and regional cluster structures** foster cooperation in a broad panorama of topics and sectors (tourism, agriculture, transport, traffic, health), as well as the more widely recognised Copernicus thematic areas (land, maritime, atmosphere, etc.).

- Regional actors are **closer to end users** and can effectively engage with local industry, including SMEs, research and academic institutions, local and regional authorities, and providers of services. E.g., innovation clusters such as Aerospace Valley in Midi-Pyrenees and Aquitaine; Pole Mêr Bretagne Atlantique in Brittany; regional Satellite Applications Centre of Excellence in the East Midlands; and Cluster Aerospace bavAIRia.

- Regional networks and clusters ensure not only a bottom-up approach and feedback but also shape the **specifications of future services** and programmes, by providing direct dialogue with end users, as well as with the representatives of ESA and the EC institutions, and, as evident from past experience, successfully engaging in programmes initiated by those institutions. E.g., the network of Regional contact offices (RCOs) developed under FP7 serving as a set of points of

reference for downstream sector in regions (funded 2011-2013); EMMIA (European Mobile and Mobility Industry Alliance) Policy Learning Platform initiative, which designed policies for the support of mobile services based on GNSS as well as on COPERNICUS uniting more than 20 regions in Europe (funded 2011 – 2014).

- Many Copernicus data and services are important to **local and regional authorities** (LRAs) for public policy purposes (e.g. coastal monitoring, forest fire prevention, environmental monitoring, transport and urban planning). LRAs and regional/local administrations are of growing importance as **end-user groups**. Thus the regional level is an ideal arena to interact and outreach to relevant representatives of regions who decide upon the uptake and are responsible for its implementation.

- Regional actors **understand better the regional needs**, and are using promotional events to foster uptake of Copernicus services and establish working links between specific Copernicus expert groups and regional end-users in thematic areas relevant to local and regional priorities. E.g. maritime focus of uptake initiatives in Brittany, geo-information services for coastal regions in Puglia, or atmosphere services for air quality monitoring and transport in East Midlands and Bavaria. In cases where different regions have identified shared thematic interests, cross-regional collaborative approaches to user uptake are beginning to be developed (e.g. coastal regions, Mediterranean regions, mountainous regions etc.).

- Regional actors are **closer to the pool of local entrepreneurs and start-ups** and are able to facilitate dialogue between Copernicus, SMEs and start-up initiatives. E.g. EMMIA-funded service provision networks for “young” SMEs active in space via voucher schemes in Bavaria.

- Understanding the **regional needs allows regional actors to organise focussed training sessions** for groups of potential users, local and regional public institutional bodies, and to raise awareness of the Copernicus program and foster user uptake of Copernicus data. E.g. training sessions and face-to-face meetings organised by CEREMA; inter-regional Master courses on remote sensing developed by GIS Bretel in Brittany and the region of Pays de la Loire.

- **Regional contact points are more accessible** to local SMEs and local authorities, and provide easier access to COPERNICUS services, data and initiatives at national

level. E.g. DRA Scarl in Puglia, Regional Satellite Applications Centre of Excellence in East Midlands.

Ensuring appropriate **data access** for regional stakeholders, young entrepreneurs and SMEs without having to implement special infrastructure investments is an important prerequisite for any commercial usage of the satellite imagery. Trans-national collaborative ground segments are important links for providing regional data access points. Copernicus also includes *in situ* data much of which is generated on the regional scale for regional applications.

Integration and harmonisation of Copernicus satellite and *in situ* data often requires integration and augmentation with local geo-layers and information of specific character and content based on regional policies, needs and interests; e.g. identifying geo-spatial patterns of health impacts from air pollution in urban environments. Open and free access to not only Copernicus data but other public data sets as well, is emerging as an important requirement for regional uptake of Copernicus.

- Regional networks provide an effective **platform for cross-regional promotional and dissemination activities**; user feedback and educational and training activities in the regions. E.g. NEREUS regional workshops in Puglia, Basilicata and other regions; ESA/NEREUS publications; an inventory of available services and providers in the regions developed by RCO network.

- Regional actors are involved in **inter-regional and cross-regional networks** and consortia and are aware of **capabilities in the regions**, ensuring fast mobilisation of partners in response to the calls and funding opportunities. E.g. EMMIA initiatives coordinated by Aerospace Valley or bavAIRia e.V.; BOOSTER MORESPACE network in Brittany.

- Involvement of regional actors in networks assures **direct dialogue between the regional level and the EC level**. E.g. NEREUS initiatives and workshops at Committee of Regions or European Parliament days in Brussels, with participation of representatives of EC, CoR, NEREUS, ESA and the European Parliament.

In this context it is worth mentioning the **ERRIN network** – European Regions Research and Innovation Network. The network represents more than 120 regional stakeholder organisations and aims at enhancing regional competitiveness, by fostering research

and innovation. ERRRIN was a member of the GRAAL consortium (Copernicus4Regions initiative) and contributed to increasing awareness of Copernicus among its members, in particular through its thematic working groups (Energy and Climate Change, Health, Smart Cities, Transport, Water, Innovation & Investment). Having both a strong regional and innovative dimension, rather than an intrinsic 'space flavour', ERRIN is a good platform to foster awareness of the Copernicus programme and the uptake of its data and information. The ERRIN network also seeks to contribute to the implementation of the Europe 2020 Strategy the Innovation Union flagship and the Smart Specialisation strategies and the role of Copernicus in these wider policy areas.

NEREUS - Network of European REgions Using Space Technologies voices the regional aspect vis-à-vis the European Space Policy. Established in April 2008, NEREUS is a pan-European network of 25 regions from 8 countries and over 40 associate members, representing a significant industry, SME and research membership. The network aims to explore the benefits of space technologies for regions and their citizens, and to spread their applications. Apart from providing a platform for regions, NEREUS also discusses topics in working groups (one of which dedicated to Copernicus), organises thematic workshops and prepares position papers on topics relating to regional space policy and uptake.

Case Study

Case study – Regional Contact Offices networking

The Network of Regional Contact Offices, formerly called DORIS-NET, was set up in 2010 with the aim to raise awareness and strengthen regional involvement in Copernicus. A Copernicus Regional Contact Office (RCO) is designed to act as a focal point in its region, working at the interfaces between industry (services providers), R&D actors, regional users and policy makers. RCOs are generally hosted by an independent entity and mandated by the regional authority. Their role is to assist regional actors to use Copernicus -based data and services in their daily life and serve as regional centre of Copernicus expertise. The objectives of the RCO are:

- Identify potential users of Copernicus services;
- Raise awareness of the benefits offered by Copernicus and Earth Observation services;
- Seek business opportunities for local Copernicus actors;
- Maintain an extensive and updated knowledge of the Copernicus portfolio and new services;
- Assist users in the expression of their needs or in the search for services answering their needs;
- Facilitate dialogue between users and service providers;
- Promote new services developed by regional actors;
- Support training in the field of Earth Observation.

Case Study

From 2006 onwards local and regional funding has enabled active RCOs targeting Copernicus user-uptake to be set up and 12 such entities are now active: Aquitaine - Midi Pyrénées (FR); Azores (PT); Basilicata (IT); Bavaria (DE); Bremen (DE); Brittany (FR); East Midlands (UK); Lombardia (IT); Mazovia (PL); Puglia (IT); Veneto (IT).

The network partners have expanded their respective network connections to reach out at least 20 other regional bodies. Not all of these connections are Copernicus specific but this networking has put links in place on which Copernicus uptake could evolve with the right encouragement. Networking through projects such as DORIS_Net and THE ISSUE with the support of NEREUS has been the source of fruitful inter-regional collaborations and successful joint projects which a single region could not have achieved alone. For example, in the East Midlands, from these initiatives alone the network of regions with shared interest in satellite applications has risen from 5 (2009) to 26 (2015) counting only those projects in which East Midlands has been involved in. Other RCOs achieved other examples of inter-regional networking: e.g. Space4you; EMMIA programme; etc.

3.2.3 Austria

Summary of Best Practices	▪ Research Promotion Agency (FFG) as main funding platform, manages the Austrian Space Applications Programme and is the Contact Point for Copernicus ▪ Data access tool provided by the Earth Observation Data Centre for Water Resources Monitoring (EODC) as National Collaborative Ground segment contribution ▪ GIS conference bundle GI Forum and AGIT organised by Z_GIS two established events for the EO community
Areas for improvement	▪ Raise awareness of general public regarding Copernicus benefits ▪ Establish data centres as EODC for other Copernicus services, e.g. Land resources or provide links to already existing ones.
Gap identification	▪ Better overall promotion for Copernicus (i.e promotional materials for users with updated information in the local language; regular events, domain specific) ▪ In the vicinity of the two main space clusters Vienna and Graz, several technology and business incubators are active, albeit only the soon to be opened ESA BIC is space-focused

The Austrian space-related community is mainly focused on remote sensing and even though only few events are organised by local bodies, there is a high level of awareness among providers and end users. Austria's size and geographical position have enabled the EO community to orient also towards what happens at international level.

One of the most important bodies dealing with Copernicus and EO in Austria is the **Research Promotion Agency (FFG)**, which was founded by the Ministry of Transportation, Innovation and Technology, and incorporates the Austrian Space Agency (ALR), which implements national aerospace policy and represents Austria on international aerospace committees. FFG has established and operates the main **funding instrument** for space-related projects, including the **Austrian Space Applications Programme**, which is an R&D programme used as incentive for young researchers and companies to tackle amongst other Copernicus applications and strives to enhance "thinking outside of the box".

ALR has the role of **Contact Point** for Copernicus and acts as the interface between the scientists and the end users. Furthermore, the Environment Agency Austria (EAA) was appointed as the **Austrian delegate to Copernicus User Forum** and serves as a gateway to Copernicus.

The **Earth Observation Data Centre for Water Resources Monitoring (EODC)** is bringing awareness on Copernicus in other areas, such as ICT, as it involves a bottom-up approach. EODC involves already operational **data access** and processing

capabilities, cloud platform and supercomputing capabilities with secured funding until 2018 for the Sentinel family uptake. The EODC is an international collaboration between the public sector (namely the Department of Geodesy and Geoinformation within the Technical University of Vienna) and the private sector (one of the shareholders is an ICT company). Major players in the Austrian **Copernicus community** are already organised within EODC. The recently signed **National Collaborative Ground Segment** enables the Earth Observation Data Centre for Water Resource Monitoring (EODC) to plug in and distribute data to different communities, based on an open international collaboration.

The annual **GIS conference bundle GI_Forum and AGIT**, organised by Z_GIS (University of Salzburg) are two well established events for the international Earth Observation community. They include over 200 presentations each, with over 1000 people attending from all over the world. Targeting a large user group, these events serve as a bridge between the young researchers and the already experienced scientists and could be a platform for Copernicus reach out. Austrian experts consider that mere info days are not enough and should be complemented by specific events that concern the local community (e.g. EMS, civil protection mechanisms), to maximise effectiveness. Focused events allow bringing together the representatives of competent authorities and allow discussing user experience in a facilitated environment.

Figure 11: Maturity level by user uptake initiative type

Austrian stakeholders have made comments regarding the fact that a key area which needs further improvement, not only in Austria, but in Europe in general, is the level of **awareness of the general public**. Also project funding does not seem to be addressed beyond a pilot stage, thus not attaining a level to be used for awareness actions.

The most effective initiatives seem to be funding instruments that showcase the applicability via demonstrations. The need for process innovation requires a source of funding for the implementation stage. Innovative funding schemes such as PCP might be a good stimulation method but the national administrations struggle with understanding the user needs and requirements. One way to deal with the gap between the existing technology and the user needs could be to create a pre-designed toolkit in the local language. Organising training sessions for the spatial planning or the environmental agency would serve as a demonstration on how to use these toolkits.

3.2.4 Belgium

Summary of Best Practices	▪ BEODays, annual stakeholder outreach event, attracting application companies ▪ EODesk as main Contact Point for Belgian EO stakeholders ▪ BEOP national web portal for EODesk, promoting EO information & activities ▪ BELSPO newsletter on EO (700 subscribers) ▪ STEREO as national funding instrument supporting research & applications
Areas for improvement	▪ Limited impact of ESA BICS, low outflow in terms of EO-related projects ▪ User community exists of SMEs who are hesitant to invest in 'unproven' Copernicus data
Gap identification	▪ Coherence, accessibility and awareness of access to Copernicus data ▪ Understanding of European EO legislation and regulations ▪ Contact point for local/regional authorities (especially for Brussels and Wallonia) ▪ Absence of national or regional network

Belgium has a long-lasting tradition in Earth Observation, supported by enabling national policies and associated programmes managed by the Belgian Science Policy Office (BELSPO). On a national level, **the STEREO research programme** provides dedicated funding opportunities in the field of Earth Observation. The currently running programme (STEREO III) makes available a budget of EUR 28.6 million, aimed not only at supporting innovative research, but also at stimulating the development of downstream applications and putting Belgium on the map as an international centre of excellence in selected EO domains. A number of additional smaller EO funding initiatives have been launched, e.g. the Proba-V Preparatory Programme, specifically directed at supporting the data exploitation of the Proba-V satellite.

The **Belgian Earth Observation Platform (BEOP)** serves as an **online promotion platform** to facilitate the dissemination of EO information & activities to professionals and the public at large. Further awareness raising is achieved through the use of an electronic **EO newsletter** (reaching approximately 700 subscribers), which informs the EO community about the latest developments and opportunities in the field of Earth Observation. The portal **EOEdu** is an educational website which offers teachers and the public at large a platform to learn about remote sensing, providing with (basic) technical content and links to external information sources.

The **EODesk** acts as the **national contact point for Belgian EO stakeholders**. However, for local/regional authorities & administrations, which represent an important EO user segment, **central EO/GIS contact points are currently lacking in Wallonia and Brussels**. This is not the case for the region of Flanders, where the 'Agentschap Geografische Informatie' is fulfilling this role. In the area of data access, the government-supported Product Archiving, Distribution and User Access programme (PADUA) generated a

centralised distribution portal for the EO user community, providing access to both scientific and commercial EO data.

The country's EO community gathers at several of the **EO-related events** throughout the year. **BEODays** is the main annual stakeholder outreach event, encompassing approximately 120 participants mainly from research institutes and application industry. In addition, the **Space Days** attracts a wide variety of downstream users and thereby offers an additional event platform to promote Copernicus uptake, as it was shown when it featured 'Copernicus & Galileo' as its main theme in 2014. Other EO-related/thematic events include both annual and one-off events such as the Belgian Geography Days, the Proba-V Symposium or the International Liège Colloquium on Ocean Dynamics, while more **technical user trainings** have been organised as well (e.g. The Dark Side of Remote Sensing).

Figure 12: Maturity level by user uptake initiative type

Currently, Belgium has **no existing national or regional EO industry associations**. As can be seen in several other countries, the EO industry is represented as part of larger space industry associations, such as VRI (Flanders), Wallonie Espace (Wallonia) and Bruspace (Brussels Capital Region). On the side of start-up initiatives, the currently **limited outflow of the ESA BIC's in terms of EO projects** and the **absence of any other dedicated EO/space start-up platforms** have so far hindered the development of a larger start-up interest in EO.

Overall, the user community generally knows about the existence of the Copernicus programme, yet **bottlenecks for user uptake** are present in relation to the **awareness** of specific Copernicus data available, as well as existing concerns in terms of **access** to

these datasets. Moreover, Belgium's industry user community, which exists mostly out of SMEs, is generally **hesitant to invest resources in 'unproven' Copernicus data**, as opposed to different other (Belgium-supported) EO sources available (e.g. Proba-V). Despite these current bottlenecks, interest in the use of Copernicus data in several **application domains** is visibly growing (e.g. **dredging, security & risk management, agriculture, coastal monitoring and vegetation mapping**).

3.2.5 Bulgaria

Summary of Best Practices	▪ Bulgarian Information Office for GMES-Copernicus in the past ▪ Two events to discuss the EO needs in the Balkans (FP7 project and EC funds) ▪ Workshop for the national stakeholders "Fundamentals of GEO and GEOSS Training" (FP7 project BalkanGEONET) ▪ Spaceedu.net web platform, which promotes space technologies and science and organises trainings (though not used for Copernicus yet)
Areas for improvement	▪ The former contact point seems not to be active anymore and provides with out-dated information on its website ▪ The initiatives did not have sustainable continuation after the FP7 project completion ▪ Possibly leverage already existing initiatives like the Spaceedu.net portal to support Copernicus user uptake
Gap identification	▪ Need for an active Copernicus coordinator at governmental/administrative level ▪ Lack of sustainable funding of the Copernicus user uptake initiatives ▪ Need for more technical and practical trainings and workshops on how to use/ benefit from Copernicus for both intermediate and end users. For example, initiatives that explain the technical issues of Copernicus, data access and provide the updated information about the programme in the local language. ▪ Lack of initiatives targeted at supporting start-ups

Bulgaria is a country with a few implemented Copernicus user uptake initiatives so far. The country is not a member of ESA yet but has signed ESA Cooperation Agreement. Since Space policy does not have a priority in the country yet, there is not a national **funding instrument** for EO/Copernicus user uptake initiatives, including no **start-up initiatives**. There is however, the **Bulgarian Information Office for GMES-Copernicus** with the aim to support the participation of Bulgaria in Copernicus. The establishment of such single national **contact point** was aimed to have one institution to share information, to advice and to support activities related to Copernicus, with the objective of increasing efficiency and synergies. Unfortunately, the Office does not have updated information on its website (e.g. still using GMES name) and after several unsuccessful attempts to consult the Office for the scope of this study, it is assumed that the contact point is not active any more.

There has been, however, an active EO community in Bulgaria implementing FP7 projects, (such as OBSERVE or BalkanGEONET), cooperating with EC to organise events to engage the EO community. Thanks to them a few **events** have been organised to exchange views on how to implement the EO activities in the Balkans, discuss with speakers and leading EO institutions on needs regarding EO in the Balkans, and build-up networks and cooperation, with focus on capacity building and more extensive use of EO data. These two events included EO-GMES Operational Capacity Workshop in Sofia in 2011 and OBSERVE CARAVAN Workshop in Sofia in 2012. Another initiative of

user feedback, training & education and promotion type was a workshop organised in Sofia 2012 "Fundamentals of GEO and GEOSS Training" (part of BalkanGEONET project).

Another initiative worth mentioning is the very user-friendly **Spaceedu.net** web platform, which promotes space technologies and science and organises trainings with recognised experts from the field. It is both a **promotional** and a user feedback, training & education initiative. There is no focus on Copernicus programme in the portal yet, though, but could have high impact once further exploited and leveraged to promote also Copernicus through it.

Figure 13: Maturity level by user uptake initiative type

It is important to emphasise that, so far, the majority of Copernicus user uptake initiatives in Bulgaria had been organised with a bottom-up approach, without coordination at governmental/administrative level. The implemented initiatives did not have a sustainable continuation after one-off funding opportunities (mostly from FP7 projects or EC directly). Nevertheless, the past initiatives prove that there is a young community in Bulgaria that could take the lead in implementing other initiatives.

3.2.6 Croatia

Summary of Best Practices	▪ Workshops from the FP7 BalkanGEONET project for the EO community ▪ ISZO - Environmental Information System (data access)
Areas for improvement	▪ Improve Copernicus visibility in national thematic events that take place on a regular basis. ▪ Most of the initiatives so far were funded through FP7 projects or other international funds and lack continuation
Gap identification	▪ Lack of national coordination body for space and Copernicus ▪ Missing a sustainable scheme and funding for promotion and user feedback, training and education activities. ▪ No start-up supporting initiatives with space/Copernicus focus to leverage the potential of young generation in Croatia.

Croatia is a country with limited heritage in the space sector and it is not a member of the European Space Agency, which usually drives the national space activities. There is not an official Copernicus **contact point**, neither on administrative or technical level for users. Nevertheless, there is an active **network** of national researchers and space enthusiasts that are advocating for the creation of the Croatian National Office for Space. In the future this institution would be responsible for space activities and will be the national official representative for space related international relations (e.g. with EC and ESA). The Institut za GIS (iGIS) Association network also proves that there is a very motivated GIS community in Croatia that could be leveraged for educating about Copernicus data and services, as well as for promoting the programme.

This active Croatian community, mostly from R&D institutes, has organised already a few Copernicus user uptake initiatives in the past, especially **user feedback, training & education and networking/promotional events**, targeting both intermediate and end users. These events, such as "Towards inclusion of Balkan countries into global EO initiatives" (September 2012) or "Fundamentals of GEO and GEOSS Training" (Split 2012) were funded by FP7 BalkanGEONET project. The European/international funding instruments funds most of the space initiatives in Croatia, as there is no dedicated national budget for space/EO applications.

As it comes to **data access**, there is no dedicated Copernicus data hub in place but there is a potential platform that could promote Copernicus data in Croatia, namely the Environmental Information System (ISZO) created by the Croatian Environment Agency that has the overall goal to collect, integrate, process and maintain environmental data at national level. The user-friendly portal has now CORINE Land Cover data available for all editions.

The national stakeholders indicate that more **promotional activities** are needed, recalling the example of the European Space Expo in Zagreb in 2015, that generated a high interest from media and organisations that could be potential Copernicus users.

The thematic conferences that take place in Croatia, such as the **event** "Networking Air Quality Observations and Models: From Virtual to Real" could be also used as a platform to promote related Copernicus thematic services.

It is recommended to organise hackathons, and similar competitions for **start-ups** to leverage the potential of Croatian young generation.

Figure 14: Maturity level by user uptake initiative type

The national stakeholders emphasise that such initiatives would have huge media visibility and likely generate interest from the governmental bodies that could hopefully address some of their policies towards a wider uptake of space data/technologies.

3.2.7 Cyprus

Summary of Best Practices	▪ Cyprus Space Society, a research laboratory functioning as network to raise awareness and foster uptake in the areas of more interest ▪ An annual international conference is organised by the Cyprus Space Society together with the support of ESA and DLR
Areas for improvement	▪ The Copernicus user community is small and underdeveloped in the country ▪ Relative low level of awareness of remote sensing and Copernicus opportunities
Gap identification	▪ Need of translated material to help the action related to raising awareness as well as training ▪ Involvement of universities in the uptake strategy in order to create a solid baseline for future implementation.

The Cypriot landscape appears to be in his embryonic phase, setting up the main elements to foster the awareness and the use of environmental data provided by the Copernicus programme. The **community is currently relatively small**, and could be enlarged within academia, public administrations as well as private industry players.

The current level of awareness in the country is relative low and few people are utilising remote sensing data. Currently, most of the activities taking place in Cyprus are around the topics of **atmospheric sciences**, **cultural heritage** and **marine**.

The most relevant network for Copernicus user uptake is the **Cyprus Remote Sensing Society** which focuses on the academic and research aspects, promoting both applied and pure research in remote sensing and geo-information. Furthermore, the society also acts as a lab and is a key player in the Cypriot landscape fostering the use of EO/ Copernicus data in many application areas, with a special focus on the topics mentioned above.

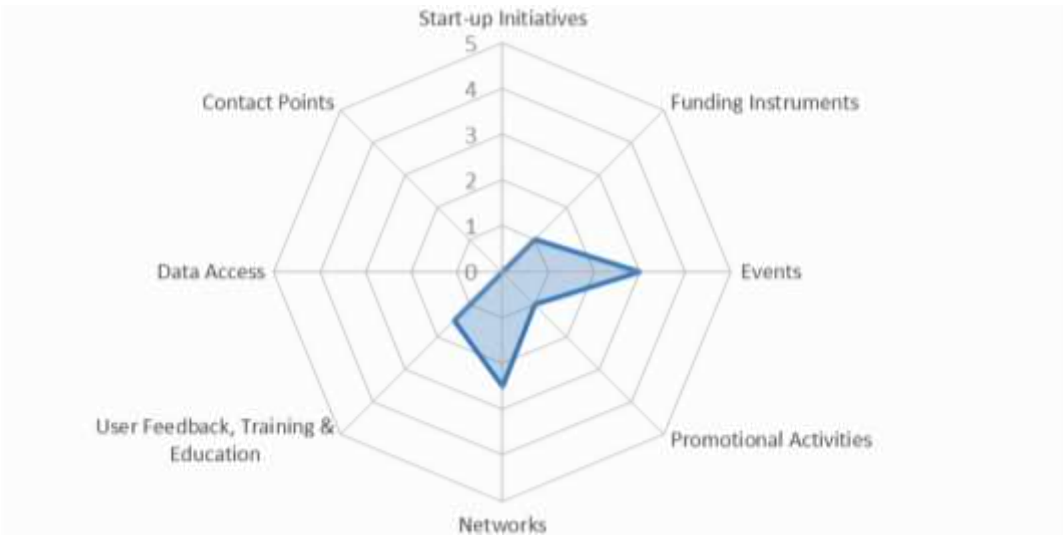


Figure 15: Maturity level by user uptake initiative type

Since 2013, the Cyprus Remote Sensing Society organises together with the Cyprus University of Technology **an annual international conference** on remote sensing and geo-information for the environment. This event is supported amongst others by ESA and DLR, making a possible first link to foster and strengthen the visibility of Copernicus programme.

Apart from the above, a **limited number of one-off events has taken place**, most notably the Cyprus Embraces Space event in May 2015, which intended to foster space R&D by highlighting the available funding schemes at European level for this topic (EU and ESA), as well as, discussing other space themes.

3.2.8 Czech Republic

Summary of Best Practices	▪ Copernicus National User Forum, an annual event gathering all the relevant national stakeholders, including users ▪ Copernicus website is an updated source of information on Copernicus programme for local stakeholders ▪ Academy of Geoinformatics Skills for training of future generation of users ▪ EO Environmental training and workshops from EOPOWER FP7 project for the public administration end users ▪ National Secretariat for GEOSS/Copernicus (Copernicus Committee) as an active coordination body for Copernicus initiatives, playing both as network and contact point
Areas for improvement	▪ The dissemination/promotional activities are quite generic, with limited specific user cases and practical examples ▪ Limited in-house EO skills among the public administrations and cooperation with R&D community ▪ Most of the initiatives are organised with a bottom-up approach by public active representatives, but without concrete strategy or implementation plan, and without dedicated national funding (mostly funded by EC FP7 projects and ESA funds)
Gap identification	▪ Need of national funding (e.g. innovation procurement), which should follow the definition of the national Copernicus strategy and better cooperation between national stakeholders, industry and R&D ▪ Need for promotion of the success stories, relevant for the local users, and presented by the other users (not only R&D/suppliers) ▪ Missing start-up initiatives, as ESA BIC Prague is still without concrete plan for implementation and funding ▪ Need to fund the practical trainings with concrete demonstrations for end users

The Copernicus user uptake initiatives in Czech Republic focused so far mostly on user feedback, training and education initiatives for end users, promotional activities and events, such as Copernicus National User Forum. The activities have been intensified in recent years, thanks to the active EO community from several (mainly public) institutions.

Overall awareness of Copernicus in Czech Republic is quite good for intermediate users in R&D, industry and academia. Within the public sector, local authorities have much lower awareness and awareness in public organisations is in general rather generic. Potential end users are mostly residing with the environmental units of the public administration. Because of a decrease of remote sensing specialists in recent years within public organisations in the Czech Republic, there is less expertise on how to use EO products. The cost of the EO products is seen as a hurdle, and there is no dedicated public funding for procuring the available EO products. Without some dedicated funds, it is unlikely that the potential end users could pay for the Copernicus products from their current budgets. Some Copernicus user uptake initiatives targeting public end users that appeared over the last years in the Czech Republic were mostly funded by

EC FP7 funds (EOPOWER and GEONETCAB projects). The national R&D funds itself have no specific focus on Earth Observation applications.

The national experts underline also that the key thing for Copernicus user uptake is the definition of a national implementation strategy and roadmap for Copernicus services adoption. One of the reasons why this is currently missing in the Czech Republic might be, that there is no official Czech Space Agency responding to and funded by the Czech government.

Nevertheless, the situation has been improving year after year thanks to the activities of an active GIS and remote sensing community, especially undertaken by the National Secretariat for GEO/Copernicus and the Prague Charles University, which organise national user uptake initiatives for training and promotion of Copernicus programme.

A very good **event** initiative is the annual **Copernicus National User Forum**, an event that has been already established in a regular scheme and is participated by the key stakeholders, including potential users. The event is a good instrument to discuss opportunities and challenges of the Czech EO market and user needs. Even though the event has been often funded by FP7 projects, it remains a sustainable initiative.

Copernicus National User Forum is organised by the **Copernicus Committee network** (National Secretariat for GEOSS/Copernicus), which is both Copernicus **network**, as well as the official **contact point** and consists of active members representing different institutions. The local experts indicate that it is still lacking of industry and R&D representatives on board.

As it comes to **data access**, the Czech Republic and ESA are discussing potential Collaborative Ground Segment activities and no concrete initiatives have been undertaken so far. The Czech stakeholders are also discussing the best approach for Copernicus data access, as to have additional data access link between ESA and users (cost of maintaining infrastructure and human resources) could be also a potential burden for small countries such as Czech Republic.

With regard to **promotional activities the local Copernicus website[1] is a good example**. It gathers all necessary updated information about the programme in one source and in the local language. However, as the experts point out, marketing and promotion is not enough, as the hands-on contact moments and cooperation between

[1] http://copernicus.gov.cz

institutions and users is needed. For example, the real life demonstrations to show practical examples of EO capabilities towards different stakeholders and hands-on training are still missing in Czech Republic, as well as dissemination of the locally relevant success stories or tool kits. Such demonstrations can show how specific user needs can be satisfied by EO data and products.

National experts suggest also that other users should be also promoters of EO data and products, not only the R&D community or suppliers.

Figure 16: Maturity level by user uptake initiative type

A sustainable support of hand-on trainings is needed, as the only **user feedback, training & education** initiatives for end users were organised through past EOPOWER and Geonetcab FP7 projects (with success and showing a clear demand for it).

As it comes to **start-up initiatives**, they are still missing for the local environment. The planned ESA BIC Prague does not have a concrete implementation plan yet and its funding remains still uncertain.

The underlined scaling opportunity, suggested by the Czech experts, is to use and integrate the INSPIRE user and provider community with the Copernicus user community for better synergies and impact.

3.2.9 Denmark

Summary of Best Practices	▪ The National User Forum to facilitate and secure a direct link between the different national stakeholders, including Copernicus users
Areas for improvement	▪ Lack of centralised coordination about the space policy in Denmark and cooperation between key institutions so far (but expected to be changed soon) ▪ Limited Copernicus presence in existing environmental monitoring related event and in the Geoforum network ▪ Absence of some key stakeholders in National User Forum meetings
Gap identification	▪ Need for a website and promotional materials for Copernicus users in Denmark with updated information about the programme and use cases in the local language ▪ Need for regular events focused on Copernicus, which should be domain specific and present concrete use cases/demonstrations for these stakeholders ▪ Need for start-up initiatives, that could be organised also together with other ICT start-up hubs

Until recently, no administration has had the overall responsibility for coordinating space based activities in Denmark, e.g. to conduct national user surveys addressing the need for EO services and information. Copernicus user uptake has received little attention in Denmark so far, and the authorities with responsibility for various EO related activities have focused on their individual needs. Nevertheless, the National User Forum, which is the Copernicus **contact point** in Denmark, is active, meeting 4-5 times a year and is making efforts to facilitate and secure a direct link between the national representatives of the Copernicus Committee, the Copernicus User Forum and Danish users of EO data and services. The overall goal is to maximise the utilisation of Copernicus in Denmark. Nevertheless, the organisers recognise the absence of some key stakeholder representatives at the meetings of the National User Forum as an issue.

The coordination of Copernicus user uptake initiatives in Denmark might change, as in 2015 the **Ministry of Higher Education and Science was appointed as national administration for outer space**. An important task for the Ministry in 2016 is to be in charge of the preparation of an overall national space strategy. Also the Ministry is going to initiate a strengthened cooperation between national space stakeholders beginning in 2016.

Overall awareness about Copernicus capabilities in Denmark differs among different users. Some governmental end users already use Copernicus data and/or services and have a high awareness (e.g. sea ice monitoring), whereas other potential users have a very low awareness. There is surprisingly little awareness in the private sector, where

the potential for development of downstream services could be high. Awareness at the regional and local level is estimated low as well.

As it comes to **data access**, Denmark and ESA are discussing potential Collaborative Ground Segment activities, but no decisions have been made yet.

The national experts indicate that there is a need for a systematic and continuous approach concerning user uptake activities, e.g. yearly or bi-annual **events** at a couple of different locations in the country and within individual domains are highly recommended.

Stakeholders in Denmark underline that practical presentations of examples and use cases that seem to work very well for disseminating Copernicus application to real life operations in different sectors. The way forward could encompass systematic events and presentations structured in such a way, that all stakeholders are able to attend (e.g. no more than 1 hour travel to get to the location of the event). Such activities could, to a large extent, be organised around case studies, and could be domain specific. Examples could be events focusing on the possibilities and potential for including information from Copernicus services and data in the agricultural domain, and so on.

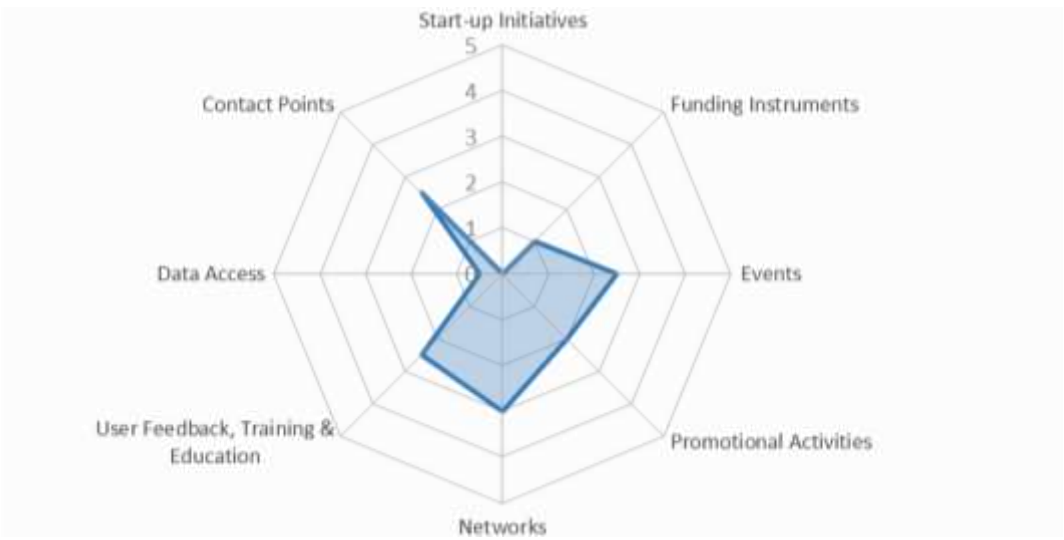


Figure 17: Maturity level by user uptake initiative type

The above activities should be accompanied by **promotional activities**, such as a national website with updated information about planned Copernicus roadshows, and other events, including links to more information, i.e. a national one-point-entry. So far these initiatives are missing in Denmark. Nevertheless, there are some already well-established events in Denmark related to environmental monitoring, such as the

International Conference on Environmental Monitoring and Assessment in Aarhus or EnviroInfo & ICT4S in Copenhagen, which networks could be leveraged for including Copernicus events in their programme.

The same potential synergy is seen in the **network** of Geoforum Denmark - the Danish Association for Geographic Information, which associates 250 companies and organisations from the public and private sectors, 300 private members and 90 volunteers. The network promotes the use of GIS and spatial data for different applications in Denmark and organises many professional trainings and workshops related to GIS. Geoforum also publishes the monthly magazine GEOFORUM. Yet, no Copernicus direct user uptake initiatives within this network had been undertaken to date.

The gap is also identified in the **start-up initiatives**, as no incubators, accelerators or technology transfer centres focused on space/Copernicus applications are currently active in Denmark.

3.2.10 Estonia

Summary of Best Practices	▪ Establishment of Estonian Copernicus user forum in January 2013 ▪ Study „ Use of Earth Observations by public sector“ 2011-2012 – report (Invent Baltic) ▪ Series of training and awareness events: forestry, agriculture, traffic , environment – 2013-1014, (Tallinn Technical University, Tartu Observatory, CGI, Regio) ▪ In 2014 the stakeholder community prepared Estonian promotion material about Earth Observation - webpage www.kaugseire.ee, and book of articles Eesti kaugseire 2014 with an English summary about each article. ▪ Efforts to increase Estonian involvement in International space networks- GEOKOSMOS 2012-2015 (Tartu Observatory, Tallinn Technical University, Tartu University, Ministry of Environment) ▪ Public tenders/initiatives focused on fostering take up of space technologies in the private sector
Areas for improvement	▪ Enhancing efforts to train highly skilled human resources (Increase mobility – training, exchange experience and knowledge, etc.) ▪ Stimulating collaboration between service providing industry and public administrations (end users)
Gap identification	▪ Ground segment: data is available, however, to really efficiently produce space based services and products stakeholders would need more advanced and improved infrastructure to download data ▪ For small countries like Estonia it takes more time to build up competences/capabilities and find financial resources to realise space endeavours; ▪ It takes more time to transfer national research competences to business – thus there is an enhanced need for special education and increased awareness in Estonia ▪ Next steps: Enlarge international/regional collaboration; establish quick link to Copernicus data; start with pilot services for the public administrations and educational programmes for students

The institutional governance structure related to space activities and the involvement in relevant international organisations (EUMETSAT, Regional cooperation of the Baltic countries and the Baltic Sea, Worldwide Group on Earth Observations (GEO)) is quite advanced in Estonia considering that it is a fairly young member of ESA. Through smart **entrepreneurial and innovation support policies** Estonia supported the development of a considerable SME-service provider industry.

Base for Estonia’s space activities is a national space strategy (the latest for 2011 – 2013; next period 2016 – 2020 is under development) in which Earth Observation is marked as a priority. The latest edition “Strategy for Estonian Space Affairs 2011–2013 - Innovation strategy for implementation of satellite based applications and services for the benefit of the society, development of space science and space business in international cooperation” is in English online accessible[2]. The current Estonian Space Strategy sets the systematic use of satellite-based applications in the public sector as a

[2] http://www.eas.ee/images/doc/ettevotjale/innovatsioon/kosmos/estonian-space-strategy-2011-2013-booklet.pdf

goal for 2020. One chapter in the strategy is dedicated to address public users: "2.3.1. Development of public sector services based on space applications". For the definition of the last space strategy, Estonia commissioned in 2009 an analysis on the **status quo of space downstream services' market segments and their future potential in Estonia**.

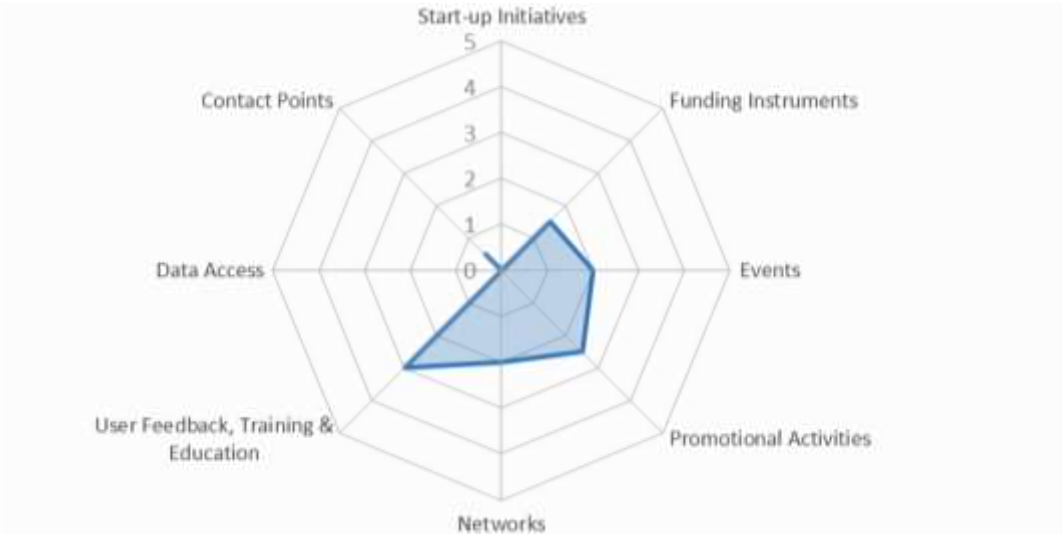


Figure 18: Maturity level by user uptake initiative type

The political responsibility for Copernicus is with the Ministry of Economic Affairs and Communications of the Republic of Estonia[3] which has been mandated by the Estonian government for the implementation of the space strategy. The Ministry of Economic Affairs and Communications is also in charge to coordinate and liaise with ministries and governmental agencies concerned by downstream applications. Space activities are managed by the Space Affairs Council that has been set up by the Ministry and comprises 20 experts from science, industry and public sector, namely representatives of the State Chancellery, the Estonian Academy of Sciences, Enterprise Estonia (EE) and the Tartu Observatory. The National space advisory board is a more formal structure under the supervision of the Ministry of Economic affairs, and comprises all ministries relevant for space. The Ministry of Environment, Agriculture, Internal affairs have especial interest for Earth Observation and based on needs and interests of these Ministries an **Earth Observation council** with the objective to develop a strategy on how to leverage Sentinel data and push entrepreneurship has been established in November 2015. The coordination of Copernicus activities in 2012-2015 was done through a special national project GEOKOSMOS, led by Tartu Observatory. Estonia is represented in Copernicus User Forum by the Tartu Observatory.

[3] https://www.mkm.ee/en

In January 2013 the national **Estonian Copernicus User Forum** has been established. The work of this forum is organised by an e-mail list of participants (50 names, from local authorities, officers, enterprises, students, researchers) and related base-camp files storage. At least once per year a conference or general seminar is organised. In 2013-2014 a series of training seminars for end users was held to introduce Copernicus applications in four topics: forestry, agriculture, transport and security.

In addition to the Ministries, Enterprise Estonia (EE) also has a central role, being the technology and business competence centre of Estonian space affairs and also performing the functions of the Estonian Space Office (EstSO). As such it is in charge of activities related to space awareness raising and knowledge, distributing space related info and organising info days. The Estonian Space Office set up in 2012 a **Remote Sensing Action Group** (Group of Experts) to support activities in the EO-domain. The initiative Estonian Space Society, which aims to support the use of space applications in society and popularise space technologies and space education by involving active citizens from all fields of life.

For the development of its space capabilities Estonia puts strong emphasis on International, in particular **European collaborations**. A cornerstone in this respect is the International collaboration through FP7 projects (GLaSS, FORMIT), H2020 MULTIPLY, with Finnish user forum and Earth Observation teams in FMI, Alto University, SYKE, with whom also several meetings and seminars have been organised. Contacts with the Latvian and Lithuanian teams have also been established for future joint plans.

3.2.11 Finland

Summary of Best Practices	▪ Several national user-workshops supported the dissemination and information activities in Finland ▪ The yearly Finnish Remote Sensing Days are free and open events, and address amongst others Copernicus and its application potential for Finland
Areas for improvement	▪ Better and more long-term planning to reach a broader scope of end users with the User Forum Workshop, to increase the number of participants and to improve the diversity of the participants' profiles ▪ Improved Suomen User Forum website design and updated content ▪ Finland has several Contact Points for the different Copernicus themes, however, these have no official mandate
Gap identification	▪ Limited number of Copernicus events or networks

Finland has distinguished itself through a high participation in the FP7 space programme for Copernicus (GMES) and provided valuable contributions to the service development. It ranked among the top-3 small countries (together with Austria and Norway); more than 7 Copernicus-projects were coordinated by Finish stakeholders and these participated in many more (MACCII, ERA-CLIM2, GMES-C, Polar Ice, DECUMANUS, North State, Advanced_SAR, MarcoPolo, GLaSS, CORE-CLIMAX, GMES-PURE, ICOS-INWIRE, MYOCEAN2, Cryoland, Recover, Cobios, PASODOBLE, AQUAMAR, GEMS, MACC, My Ocean, Geoland II …).

Finland is represented in the Copernicus User Forum by the Finnish Metrological Institute (FMI), a research and service agency under the Ministry of Transport and Communications. While the Ministry of Employment and the Economy is responsible for developing the Finnish space policy, all matters related to Copernicus user uptake is under the responsibility of the FMI. National User Forums have been created to serve the European User Forum, the **Finnish User Forum** is directed by a Senior Scientist of FMI and the Development Manager of the Finnish Environment Institute (SYKE).

Most of Finland's activities around Copernicus user uptake are related to the involvement in the Copernicus User Forum at European level. The Copernicus **Suomen User Forum website** is Finland's key information tool with regards to Copernicus. Apart from that, the FMI makes efforts to reach out the relevant target communities and potential end users via a number of **workshops related to the User Forums** activities and FP7-funded projects. The User Forum website also lists **Contact Points** for 5 Copernicus thematic areas, namely Atmosphere, Marine, Land, Security and Emergency Management and In-Situ, although these do not have an official mandate or budget.

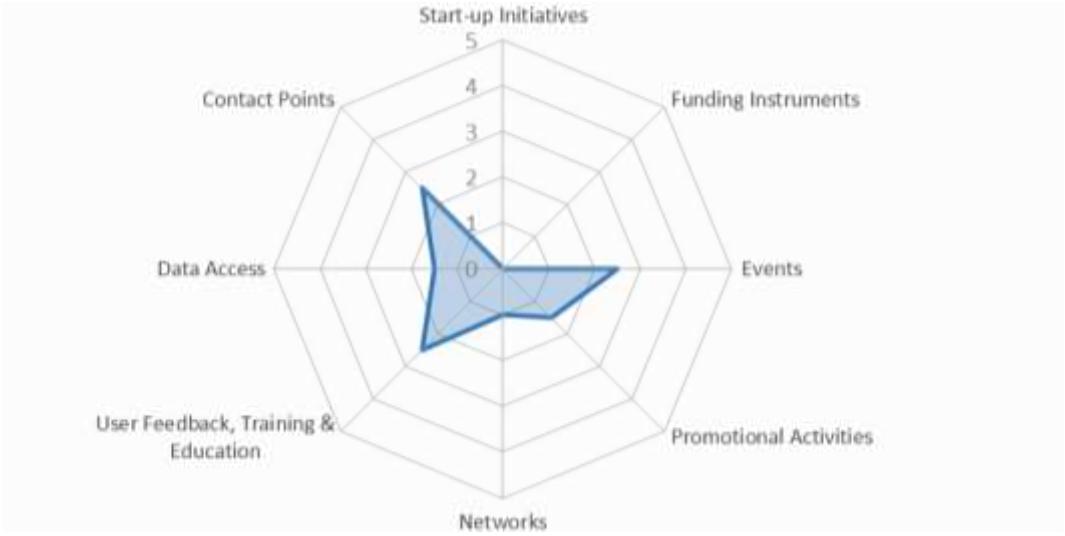


Figure 19: Maturity level by user uptake initiative type

The annual **Finnish Remote Sensing Days** are free and open **events**, organised since 2010 and address amongst other topics Copernicus and its application potential for Finland. The 2015 edition had its main emphasis on the future of remote sensing and business opportunities.

3.2.12 France

Summary of Best Practices	▪ National Contact Points for Copernicus ▪ Mirror site for the dissemination of Sentinel data (PEPS) ▪ Consistent set of synergetic initiatives aiming at disseminating data and tools among public administrations involved in land management (Theia, Equipex Geosud) ▪ Start-up initiatives aiming at stimulating innovation, notably through the funding of projects. Synergy with existing Space-related "competitiveness clusters" ▪ Regular thematic or Space-related events
Areas for improvement	▪ Copernicus-related regional initiatives are very limited in number and take place in regions already involved in Space-based applications. Measures favouring initiatives in "non-Space" regions might be considered ▪ Initiatives related to data access mainly target the scientific community. Extending these initiatives beyond the scientific community might be considered ▪ The presence of Copernicus-related presentations in domain-specific events (e.g. events related to GIS, oceanography, etc.) might be strengthened
Gap identification	▪ Lack of documentation presenting in a user-friendly way (and in native language) what can be done with Copernicus data and services ▪ Lack of methodological guides explaining how to use the data (e.g. which tools are necessary at user level) ▪ Lack of "EO courses" in curricula addressing domains that could benefit from Earth Observation (e.g. spatial planning, biodiversity, sustainable development, GIS, etc.)

A large number of initiatives aiming at increasing awareness on, and use of, environmental data among users have been launched in France. A strong emphasis is put on facilitating data access to (public) users but the other types of User Uptake activities are not neglected. The undertaken initiatives cover a relatively wide variety of domains such as data access, start-up, funding instruments, networks or events. In most cases, these initiatives have been launched by public institutions. Many of them target either end users from the public sector or intermediate users likely to provide value-added service to end users.

As far as **data access** is concerned, France is part of the eight EU Member States having signed an agreement with ESA for the implementation of a mirror site facilitating the dissemination of Sentinel data to all national users. The mirror site, PEPS (Platforme d'Exploitation des Produits Sentinelles), is operated by CNES (the French National Space Agency).

Another significant initiative in the domain of data access is the creation of four **national thematic poles** respectively related to continental surface (Theia), atmosphere (AERIS), oceanography (Pôle Océan) and solid Earth (ForM@Ter). These poles, which are supported by public institutions, mainly target the scientific community. Each pole aims to provide a single access portal to data and products, to

distribute data processing tools and share resources (data processing, archiving, etc.), to offer expert support on the use of data and to contribute to the animation of the concerned scientific community.

In some cases (e.g. Theia) a pole can also build on regional expertise centres, which bring together the local actors (e.g. public and private users and providers). It is also worth noticing that in most cases, the thematic poles do not start from scratch and build on existing activities (for instance, Theia builds among others on the initiative called Equipex Geosud, which aims at making satellite data freely accessible to the scientific community and public stakeholders).

Increasing the number of **regional centres** and/or increasing the user basis by extending the scope of the poles beyond the scientific community might contribute to support user uptake.

Figure 20: Maturity level by user uptake initiative type

Under the aegis of the State-Industry Concertation Committee on Space (COSPACE), a national programme called "Boosters" has been launched with the objective to boost the creation of new **start-ups** and the provision of space-related innovative services. This programme aims at setting up consortia whose role will be to create favourable conditions for the emergence of innovative ideas, and to select and support (through funding) promising projects (it is expected that 10-15 projects are supported every year). This initiative relies on a former initiative which led to the creation of Competitiveness Clusters (each one of the afore-mentioned consortia being coordinated and hosted by a Competitiveness Cluster). Another start-up initiative called "IGN Fab" has been launched by IGN (the national geographic institute) with the

objective to support SMEs willing to develop innovative geo-information services. Both initiatives put in place **funding instruments** to support innovative projects.

Several **networks** connecting public/private users, research institutes and providers have also been established through the creation of **Competitiveness Clusters**. Among the 71 existing clusters, three clusters are directly related to Space applications. A fourth one deals with "risks" and is therefore partly related to emergency management. Although resulting from a national initiative, the Competitiveness Clusters have a regional dimension by design.

Several **events** likely to play a role in the uptake of Copernicus products and service have been organised or initiated either at national or regional level. In particular, the French Ministry of Ecology, Sustainable Development and Energy organised a series of six **Copernicus User Fora** during the period 2009 – 2013. These meetings have not been renewed so far. Several **thematic events**, which are not directly related to Copernicus but are good "vehicles" to create awareness on Copernicus are organised on a regular basis: MerIGEO (a national colloquium organised every two year and dedicated to geomatics applied to the marine environment), annual meetings on "Regional dynamics in geographic information" organised by AFIGEO (the French Association for Geographic Information), annual "Urban Observation" seminars organised by public institutions and dedicated to methods and tools for the observation of urban areas. Ensuring that Copernicus is on the agenda of all these events would certainly contribute to better inform possible users. Some Space-related events like the Paris Air Show in Le Bourget and the Toulouse Space Show could also be better used to increase awareness on Copernicus.

In addition to the above-mentioned initiatives, a regional initiative called A^2S (Programme Alsace Aval Sentinelle) and specifically focused on the Copernicus Space component deserves a specific attention. This initiative, which builds on the expertise of SERTIT (one of the actors of the Copernicus Emergency Management service), encompasses most of the levers relevant to user uptake in order to maximise synergies and to offer a "complete package": creation of an expertise centre, networking of public/private actors, incubation, training and education.

A noticeable fact is that most of the above initiatives should not be seen as isolated activities but as building blocks of a coherent strategy aiming at supporting the use of Space-based Earth Observation data.

For instance, the creation of the four thematic poles is not only the result of a national strategy but it also builds on other initiatives (e.g. Theia builds on the data made available to users through the Equipex Geosud initiative and is also one of the users of the PEPS platform). Another example is the Boosters initiatives, which builds on the existence of the Competitiveness Clusters.

This coherence partly comes from the fact that these initiatives are initiated at national level (even though they may have a regional component). This guarantees that all initiatives tend towards the same objective and that the latest initiatives benefit from the achievements of previous initiatives.

Furthermore, an interesting element is that most initiatives combine several levers (e.g. access to data, access to expertise, training, etc.) rather than focusing on a single lever.

3.2.13 Germany

Summary of Best Practices	▪ Specialised contact point network which has a mandate and budget for one staff and promotional activities ▪ Dedicated Copernicus event to improve awareness, offering networking opportunities and showcasing success stories ▪ Specific funding instrument for technical/economic feasibility studies for public administrations wanting to test Copernicus ▪ Annual Copernicus Masters competition supported by DLR and T-Systems (besides ESA) ▪ Online Copernicus dedicated portal in German language
Areas for improvement	▪ Harmonisation of its contact point network with a general contact point who can redirect requests of users ▪ GeoLizenz is a uniform licencing platform for geodata, however, the usage of this platform has been limited ▪ Coordination at EU level of promotional material for Copernicus
Gap identification	▪ Coherence, accessibility and awareness of access to Copernicus data and data products with a user-centric approach rather than thinking by data or services

As the one of the leading spacefaring nations in Europe, it comes as no surprise that Germany is quite active in the Copernicus programme and its user uptake. On a federal level, Germany set up a dedicated **network of contact points**. Each of these so-called Fachkoordinatoren is responsible to respond to user queries, to stimulate the user uptake in their domain and to provide their technical knowhow to the Copernicus User Forum at European level. The contact points are mandated by the government and funded by their respective public agencies or institutions, but mostly execute this activity in addition to their other tasks. Earlier this year, funding was granted to the institutions with Fachkoordinatoren to employ an additional staff dedicated to bring Copernicus into the day-to-day processes within the public administrations with promising early results. The Fachkoordinatoren are coordinated by the Bundesministerium für Verkehr und digitale Infrastruktur (BMVI) which holds a quarterly coordination meeting to discuss national Copernicus topics, and to discuss items to be addressed at the Copernicus Committee where the BMVI coordinator represents Germany.

The BMVI also funds and manages the **federal funding initiative** specifically devoted for studying the use of Copernicus data within the public administrations both from a technical and an economic point of view. Currently 8 projects are funded with more to come and early success is seen. A more general funding programme for space technology transfer, including EO applications is the INNOspace programme of BMWi/DLR. An example of regional R&D funding for downstream applications can be found in Bavaria.

Germany is the location of two successful ESA **business incubation** centres, one in Darmstadt and one in Bavaria, together accounting for 22 successful EO-related start-ups already. In addition, the Anwendungszentrum Oberpfaffenhofen (AZO) together with ESA, DLR and T-Systems established the annual international **Copernicus Masters** competition which, similarly to the European Satellite Navigation Competition, aims to identify innovative ideas and solutions regarding utilisation of Earth Observation data with already more than 700 ideas since its start in 2011.

Furthermore, BMVI and the German Aerospace Center (DLR) developed **an online portal providing general information** about Copernicus (www.d-copernicus.eu) and the federal funding initiatives. A possible enhancement to the portal would be to make it more user-centric instead of providing information about the Copernicus Services instead of linking use cases to the information sets. DLR and the BMVi publish in addition **promotional material** such as brochures on Copernicus itself and its individual services.

Figure 21: Maturity level by user uptake initiative type

Regarding **data access**, Germany is part of the Member States having signed the cooperation agreement with ESA for setting up a national mirror site in order to provide access to Sentinel data. This is managed by the DLR site of Neustrelitz which is also part of the biggest German data access point, the **DLR Earth Observation Center** which in addition provides access to data gathered by national and other missions (TerraSAR-X, TanDEM-X, EnMap). Rather unique is the Geolizenz.org portal which aims to standardise and ease the licensing process by providing a licencing platform for all sorts of geodata, however, the actual use by Copernicus users is lagging behind.

The most relevant Copernicus event is the **Nationales Forum für Fernerkundung und Copernicus** which is organised annually by BMVI and DLR in cooperation with other ministries, and provides apart from talks, workshops and success cases, also a great networking opportunity. Many more events relevant to Copernicus take place in Germany ranging from leading international conferences and trade shows fares such as INTERGEO and the recently initiated Space Tech Expo Bremen, as well as many workshops and seminars, mostly organised through universities with a strong focus on Geoinformation. Quite a few regional events take place, mostly in partnerships with already established regional **networks**, such as BavAIRia e.V., InGeoForum or GiN e.V., which is essential in connecting local academia and industry with public administrations. Continuously accompanying these user domain events with dedicated presentations and promotion of Copernicus and use cases might add to a greater awareness of the Copernicus added-value and thus, increase user uptake.

DLR also partnered with several academic institutions to set up the **training platform** SARedu in order to provide knowledge and professional training for relevant software products concerning especially SAR-data but also EO data in general.

Concluding, Germany is on a good track with many user uptake initiatives and there are many further opportunities to promote Copernicus. One challenge is how to better target public end users as it is difficult to reach them at their regional and local levels. It is of essence to find the connection to their daily work processes and to highlight the Copernicus added-value. With regards to the promotional material it would be beneficial to expand the material available in German, and stakeholders see a role for the EU in this regard.

3.2.14 Greece

Summary of Best Practices	▪ Several community ad hoc event have been organised in the frame of R&D programmes. ▪ Awareness has increased thanks to the Greek presidency of the Council of the EU ▪ Start-up initiative named LDA Appathon to foster the integration of EO / Copernicus data in new ICT flows ▪ Mirror data access platform under the Copernicus collaborative ground segment
Areas for improvement	▪ More involvement of the international community for sharing experiences and best practises (community focused as well as horizontal focused) ▪ More leverage of si-Cluster network to promote Copernicus
Gap identification	▪ Website, newsletters, training, in the local language ▪ Need of repeated events, and more structured national organisation ▪ Lack of funding to support implementing the use of Copernicus data into operational work processes

The level of awareness of the Copernicus programme within the Greek user community is relatively good, although still a considerable amount of effort needs to be committed before a satisfactory level of user uptake will be reached. At this moment in time, the Copernicus users are mainly situated in the national, regional and local public agencies. Some users from the private sector are involved but they still represent a small portion of the total pie, and are often involved because of public procurements. The most commonly used services are security, emergency, marine environment and land monitoring.

Under the recent Greek presidency, several initiatives have been organised in order to raise awareness of the programme, both under the form of **events** as well as **user feedback, training and education initiatives**. For instance, in May 2014 a conference on the overall programme was organised between ESA, the Commission and the Greek Presidency of the Council of the EU, putting in place a good combination of policy related high-level speeches and insights into the current and future needs of the end users. Unfortunately, the event took place only once, although this structure could have been reused as a national EO/Copernicus annual conference, bringing together representatives from several EU institutions as well as national and regional stakeholders. Another important European event, the Space & Security conference, has been organised in order to address these topics.

Under different R&D projects, several user uptake activities (mainly related to **user feedback, training and education**) have been performed. The main areas explored are related to training Civil Protection during an emergency (e.g. wildfire), as well as in the context of urban environment and development, and smart cities. Furthermore, the

network si-Cluster organised a specific training for young scientists and professionals on Earth Observation in collaboration with ESA. Despite the fact that the initiative was well perceived, the training was just a one-off initiative. Initiatives like this are considered to be essential for their educational importance with respect to creating skilled potential future staff and current staff active in the field.

In Greece, a **start-up initiative** named LDA Appathon is organised every year in order to foster the integration of EO / Copernicus data in new ICT flows. It could be considered as a mix between a national idea competition and a hackaton. Only Greek companies are allowed to take part.

Greece signed the agreement with ESA for putting in place a mirror data access platform under the collaborative ground segment agreement. The mirror platform is operationally granting **data access** to the full set of Sentinel data. The National Observatory of Athens coordinates the mirror platform.

Figure 22: Maturity level by user uptake initiative type

The main **network** operating in the country are the si-Cluster and the Hellenic Association of Space Industry. The first one is an initiative run by a bigger network named Coralie which focus is to foster science, innovation and entrepreneurship. si-Cluster is the branch dedicated to the space industry and encompasses more than 30 industrial members, large businesses and SMEs, academic institutions and research centres. While specific references to EGNOS and Galileo are made on their webpage, the same does not apply for Copernicus and instead the general term Earth Observation is used. The second network identified, the Hellenic Association of Space

Industry, has the mission to maximise the Greek industrial participation in major space programmes and is of less relevance for the scope of this study.

One of the main difficulties in Greece in implementing Copernicus data into work processes consists of the **lack of funding**, needed to implement those new operational process/systems. It has to be said that the general awareness of the Copernicus programme resides among a specific set of companies as the public administrations commissioned the acquisition of the date and the elaboration at national/regional level to private services providers. Outside this scheme, there is generally a low level of awareness. In order to foster the use of Copernicus data and information, it would be essential to organise workshops, conferences and events to ensure cross-fertilisation within the wider eco-system, with a strong emphasis on showcases. It goes without saying that **websites, newsletters and trainings in Greek** are fundamentally needed in order to reach the entire community.

3.2.15 Hungary

Summary of Best Practices	▪ FÖMI Remote Sensing Centre with its strong technical competences and an excellent reputation, supports national activities within the Copernicus framework ▪ HUNAGI (Hungarian Association for Geo-information) is an extremely relevant network bringing together several institutions to promote, stimulate, encourage and support the development and use of GI and associated technologies ▪ Even in absence of a national space agency, Hungarian space activities are strategically oriented and steered by appointed entities such as the Hungarian Space Office (HSO) and the Hungarian Space Board (HSB)
Areas for improvement	▪ Improve the operational use of Copernicus data and services beyond traditional applications such as land use/land cover mapping and meteorology ▪ Improve the presence of Hungarian industrial and scientific presence in Copernicus
Gap identification	▪ Lack of distributed roles and responsibilities among institutional entities for the different thematic areas of Copernicus ▪ Limited availability of suitable national funding instruments to develop new business opportunities in the space and Copernicus domains in order to improve the Hungarian system competiveness

Space related activities in Hungary are coordinated and steered by two well identified entities such as the Hungarian Space Office (HSO) and the Hungarian Space Board (HSB). HSO manages, and coordinates the Hungarian space activities; in 2010 HSO was administratively integrated into the body of the Ministry of National Development. HSB supports the work of the Minister on strategic matters.

The main technical focal points are Institute of Geodesy, Cartography and Remote Sensing (FÖMI) and the Hungarian Meteorological Service (OMSZ), for what concerns cartographic and meteorological applications respectively.

FOMI is the national cartographic institute which directly manages all the geospatial applications and datasets related to land management (Land registry, base layers, etc.) and geodesy. Given the high technical skills available, FOMI has been responsible for the verification and enhancement of the Hungarian part of some important Copernicus Land products (Corine Land Cover and High Resolution Layers 2012).

The Hungarian Meteorological Service (OMSZ) fulfils duties such as collecting, processing and (in the last few decades) providing meteorological data and information. It also analyses and calculates weather development by using its own numerical model runs, as well as up to date forecast products issued from international weather forecast centres.

Concerning other thematic areas of Copernicus services, Hungary could develop a wider use of such products and services including country specific downstream services in order to meet specific domestic requirements.

Hungary features also two very relevant **networks** associated to space and geospatial information, having also Copernicus relevance: HUNAGI (Hungarian Association for Geo-information) and the Hungarian Society of Surveying, Mapping and Remote Sensing (MFTTT).

HUNAGI embraces about 100 Institutions and Organisations to promote, stimulate, encourage and support the development and use of geo-information and its associated technologies and to strengthen the institutional links between the multidisciplinary geo-information communities in Hungary and abroad. HUNAGI carries out actions related to the EUROGI membership and provides representation of its members' interest on international fora. Therefore HUNAGI can be considered as a very important actor in order to coordinate and support Copernicus user uptake initiatives in Hungary.

Figure 23: Maturity level by user uptake initiative type

MFTTT has a similar, but more technical orientation with the mandate to facilitate the promotion of technical progress, raising the technical level of professional education and dissemination. Similarly as HUNAGI, it is a good network that can provide the necessary technical skills and contacts to orient Copernicus user uptake actions and make them effective in the Hungarian territory. MFTT organises also **events** such as the Annual Meeting of the Society every two years. In addition to those lectures,

discussion meetings, conferences, conventions, exhibitions, domestic and foreign study tours are organised regularly.

Concerning space and geospatial related activities with Copernicus implications, it is worth to mention that Hungary has a dedicated coordination office for INSPIRE related activities and processes. Such office is the UNSDI Hungarian Coordination Office (HUCO), with a national and cross border mandate to support the implementation of the INSPIRE Directive and to raise awareness on SDI at political level acting in coordination with stakeholders and other interested parties.

Hungary lacks dedicated national **funding instruments** for the development of space related business and technology, which is reflected in the absence of Hungarian space industry from Copernicus operational services. **Education and training** in space in Hungary is present as part of the universities background, but there is no specific action in developing specific educational activities in a Copernicus perspective.

3.2.16 Iceland

Summary of Best Practices	▪ International cooperation is very much exploited for the themes like Artic, Ice, Atmosphere and Emergency ▪ Contributing to Copernicus besides not being either part of ESA or EU ▪ Particularly interested and active in the Emergency Management service, had proven the utility of activating Copernicus for the volcano eruption in 2014
Areas for improvement	▪ More visibility on Copernicus through dedicated initiatives since so far the community is building around the broader EO landscape ▪ Potential for a broad exploitation of Copernicus data and services (i.e. especially Land, Climate Change, Atmosphere and Emergency), considering the geographic peculiarity of the country
Gap identification	▪ Coordination at EU level of promotional material for Copernicus

The Iceland scenario is atypical since Iceland is part of the Copernicus programme, contributing to it via financial quota, but it is currently not part of ESA or the EU. A national funding instrument for EO/Copernicus user uptake initiatives does not exist, neither are there EO or space-related start-up initiatives. The majority of EO user-uptake initiatives so far were organised with a thematic bottom-up approach, without coordination on the governmental/administrative level.

The remoteness of the country encourages actors to build up partnerships with other countries/ geographical areas that face similar conditions. For this reason, most of the initiatives target global actors and the role of remote sensing in those remote areas. Most of the user uptake initiatives organised are of the **User training, feedback and education** type. The role of academia and education is relatively important, resulting in the organisation of education seminars and workshops.

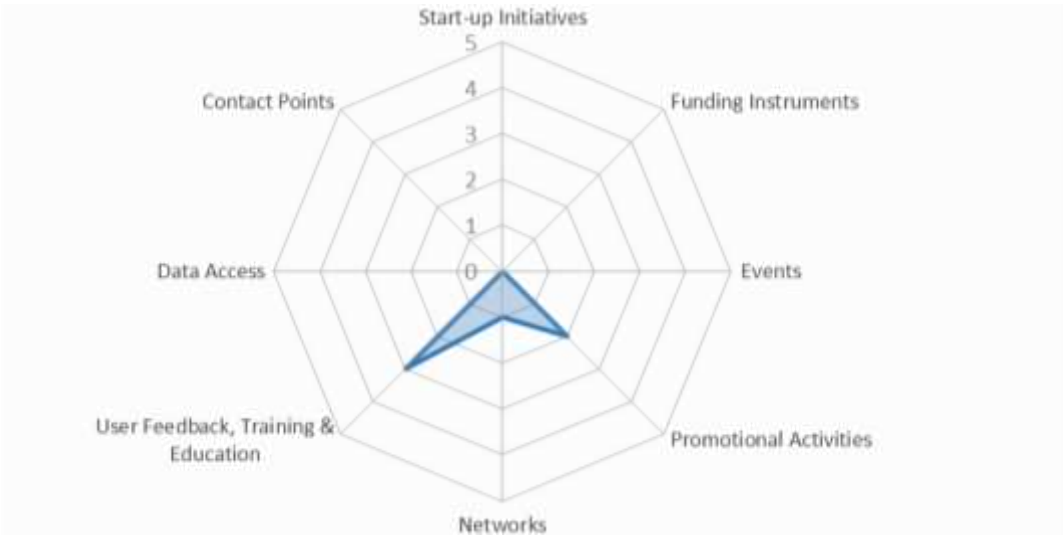


Figure 24: Maturity level by user uptake initiative type

The national Civil Protection in Iceland activated the **Emergency management service** at the occasion of the volcano eruption in late 2014. The use of Earth Observation and therefore Copernicus data sets is considered to be fundamental in a country with such geographical conditions. As part of the relevant interest in the Emergency Management Service, the community has also a special interest for the Land Monitoring Service as well as Climate Change and Atmosphere Monitoring Services.

Much needs to be done to raise full awareness of the programme. The data products are not yet well integrated in the national and local system. There is great potential for the full exploitation of data and information, considering the relevance of Earth Observation data and Copernicus Services for the country.

3.2.17 Ireland

Summary of Best Practices	▪ EPA Geoportal ▪ Irish Earth Observation Symposium (IEOS) ▪ Technical trainings & workshops ▪ IRLOGI Space & Place Awards, annual recognition prize awarding the most important and innovative applications using in the EO-related areas of GIS and LBS
Areas for improvement	▪ Limited start-up interest in EO ▪ Lack of Copernicus data accessibility know-how
Gap identification	▪ No dedicated EO network or association ▪ Need for comprehensive tutorial tool for Copernicus data use

Despite the absence of a comprehensive EO supporting policy at national level, the Irish EO stakeholders have over time tried to stimulate the development of Ireland's role in this field, e.g. through policy papers (An Earth Observation Strategy For Ireland – EPA) or the creation of an ad-hoc GMES/GEO Forum in 2003. Apart from the traditional national themes, several EO downstream application areas are of particular local importance, such as **natural resource management** (e.g. fisheries, precision agriculture, forestry inventory), **marine safety & security** (e.g. vessel tracking, oil spill detection), and **environmental monitoring & forecasting** (e.g. flood forecasting, storm surge predictions, air quality monitoring).

Overall awareness of the Copernicus programme with EO stakeholders is relatively **high**. Nonetheless, the programme's impact on the country's user community is currently still limited, which according to stakeholders, is mainly a result of persistent lack of knowledge in relation to **data accessibility**, as well as the overarching perception that working with these data or data products requires significant technical expertise or investments. Consequently, stakeholders have expressed the need for a **comprehensive tutorial tool** with open source software in order for Copernicus data to effectively reach end users.

Even though there are **no dedicated networks for EO industry** currently in place, Ireland does house a rather **significant EO community**. Furthermore, related industry associations such as the **Irish Organisation for Geographic Information (IRLOGI)** or the recently founded **Irish Space Industry Group (ISIG)** do count several EO/GIS industry payers amongst their members.

The **Irish Earth Observation Symposium (IEOS)** annually brings together the majority of the Irish EO research community, yet also increasingly attracts public administrations and industry, with its 2015 edition reaching approximately 150

participants. Events organised in the application domains where EO plays a central role include Geographical Information Systems (e.g. GIS Ireland Conference, GeoScience Conference), Marine and Climate Change (e.g. Space Innovation Powering Blue Growth, Environment Ireland) or space in general (e.g. Irish Industry Space Day).

The growing interest in EO solutions has also been reflected in the increasing number of **technical trainings and workshops**. At IEOS2015, for example, a dedicated **Sentinel Data Users workshop** was hosted for industry and stakeholders present. Furthermore, also **industry-driven training in GIS and EO** is on the rise (e.g. IMGS Geospatial User Group, GeoDATA Seminars).

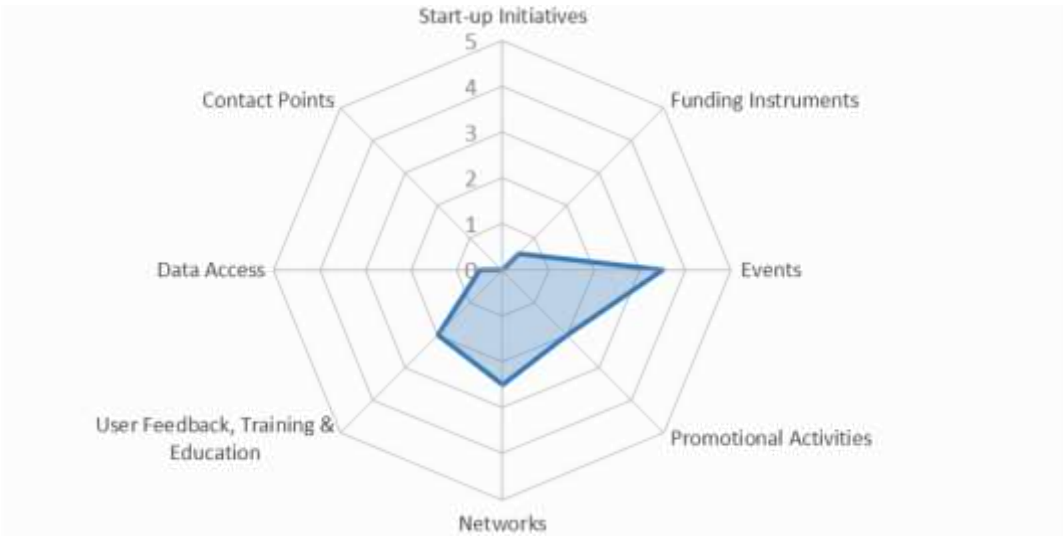


Figure 25: Maturity level by user uptake initiative type

In terms of data access, the **Environment Protection Agency (EPA) GeoPortal** is a noteworthy online data access point. The portal offers GIS data in a broad range of related domains (e.g. water quality, Corine land cover, soil structure), web mapping tools and easy-to-use GIS datasets, with ample attention for user support and interactive training opportunities.

Lastly, the **IRLOGI Space & Place Awards**, is an annual recognition prize which awards the most important and innovative applications using in the EO-related areas of GIS and Location-Based Services (LBS). Prize categories cut across different user domains, such as 'Best GIS Application in the Public Sector' or 'Most Innovative use of Geographic Information'.

3.2.18 Italy

Summary of Best Practices	▪ The National User Forum. established in 2014 to exchange information and promote activities in the frame of the Copernicus ▪ The Italian extended Collaborative Ground Segment, which is the infrastructure providing access to Sentinel data, national contributing mission and enabling a network of thematic exploitation platforms ▪ Well identified delegations and contact points at national level guaranteeing proper representation in the Copernicus fora ▪ Active operational access and use of Copernicus products in the field of Emergency and Land
Areas for improvement	▪ Improve the network of reference contacts in the regional and local administration to foster the awareness on the current Copernicus service offering to support working practices ▪ Better exploitation of the existing best practices to showcase successful access and use of Copernicus data and products
Gap identification	▪ Very low operational involvement in the Atmosphere and Marine domains ▪ Under-exploitation of Copernicus services to address sectorial needs that may potentially benefit: ecosystem management, local planning, air quality, biodiversity ▪ Scarce (maybe absent) presence of Copernicus educational courses in academia. Currently there are not specific modules/teachings oriented to Copernicus

Italy is actively participating to Copernicus thanks to a good delegation to institutional representatives with clear mandates with respect to the different Copernicus fora and user groups. In particular, it is worth to mention ISPRA being the national delegate to the Copernicus User Forum and also acting as a **Contact Point**. ISPRA also provides the national focal point in EIONET and is in charge of the secretariat of the **National User Forum**, an important tool whose main purpose is to discuss upon, promote and disseminate the potential use of Copernicus services towards the various relevant actors in the country. The National User Forum plays a central role in the Italian Copernicus panorama, since it federates several public and private entities such as national and regional institutions, research centres, industry and enterprises. The National User Forum settles an annual plenary meeting to discuss about each Copernicus Service and Ground Segment and organises 4-5 thematic workshops per year. The most recent meeting to date was held in November 2015 and it was dedicated to the Copernicus downstream opportunities for SMEs in Italy.

Since Italy is heavily exposed to several environmental and natural disasters, the Italian Civil Protection (DPC) has been traditionally involved as the main focal point in the definition of the requirements for the Emergency Management Service (EMS) since the early days of GMES. It was indeed leading the GMES Emergency Implementation Group and then it has been coordinating the User Advisory Board during the R&D phase. Today DPC is one of the main users of the Copernicus Emergency Service, registering

so far 20 activations which account for 14% of the overall Copernicus EMS activations over the past 4 years, and 20% of the activations triggered over Europe only.

As for the Service Component a number of Italian industries are actively involved with a leading role of core service provisioning in the Emergency and Security domains, consolidated during the R&D phase and now operational since GIO phase.

Italy has developed an important example of a land downstream service in the field of soil sealing that ISPRA is delivering since the past two years in cooperation with the National System for Environmental Protection and the private sector. This is an excellent showcase of the joint exploitation of Copernicus data/services together with national capacities in order to minimise overlaps and maximise synergies. In the frame of a MoU between ISPRA and ASI, another interesting downstream solution opportunity is currently being studied in the field of air quality, to combine near real-time in-situ data and Copernicus data in a local model.

Figure 26: Maturity level by user uptake initiative type

For what concern space and **data access**, Italy has a well-established background being the EU third contributor to the ESA annual budget and an important player in the Space scene also at global level. The Italian Space Agency plays a leading role in the development and scientific exploitation of COSMO-SkyMed, which is one of the key Copernicus Contributing Missions. In terms of involvement in the Copernicus Space Component, Italy is actively contributing to the Sentinel core ground segment and is currently developing its **own Collaborative Ground Segment** which will not only provide direct near real-time access to data but it will also integrate a service platform for the exploitation of Sentinel data in different thematic fields.

In the next future a virtual laboratory for coastal risk will be implemented via a public procurement in the framework of an extended cooperation between ASI and ISPRA. This could be an important showcase for the exploitation of Sentinel data in service platform perspective; EU investments here could be effective and lead to a significant return in terms of visibility and outreach given the wide user community engaged.

Concerning **funding instruments**, Italy has a good number of different national and regional mechanisms to support the development of new space related services. The main instrument is the National Operation Programme Research and Competitiveness (which has a wide target), complemented by other more specific funding programmes such as the Principal Investigation opportunities offered by the Italian Space Agency.

Italy is rich also in space/Copernicus related **promotional activities** and **events** such as, for example, ASITA, the Space Week or, at local level, the Inter-regional cooperation in space events.

In such a well configured background for Copernicus uptake the main area for improvement is certainly the top-down knowledge transfer to the regional and local administrations that seem to lack both the basic information about the Copernicus services' potential benefits and the way to access the services. There is also a general tendency in preferring the development of internal capabilities rather than the exploitation of externally provided services, which is a limit to the uptake of Copernicus services. In this sense user groups shall be carefully identified based on sectorial needs and involve them in ad hoc information sessions to showcase the use of Copernicus in specific operational contexts.

Several **networks**, clusters and associations are working in the space sector and they may be used as lever to identify such user groups and achieve the capillarity in the service distribution. In this picture an important support may also come from the NEREUS RCOs, but it is worth to mention also the regional Aerospace districts and industrial associations such as AIAD, AIPAS and ASAS as important **networks** to stimulate industrial cooperation for the exploitation of Copernicus related opportunities. **Start-up initiatives** are currently mainly located at regional level (for example BIC Lazio and LazioInnova), but they seem to be effective in the support to new business ideas.

There are areas for improvement also related to specific Copernicus domains, in particular in relation to the CMEMS products (data are provided by research and are

used mainly by researchers with a very limited involvement of Public Administration users) and in regard to CAMS services due to the difficulty to use the CAMS Core service (as it is) at national level because not suitable for the required needs. Additionally, environmental agencies, research institutes and universities in other areas and application domains such as ecology and ecosystems management (i.e. coastal dunes) or biodiversity applications could better exploit Copernicus data and products. Furthermore, Copernicus is still absent form academic curricula, which is a strong limit to the presence of Copernicus as part of the standard background of technical staff in institutions and industry. Finally, Italy has a strong demand for terrain stability analysis where new Copernicus data/services could bring a significant value (e.g. the systematic InSAR processing of large SAR data collections from Sentinel-1 and other SAR Copernicus Contributing Missions).

3.2.19 Latvia

Summary of Best Practices	▪ Study on "Space Downstream Services in Latvia" by Invent Baltics (special focus on the supply and demand in Latvia that is linked to European Copernicus/Galileo downstream sector.) ▪ Setting up an (informal) Latvian GMES (Copernicus) User Forum as key reference point for Copernicus matters ▪ Latvia's Space Technology Cluster providing support and information for companies active in space technologies ▪ Development of "Space Technologies and Services Cluster 2012-2015", support for development and market access for new EO/Copernicus based products and services
Areas for improvement	▪ More active participation in Copernicus governing bodies (especially User Forum): since Copernicus User-Uptake concerns many competences different ministries should be actively engaged in Copernicus related policy making, including Ministry of Environment Protection and Regional Development, Ministry of Interior, Ministry of Economics, Ministry of Agriculture. ▪ The Ministry of Environmental Protection and Regional Development is by far more concerned by the implementation of Copernicus Services as the Ministry of Education and Science that is mostly in charge for Copernicus related matters. Defining the responsibility with view to the actual use and implementation of Copernicus-services might be more efficient for up-take. Hence the Ministry of Environmental Protection and Regional Development has to be more involved in the decision-making process at European level. ▪ Performing national cost-benefit analyses of the Copernicus programme in Latvia ▪ Identifying Latvian end users" need for Copernicus services, by considering cost-benefit aspects and Latvian relative strengths and weaknesses (high expertise in LIDAR-based measurements, for example), with an objective to decide in which fields priority should be given to the adoption of Copernicus services and in which fields it is reasonable to develop tailor-made services with public funding (as normally done in EO markets);
Gap identification	▪ Analysing financial issues and budgetary priorities (the results of the current study indicate that some potential end users in Latvia seem to be chronically underfinanced).

Latvia is represented in the Copernicus User Forum by the University of Latvia. At institutional level Latvian participation in the Copernicus Committee and its Security Board is divided between two ministries – Ministry of Education and Science and Ministry of Defence. The main responsibility lies with the Ministry of Education and Science that is also responsible for the Latvian Space Strategy. The National Working Group on Space Technology (NWG) supports the Ministry in the process of phrasing a comprehensive long-term space policy for Latvia. It comprises representatives of relevant state administrations, scientific institutions and private companies. As first important initiative, **an informal local GMES (Copernicus) User Forum** was summoned up in October/November 2012. Ministries and major public agencies nominated a "GMES (Copernicus) contact point" to become continuously involved in Copernicus related policy making. The mission of the informal Latvian Copernicus User Forum includes awareness raising, better exploitation of the services available to Latvia,

forum for better linking Latvian Copernicus-Community and better networking them at international level, Copernicus end user empowerment. The members of the local Copernicus User Forum could become rotating representatives of Latvia in Copernicus User Forum contingent to the contents and priorities of annual Work Programmes of the Copernicus programme (shared governance).

Figure 27: Maturity level by user uptake initiative type

The Foundation Ventspils High Technology Park (VHTP) is a key player of the Latvian space community. Its mission is to provide necessary infrastructure and support services for the development of companies that are engaged in the field of high technologies. Since 2009 VHTP hosts and coordinates the activities of **Latvia's Space Technology Cluster**[4]. The cluster provides support and information for companies active in space technologies. Its membership comprises 53 members of which 38 companies.

In the frame of the initiative Activities for Development of Space Technologies and Services Cluster 2012-2015, the cluster provides member companies with 'De minimis funding' (max. 14 200 EUR per member) for developing new EO, GNSS or SatCom based products or services and for introducing them to the market.

[4] http://www.vatp.lv/en/SpaceCluster

3.2.20 Lithuania

Summary of Best Practices	▪ Entrepreneurial support and strong focus on innovation (innovation related events that include the dimension of Copernicus) ▪ Science and technology parks "valleys" to support science and innovation
Areas for improvement	▪ The valleys could be exploited to stimulate and support the development of Copernicus-based services and products
Gap identification	▪ Initiate Copernicus user uptake initiatives in general to start raising awareness

Base for Lithuanian's space activities is the National Programme on Development of Research, Technologies and Innovation in the Space Sector for 2010–2015. Although Lithuania has a space tradition it just recently joined ESA as a cooperating state in October 2014. The competence for space is with the Lithuanian Ministry for Economic Affairs. The government has invested in five **science and technology parks**, known as **valleys**, to support science, innovation and technology in Lithuania by providing access to highly specialised equipment and infrastructure. These valleys could be exploited to stimulate and support the development of Copernicus-based services and products.

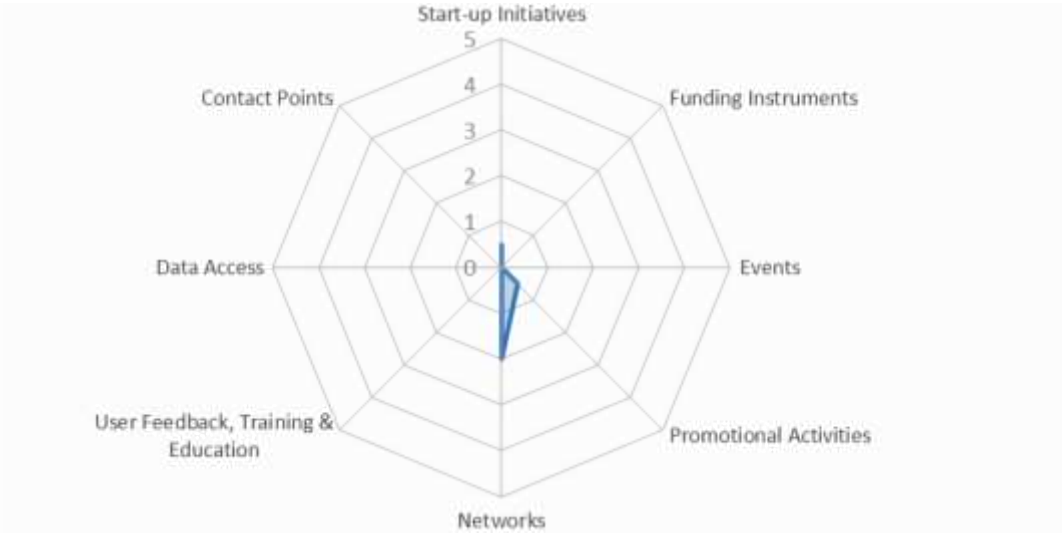


Figure 28: Maturity level by user uptake initiative type

The **Lithuanian Space Association** or LSA whose mission is the promotion of space-related activities of Lithuanian R&D institutions and SME's, co-operation with the European Space Agency, bilateral relations with national space agencies and companies working in the space industry, serves also as a point of reference for Copernicus related matters. It comprises 25 Lithuanian R&D institutions, Universities and SME's co-operating in Aerospace related activities.

3.2.21 Luxembourg

Summary of Best Practices	▪ Luxembourg Space Cluster and successful space community ▪ LuxLAUNCH Special National Support Measure ▪ Luxembourg Earth Observation Day
Areas for improvement	▪ The above initiatives are not addressing Copernicus directly, but are mere space-related activities in general. A stronger emphasis on Copernicus would be beneficial ▪ The business networks miss representatives from the user communities ▪ Earth Observation applications could be more of a focus in the space start-up initiatives ▪ The events such as Luxembourg Earth Observation Day are not organised on a regular basis
Gap identification	▪ Lack of a direct technical contact point for Copernicus users ▪ Need of materials with explanations and awareness raising among end users on the usefulness of the data (type, characteristics, what can be done with the data…) ▪ Organisation of hackathons and other initiatives targeting start-ups

As it comes to Copernicus user uptake initiatives in Luxembourg, they are usually organised together with other space-related activities and not directly visible for the Copernicus programme itself.

There is however a very active and successful **space community** in Luxembourg. Luxembourg has, in fact, invested heavily in its space industry, especially since it became a European Space Agency member in 2005. Government spending in the sector currently amounts to 0.03% of GDP, ranking the country in the ESA's top five in per capita terms. There are numerous companies that are service providers. The Government took the decision in 1985 to invest in and set up SES, a very successful model of the public-private partnerships. Around 20 companies and several public research laboratories are currently active in the space sector and their turnover rose by 21% to €2.3 billion in the four years to 2013.

The Copernicus intermediate users in Luxembourg such as the scientific community and companies are very well aware of what is happening in Copernicus programme via their own **network**, such as **Luxembourg Space Cluster** and participation to European working groups. Users such as public administration are aware, to a certain extent, through the scientific and business communities. Ministry of the Economy – Space Affairs for the Copernicus Programme is the **Copernicus contact point** and has the official mandate for coordination of the space programmes at national level. It supports Luxembourg participation in the ESA and EC programmes and represents the country in international networks. However, there is no special focus on Copernicus, especially regarding the presence of a specific contact point for users. Luxembourg

supports very well its R&D community in financial instruments, including funds for space and supporting participation in ESA programmes. The **national funding instrument** that can be used for Copernicus user uptake is the **LuxLAUNCH Special national support measure**, which funds market feasibility studies for space projects, including Earth Observation applications.

An ESA Technology Transfer Network Broker is supporting **start-ups** and SMEs, but no Earth Observation products have been developed under it so far.

Figure 29: Maturity level by user uptake initiative type

The other Copernicus user uptake initiative worth mentioning is the **Luxembourg Earth Observation Day**, an **event and promotional activity** which was organised three times so far with the objective to discuss and promote the potential of Earth Observation in different applications among end users and service providers.

The Luxembourg experts underline that there is a need for further explanations and awareness raising among end users on the usefulness of the data (type, characteristics, what can be done with the data…) for their needs in the context of a small country like Luxembourg.

3.2.22 Malta

Summary of Best Practices	▪ Overarching Smart Specialisation Strategy to foster national R&I in specific thematic areas of excellence for Malta ▪ Satellite Solutions for Smarter Islands conference with a relevant focus on EO ▪ Malta App Challenge for satellite based datasets is an innovative example of user uptake initiative ▪ Malta GeoPortal: government funded platform making GIS data available to both industry and wider public ▪ Different EO user training events have taken place
Areas for improvement	▪ Low overall awareness of Copernicus programme and application areas ▪ Setting-up a step based user uptake approach ▪ Within such an approach focus on topic areas included in the Smart Specialisation Strategy such as: Maritime and Aquaculture, Aviation/Aerospace, Public Health, and LBS & Tourism
Gap identification	▪ Lack of any EO related networks ▪ Absence of central formal contact point for Copernicus/EO ▪ No space- or EO-specific funding instruments available

Malta's overarching **Smart Specialisation Strategy** seeks to push for a national Research & Innovation (R&I) specialisation in a number of thematic areas where it has a distinctive competitive advantage. With ICT as a central enabler, the Maltese government aims to use the public R&I strategy to stimulate the development of **innovative applications and services** in these domains.

This overall policy trend has been reflected in several of the country's recent **events**. In that light, the country hosted the **'Satellite Solutions for Smarter Islands'** conference in cooperation with Eurisy. The conference was an important landmark event for increased national efforts in the domain of EO, with presentations on a broad set of relevant topics (data access, possible applications, and funding possibilities) by a wide variety of both national and European public stakeholders, as well as industry players.

Supported by several government and industry initiatives, Malta's growing **start-up scene** is a promising indicator of its potential towards Copernicus user uptake. The recently launched **Malta App Challenge** for satellite-based datasets and GNSS signals, is an excellent example of such an innovative user uptake initiative. While the results and impact of the challenge still remain to be seen, its overall approach and engagement with the island's upcoming start-up community demonstrates the country's ambitions in this field (see Case Study).

Furthermore, the Maltese government has invested considerably in terms of **data access**, making GIS data available to both industry and the wider public. With the creation of the **Malta GeoPortal**, interested parties can now make use of an easily

accessible GIS platform, which includes public data (including EO data products) from a broad range of public entities and domains. Finally, a number of **EO user training events** have been organised, with additional ones scheduled in the near future (e.g. EO Toolbox training).

Despite the country's recent interest in geospatial applications and EO solutions for *smart* services, the Maltese user community still has an **overall low awareness** of the Copernicus programme and its services across different user segments.

In addition, the country has a relatively **narrow industry ecosystem** in the GIS and EO domain, which is also resembled in the **lack of any networks** in this area or any related fields. Furthermore, **no dedicated national funding programme focusing on EO/GIS** is currently in place.

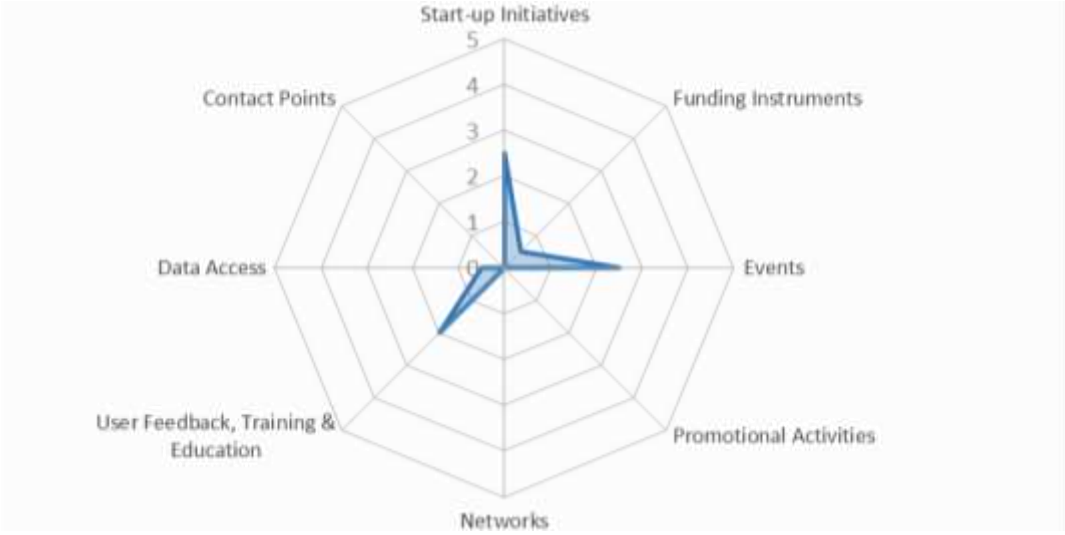


Figure 30: Maturity level by user uptake initiative type

Taking into account the overall low Copernicus awareness, a **step-based user uptake approach** is recommended by stakeholders. The first priority should focus on **raising awareness** on the **Copernicus services** among different user communities. As indicated by local stakeholders, the immediate organisation of more advanced user workshops would risk to miss its intended effect, as users might be insufficiently attracted to attend these without prior knowledge about the programme. Only in a later stage, **targeted user training workshops and/or events** would be able to have a significant impact upon Copernicus user uptake.

It is important to note that such advanced workshops should likely be focused on **targeted application domains** and associated service areas/relevant datasets. In the light of the mentioned country's Smart Specialisation Strategy, the topic areas

Maritime and Aquaculture, **Aviation/Aerospace**, **Public Health**, and **LBS & Tourism** are among the most suitable priority domains. In terms of target user groups, the country's vibrant **start-up community** as well as the already engaged **local authorities** are likely the user segments with the highest uptake potential.

Finally, it has been indicated that the installation of a formal Copernicus **contact point** could further benefit the user uptake and ensure consistency in the overall user uptake initiatives across different user communities. Such contact point could be established within one of the current key authorities in the field of EO/Space, such as the Malta Council for Science and Technology (MCST) or the Malta Environment and Planning Authority (MEPA).

3.2.23 The Netherlands

Summary of Best Practices	▪ Government founded National Remote Sensing Programme and User Support programme to stimulate the development of the EO downstream industry in the Netherlands ▪ Regional specialisation strategies in targeted EO application sectors ▪ Satellietdataportaal providing users with access to multiple satellite data sources and typologies ▪ GeoBusinessNederland (GBN) as industry network active in geo-information ▪ Earth Observation Science & Society Symposium (EO3S) bringing together EO scientists and user community
Areas for improvement	▪ Need of targeted awareness raising in key application domains ▪ Use of public procurement (especially from local and regional authorities) as an enabler to launch relevant Copernicus applications & services
Gap identification	▪ Lack of technical training sessions ▪ Limited interest from start-ups in EO

The Netherlands has early on invested in the development of EO applications. Through national support programmes such as the **National Remote Sensing Programme (NRSP)** and the **'Programme Gebruikersondersteuning' (User Support – GO)**, the Dutch government has been successfully stimulating the development of the EO downstream industry.

Overall, overarching national strategies have identified the domains of (i) **agriculture & food security**, (ii) **energy** and (iii) **smart cities & urban development** as the main priority areas for EO uptake. **Regional specialisation strategies** play a key role in fostering EO application development, such as in agriculture (region of Flevoland) or maritime & offshore (Northern Holland).

The **GeoBusinessNederland (GBN)** unites Dutch companies active in the broader field of geo-information business. Member companies can participate in Special Interests Groups (SIGs) and thematic Commissions organised by GBN, which touch upon different thematic areas and user uptake activities.

User driven events such as the **Earth Observation Science & Society Symposium (EO3S)** bring together EO scientists and a broad EO user community (e.g. industry, administrations) to discuss the growing application possibilities and trends. Other events on thematic topics, such as security & infrastructure management (Aardobservatie op de Kaart: Samen voor Veiligheid die Rendeert) or GIS (e.g. GeoBuzz) are held as well.

The **'Satellietdataportaal'** (*Satellite Data Portal*) provides the user community with access to EO data from multiple sources and in different data categories (i.e. raw data/processed 'GIS Ready' data/Sentinel Data Hub and other free external data sources). The portal contains extensive context and information about Copernicus, as well as a link to both the Sentinel Data Hub manual and ESA Sentinel Toolbox. The portal's launch (2012) was accompanied by formal **opening & awareness raising event**, attracting over 250 representatives from different downstream sectors.

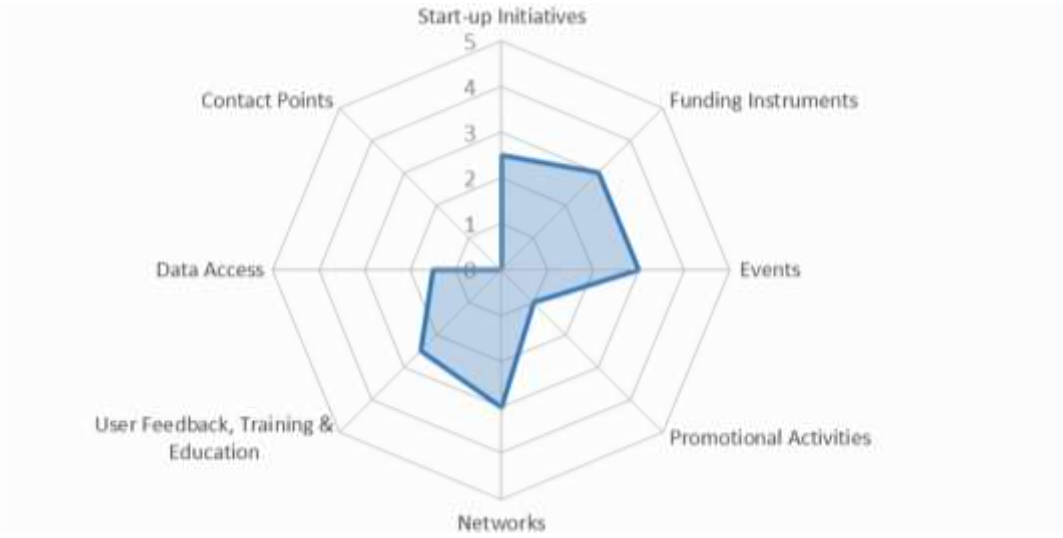


Figure 31: Maturity level by user uptake initiative type

Overall awareness and **expected impact** of Copernicus is **high**, although **both targeted awareness raising activities and technical workshops** for priority user domains are deemed necessary. In addition, **local and regional authorities** are seen as an important driver for user uptake, using **public procurement** as an enabler to launch certain applications & services – an area in which additional awareness raising in the context of the Copernicus programme would be beneficial. Other current gaps include the **suboptimal interest from the start-up community**.

3.2.24 Norway

Summary of Best Practices	▪ Great cooperation/consultation process between the Copernicus contact point and national intermediate and end users ▪ Best practice in implementing Copernicus in the operations of national public administrations ▪ Extensive documentation dissemination from the Public Administration of the usefulness of Copernicus for Norway and coherent strategy implementation ▪ Implementation of Copernicus full access data system by 2016 ▪ Copernicus Competition on Innovative Applications using Copernicus data/services ▪ Start-up supporting initiatives such as Spacetransfer ▪ Setting up direct national acquisition stations for Sentinel data ▪ Preparations for Sentinel 2 in Europe Workshop
Areas for improvement	▪ The potential of existing events and conferences related to environmental monitoring and for geomatic community is not fully exploited ▪ Increase the budget for Copernicus Competition on Innovative Applications
Gap identification	▪ Technical guides about Copernicus data, once they are available

Norway is a country with a long history in the space sector. Norway is not the EU-member but it is member of European Space Agency and contributes to the Copernicus programme. Norway joined Copernicus through a specific process, including approval by the European Parliament.

The Copernicus user uptake initiatives can be associated with several initiatives, especially the **networks** (such as GI NORDEN), which were established long before Norway joined Copernicus. The country has had operational Earth Observation services like oil spill monitoring and sea ice mapping for years, and Copernicus has been included in on-going programs and services.

The approach to Copernicus in Norway could be taken as a very good practice of implementing its potential in the **national end user operations by the public administration** and a perfect example of cooperation between public institutions, intermediate and end users. The official **contact point** for Copernicus users is the Norwegian Space Centre and it has been managing this process, including organising information sessions.

The public administration prepared **extensive documentation of the usefulness of Copernicus for Norway** as a basis for the decision to join and consulted all the potential stakeholders. They started by analysing the interest among users broadly in Norway and created a national strategy to implement Copernicus programme based on that. For these reasons, the awareness of Copernicus among users is very high (both intermediate and end users) and users are waiting for the better availability of

Copernicus data. The factor that the local experts consider as the most relevant for the user uptake is the proper **data access**/provision system. Norway and ESA have signed the Cooperation agreement regarding Collaborative Ground Segment in September 2014. Norway is also setting up a Sentinel data mirror site. Further, Norway plans to employ national acquisition stations to receive Sentinel data directly from the satellite. The full data access system up and running is expected to be ready in 2016. Norwegian Mapping Authority is aiming to take a central role regarding archiving and distribution of Copernicus data.

At the same time, the administration still undertakes initiatives to promote the programme to a broader group of potential users.

Figure 32: Maturity level by user uptake initiative type

Except for the international and national R&D **funding instruments** that can be used for EO/Copernicus applications development, Norwegian Space Centre has started also to implement the **national Copernicus Competition on Innovative Applications** for companies, entrepreneurs and start-ups to develop innovative ideas on the use Sentinel data. As the budget is not very high (EUR 55 k) the NSC considers it as a **promotional initiative**, but in fact it could serve as seed money for early-stage start-ups. Other **start-up initiatives** include Spacetransfer, a National Technology Transfer Initiative (NTTI) which is part of the ESA's Technology Transfer Broker Network. Its goal is to obtain technology transfers between space and non-space industry (not only focusing on Earth Observation).

As it comes to networking **events**, there was "Preparations for Sentinel 2 in Europe Workshop" organised by NSC, that was the platform to discuss with other international

coordinators, the support and services to national users of satellite images, with special focus on Sentinel-2 and Landsat.

There are also well established **geo-related conferences** in Norway that can be used more for Copernicus promotion and user feedback initiative, e.g. Norway National Conference for Geomatic Community (part of Geomatics Week) or GeoKlar - a National Preparedness Conference that focuses on crisis management.

3.2.25 Poland

Summary of Best Practices	▪ Practical hands-on satellite demonstrations for crisis management community: EU Carpathex 2011, POLEX Demonstration 2013, PIONEX Demonstration 2014, EDEN Demonstration 2015 ▪ Technical trainings and workshops targeted at national parks, environmental community, R&D community ▪ Successful Start-up Weekend Space Gdansk event organised to involve dynamic entrepreneurs in the space environment ▪ First events organised openly at national level by the public administration (International Conference "Copernicus - the road to economic development") ▪ Snow Cover Portal for Europe presents and promotes the use of satellite data for daily applications combining needs of different users ▪ Geoserwisy the portal and its e-learning platform gather the EO news and practical information in one source for the public administration in the local language.
Areas for improvement	▪ SMEs and start-ups that are gaining importance on the Polish market should be more exploited ▪ Initiatives should be scaled to specific targeted users as much as possible, showing the capabilities of Copernicus products in line with the operational procedures of the addressed users ▪ Launch sustainable national funding scheme/launch innovation procurement with the focus on space/EO applications ▪ Create a data access portal for all the data that has been already processed for a certain region
Gap identification	▪ Create start-up hub that could focus on space applications and the related support mechanisms ▪ Create users support network/contact point that would support in technical issues different kind of users for different Copernicus services. ▪ The official contact point for Copernicus seen more as reference contact for the EC and ESA rather than for the ultimate users ▪ Most of the initiatives are organised using the funds available at certain time, usually from the EU funding and lack continuation

Poland is a country with long history of remote sensing applications development among research & academia intermediate users but the Copernicus/EO user uptake initiatives started relatively not long time ago, with the first **FP6 and FP7 projects focused on capacity building of Earth Observation**. Most of the Copernicus user uptake initiatives organised so far focused on user feedback, training & education and promotional initiatives. The landscape of Earth Observation community in Poland had been very dynamic in recent years, especially after Poland joined ESA in 2012 and many new space companies were founded or joined space industry, with new availability of data and opportunities.

The overall awareness of Copernicus programme and its capabilities varies on the type of users and domains. The **intermediate users from industry and R&D** are well aware about the Copernicus capabilities thanks to participation in the **Space industry related**

networks and events, organised by National Contact Point, Ministry of Economy, Ministry of Science and Higher Education or Polish Space Industry Association.

The identified end users are mostly from the public sector, especially from crisis management, water and forest management, environmental monitoring and spatial planning. The public sector users often lack the GIS specialists in-house or funds for the innovative technologies for their daily operations (but it is changing for better). For these reasons, there have been organised many **User feedback, training & education initiatives** to improve the technical skills of the potential users, especially from crisis management and environment domains.

Figure 33: Maturity level by user uptake initiative type

The most effective initiatives so far were the practical hand-on experiences with **real-life demonstrations**, starting from Satellite support of the **EU Carpathex 2011 before the European Football Championships EURO2012**. That continued in a sustainable cooperation between R&D community and The Fire State Services that created official procedure and contact point to access the GMES-Safer/Copernicus data and organised and participated later on in other initiatives, such as satellite support during **POLEX Demonstration 2013, PIONEX Demonstration 2014 (FP7 PRACTICE), EDEN Demonstration 2015 (FP7 EDEN)**.

One of the results of all demonstrations is the plan to create a **data access portal** for all the data that has been already processed for a certain region, as often many different users are interested at the same time in the same area. So far, as it comes to data access, Poland and ESA are discussing potential Collaborative Ground Segment

activities. ESA published Invitation for Tender for EO Innovation Platform Testbed Poland, which will be a cloud-based solution for EO data access for the national users.

There is a high potential in young generation in Poland, as the public administration is getting the 'fresh' view thanks to them, as well as start-up scene is getting very active and gaining importance on the Polish market. The first **Space Start-up Weekend in Gdansk in October 2015** proved to be very successful in promoting space applications (Copernicus was not the main focus, though). The initiative was organised by the volunteers and for sure the continuation of such events and promotion of space applications in the start-up scene would be much needed. **There is not yet an ESA BIC or any other start-up oriented hub** focusing on space applications.

The **promotional activities** of Copernicus are usually combined together with other space related initiatives and are organised by groups of enthusiasts with bottom-up approach, with small budget and targeting usually young generation (e.g. Satellite Days, Science Picnics). A successful promotional and educational initiative that was funded by FP7 projects is a practical **Snow Cover Portal for Europe** that presents and promotes the use of satellite data for daily applications, such as monitoring of snow in determined location, with comparison to previous years. The complementary promotional initiative is the Geoserwisy portal[5], with its e-learning platform, that gathers the EO news and practical information in one source for the defined target group in the local language and fills the gap of lack of competences in public administration. What is missing is the official Copernicus newsletter for the users in Poland coordinated on a sustainable basis.

Ministry of Science & Higher Education in Poland is the official **Contact Point** of the Copernicus Programme in Poland, however, they serve more as the contact point for EC and ESA and not directly the user contact point for technical issues. There is directly only one person dedicated full time for Copernicus and information about the contact details, and what follows access to it, is limited.

It is characteristic for Poland that many of the Polish user-uptake initiatives are organised by local enthusiasts with bottom-up approach and there is not yet an established strategy or implementation structure with sustainable **funding instruments** directly for Copernicus. Most of the user-uptake initiatives organised locally and targeting Polish users are financed by the European funds, either from

[5] http://geoserwisy.pl

FP7/H2020 or ESA. The national R&D funds contain many domain-related topics, including remote sensing, but their objective is mostly to fund the research projects and direct Copernicus topics in the calls are missing, which could be additional push for the local user community to use Copernicus data. The situation is expected to change soon, as the Polish Space Agency (POLSA) has been established with its dedicated budget and the first calls for proposals for satellite applications have been published. It is also discussed that POLSA would create a technical contact point for Copernicus users.

3.2.26 Portugal

Summary of Best Practices	▪ 0
Areas for improvement	▪ Improve the awareness of the utility and importance of EO data and products among public entities decision makers ▪ Expand the operational use of Copernicus products and services beyond the maritime domain, leveraging already successful experiences in the civil protection and in the land management domains ▪ Better exploitation of the existing best practices to showcase successful access and use of Copernicus data and products
Gap identification	▪ Currently there is no Copernicus based downstream service active in Portugal. ▪ Not adequate satellite related technical skills among the staff of public administration bodies is currently the main barrier to the use and exploitation of Copernicus data and products. ▪ Scarce (maybe absent) presence of Copernicus in the academia. Currently there are not specific modules/teachings oriented to Copernicus

In recent years, Portugal has boosted the national awareness and strategy towards Earth Observation through the establishment of the GTOT – Grupo de Trabalho de Observação da Terra (Portuguese Working Group for Earth Observation). GTOT is a **network** and **Contact Point** set up at inter-ministerial level (involving eight different Portuguese ministries and 21 public institutions) with the goal both of defining strategies for the uptake of Copernicus services and for supporting the development of services in Earth Observation (land, marine, atmosphere, security and climate changes).

GTOT was launched by the Foundation for Science and Technology (FCT) through a resolution of the Council of Ministers and is now coordinated by the Directorate-General for Territory Development (DGT). This working group is assessing the national capacity and knowledge of satellite image processing within the public administration and it is also preparing an inventory of the Portuguese state regulations on environmental monitoring, civil protection and civil security which may benefit from the Copernicus programme. On this basis, the Group will release an Action Plan for Earth Observation information implementation.

The GTOT working group proved to be a very effective framework to disseminate information, as well as the DGT is currently engaging with the Earth Observation **network** through an emailing list of 1002 members from public administration, private sector, academia and research centres. DGT sends regularly information on Copernicus

(events, activities of Copernicus services, etc.) and it is currently building the national Copernicus website[6] which is expected to be the main **promotional channel**.

In Portugal the main focal points for what concerns Copernicus and space Earth Observation are the Directorate-General for the Territory Development (DGT), the Portuguese Institute for the Sea and the Atmosphere (IPMA), the Directorate-General for the Sea policy (DGPM) and the Foundation for Science and Technology (FCT)). Even if there is not a space agency in Portugal, there is a space office settled within the Foundation for Science and Technology. Portugal has also a very active Horizon 2020 National Point of Contact.

Figure 34: Maturity level by user uptake initiative type

DGT and DGPM are the Portuguese representatives in the Copernicus Committee, while the National Laboratory for Energy and Geology (LNEG) and the Institute for the Conservation of Nature and Forests (ICNF) are representing Portugal in the User Forum. The participation of Portugal in the Copernicus Committee and User Forum is coordinated by the Foundation for Science and Technology. DGT and IPMA are jointly implementing the **IPSentinel project, which is the Portuguese contribution to the Sentinel Collaborative Ground Segment**. The agreement with ESA has been recently signed (November 2015) and it is foreseen that IPSentinel will satisfy national requirements in terms of both **data access** to Sentinel images and the generation of customised higher level products. This development is taking benefit also from other European funding instruments such as the European Economic Area (EEA) grants that foresee specific measures over Portugal.

[6] http://www.copernicus.pt

In general, Portugal shows an excellent use of satellite based products (including Copernicus) in the marine/maritime and emergency domains.

For what concerns the marine/maritime domain, Portugal exploits its industrial excellence (Edisoft) combined with the availability of a strategic multi-mission ground receiving station in the Azores islands and the advantage of having the European Maritime Safety Agency (EMSA) Headquarters located in Lisbon. Additionally, there are other examples of satellite based information in the maritime domain, developing national measures and actions (MSFDsat, Fish&Ships) in the framework of European directives (e.g. the Marine Strategy Framework Directive - MSFD) and stimulating national research programs (e.g. SOPHIA).

In the emergency domain, Portugal has a long tradition in the use of Earth Observation for fire monitoring. In recent years Portugal has activated the Copernicus Emergency Management Service both for forest fire monitoring and for an exceptional volcanic event affecting Fogo Island in 2014.

Concerning other Copernicus services, Portugal is planning to increase the use of Copernicus Land products (especially the High Resolution Layers) and to associate land use/land cover products to national statistics projects (e.g. through a Eurostat funded project addressing LUCAS related land use/land cover statistics).

In terms of **events**, Portugal features a biannual conference aiming the Cartography and Geodesy areas, and involving National Entities, Research and Academic Organisations, Data providers, etc. on a wide range of themes; this represents an interesting opportunity for the wider promotion of Copernicus. Additionally, Portugal has hosted thematic conferences and workshops; the most recent one was the CMEMS Regional User and Training Workshop (Lisbon, December 2015) organised by MARETEC, the Marine Environment and Technology Center of Instituto Superior Técnico.

The main gaps and areas for improvement are related to the low level of space related technical skills among the technical staff in the public administration which is currently limiting the understanding of the value and importance of Copernicus and EO related products and services. This is reflected into the low commitment of Directors and other decision makers for what concerns investments and operational use of these products and services. As a consequence, also academia are not stimulated to include Copernicus and Earth Observation applications into a wider range of curricula. However, in Portugal there are some **user feedback, training & education** activities

such as the SOPHIA Project (currently running) and the planned Portuguese Copernicus Training Activities which will be a set of promoting workshops targeting different levels of Public Administration (e.g. service directors, technical managers), universities (professors, students) and media providing training materials (e.g. tutorials, presentation, videos)

Another relevant gap and area for improvement is in the Copernicus enabled downstream services, which are currently completely absent from the Portuguese scene.

3.2.27 Romania

Summary of Best Practices	▪ The Romanian Space Agency (ROSA) has a long experience in the participation to the Copernicus programme ▪ The East European Copernicus Conference is an excellent event (organised by ROSA) to spread knowledge and updates on Copernicus as well as to stimulate networking among industry, research and institutions in Eastern European countries ▪ The STAR programme is an interesting funding instrument to implement the Romanian space strategy through the agreement with the European Space Agency (ESA) ▪ National competition Rovere Exo-EN for high school students organised by ROSA is a good example for raising interest of Copernicus in young generations
Areas for improvement	▪ Improve the awareness on Copernicus initiative beyond ROSA, involving competent entities for the different Copernicus themes ▪ Improve the presence of Romanian industrial and scientific presence in Copernicus ▪ Develop targeted user training initiatives to demonstrate how to possibly use Copernicus in selected targeted fields
Gap identification	▪ Lack of distributed roles and responsibilities among institutional entities for the different thematic areas of Copernicus ▪ Lack of suitable instruments for the development of start-ups or new space or Copernicus related businesses

Romania is characterised by the presence of a very active focal point, established within the Romanian Space Agency (ROSA) that maintains technical and strategical relations with both the European Space Agency and Copernicus fora.

Through ROSA, a significant number of Copernicus and space related initiatives are implemented. For example, ROSA has been responsible for the organisation of the last edition of the **East European Copernicus Conference event** that was held in Bucharest in early October 2015. These kind of events are extremely relevant in order to spread knowledge and information about the current status of the Copernicus programme, the tendencies and action lines of the near future and, additionally, to stimulate networking among institutions, research centres and industries.

ROSA manages also an important **funding instrument** which is the STAR Programme (Space Technology and Advanced Research), through which the agreement between Romania and the European Space Agency is implemented. Another important funding instrument in Romania is the National Strategy of Research, Development and Innovation 2014-2020. Nevertheless, it seems that there are no instruments for business incubation or the support to the development of start-ups.

Education and training in space is also well considered in Romania, for example it is worth to mention the **National competition Rovere Exo-EN** for high school students

organised by ROSA in synergy with ESERO Romania - the European Resources for Education Space in order to interest young people in space sector and increase quality education through skills training for young people.

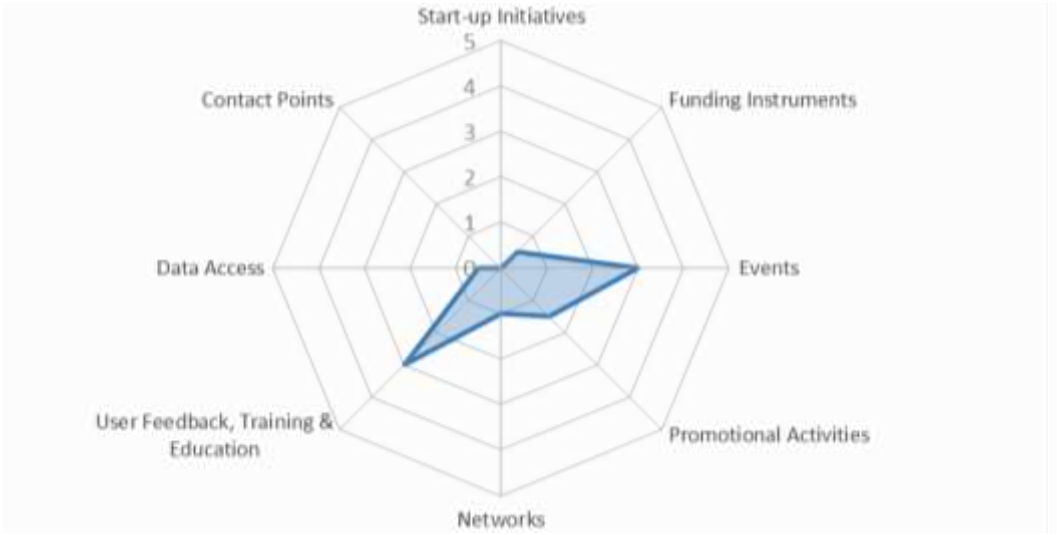


Figure 35: Maturity level by user uptake initiative type

The Romanian presence in the Copernicus programme is sustained mainly by ROSA, which has also been taking part to several past and present R&D projects (e.g. SAFER). Even though there is a good number of space related industries and research centres, the **potential participation to the Copernicus programme is not yet fully exploited** (e.g. show-off the hands-on demonstrations of Copernicus in different target fields).

Romania features also a well-established national coordination at political level on space affairs through the Space Subcommittee with the Parliament of Romania.

3.2.28 Slovakia

Summary of Best Practices	▪ EO Environmental trainings and workshops from EOPOWER FP7 project ▪ The Slovakian stakeholders often participate in the Czech initiatives, as the cooperation between Slovak and Czech administrations is very good
Areas for improvement	▪ The initiatives did not have sustainable continuation after the FP7 project completion ▪ The presence of Copernicus in existing environmental monitoring related events is limited ▪ The outreach of the Copernicus contact point is rather limited ▪ Need for more technical and practical trainings and workshops for both intermediate and end users ▪ Annual enviro-I-forum conference covering topics related to environmental management and GeoInformation technologies (and other similar events) could be better leveraged to disseminate Copernicus potential
Gap identification	▪ Low support for the user uptake initiatives by the governmental organisations ▪ Lack of sustainable funding of the Copernicus user uptake initiatives ▪ Lack of website/guide/brochure that explains the technical issues of Copernicus, data access and provides the updated information about the programme. ▪ Lack of initiatives targeted to support start-ups ▪ No use of networks, platforms and events for other initiatives dealing with geospatial data, like INSPIRE

In Slovakia not many Copernicus user uptake initiatives have taken place so far. The country is not a full member of ESA yet and is currently participating in the ESA Plan for European Cooperating States (PECS).

The overall awareness of Copernicus in the country of intermediate users from industry, governmental organisations and R&D is described as good by Slovak stakeholders, but rather low amongst the local authorities.

The governmental organisations do not consider space activities as a top priority for the moment and as a consequence, the support to Copernicus user uptake initiatives by the public institutions is low. The outreach activity of the Copernicus **network and contact point**, which is the Copernicus National Working Group, is rather limited as no public information is available about it.

The initiatives that have been directly aimed at user uptake in Slovakia were organised by the FP7 project EOPOWER that financed **user feedback, training & education** environmental workshops for the National Park Nizke Tatry. The project grounded also cooperation between national stakeholders (Nature and Landscape Conservation Agency of Slovakia and National Park Nizke Tatry) in the EO activities for the Slovak market together with Czech coordinators. It is important to point out that even though there are not many user uptake activities in Slovak Republic, the **Slovakian**

stakeholders often participate in the Czech initiatives, as the cooperation between Slovak and Czech administrations and market players is very good.

From the experience of national stakeholders, the most effective initiatives for user uptake are those which directly **target intermediate users** (e.g. application developers, companies or R&D organisations) and initiatives that offer **concrete technical know-how** about the Copernicus products (like trainings, technical guides for concrete domain and users).

Figure 36: Maturity level by user uptake initiative type

The **enviro-I-forum conference** that takes place each year in Slovakia covers topics related to environmental management and GeoInformation technologies, and could be used as a platform to present and discuss Copernicus topics.

What is considered a potential option for cross-fertilisation and synergy, is using the networks and platforms from other initiatives dealing with geospatial data in Slovakia, for example events and forums dealing with implementation of INSPIRE Directive in the country.

3.2.29 Slovenia

Summary of Best Practices	▪ Space SI, a strong network / centre of excellence with good representation of data processing skills among its members ▪ Under way establishment of a Space office which could serve as Copernicus contact point too
Areas for improvement	▪ Copernicus-related initiatives are very limited ▪ The presence of Copernicus-related presentations in domain-specific events (e.g. events related to GIS, oceanography, etc.) need to be strengthened ▪ Dissemination of Copernicus related information in the local language
Gap identification	▪ Lack of documentation presenting in a user-friendly way (and in native language) what can be done with Copernicus data and services ▪ Lack of methodological guides explaining how to use the data (e.g. which tools are necessary at user level) ▪ Lack of "EO courses" in higher education curricula

In Slovenia, the level of awareness remains relatively low, although the community witnessed an increase of awareness during the last two years, since the launch of the operational phase of Copernicus programme. Understandably, the space and the GI community are seen to be waiting for the services to roll out before implementing and integrating the Copernicus date in their own activities.

At the moment a **lack of overarching structure and structured information flow** exists. This situation is expected to improve, as it is intended to establish a **space office** under the Ministry of Education and Development, which could eventually take the lead in coordinating national activities, boost awareness of the programme, and last but not least, could serve as contact point for ESA and EC and the wider user community.

The **Space SI** is a **network** build as a centre of excellence which is very active in remote sensing in Slovenia. The main areas of interest range from rapid disaster mapping and monitoring, land cover mapping, land and air temperature modelling, and detection of water bodies, to analysis of biophysical parameters for agriculture and forestry. Therefore, applications areas could be agriculture, land use, atmosphere and topographic corrections and drought monitoring just to name a few. The consortium of Space SI has knowledge in data processing, however, some financial incentives would be welcomed to foster the downstream sector and enable application areas building on the good data analysis and process skills available.

The user uptake initiatives performed so far in Slovenia are predominantly **user feedback, training and education** and **events**. The focus is still relatively general, only few events targeted specific thematic areas such as air quality assessment and

management. Most of the user uptake activities that took place, were coordinated by the Slovenian Environment Agency and the EIONET network.

Figure 37: Maturity level by user uptake initiative type

A Slovenian SME under a contract with ESA performs a **data access** activity**.** Since the launch of the Sentinels, the company works in the implementation of functions related to the access, distribution and archiving of the Sentinel data for the Slovenian market as well as for the neighbouring countries. The company ensures the bridge with the GI community as this is the historical expertise of the company.

A **need exists to expand and consolidate the user community**. This could be done achieved via more targeted initiatives in the respective application domains as well as through more Copernicus materials being made available in Slovenian. Especially the presence of EO / Copernicus in the universities could be enhanced.

3.2.30 Spain

Summary of Best Practices	▪ The CDTI develops the National Strategy for Space and holds the Technical Secretariat of the Interministerial Committee on Industrial and Technological aspects of the National Space Policy ▪ The Ministry of Agriculture, Food and Environment, and IGN are the National delegate to the Copernicus User Forum. At the same time, they have established a National Copernicus User Forum that gathers together Spanish public user organisations in all of the Copernicus Services domains ▪ Service-specific national coordinators have also been appointed for the each of the Copernicus Services ▪ The Aemet has established a National Group on GEO that gathers together a number of public institutions involved in EO activities at national and international level. ▪ IGN is managing the PNOT (National Plan for the Observation of the Territory), a framework for EO data access and production.
Areas for improvement	▪ Practical in-house training for public administration at all levels (national, regional and local) on how to access and use Copernicus data and services. Implementation of concrete user cases tailored to the working practices of individual organisations ▪ More frequent meetings of the National Copernicus User Forum to raise awareness about the benefits of the Copernicus services among the potential public user organisations
Gap identification	▪ Lack of political, procedural, "marketing" and overall cultural context for the uptake of Copernicus ▪ Scarce participation in the Atmosphere and Climate Change domains ▪ The objectives and roadmap for implementation of the Collaborative Ground Segment are under development and the Agreement with ESA is not signed so far ▪ Staff in public administration has not enough (human) resources to take up Copernicus data and services

In Spain, Copernicus has well established **contact points**. CDTI (Center for the Technological and Industrial Development), a public agency under the Ministry of Economy and Competitiveness, is National Delegate to the Copernicus Committee together with the Ministry of Industry. In addition, CDTI is the delegate to the Copernicus Collaborative Ground Segment Task Force and to the Horizon 2020 Space Programme Committee. The Ministry of Agriculture, Food and Environment and the National Geographic Institute (IGN) of the Ministry of Public Works, are the National Delegates to the Copernicus User Forum.

The CDTI also develops the National Strategy for Space and holds the Technical Secretariat of the Interministerial Committee on Industrial and Technological aspects of the National Space Policy. In addition, CDTI is managing the development of INGENIO, a national Earth Observation mission that will become a Copernicus Contributing Mission.

In terms of **networking,** a National User Forum is organised periodically by the Ministry of Agriculture, Food and Environment and the National Geographic Institute, with the participation of CDTI and of an important number of potential user organisations from the public administration.

Under a **thematic point of view**, service-specific reference organisations have been appointed for each of the six Copernicus service domains: the National Geographic Institute (IGN) for the Land domain, actively cooperating with the European Environment Agency (EEA) and proactive in providing guidelines and requirements for land cover and land use, as well as providing in-situ data; the National Port Authority for the Marine domain, being part of the Copernicus Marine Environment Monitoring Service network of providers and working to articulate a national users network; the National Meteorological Agency (AEMET) for the Atmosphere domain; the National Civil Protection General Directorate for the Emergency Management domain, with ten activations triggered in the period 2012-2015, mainly for natural disasters; the Guardia Civil for the Security domain, also participating in FP7 R&D projects such as NEREIDS and SAGRES; the Spanish Office for Climate Change for the Climate Change domain.

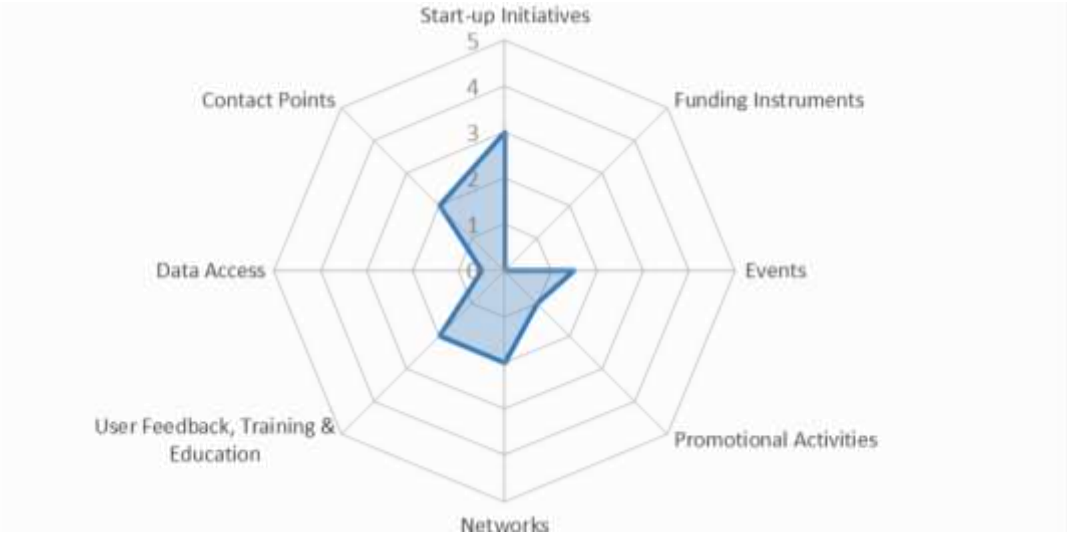


Figure 38: Maturity level by user uptake initiative type

Regarding **EO related associations**, there is a National Remote Sensing Association (AET), which is organising a biannual Congress where latest developments and applications are presented and discussed.

Aemet has established a **National Group on GEO** that gathers together a number of public institutions involved in Earth Observation activities at national and international

level. The aim of this Group is to act as a link with the global initiative GEO/GEOSS. The members of this Group are mainly a subset of the members of the National Copernicus User Forum.

Spain is preparing the **launch of two EO satellites**: and optical mission called INGENIO and a dual use radar satellite called PAZ. The Ground Segment of both missions is located at the National Institute for Aerospace Technology (INTA), which belongs to the Ministry of Defence. Both missions will become Copernicus Contributing Missions.

In terms of **training and education**, several courses open to the public and private sector have been identified: the "Master on Satellite Technology" organised by Polytechnical University of Madrid, the "Master on Geographic Information Systems and Remote sensing" of the Autonomous University of Barcelona and the "Course on Cartography, Geographic Information Systems and Remote Sensing" of the University of Alcala.

In terms of **data access**, the objectives and roadmap for implementation of the Collaborative Ground Segment are under development and the Agreement with ESA is not signed so far. More than 20 actors belonging to public institutions, research entities and private companies are cooperating to agree on a common strategy and to design the collaborative GS architecture.

IGN is managing the PNOT (National Plan for the Observation of the Territory), a framework for EO data access and production. PNOT consists of two parts: PNT (National Plan for Remote Sensing) and PNOA (National Plan for Aerial Orthophotography). Data is made available for free to the local authorities users of this service. Data is also currently used as part of the ancillary datasets in Copernicus.

Concerning **funding instruments,** two ESA Business and Incubation Centers (BIC) have been created, one in Madrid and one in Barcelona, supporting new companies with a focus on space services and applications.

Currently, one of the areas for improvement is the access to Copernicus data and services by public administration at all geographical levels. Practical training in-house, tailored to the users working practices, would be highly valuable. In terms of promotional activities and events more could be done to promote, to stimulate networking and cooperation, to exchange experiences and to showcase the benefits of Copernicus data and services in the different operational context.

3.2.31 Sweden

Summary of Best Practices	▪ National User Forum (network of 13 public bodies) to address national topics of interest, each of the entities is responsible for the uptake of its community ▪ Biannual events/conference on Remote Sensing which 2015 edition focused on Copernicus ▪ In the process of establishing a collaborative ground segment for the distribution of Sentinel data and signed an agreement with ESA.
Areas for improvement	▪ Better structure around the National User Forum with more clear responsibility regarding 'who does what'
Gap identification	▪ More communication and awareness of the programme in order to stimulate uptake from non-space community ▪ Unclear division of responsibilities and lack of overarching coordination

The **overall awareness** of Copernicus, its services and its benefits in Sweden range from **low** (industry, research and academia) to **medium** (national public administrations).

In Sweden, there is a **network** of 13 governmental bodies, the so-called **National User Forum** which was formed in 2011 and which serves as a national replication of the EU User Forum. On a rolling basis, different public users are requested to take part in the National User Forum for coordination on EO-matters. As the participation to the forum is on a voluntary basis, there is a certain **lack of a coordination role** by the forum and this is seen as one of the stumbling blocks for the promotion of the Copernicus programme. Each member of the User Forum has the role to perform uptake into their respective communities, which naturally leads to a more diverse level of awareness and training in the different domains.

As more Copernicus data become available, Sweden is organising more initiatives in order to raise awareness but also to show how to integrate the data in the processes of the national public administrations.

In 2011, the National User Forum decided to put in place a **biannual events/conference on Remote Sensing** and the last edition of 2015 focused specifically on the Copernicus programme, giving the possibilities to the different users' categories to meet and share their experience. This event series is considered to be a success story for several reasons: firstly, there has been a wide participation from EU-actors, the European Commission, ESA, service operators and national actors; secondly, the impact was relatively high because of a focus on concrete examples and applications based on Copernicus data, as well as hands-on experiences for conference participants in the different labs and service booths. Last but not least, there was time

for users and service providers to mingle and discuss. As the organisers of the conference are members of the National User Forum and since they represent the different communities, it ensures a good visibility on the needs and hot topics in their respective communities.

Most of the other initiatives taking place in Sweden, are categorised as **user feedback, training and education**. The majority of the initiatives are directed at a specific community, primarily the forest management community, followed by the marine and inland water community and to a lesser extent the community dealing with climate change issues.

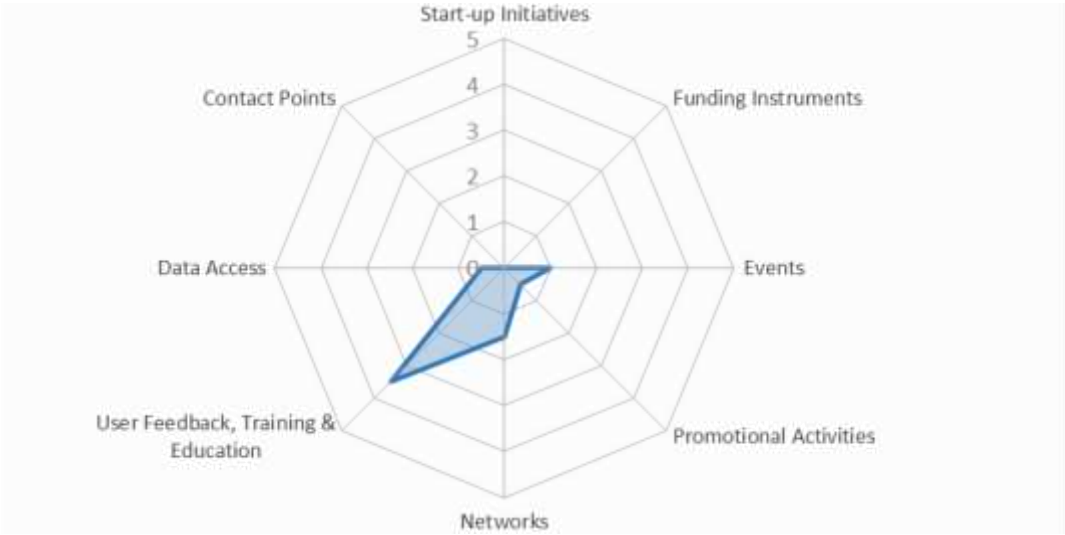


Figure 39: Maturity level by user uptake initiative type

In relation to **data access**, Sweden is in the process of establishing a collaborative ground segment for the distribution of Sentinel data and signed an agreement with ESA. Nevertheless, at the moment of writing the report, the process has not yet come to full speed but negotiations are still ongoing. On the other hand, thematic data portals on an open source basis have been initiated and address the forestry community and the inland water community.

In conclusion, the Swedish stakeholders envisage that the user uptake strategy needs to be more strategic and should comprise time and resources for systematic and long-term user interaction, awareness-raising communication, showcases to illustrate potential uses, education on how to use EO data and support access to Copernicus data. Stakeholders highlighted there is an **unclear division of responsibilities and lack of overarching coordination**. At this moment in time the User Forum involves some of the national governmental agencies perceived as users or potential users for

EO/Copernicus, however, there is a lack of systematic approach to take into account research and academia as well as industry, and so far only the service providers are involved.

3.2.32 Switzerland

Summary of Best Practices	▪ Swiss Earth Observation Service Providers Society, represents a community of small and medium-sized Swiss companies interested in Earth Observation, GIS, software and data products ▪ Société Suisse de Photogrammétrie et de Télédétection ▪ National Point of Contact (NPOC) for Satellite Images and data access to Copernicus ▪ Funding instrument for the development of Swiss technologies and scientific competences with a focus on Space
Areas for improvement	▪ Stronger focus on Copernicus ▪ Leverage AP-Swiss to develop start-up initiatives that could be an opportunity to stimulate EO entrepreneurship Swiss Start-up Day, the Global Entrepreneurship Week and Space Prize
Gap identification	▪ Dedicated Copernicus events and user training

Switzerland is quite active in the space domain through its participation to the ESA and Copernicus, making Swiss companies, universities, research centres and organisations involved in several user-uptake initiatives. The main reason relies on the will to facilitate the acquisition of technological and industrial competencies needed to manufacture sensors and other instruments and to encourage the development of applications and the operational use of Earth Observation data.

Due to the general recognition of the importance of space in general and EO in particular for the private as well as public dimension of the market, many initiatives have been put in place in order to foster and speed up the uptake of the programme. Nevertheless, it has to be noticed that those activities almost never target Copernicus only, but rather the Earth Observation industry in general giving space for future visibility of Copernicus.

The space policy and therefore priorities for the Swiss industry are dealt by the Swiss Space Centre. The centre is taking care of most of the initiatives, ranging from **events** to **promotional activities.** The idea behind events like “Space Projects: An opportunity for cutting-edge research and advanced technology development” is mainly for policy discussion and exchanges of views amongst institutions.

In 2014, the Swiss confederation funded 10 projects through a **funding instrument** for the development of Swiss technologies and scientific competences with a clear potential for space products and services applications. It goes without say that, there is change for Copernicus to be inserted in such a frame.

One of the private/public actor more active in the Swiss landscape is the ESA initiative **AP-Swiss**. This is considered to be a focal point for distributing information and raising awareness of the different branch of space, within which Earth Observation. The office took part in several **start-ups initiatives**, namely the Swiss Start-up Day, the Global Entrepreneurship Week and Space Prize powered by Inmarsat and AP-Swiss industry aiming at raising awareness to that community.

Figure 40: Maturity level by user uptake initiative type

Data access is granted to the National Point of Contact for satellite imagery. Copernicus data are distributed as well as other EO data sets. Additional customised services are provided as well.

More activities and initiatives need to be done in order to canalise the knowledge around Copernicus and not only Earth Observation in general. It is essential to identify relevant niche where Copernicus "sectors" so to develop corresponding Swiss core competences; it is important not to forget the role of training, education and research, as well as awareness around the programme, establishing university courses could be very relevant.

3.2.33 United Kingdom

Summary of Best Practices	▪ The Satellite Applications Catapult is beginning to provide an integrated approach to Copernicus uptake through its combination of data access facilities, end user services, regional networking and fostering of industry-academic collaborations ▪ Scaling EO applications and working with key public sector users in Government Departments across the board ▪ Stimulating a vibrant Space SME sector coupled to a regional growth strategy for space considered central policy drivers ▪ Satellite Applications Catapult offering a package of measures to support the growth of SMEs in the Space sector ▪ Development of Regional Centres of Excellence
Areas for improvement	▪ Transition from end user interest to end user uptake remains low ▪ Low success rate in funding competitions for Copernicus user uptake is a major barrier ▪ Widespread uptake of Copernicus services in the future depends on the ability to provide services as an operational system driven by user requirements
Gap identification	▪ Gaps remain between Copernicus core service products and user needs especially for users in non-space sectors. Bridging the gap through user-driven research, innovation and project delivery remains a longer term priority

Implementation to date of the UK Space Innovation Growth Strategy (IGS), which was published in February 2010, has led to substantive changes in the structures and governance of the space sector in the UK. The most significant developments relevant to end user uptake of Copernicus data and services comprise:

- The creation of a **Space Leadership Council**, bringing together Government, Industry and Academia as the most senior group in the UK advising on Space policy
- The creation of the **UK Space Agency** (UKSA) tasked with providing a unified voice in championing the sector, advising on policy, setting strategy and co-ordinating funding
- A 33% increase in optional funding to the European Space Agency **increasing the UK's work and influence in crucial areas of satellite communications and Earth Observation**
- **A Satellite Applications Catapult centre at Harwell, Oxford,** one of only nine Catapults in the UK, initiated using Technology Strategy Board funding.
- ESA's establishment of the **European Centre for Space Applications & Telecommunications** (ECSAT) at Harwell

Copernicus is an important element within the wider canvas of market-oriented applications using space data and services in UK strategic market areas. Broadly, widespread uptake of Copernicus services in the future depends on the ability to provide services as an operational system driven by user requirements in space and non-space sectors. Examples involving exploitation of Copernicus space data and services include:

- Security services-maritime geospatial services and secure satellite communications delivering maritime surveillance and environmental monitoring; disaster monitoring for flood, fire and extreme weather and rapid response.
- Climate and environmental services-insurance and finance applications, agriculture and food security, climate applications, air pollution and carbon monitoring and modelling.
- More efficient public sector services-transport management, smart cities and urban services for local government, energy infrastructure services.

Applications may be a unique EO-based added value service, an integrated EO- satellite navigation service or a service that depends on e-connectivity through fast broadband, M2M communications, cloud-based ICT services and/or terrestrial as well as space based communications systems. Broadly, widespread uptake of Copernicus services in the future depends on the **ability to provide services as an operational system driven by user requirements**.

The **Satellite Applications Catapult** is a newly formed independent innovation and technology not-for-profit set up by Innovate UK (formerly known as the Technology Strategy Board) to provide an integrated approach to uptake of space data and services through use of its data access facilities, end user services, regional networking and fostering of industry-academic collaborations. Around 25% of the Catapult's user uptake events are Copernicus related with a distinct emphasis on EO and GIS applications and have been delivered to potential end users in the private and public sectors through regional workshops at Harwell or around the country. 3-4 events per annum is typical of the Copernicus related workshop activity, reaching 50-100 participants per workshop and covering a wide range of Copernicus themes, including environment, agriculture, fishing, maritime, energy, climate change and transport.

The **Space for Smarter Government Programme (SSGP)** is a strategic, national, programme led by the UK Space Agency in 2014 and delivered in collaboration with

the Satellite Applications Catapult. SSGP aims to drive the uptake and use of space products, data and services across Government and its affiliated organisations, Local and Municipal Administrations and Devolved Administrations. SSGP runs yearly competitions to fund case studies and demonstration projects around the theme of public sector uptake of space application; 80% of the successful SSGP projects funded in 2015 are making use of imagery from Copernicus.

As a **start-up initiative** and also to support the growth of SMEs in the Space sector, the Satellite Applications Catapult provides a single point of access for finance, business management tools, skills and training, and mentoring. Secondly, in conjunction with UKSA, regional growth plans for space are being coordinated with the devolved administrations in Scotland, Wales and Northern Ireland and in England with Local Enterprise Partnerships and Local Authorities, aiming to secure non-Space funding for new projects and to expand networks of co-funded regional centres-of-excellence and business incubation centres across the UK. Lastly, the United Kingdom hosts one ESA Business Incubator in Harwell.

Figure 41: Maturity level by user uptake initiative type

The United Kingdom has signed an agreement to become part of the Collaborative Ground Segment in 2014 to enhance **data access** in the country. Apart from the technical implementation by Airbus Defence & Space, the Satellite Applications Catapult is responsible for managing and dissemination of the data to the commercial and public sector users, alongside the support for academic users provided by STFC-CEDA.

The EO21 Foresight Report or EO21 Indicator of Trends Report are **promotional activities** that include the landmark GSA GNSS Market Reports. Whilst not as exclusively focused on EO, the brochure Satellites Everyone: The big Picture, includes EO as one of the themes.

The National Centre for Earth Observation supports a wide **network** of scientists from UK universities and research organisations and delivers a programme of knowledge exchange, research coordination and training together with an annual conference. The Innovate UK Knowledge Transfer Network is a general innovation network that has space as one of its themes.

Case Study

Catapult Regional Centres of Excellence

G-STEP, in the East Midlands, was the first space-enabled service accelerator initiative in any UK region/administration and, over the period 2010-2015, G-STEP developed core competences to assist the uptake of Copernicus data and services by regional businesses and organisations both for product development and the utilisation of services to enhance business performance. G-STEP's translation into a Satellite Applications Catapult Regional Centre of Excellence is based on its track record for attracting national, regional and EU funding for R&D and innovation and its success in facilitating industry-local authority-academic partnerships to support user uptake of EO data and services. Examples include transport, traffic congestion and air quality management programmes with local authorities and agricultural applications with both industry and international clients. When G-STEP was launched, awareness of GMES/Copernicus as a potential end user service in the wider business community and with local authorities was essentially zero. The G-STEP model has been effective for initial engagement through events and workshops and for supporting knowledge transfer of Copernicus EO and GIS capability for end user applications in local businesses (including SMEs) and with local authorities. Applications of Copernicus data and services have been introduced in priority business sectors identified in Regional Development Plans, e.g. Transport, Air Quality, Urban Planning, also identifying academic based expertise that could be applied to assist local authorities and SMEs with delivery issues. Between 2011 and 2014 G-STEP organised 2 workshops a year, called "Business Meets Space", typically attracting about 150 participants to each event, with follow ups with over 100 companies to explore Copernicus potential for their businesses. 10 funded academic-industry partnership projects are traceable to these earlier introductory activities alongside start-up of a number of satellite applications projects with additional funding from EU, ESA and national funding sources. Gross added value to regional businesses from collaborative programmes with G-STEP has been estimated at 1.8M euro over 5 years.

Despite the rapid build-up of information events and workshops, converting potential user interest into user uptake remains a difficult transition. In the case study above, only 10% of active business engagements led to any significant user uptake. Funding for uptake projects remains the main barrier both in the EU and in national programmes.

3.3 Key findings from the user uptake initiatives analysis

Whilst the individual needs of the Member States and regions involved with Copernicus are widely varying, depending on the need for EO based data or information in the different market segments, the overall maturity of Copernicus user uptake and the political accents and government policies and priorities, a **set of generic key findings are distilled**, summarising key aspects in terms of user uptake initiative needs and highlighting the frequently mentioned observations by the large number of consulted stakeholders and experts, as well as synthesising the outcomes of the mapping and evaluation task.

Key finding 1: Many user uptake initiatives have been undertaken over the years or are currently under development, many of which supported by the European Commission. Nevertheless, there is a **clear need for a systemic and integrated architecture in order to ensure continuity and sustainability of those initiatives**. Furthermore, the **diversity of the (potential) user community** in public and private sector and the **dispersion of users at several geographic levels** within public authorities, render user uptake initiatives a complex task to manage. The European User Forum which is positively regarded within the community, has not yet been transposed consistently into **national structures**. In addition, few countries have a real **structured contact point**, who is able to provide non-technical and technical information to interested users.

Key finding 2: A significant effort is still required for increasing user awareness both in the public and private sector. Consistent presence at conferences and events in the respective user domains is therefore required, however, **patchy coverage of the Copernicus programme has been noted, even at leading events**, and especially in the non-space user application events. National stakeholders often have no resources to maintain a booth, to ensure presence of staff, or to deliver presentations within the conference programme.

Key finding 3: Outreach to public administrations to increase awareness of Copernicus is a complex task, which requires an intense and recurring collaboration with the administration. Apart from a bottom-up approach which is been gradually setup, **a top-down communication effort is currently lacking and decision makers are insufficiently targeted**, both the existing staff in their current role as the future high potentials at university.

Key finding 4: Due to resource constraints, a lack of champion, or lack of interest**, not all Member States have localised up-to-date promotional material adapted to the Member States' needs in public sector or the country's interesting market segments in the private sector**. One-off activities in the frame of FP7 or Horizon 2020 projects were not sustainably maintained or updated and therefore slowly disappear. A clear gap exists for user-friendly promotional material describing the Copernicus data and information in an understandable way for new users whilst also providing some depth for intermediate users. Users have often difficulties understanding what Copernicus could do for their processes.

Key finding 5: The **online Copernicus resources are dispersed** over several websites such as the Copernicus.eu website, the different Copernicus Services websites, the ESA website, the national Copernicus websites and those of past or current activities under FP7 or Horizon 2020. Today, most of them lack content adapted to the different knowledge levels of the visitors, and provide limited information for the private sector stakeholders, in particular the start-ups and young SMEs.

Key finding 6: At the European or international level valuable networks exist which have a focus on Earth Observation or Copernicus, but at national or regional level these application domain networks are more limited in quantity, or have no particular focus on Earth Observation. The rich **end-user driven networks could be better exploited to lever the Copernicus outreach** and to maximise the potential Copernicus impact within their application domain.

Key finding 7: Generic Copernicus information is excellent to generate a first awareness with potential users, however, **fatigue and frustration with users should be avoided at all cost** when promised data or information is not available, or when a first try-out turns out to be either costly or difficult to accomplish. At the moment, showcases are dispersed over several sources and/or presented without consideration of the audience.

Key finding 8: As Copernicus was devised as a policy tool for public administrations, and since this characteristic remains a cornerstone of the programme, **potential private sector users are insufficiently addressed** and are not informed about the potential of the Copernicus economy, its markets and its trends.

Key finding 9: **Copernicus or Earth Observation in general are topics that are underserved in relevant university degrees**, both in those more closely linked to Earth Observation data and information such as GIS, but especially those that have a less strong link between the potential Copernicus information and the end-user solution such as in agriculture related degrees, but as well in business schools.

Key finding 10 / 11: Whilst training opportunities are not widespread, the organised **trainings are popular and demonstrations are in particular effective** both in public as private sector. Hands-on exercises which are thematically close to the participants' daily activities are deemed particularly effective for engaging end-users. Different types of educational or **training material exists but is dispersed** over different channels. Moreover, training is particularly sensitive to funding, for example, good initiatives took place under European R&D programmes, but were often stopped after funding ended.

Key finding 12: The importance of the regional level in Copernicus user uptake is evident. **Regionally focused initiatives have shown their effectiveness, however, are greatly depending on funding at European level** and have found it difficult to build a sustainable model supported by the regional authorities.

Key finding 13: The **space application start-up ecosystem is changing and receiving more and more attention from innovation and finance actors**. The well-established ESA BIC network is ever expanding, albeit the BICs currently have a varying EO competence. A first accelerator focused on space is emerging. The idea competitions are becoming more prestigious and try to expand their reach within Europe. Lastly, hackatons are organised and have roll-out potential across European hotspots. Nevertheless, to build a thriving start-up scene and attract the right investors, a larger scale and therefore deal flow is needed.

Key finding 14: Building on the previous key findings, more qualified dealflow means more investors, but on the other hand, **funding opportunities for user uptake of Copernicus in private sector should be increased**. Start-ups, as in any other sector, have at times a limited understanding of both the private and public funding sources, and have an either perceived or either effective lack of access to finance. Especially expansion financing is difficult to find for personnel-intensive project business models.

Key finding 15: Public authorities are increasingly aware of their power to create new markets and stimulate the tech economy with their own public procurement. Innovation procurement or similar schemes that aim to bring innovation in the government and at the same time push the market forward are emerging at European and national level. Early results are promising.

Key finding 16: Entrepreneurs and administrations wanting to try-out data are not sufficiently understanding the complex jargon as well as the available data, as a thematic or sector focussed product portfolio is not available or **communication about data or information is not sufficiently transparent**. Doubts about the continuity or sustainability of Copernicus data and information exists, combined with an unclear border line between the Copernicus Services and the private sector play.

Key finding 17: Data access is a hurdle widely experienced by the user community, and one of the most heard issues when talking to stakeholders. The European Space Agency is building on data access platforms and the collaborative ground segment is gradually developing, but the current CSCDA is perceived too complex to gain access to and is currently mainly targeting the scientific community, although this contradicts the promises of free and open data. Data access is both a real hurdle as well as a perceived problem. The emerging dedicated thematic platforms are viewed positively in the community, as well as initiatives that include sharing of tools or resources such as processing capabilities, archiving, etc.

4. An integrated strategy for the user uptake initiatives in Europe

4.1 Recommendations for stimulating user uptake

The mapping and assessment exercise within the context of this report has produced detailed insights in Copernicus awareness and engagement initiatives by geography, as well as by initiative type. A solid understanding of the initiative landscape and its best practices and gaps, have led to the development of key findings. An expert workshop was conducted to further complement the recommendations stemming from the mapping and evaluation exercise, and to propose concrete actions.

The objective of this section is to summarise the overall recommendations for the European Commission, as well as for the relevant national, regional and local actors in public administrations. Some of these recommendations are translated into actionable items and for those a first assessment regarding benefits, impact on EC objectives and costs is presented, as well as possible Key Performance Indicators (KPIs) to monitor the effectiveness of the action at hand.

Recommendation 1: Establish a *Copernicus User Uptake Support Office* and build the extended *Copernicus User Uptake Network* to enlarge the reach into the various Member States by leveraging the user uptake initiatives across borders and at regional level. The support office's primary objective is to ensure broad, coordinated and sustainable user uptake activities across Europe; a key prerequisite stemming from the conducted analysis.

At the heart of the user uptake engagement strategy lies the *Copernicus User Uptake Support Office* to be created, which coordinates and supports the implementation and execution of the *User Uptake Core Tools*, a set of user services with the objective to stimulate uptake. The support office liaises and develops partnerships with the various *User Uptake Key Partners,* most notably the *Copernicus Contact Points*, the *Copernicus Academy*, networks and industry. These partners help leverage the tools and resources provided to strengthen the impact of the user uptake initiatives. The support office maintains a user uptake initiatives action plan, supports its rendition in national action plans and also ensures cross-fertilisation of best practices between the partners. The office is presided by a Commission staff and supported in the execution of its tasks by the user uptake contractors.

As a first step the *Copernicus User Uptake Support Office* liaises with Member States in a series of workshops, where comparable countries in terms of user uptake maturity or thematic needs discuss user uptake initiatives. The analysis of the maturity of user uptake initiatives per Member State, described in detail in the previous chapter, highlights the priorities for the implementation. The development of the national action plan is an interactive process, starting with validating these identified user uptake gaps and areas of improvement, and building consensus on the maturity level and required actions. Such validation is advisable as the national or regional priorities might differ and unexpectedly leverage the impact of the user uptake initiative. For example, Bucharest is seen as a hotspot of ICT start-up activity, and consequently the organisation of hackathons would be recommended, even though other initiatives within the lower maturity levels are not yet fully developed or in place. The national action plans detail the content and potential use of the User Uptake Core Tools offered by the Commission.

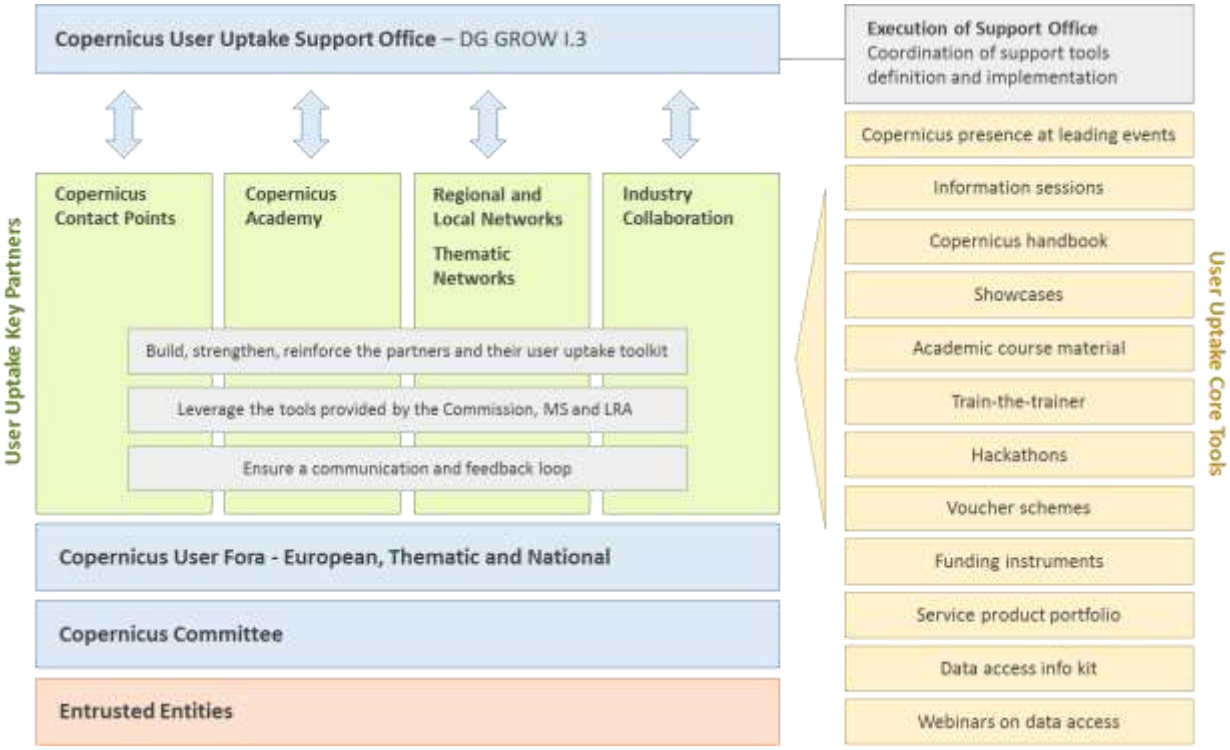


Figure 42: Copernicus User Uptake Network Architecture

An ideal opportunity to biannually organise several such workshops is around meetings of the Copernicus User Forum at European level where most Member States are usually represented.

The first workshops should also focus on the potential setup of additional *Copernicus Contact Points* in more Member States, as the contact points are a key partner in the

implementation and execution of the action plans. Copernicus Contact Points are designated contact persons, with a mandate from the relevant administration, from which potential Copernicus users can request non-technical or technical information. The contact points also organise national or regional events and conduct further promotional activities such as organising technical workshops or facilitating access to EU funding. A good example of such a national contact point structure can be found in Germany, where the different 'Fachkoordinatoren' per Copernicus Services respond to user queries, stimulate the user uptake in their domain, provide their technical knowhow, and participate to the Copernicus User Forum.

The Copernicus Contact Points should both address the users in public administrations as those in the private sector. The extent of implementation, i.e. Copernicus Contact Point per service or thematic area, naturally depends on the overall Copernicus maturity, as well as on the size of the respective Member States. The involvement of the Copernicus Contact Points in the above described workshops is advisable as it will build a communication channel and feedback loop between the user uptake initiatives at European level with those at national or regional level, and enhance the implementation of the action plan.

Member States without Copernicus Contact Points could be incentivised by a funding instrument that would finance the setup and implementation of the contact points. The funding instrument could also support the expansion of activities within the existing and already nationally-funded contact points, e.g. to organise more events, to organise more promotional activities and to ensure knowledge exchange within the public administrations at national and international level. The level of funding could be commensurate to the economic weight (or population) of the Member State or to its contribution to the Copernicus programme. The neutrality of the Copernicus Contact Points needs to be ensured (e.g. public administrations or agencies, universities, research institutes or NGOs). Ideally, the contact points are mandated by their Member State. They should be well connected with the different user communities in their thematic area and should function independently from the national space agencies so as to ensure their focus on meeting end user needs.

A second partner in the Copernicus User Uptake Network, is the *Copernicus Academy* to be established which coordinates, supports and implements curricula in the academic world to enlarge the pool of Copernicus-savvy graduates. Secondly, the Copernicus Academy develops, maintains and conducts the online and offline training

opportunities directed at the public and private sector. Last but not least, the academy also facilitates knowledge exchange in an online environment.

The Regional and Local Networks, the third partner in the Copernicus User Uptake Network, will develop the market at those geographical levels by addressing user needs for their specific domains or sectors whilst drawing on expertise from the thematic pan-European networks where necessary. Lastly, collaboration with key actors from industry will foremost act as a lever to increase Copernicus awareness, but also data or information access in new privately developed services.

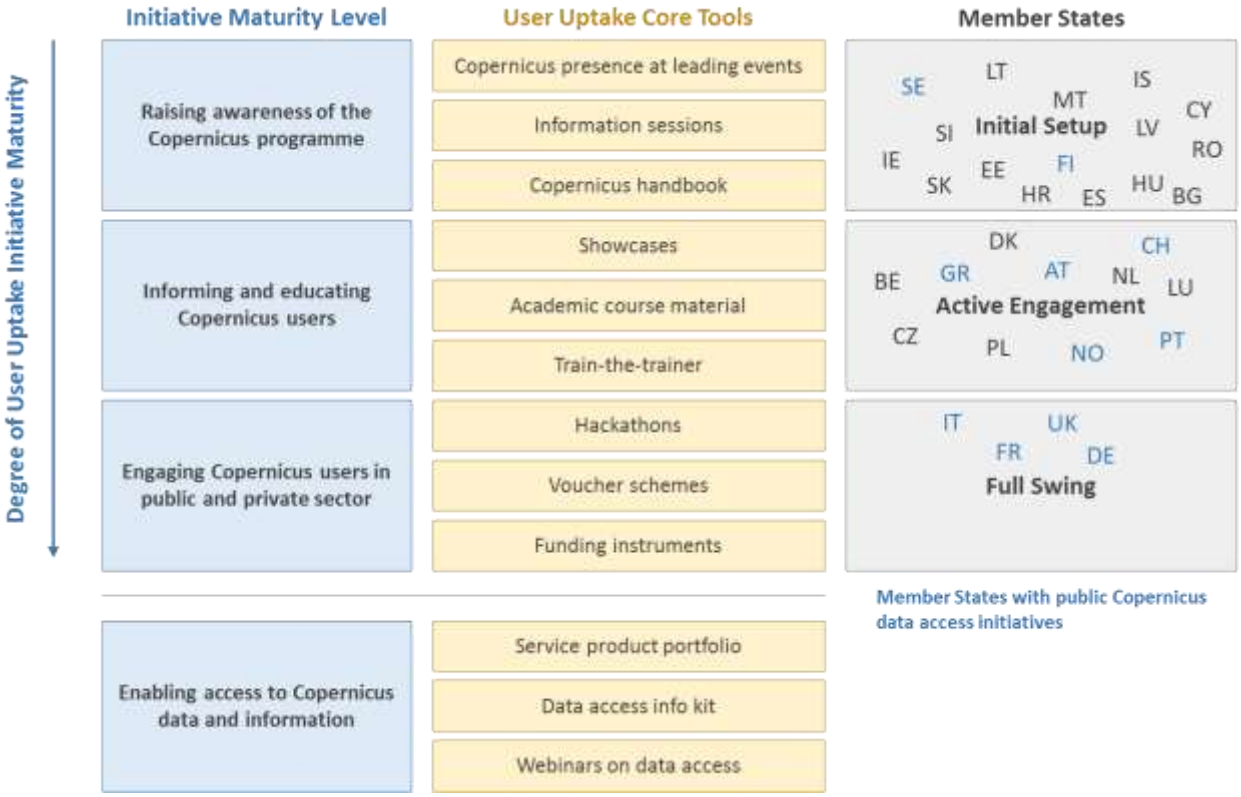


Figure 43: User Uptake Core Tools by Degree of User Uptake Level

The User Uptake Core Tools will provide the basic building blocks for a toolkit for the Copernicus User Uptake Support Office, as well as for its partners. The User Uptake Services can be categorised by degree of user uptake level, starting with raising awareness, through informing and educating users and up to facilitating actual usage.

The landscape of the defined network architecture is completed by the User Forum at European, national or thematic level, and by the Copernicus Committee. During these formal meetings, Member States will be updated on the progress and will have the opportunity to discuss topics related to the user uptake engagement implementation and provide relevant inputs to the Copernicus User Uptake Support Office.

The Copernicus User Uptake Support Office is tasked with monitoring the activities of the Contact Points, supporting them with new information and tools, and exploring opportunities for best practice knowledge exchange. Where the necessary infrastructure in a Member State is not available or will not be put in place, the Support Office may implement tools and measure directly, in liaison with the concerned Member State. Once a suitable structure of Copernicus Contact Points becomes available in a Member State, it will be important to maintain a constructive communication channel with the contact points so as to ensure buy-in, to leverage the tools made available and also to ensure cross-fertilisation amongst the contact points.

As monitoring the progress vis-à-vis the objectives of the Commission with regards to user uptake is essential for the success of the Copernicus programme, the Copernicus User Uptake Support Office also monitors closely the performance and expected impacts of the User Uptake Core Tools itself. Through regular qualitative reviews supported by KPIs for each service, the effective use of the budgets is ensured and continuous improvement of the provided tools implemented. The European and national action plans and associated timeline should be a living document with regular reviews.

In case the setup of the infrastructure described in the above proves not viable in a number of Member States, users in those areas could benefit from a helpdesk at European level or a contact point of a neighbouring member state or region. A similar support function already exists in the Galileo programme under the form of the European GNSS Service Centre (GSC), however, the important geographic differences in the Copernicus context, and the need for localised information, renders this a secondary priority or a back-up plan for those countries without a dedicated user uptake infrastructure.

Data access requires to be treated as a separate topic, as it is a prerequisite for successful user uptake, and therefore is priority for each country regardless of their user uptake initiative maturity level. The proposed recommendations and associated actions can be found in section 4.1.4.

The implementation of the Copernicus User Uptake Network for the above outlined overall approach would require:

- **Action 1.1:** (C) Setup the **Copernicus User Uptake Support Office** and its related implementation support, which coordinates the development of the User Uptake

Core Tools. Organise workshops with Member States to build, strengthen or reinforce the national Contact Points and to define the national implementation plans.

- **Action 1.2:** (F) Setup a **funding instrument to create missing Contact Points** in the concerned Member States or to **expand the activities of the existing Contact Points**.
- **Action 1.3:** (C) Establish a **Contact Point or helpdesk at EU level**, to serve those users in Member States without a national infrastructure.
- **Action 1.4:** (U) (N) **Create missing or strengthen the existing national User Fora**, as a national replication of the Copernicus User Forum, to have a counterpart at national level, and as an important tool for the Contact Points to align. Ensure diversity through participation from public administrations, private sector and academia by ensuring the User Fora become qualitative events.
- **Action 1.5:** (U) (N) Create **thematic User Fora at European level** to stimulate knowledge exchange and sharing of best practices
- **Action 1.6:** (P) **Develop further and maintain the catalogue of existing and potential users** of Copernicus information and data, as built under the "User Requirements" Framework Contract to be better able to target audiences.

The recommendations and associated actions for the User Uptake Core Tools and described in the next sections, organised by level of user uptake maturity level.

Figure 44: Analysis set of report and future Copernicus User Uptake Support Office

4.1.1 Raising awareness for the Copernicus programme

The Copernicus programme was originally devised as a policy tool for public administrations and today this characteristic remains a cornerstone of the programme. Nevertheless, broad uptake of Copernicus data or information within the public sector has not yet been achieved, and a considerable effort is still required to increase awareness amongst the civil servants in the different Member States about the Copernicus programme, its data and information products, and the potential enhancements, economic advantages, and efficiency gains this can bring to their processes and workflow. Similarly, private sector intermediate and end users are insufficiently aware of the existence and characteristics of the Copernicus programme.

Recommendation 2: Ensure **presence in all conferences and events** at which Copernicus can be promoted to its relevant audience, being either a thematic conference touching upon a field in which Copernicus information could be relevant (GIS, Agriculture, Cultural Heritage, Oil&Gas, Biodiversity, Transport, Air Quality, etc.) or a space/EO conference. Depending on the topic, both public administrations as well as the private sector are present at these conferences and can be targeted.

- **Action 2.1:** (E) **Identify and prioritise all conferences and events** relevant to Copernicus and its application domains, in order to develop a conference outreach plan with high relevance and impact for Copernicus related applications.
- **Action 2.2:** (E) Design and build a modular **Copernicus booth** and ensure presence at leading events. To ensure a wide reach and enable participation to national events as well, additional manpower for the booth can be provided by the user uptake contractors or representatives from the Copernicus User Uptake Office, and the content can be tuned to the various thematic areas or sectors.
- **Action 2.3:** (E) Deploy the **Copernicus User Corner** as part of the Copernicus booth at specific events. At the corner actual users promote how Copernicus data helps them in their workflow and demonstrate in a practical manner their processes, show how to access to data and information, and last but not least, discuss the efficiency gains or economic advantages.
- **Action 2.4:** (E) Ensure increased **Copernicus presence in the speaker programme** of the conferences' plenary or breakout sessions, where said actual users present their experiences supported by one or more representatives from the Copernicus User Uptake Office.
- **Action 2.5:** (E) Organise **piggy-back events to conferences**, likely ensuring the presence of the all the actors of the value chain (institutions, industry and

academia), as part of the **Information Session Series**. These sessions should be highly adapted to the audience targeted.

Recommendation 3: Ensure **awareness of Copernicus and its advantages within public administrations**, with decision makers and at operational level within the civil servant staff pool, in order to create complementary buy-in from the hierarchy. For example, the UK's Space for Smarter Government (SfSG) initiative serves both functions through high level strategic workshops at Departmental level within Government as well as thematic and sector focussed workshops at functional level and SfSG competitions calls for user uptake demonstrator projects.

- **Action 3.1:** (E) Deliver **series of presentations to civil servants at decision-making level** (e.g. Cabinet of Ministries, e-government representatives) about the contribution of Copernicus to empowering their policies and instruments available for co-funding the potential implementation. Once buy-in has been achieved, they are more likely to accept or even promote the use of Copernicus in their respective departments or Member State. This action is part of an overarching **Information Session Series**.
- **Action 3.2:** (U) **Organise non-technical Copernicus presentations in institutions which train future civil servants** (e.g. Ecole Polytechnique, Ecole Nationale or Institut Régional d'Administration in France), as part of the Copernicus Academy described hereunder, to ensure the next generation of policy-makers are made aware of the advantages of space data for a variety of public sector users.
- **Action 3.3:** (U) Organise a **series of elite summer schools** aiming at decision makers and up and young high flier government officials to stimulate coherent approaches and knowledge sharing concerning potential impacts of Copernicus on public governance and delivery of public services.

Recommendation 4: Strengthen the toolkit at the disposal of the national and regional activists for increasing awareness of Copernicus. These activists include, for example, the Contact Points as well as the regional networks or champions in public administration. The promotional information should be targeting both public administrations and the private sector. It would be highly recommended to either translate the developed promotional material, as localisation is one of the cross-cutting recommendations often mentioned by stakeholders, or to provide the developed material in editable format to the relevant stakeholders at national or regional level and could be willing to produce the localised versions.

- **Action 4.1:** (P) Develop the **Copernicus Handbook**, bridging the gap between the general Copernicus brochure and flyers on the one hand, and the detailed technical information provided by the Entrusted Entities on the other hand, in order to provide more concrete examples and spark the imagination of what Copernicus could do for the reader. Such a handbook would integrate a harmonised/standardised Product Portfolio for all Copernicus Services and data sources (catalogue) and would ideally be accessible online as an e-book or wiki.
- **Action 4.2:** (P) Develop smaller **thematic Copernicus Brochures** geared specifically towards public administrations with a stronger regional focus or thematic focus (e.g. *Copernicus for Oil & Gas*, including practical content, relevant and targeted to these specific target groups. The key market segments of the institutional Copernicus users should be targeted (e.g. agriculture and forestry), depending on the latest market analyses.
- **Action 4.3**: (P) Communication toolkit such as standard editable presentations, graphic material and Copernicus corporate identity.

Recommendation 5: **Enhance the existing Copernicus website** and make it the single entry point to the Copernicus world. Therefore, the content served should be tailored to the knowledge level of the visitor with sections, such as "I am a Copernicus Newcomer", "I am a Copernicus Professional", "I am a Copernicus Entrepreneur", etc. The private sector and especially the start-up eco-systems, are also currently not sufficiently addressed on the website or social media. **Further increase Copernicus presence on social media** to also reach the address the more geeky ICT community with adapted content for those audiences.

- **Action 5.1:** (P) **Enhance the existing Copernicus website,** adapt website content to knowledge level of visitor, centralise the showcases of the different Copernicus Services on the Copernicus website and order them thematically rather than strictly by service, etc. Develop a section for private users and more specifically start-ups (including information on funding instruments such as the Horizon 2020 space call or the SME Instrument).
- **Action 5.2:** (P) Create a **web repository of available user uptake resources** (presentations, brochures, flyers, showcases, course material, reports, etc.) in all languages they are available in.
- **Action 5.3:** (P) **Increase presence on social media used by professionals in private sector** (e.g. LinkedIn or Twitter) by highlighting one example of the collection of

showcases per week, by addressing content relevant for private sector and start-up communities.

Recommendation 6: Leverage networks, industry associations and clusters with interests relevant to Copernicus to extend reach and multiply efforts in raising Copernicus awareness. Create buy-in with networks not currently active with Copernicus, especially in user domains or industrial sectors which are currently underserved or hard to reach.

- **Action 6.1**: (N) Organise regular meetings between networks, such as NEREUS, ERRIN, EARSC, EARSeL, EUROGI, etc. and the Copernicus User Uptake Support Office to inform about Copernicus, to encourage Copernicus promotion activities towards their members and to understand their needs.

4.1.2 Informing and educating Copernicus users

As a next step in marketing the Copernicus data and information, the objective of this set of recommendations and associated actions is to create further interest and desire with potential users to incorporate Copernicus data into their work processes and solutions. Highlighting the technical or commercial potential of Copernicus for public or private users is paramount, this can be achieved by promoting showcases, performing demonstrations and publishing a market report. Secondly, since users can assess the Copernicus potential best as informed clients, it is essential to educate potential users on the how-to. Lastly, a regional approach could prove an effective marketing strategy in selected geographies.

Recommendation 7: Market the actual achievements 'enabled by Copernicus'. It is considered vital to focus on marketing what is available today or in the near-term, and to increase efforts on marketing real showcases and their demonstrated advantages in economic or policy terms, rather than pushing data and information not yet available or not yet validated, in order to generate quality content that creates attention and attracts potential users, in accordance with the so-called inbound marketing concept. The key objective is to avoid fatigue and frustration with users, for example, when promised data or information is not yet available, or the hurdle towards finding and understanding more detailed information is too big. Currently, the showcases are organised by Service, but this does not always represent the categorisation of information that users are looking for, and more domain driven or sector driven categorisations could be used (e.g. custom sets of showcases or information for forestry agencies or Oil & Gas companies). Showcases of successful private initiatives are insufficiently covered and their development would help stimulate the so-called Copernicus economy. The showcases could ideally be presented on the Copernicus website, but should be provided as well for offline usage (e.g. for use in a slide deck).

- **Action 7.1:** (P) **Collect Copernicus showcases/success stories** and leverage the existing showcases developed for or by Copernicus Services, update and improve the existing ones, develop new showcases where there are gaps, and lastly, increase the focus on 'how it was done' and what the tangible efficiency gains or economic advantages obtained were.
- **Action 7.2:** (P) **Select pilot country for an end-to-end pilot implementation** as showcase for other Member States. Discuss with owners of Copernicus-supported directives and determine reporting with intensive data collection efforts. Partner with respective Copernicus Services for country selection.

- **Action 7.3:** (P) Build network of indirect EU power users – those that own the reporting directives – to discuss and **determine the potential benefit of Copernicus for the reporting**, and communicate to their reporting entities.

Recommendation 8: Inform the private sector about Copernicus, its market segments and trends, to highlight the market opportunities and stimulate the development of the Copernicus economy. Develop the Earth Observation Market Report in resemblance to the GSA's GNSS Market Report, a regularly updated publication describing the GNSS global market, its individual market segments, value chains, applications trends, etc. Currently at Issue 4, the GNSS Market Report has become a landmark publication. A first step in this direction for EO can be found in the EO21 Indicator of Trends Report from Satellite Applications Catapult. Secondly, partnering with leading companies, such as the geospatial multi-nationals, might allow to leverage their existing communication channels (developer events, magazines, website, etc.) with their (potential) clients to advertise Copernicus and its advantages.

- **Action 8.1:** (P) Develop the **Earth Observation Market Report** highlighting key technical and market opportunities and trends, in a stylised manner.
- **Action 8.2:** (P) Develop a **Partnering Strategy** with leading geospatial companies to identify common interests, mutual benefits to achieve, and explore to leverage their communication channels.

Recommendation 9: Enlarge the pool of Copernicus-savvy students and researchers, as the future generation of potential Copernicus users. Considering that EO has numerous applications outside the usual space-related application domains, it is crucial to create awareness on EO within universities and business schools. Copernicus has relevance in many application domains that have dedicated university curricula where remote sensing or the EO flagship programme Copernicus is not sufficiently addressed (e.g. geology, forestry). The *Copernicus Academy* is setup as a User Uptake Key Partner of the Copernicus User Uptake Support Office. The Academy manages, supports and implements the development of Copernicus university curricula and the provision of Copernicus lectures at academic institutions. Secondly, the academy maintains a network of academics, researchers and provides a platform for knowledge exchange on Copernicus-related topics. The academy stimulated the creation of start-up companies as an indirect benefit, as tomorrow's entrepreneurs are today's students.

- **Action 9.1:** (U) **Develop a set of course material** on Copernicus data and information under a public license for use by universities, to introduce Copernicus

within several curricula that might benefit from Copernicus, such as agriculture, forestry, GIS, etc.

- **Action 9.2:** (U) Map the relevant academic curricula of interest for Copernicus user uptake. **Develop a systematic plan to organise Copernicus lectures** at selected academic institutions.
- **Action 9.3:** (U) Form the **Copernicus Universities Alliance** with a memorandum of understanding among universities to stimulate cooperation on knowledge building and Copernicus-related research as a start. The alliance enables for innovations that were developed in academia and research institutes to 'hit the market' as quickly as possible.
- **Action 9.4:** (U) **Support a series of Summer Schools** delivered by internationally recognised experts in the chosen domains and sectors, and attended by high flyer post-graduate and early-career participants. The process will create the Erasmus-for-Copernicus network of the future.

Recommendation 10: Provide **dedicated training opportunities for users in the private sector**. To save time and costs for private companies to follow training, the training would preferably take place as distant learning (online).

- **Action 10.1:** (U) Develop **an online distant learning training programme directed towards various commercial sectors** which includes the relevant practical demonstrations.

Recommendation 11: Provide **dedicated and recurring training opportunities for users in the public sector**. The mapping analysis highlighted the effectiveness of hands-on demonstrations given by actual users (user-to-user and train-the-trainer concepts) or hands-on exercises which are thematically close the participants' daily work. For example demonstrations that show how Copernicus helps public administrations to fulfil their reporting requirements – stemming from e.g. environmental policies – in an easier and more economical manner. This activity is to be performed by the Entrusted Entities, potentially supported by the user uptake contractors (e.g. for land monitoring). Transverse training (e.g. coastal monitoring) is also to be performed by contractors. Similarly to the education actions for academia and private sector, the training are managed and implemented by the overarching Copernicus Academy.

- **Action 11.1:** (U) Build **a list of potential users in leading institutional market segments of Copernicus**, which can be targeted by training.

- **Action 11.2:** (U) **Develop and ensure a recurring and sustainable training programme for public end users** as a one-off training will not achieve the desired impact. Preferably bring the training to the public sector users themselves, by organising the training sessions at their premises. Train-the-trainer to multiply the impact of the programme. Pilot the programme in a more centralistic Member State, possibly in cooperation with e.g. the Member State's geographic information authorities.

Recommendation 12: Build a network of Regional Contact Offices (RCOs) to strengthen the Copernicus User Uptake Network at regional level as the regional administrations represent a key uptake/market development opportunity for Copernicus. Support the sustainable RCOs that have been prototyped through the GMES4Regions initiative, or in those other regions where similar organisations have emerged. These organisations develop and maintain links to regional authorities, academia and regional industry in a triple helix structure to address strategic priorities in domains and sectors where Copernicus data and services (and other space applications) are applicable. The RCOs retain links to the national level, but use specialisation to avoid duplication, for example, by identifying policies for which Copernicus can have impact at regional level. RCOs stimulate regions to activate and use structural and other local funds and to establish regional uptake mechanisms and reporting. Region-to-region showcase exchanges should be encouraged to share best practice of Copernicus uptake, reporting and integration with national activities.

- **Action 12.1:** (N) **Support existing Regional Contact Offices (RCOs) that have found a sustainable model and develop new ones.** The one-stop shop regional contact points have organised information/training/seminar sessions and have organised cross-regional knowledge sharing. Ensure continuity by assessing success factors of the sustainable RCOs in question. Potentially introduce specialisation by thematic area. **Focus on the development of new RCOs** in regions with identified potential and stakeholder support on regional political level. For the above, identify funding sources to assist sustainability of RCOs and start-up of new RCOs.
- **Action 12.2:** (U) **Identify successful grassroots successes and enlarge the impact by transposing those to other Member States or regions**, supported by demonstrations or concrete training programmes, complemented by a series of targeted events, using best practice from individual regional end-user workshops

and conferences to strengthen cross-regional exchange and collaboration. Possibly as part of the Information Session Series.

4.1.3 Engaging Copernicus users in public and private sector

Converting the interest and desire of a potential customer into a transaction is the last step of successful marketing. Engaging users to actually integrate Copernicus data and information in their workflow or service offering should be the outcome of a successful engagement strategy.

Copernicus is a data source increasingly being used as an enabling service part of a larger technological solution. To grow the latter market, it is deemed essential to engage entrepreneurs from other sectors e.g. the ICT eco-system.

Recommendation 13: Stimulate the creation of start-ups using Copernicus to develop their service offering. Europe has already several space-related start-up initiatives such as the Space App Camp, the Copernicus Masters, Startup Weekend Space, and the ESA BICS, amongst others. As a successful start-up eco-system requires a significant dealflow, seen the relatively low success rate of start-ups, the volume of start-up initiatives should be increased to subsequently increase the number of successful start-ups created. The existing initiatives showed can be expanded and new ones created.

One possibility would be to organise *hackathons*, an event where a coding competition takes place around a theme, which in the case of Copernicus, ideally addresses a thematic challenge relevant for the region it is taking place in, to gain local stakeholder buy-in. A hackathon is a compelling manner to inform potential entrepreneurs about the possibilities provided by EO data and information, and to stimulate the creation of start-ups and of new products/services using Copernicus data.

Idea competitions, such as the Copernicus Masters, can be grown further by increasing its geographical and thematic reach. The existing Copernicus Masters is an interesting manner to support start-up companies but it does not sufficiently address the regional dimension. An option is to organise regional and/or local competitions that would be labelled as Copernicus Masters finalists. Alternatively, regional awards could also be offered against thematic challenges of importance for that region (e.g. forest fires in Greece, floods in central Europe, etc.) and engage local actors to be involved in the organisation and sponsoring of these competitions. Thirdly, an application sector focus on a variety of topics such as Oil & Gas, smart cities, etc. could enlarge its reach.

Hackathons and idea competitions contribute to connecting start-up companies with potential partners and investors, therefore it is important to maximise the number of investors and representatives from private companies in the panel of judges.

Apart from hackatons and idea competitions, voucher schemes for entrepreneurial support can be provided, or free or reduced price access can be given to data processing platforms as this is a barrier to develop new products for start-ups and SMEs.

- **Action 13.1:** (S) **Organise hackathons** to illustrate different uses of Earth Observation and to stimulate the creation of start-ups (similar to the COSMO-SkyMed Hackathon, organised by ASI). Hackathons and competitions are the best way to attract dynamic entrepreneurs.
- **Action 13.2:** (S) **Expand the idea competitions**, such as the existing Copernicus Masters, geographically, thematically or sectorial to increase the number of Copernicus-related start-ups.
- **Action 13.3:** (S) **Explore voucher schemes** for technical and business support (not cash) from experts, thereby implementing the lessons learnt from experiments under the CIP and EMMIA scheme.
- **Action 13.4:** (D) (S) **Create of a free or reduced price cloud-based platform for integrated services**, e.g. data storage and processing which is a hurdle for start-ups or SMEs, concept of bringing the process to the data rather than the opposite.
- **Action 13.5:** (S) **Strengthen the relationship between Copernicus and business incubators & accelerators**, such as the ESA BICs, and the key technology transfer centres at universities in support of the Copernicus economy. Explore synergy with the described voucher schemes.
- **Action 13.6:** (S) **Copernicus Mission for Growth** to enable European companies to increase business outside the EU through service export and technology/capability transfer.

Recommendation 14: Increase funding opportunities for user uptake of Copernicus data and information in the private sector to stimulate the creation of start-ups or the development of new products in existing companies. For example, by better link Copernicus to other EU initiatives (Maritime Spatial Planning, Smart Cities, Blue Growth, etc.) and their associated funding instruments, more EU funds can be leveraged for Copernicus. Not only stimulating qualified interest in Horizon 2020 space funds but also other vertical EU funding schemes, complemented by the national ones. A better understanding of private capital on the other hand can equally improve the

success of businesses to attract (new) investors. Furthermore an increase in the available funding could be considered, by creating a compartment in the SME instrument for EO / Copernicus, or by testing innovative funding instruments such as inducement prizes.

- **Action 14.1:** (F) **Publish a guide to funding,** to explain the public funding mechanisms and private funding sources and to helps entrepreneurs to navigate between the different sources of public and private financing.
- **Action 14.2:** (F) **Increase Copernicus presence in the SME instrument** by creating a dedicated compartment for Copernicus. Subsequently it is important to encourage participation in order to increase competition and the quality levels of the participating companies.
- **Action 14.3:** (F) **Implement an inducement prize** open to innovations contributing to efficiency gains in data compression, processing, storage, distribution or access. The objective is to further stimulate the use of large and complex EO / Copernicus data products by scientists, researchers and commercial companies.

Recommendation 15: Increase **funding opportunities for user uptake of Copernicus data and information in the public sector**.

Funding instruments can be created for public administrations to procure feasibility studies in order to assess the technological gap of adapting Copernicus information to national procedures, to investigate new applications and in combination with an economic feasibility study to assess the efficiency gains or economic advantage. Interesting examples of this are the funding put in place through the Space for Smarter Government Programme (SSGP) in the United Kingdom, the German funding programme for public administrations to support the development of Copernicus solutions with technical and economic feasibility studies, or innovation procurement at European level. These funding mechanisms are needed and can help the public sector to think differently and create sustainable and operational services using EO data. In this context it should be noted that the Commission has already launched such instrument in November 2015.[7] Furthermore, regional clusters who work in conjunction with local/regional authorities on Copernicus related innovation or feasibility projects can have access to both regional and EU structural funds for such joint ventures.

[7] Horizon 2020 call EO-2-2016: Downstream services for public authorities (PCP)

- **Action 15.1:** (F) **Instil a business mentality in assessing whether Copernicus could be useful for a public administration** to implement by means of feasibility study on the technical implementation and the economic advantage.
- **Action 15.2:** (F) **Implement an innovation procurement instrument** for public administrations to establish sustainable supply chains for delivery of downstream EO-based services to public authorities.

4.1.4 Enabling access to Copernicus data and information

The recommendations and actions in this section are not linked to a user uptake initiative maturity level, as data access is a prerequisite for the successful uptake of Copernicus data and information. On the communication side, perceived issues such as the continuity of the data availability, and the border between the Copernicus Services and the activities of the private sector could be alleviated by ensuring transparent communication on these topics. Also other communication material on the data and services itself are deemed helpful, to be complemented by training, and improvements to the data access portals itself.

Recommendation 16: Inform about the different information products provided by the Copernicus Services, accessible for beginners, but with enough depth to be interesting for users with intermediate to advanced knowledge as well. **Increase focus on data and information access in all promotional material and develop dedicated material. Communicate transparently** about the Copernicus data policy, the future of Copernicus and the development of the Copernicus Services, in order to reassure the private sector on long-term sustainability/availability and to increase investment in Copernicus-enabled solutions.

- **Action 16.1:** (D) **Produce a Product Portfolio of the Copernicus Services**, a catalogue of the offer per thematic area or sector, the catalogue could include showcases of how data or information was used. The Product Portfolio is integral part of Copernicus Handbook described earlier.
- **Action 16.2:** (D) **Communicate the Copernicus data policy** in easy to understandable language for private users, with concrete examples of allowed usage.
- **Action 16.3:** (D) **Remove doubts about the continuity/sustainability** of the availability of raw data or data products of the services to increase investment in Copernicus by the private sector by including these sort of messages in the communication efforts on data access.
- **Action 16.4:** (D) Define and communicate the roadmap for future development of the Copernicus Services and **the border between the EU-funded Copernicus Services and private sector developed downstream applications**.

Recommendation 17: Make data and information access easier, by centralised and user-friendly data and information access portals. Appealing but hands-on webinars on data and information access would increase the engagement of users who have been attracted to try-out information. Integration and harmonization of Copernicus satellite and in situ data often requires integration and augmentation with local geo-layers and information of specific character and content based on regional policies, needs and interests. Open and free access to other public data sets to augment Copernicus data utilisation will also increase the range of applications of Copernicus data and services in the public sector.

- **Action 17.1:** (D) **Data Access Information Kit,** a physical communication pack with easy and hands-on information on what data and information is available by thematic areas or sectors and how to access it.
- **Action 17.2:** (D) **Open data discovery functions on the data portals,** to increase the number of users who know what data is available and to stimulate data and information to be used.
- **Action 17.3:** (D) Organise **concise and to-the-point webinars on data access** using free and open source tools, so users can easily try-out data. Maintain a list of free and open source tools. Feature webinars prominently on the website to increase the level of user service of the portals.
- **Action 17.4:** (D) **Collect statistics on data usage** and understand demography, and use web analytics software to analyse portal usage, in order to improve offer and navigation of the data web portals.
- **Action 17.5:** (D) **Improve data portals User Interface (UI) with a stronger user's perspective**, e.g. enable bringing processes to the data instead of the other way round, implement / improve search tools and build interfaces based on maps, shareable data product shopping carts, dataset search, product URIs.
- **Action 17.6:** (D) Enable **access to historical data** (similar to Landsat), prioritise for datasets known to have a high 'time-series use'
- **Action 17.7**: (D) **Facilitate open and free access to public data** at regional, national and European levels when required for integration and harmonization with Copernicus data sets for public sector applications.

4.2 Action plan for the user uptake initiatives

The implementation of the recommendations and associated actions as described in the above chapter is further detailed in this section for the priority actions, and a further **prioritisation** and **timeline for implementation** is proposed.

Whilst all actions and recommendations are important considering they have been distilled out of an extensive set of interviews and mapping cards, a prioritisation has been nevertheless applied considering factors such as overall complementarity with the existing landscape, potential impact & reach, required resources and appropriateness of timeline. The prioritisation ranges from 'A – Essential', 'B – Highly Recommended' to 'C – Recommended'.

The first set of linked actions relates to the overarching recommendation which is focused on building the extended Copernicus User Uptake Network, as a key structure of the engagement strategy.

#	Type	Action	Priority
Build the extended Copernicus User Uptake Network			
1.1	C	Setup the Copernicus User Uptake Support Office	A
1.2	C	Funding instrument to create new Contact Points or expand activities of existing ones	B
1.3	C	Contact Point or helpdesk at EU level	C
1.4	U / N	Create missing or strengthen national User Fora	A
1.5	U / N	Create thematic User Fora at European level	C
1.6	P	Maintain catalogue of existing and potential users	B

Table 5: Actions related to the User Uptake Network Architecture

Action 1.1, 8.2, 11.1	Setup of the Copernicus User Uptake Support Office
Expected Benefits: ▪ Increase sustainability of undertaken activities ▪ Improve coordination between initiatives taking place at European, national and regional level, and the Entrusted Entities ▪ Enhance reach in the diverse user community ▪ Handle complexity of the dispersed geographical distribution of the public sector	**KPIs:** ▪ Number workshops in Member States ▪ Number of Member States with a dedicated Copernicus Contact Point structure ▪ Number of defined national action plans ▪ Number of implemented user uptake initiatives
Schedule: ▪ First month would be dedicated to setup the office, define governance and plan activities ▪ Within 2 months the European plan of action should be further detailed and adjusted according to the resource constraints ▪ Within 6 months thereafter a first set of national action plans should be defined ▪ Within year 1 all Member States should have been consulted and an evaluation regarding the European helpdesk should be made	**ROM Costs:** ▪ Dedicated liaison officer within the Commission staff ▪ Contractors: ~150-200 k€ per year

Description:

The Copernicus User Uptake Support Office coordinates and supports the planning, design, development, implementation and execution of the User Uptake Tools, and liaises with the User Uptake Key Partners. Its key functions are:

- Maintain project management office and project management tools such as scheduling & KPI monitoring
- Adapt and update the European action plan for user uptake, considering the resource constraints such as budget, time and available personnel.
- Prepare, schedule and conduct workshops with Member States to create or expand the national Copernicus Contact points and to define the national action plans
- Liaise with Key Partners such as the Contact Points, Copernicus Academy and the Networks
- Maintain a close relationship with all project managers of the User Uptake Core Tools and track progress and impact, provide direction and intervene where necessary
- Maintain the user uptake initiatives inventory and country profiles
- Track progress of user uptake initiative maturity at Member State level
- Strengthen ties with the European industry and develop a partnering strategy with leading geospatial companies to develop multiplication channels for the Copernicus tools and leverage communication channels
- Liaise with the user uptake teams within the Entrusted Entities, coordinate future initiatives, and ensure knowledge exchange in terms of user uptake
- Report about progress to the Copernicus Committee and User Forum, and create buy-in
- Provide inputs and updates to the user list maintained by the Commission
- Evaluate the necessity for a European helpdesk or Contact Point if implementation of a national structure is lagging.

4.2.1 Raising awareness for the Copernicus programme

The following table summarises the recommendations and associated actions which have the aim to increase the general awareness of Copernicus within public and private sector.

#	Type	Action	Priority
Ensuring presence in all Copernicus-related conferences			
2.1	E	Identify and prioritise all conferences and events	A
2.2	E	Design and build modular Copernicus booth	A
2.3	E	Deploy the Copernicus User Corner	B
2.4	E	Increased Copernicus presence in the speaker programme	A
2.5	E	Organise piggy-back events to conferences (ISS)	B
Ensure awareness of Copernicus and its advantages within public administrations			
3.1	E	Deliver series of presentations to civil servants at decision-making level (ISS)	A
3.2	U	Organise non-technical Copernicus presentations in institutions which train future civil servants (CA)	B
3.3	U	Organise series of elite summer schools (CA)	B
Strengthen the toolkit at the disposal of the national and regional activists for Copernicus			
4.1	P	Copernicus Handbook	A
4.2	P	Thematic Copernicus Brochures	B
4.3	P	Copernicus Communication Toolkit	B
Enhance existing Copernicus website and increase Copernicus presence on social media			
5.1	P	Enhance existing website	A
5.2	P	Create web repository of available UU resources	B
5.3	P	Increase presence on social media	C
Leverage networks, industry associations and clusters			
6.1	N	Organise meetings to develop network of networks	B

Table 6: Actions for raising awareness for the Copernicus programme

Action 2.1, 2.2, 2.3, 2.4	Increase Copernicus presence at relevant conferences and events
Expected Benefits: ▪ Increase awareness with a large number of potential users from both the public and private sector ▪ Introduce Copernicus data and information in new market segments in private sector or fields of public administration ▪ Provide semi-technical presentations (see ISS) in domain specific events	**KPIs:** ▪ Number of audience reached ▪ Number of conferences with Copernicus presence ▪ Number of presentations in conference programme ▪ Number of supported events
Schedule: ▪ 2 months for developing a strategic plan for presence ▪ 3 months for designing the concept and content of the modular booth ▪ Operational for conferences and events as of month 4	**ROM Costs:** ▪ Implementation plan for Copernicus presence at conference and events: ~20 K EUR ▪ Modular Copernicus Stand: ~30 K EUR ▪ Transport and setup of the Copernicus Stand: ~2 K EUR per event ▪ Manpower for Copernicus Stand: ~10 K EUR per event ▪ User Corner: ~5 K EUR per event ▪ Speaker slot: ~5 K EUR per event ▪ Support to national activities: TBD

Description:

Copernicus presence at relevant events and conferences is patchy, several options exist to increase the visibility of Copernicus ranging from a low-end solution for local events to high-end option for leading conferences in highly relevant market segments:

- Leading events relevant for Copernicus should be identified taking into account the market potential for Copernicus, the events reach and attendance, and the priorities of the Copernicus programme. Based on this analysis, the implementation plan for Copernicus presence can be developed, specifying a timeline, the magnitude of the presence as well as predicted associated costs. Special attention should be given to seeking synergies with existing activities in this field by the Commission itself, its other space programmes or national or regional authorities.
- A fully fledged option consists in exhibiting with a modular Copernicus stand, which entails a reception desk, 5 mini booths with more information on success cases, a few discussion tables, computer displays and holders for promotional material.
- One of the mini-booths could be branded as the Copernicus User Corner, which is manned with an actual user who shows actual implementations of Copernicus data or information in the user's work processes. A hands-on demonstration is deemed most effective.
- As a stand-alone option or addition, Copernicus speakers should be included in the conference programme, to heighten its visibility. It is of essence here to ensure the presentation is adapted to the audience of the conference, and ideally includes a presentation of a showcase by a user.
- A more intense variation to a presentation slot, is the organisation of a piggy-back event to the conference, which is detailed under the Information Session Series.
- Support to national activities could be provided, by in-kind sponsoring in the form of stand material lending and the provision of promotional material that complement the nationally available ones.

Action 2.5, 3.1	Information Session Series (ISS)
Expected Benefits: ▪ Enlargement of existing user base ▪ Explore the development of new user communities ▪ Stimulate the fostering of new potential intermediate user communities ▪ Provide thematic information to participants that is relevant and can be easily related to by the participants to achieve maximum impact	**KPIs:** ▪ Number of participants to the information session ▪ Evaluation forms provided by attendees after the event
Schedule: ▪ The ISS starts with a 3-month overall planning period ▪ Each fully-fledged session requires a 4 to 5-months production cycle including preparation, execution and follow-up	**ROM Costs:** ▪ Highly dependent on the location (stand-alone vs co-hosted at conference) ▪ Highly dependent on the technical requirements and number of attendees ▪ Cost per session: ~20 K EUR – ~100 K EUR

Description:

The Information Session Series are hands-on, practical training sessions oriented towards existing or new users, they are seen as pure awareness-raising events and are therefore only semi-technical, accessible to newcomers as well as intermediate users. The series of sessions should be designed to maximise geographic as well as thematic coverage. The sessions will be dynamic and interactive, and formal presentations will be minimised whilst participatory approaches such as (for technical audiences) live demonstrations of products in operational settings and guided tours of data portals and (for non-technical audiences) problem-solution cases on the use of Copernicus products, will be preferred.

- The overall planning period allows to design and secure an annual programme of events (rather than a short-term promotion cycle) to increase attendance. The selection of events is based on:
  - Focus on Local and Regional Authorities (LRA) and the Geographic Information (GI) professional community as promising untapped reservoirs of potential (intermediate and end) users of Copernicus
  - Focus on non-space-faring and new Member States
  - Focus on a transverse rather than a vertical approach
  - Promising markets with strong growth are favoured, e.g. oil and gas and renewable energy
  - Co-location with other events is preferred to maximise attendance and impact, in coordination with Action 2.1 - 2.4
- Material for the sessions will be developed by the implementation team, with service providers “coupled” with users – guided by the indications of the Strategic Plan. Live demonstrations or “guided tours” of systems and products will be developed, framed as problem-solution cases where applicable
- The planning for each session requires to identify partners, potential speakers and attendees.
- Practical arrangements shall be put in place for logistics (venue, catering) and technical support. For each event, an online registration facility, online feedback form, online live-streaming, edited videos of live- streamed sessions can be provided.

Action 4.1, 16.1	Copernicus Handbook with Product Portfolio
Expected Benefits: ▪ Provide more depth on the potential of Copernicus for newcomers with sufficient depth for users with intermediate knowledge level ▪ Inform about the available data, as well as the services and more detailed characteristics of those ▪ Centralised repository of the product portfolio	**KPIs:** ▪ Number of visitors ▪ Time spend on the portal ▪ Ratings via evaluation webforms
Schedule: ▪ As there is a data collection excersise which involves the different Entrusted Entities, additional buffer should be foreseen in the schedule. ▪ The entire production cycle is tentatively projected to take 6 months	**ROM Costs:** ▪ Collection of information, consolidation and presentation: ~250 K EUR ▪ Possible translation TBD
Description: The Copernicus Handbook bridges the gap between the general Copernicus brochure and flyers on the one hand, and the detailed technical information provided by the Entrusted Entities on the other hand: ▪ For maximum reach a web-based solution should be contemplated, such as a wiki, or an e-book which can be integrated with the Copernicus.eu website. ▪ Apart from more in-depth information than in the Copernicus brochure, the handbook contains more concrete examples of the use of Copernicus, to spark the imagination of what Copernicus could do for the reader. ▪ An integrated product portfolio is presented in the handbook, in an accessible manner for newcomers, as well as users with intermediate knowledge. The main objective is to provide a one-stop shop information source for new to intermediate users.	

Actions 5.1, 5.2, 5.3	Enhance existing Copernicus website and increase Copernicus presence on social media
Expected Benefits: ▪ Better serve the different types of users (experienced users, newcomers,…) ▪ Increase user basis by informing new potential users about Copernicus benefits ▪ Facilitate access to products and services ▪ Better promote Copernicus achievements ▪ Increase awareness among the general public	**KPIs:** ▪ Increase of the total number of visitors ▪ Presence of the pre-defined user journeys in the most frequently used navigation paths ▪ Increase of the total number of followers (Facebook and Twitter) ▪ Increase of the total number of "likes" ▪ Time-to-respond to users' requests posted on the website

Schedule:
▪ 2-3 months for the definition and implementation of new user journeys
▪ 1 month to improve the number of referrers
▪ 1 month to create a section specific to downstream providers
▪ Running activities:
  ○ Regular updates (e.g. web updates to promote new showcases, success stories, UU materials, information for downstream providers…)
  ○ Production of content for social media
  ○ Helpdesk
	ROM Costs:
	▪ Definition / implementation of user journeys: ~15-20 K EUR
	▪ Improve number of referrers: ~5-10 K EUR
	▪ Creation of a specific section for downstream providers: ~10-15 K EUR
	▪ Cost of content production tailored for social media is highly dependent on the required frequency (daily, weekly,…)
	▪ Cost of regular updates is depending on the number of new material to be promoted every week, month… Cost probably around ~1-4 K EUR per month
	▪ Moderation of the helpdesk is depending on the number of requests. Probably around: ~1-4 K EUR per month

Description:

The current http://copernicus.eu portal acts as a common entry point to the Copernicus "world" and drives users to a series of Copernicus portals (e.g. service-specific portals, Sentinel Online,…). These portals are all technically different, adopt their own visual identity, and have their own "logic" in terms of user navigation.

The European Commission is now considering the possibility to integrate the different portals into a single platform but this "migration" will necessarily take time, considering the technical challenges to face and the significant number of actors concerned by the migration.

At the occasion of the re-structuring of the Copernicus.eu website in 2014, significant improvements were implemented (e.g. creation of an application-oriented section http://www.copernicus.eu/main/application-domains, creation of a "Tenders and Grants" section http://www.copernicus.eu/main/tenders-grants, creation of a "Press Room" http://www.copernicus.eu/main/press-room, etc.). Several additional improvements could be brought to the existing Copernicus.eu website before the major migration mentioned above is implemented:

- Define and implement new "user journeys" enabling to better adapt the website content to the visitor's knowledge (e.g. "First visit?"). A possible list of "user journeys" has been established by FDC in the context of GIO Lot1 SC9 ("Copernicus.eu subdomains" Study Report).

- Centralise the showcases and success stories collected under Action 7.1 and make them available to users through a thematically-oriented repository. Typically, this could be done through regular updates of the existing section presenting "Application Domains" (http://copernicus.eu/main/application-domains).
- Make sure that all the materials and resources created through Copernicus User Uptake activities (e.g. training materials) are systematically made available to users through the Copernicus.eu website (a section dedicated to user uptake already exists, see http://copernicus.eu/main/user-uptake).
- Improve the number of "referrers". Today, the websites of the stakeholders involved in Copernicus (e.g. Entrusted Entities, ESA, etc.) all include links to the Copernicus.eu website. The number of referrers could however be increased by identifying relevant portals (e.g. reference portals for the various user communities who could benefit from using Copernicus) and contacting their administrators to ask them to include links to Copernicus.eu in their portals (by reciprocity, links to their portals should also be included in Copernicus.eu).
- Create a section dedicated to downstream providers and more specifically to start-ups in order to make them aware of the opportunities offered by Copernicus to develop value-added services and products (e.g. through the availability of a free and open access to core services and to data from the Sentinels). This section could also include information on the available EU funding instruments (e.g. H2020, COSME, etc.) based on the outputs of Action 14.1.
- Set-up a "helpdesk" team responsible for answering the questions posted by visitors on the Copernicus.eu website. This team could consist of appointed contact persons at the Commission, ESA and Entrusted Entities who would receive users' request from a "moderator" appointed within the User Uptake team. Roles and responsibilities within the helpdesk team should be clearly defined. In the longer term, a Copernicus Web Forum could also be created.
- Regularly provide the teams responsible for the Copernicus Facebook and Twitter accounts with material tailored to social media, based on the outcomes of the other user uptake activities (e.g. new showcase, new training material, etc.).
- Agree on a common editorial policy for news publishing might also be useful (for instance the news published on Copernicus.eu are focused on Copernicus while those published on the Copernicus Facebook account sometimes relate to e.g. NASA activities, with no mention of Copernicus).

4.2.2 Informing and educating Copernicus users

The objective of this set of recommendations and associated actions is to create further interest and desire with potential users to incorporate Copernicus data into their work processes and solutions.

#	Type	Action	Priority
Market the actual achievements 'enabled by Copernius'			
7.1	P	Collect Copernicus showcases/success stories	A
7.2	P	Select pilot country for an end-to-end pilot implementation	C
7.3	P	Build network with EU power users	B
Inform the private sector about Copernicus its market segments and trends			
8.1	P	Develop the Earth Observation Market Report	C
8.2	P	Develop a Partnering Strategy	A
Enlarge the pool of Copernicus-savvy students and researchers			
9.1	U	Develop a set of course material (CA)	A
9.2	U	Develop a systematic plan for Copernicus lectures (CA)	A
9.3	U	Copernicus Universities Alliance (CA)	B
9.4	U	Copernicus-for-Erasmus (CA)	C
Provide dedicated training opportunities for users in the private sector			
10.1	U	Online distant learning training programme towards various commercial sectors (CA)	A
Provide dedicated and recurring training opportunities for users in the public sector			
11.1	U	Build a list of potential targets in leading market segments	A
11.2	U	Develop and ensure a recurring and sustainable training programme for public end users (CA)	A
Build a network of Regional Contact Offices (RCOs) to strengthen the regional Copernicus UU			
12.1	N	Support existing RCOs and develop new ones	B
12.2	N	Identify successful grassroots successes and enlarge the impact by transposing those to other MS or regions	B

Table 7: Actions for informing and educating Copernicus users

Actions 7.1, 7.2 and 7.3	Market the actual achievements 'enabled by Copernicus'
Expected Benefits: ▪ Increased awareness of the Copernicus achievements and data amongst users ▪ Better serve the different types of users ▪ Increase user basis by informing and convincing new potential users about best practices ▪ Filling the gap between theory and practice ▪ More media coverage and "buzz" about Copernicus success stories	**KPIs:** ▪ Number of collected and published showcases/success stories per country and application domain ▪ Number of new Copernicus users in European countries and per domain identified in success stories ▪ Number of media articles covering Copernicus success stories ▪ Number of users involved in the users network ▪ Number of showcases shared by Copernicus users to other users
Schedule: ▪ 2 months for collecting currently available Copernicus showcases/success stories. ▪ 1 month for editing the collected materials using a common standard ▪ 6 months for collecting new success stories in the missing application domains and countries ▪ 2 months for selecting a pilot country for an end-to-end pilot implementation ▪ 6 months for analysing local procedures, creation of an adopted Copernicus procedure and development of a pilot Copernicus solution ▪ 3 months for preparation of a real-life demonstration ▪ Continuous activities: ○ Regular updates of collecting the showcases/success stories ○ Production of content for presentations, social media, press releases ○ Regular follow-ups of KPIs	**ROM Costs:** ▪ Collecting Copernicus showcases/success stories per Copernicus domain and per country: ~150 K EUR ▪ Selecting a pilot country for an end-to-end pilot implementation and implementation of a solution: ~15 K EUR ▪ Developing an end-to-end solution in a pilot country: ~700 K EUR ▪ Organising a real-life demonstration of a selected solution: ~250 K EUR
Description: Copernicus has already many examples of successful implementations among users and its market potential is raising, especially with more data available for users, thanks to new satellite launches. However, often the success stories are not visible for the potential users, not promoted enough and simply not known. There was already some work done to collect Copernicus success stories in the past, mostly in FP7 projects, but these activities were not organised in an integrated way, the collected showcases were dispersed and the activity finished with the end of the project. To improve the situation, increase the visibility of Copernicus success stories and convince new users that it works excellent, the integrated marketing of the actual achievements 'enabled by Copernicus' should be	

organised. Promotion of Copernicus practical examples should be organised as much as possible, as this is much more likely to get attention of the new users than general information about the programme:

- Collect Copernicus showcases/success stories that are available but 'hidden' in the past results of FP7 projects, Entrusted Entities material, media articles and other publications. The current success stories are usually written also in different styles and languages. There is then an extensive work needed to edit the current materials, create an attractive structure and style for the description of the showcases and make sure that they are available in English but whenever possible, also in local national languages.
- Collect success stories by Copernicus application domain and geographical distribution. It will very useful for the promotion targeted in a proper way. It will also give an overview of which Copernicus applications are the most popular, as well as where are the geographical gaps in Copernicus activities.
- Publish and promote success stories/showcases. Make sure that all the success stories are available online, preferably on the Copernicus.eu website. They should be also used for promoting the Copernicus programme in social media and used in other communication of the EU, e.g. in press releases related to the programme, in presentations at conferences and events.
- Make sure that that success stories are promoted in the right local context. For example, talking about the earthquake management to Czech users, will not address them properly, as there are no earthquakes in Czech Republic.
- Select a pilot country for an end-to-end pilot implementation. A country could be selected to implement an end-to-end Copernicus solution, adapted to the local procedures and needs. That would create a role-model example that could then be adapted to the procedures and needs of the other countries. Selection could be made based on expected impact/engagement of the local authorities/experience in organising demonstrations and pilot solutions. More than one country could be selected if budget allows, thus giving the opportunity to demonstrate solutions from different Copernicus domains. After selection of the country, analysis of the operational conditions would have to be performed, followed by a pilot Copernicus solution development, a real-life demonstration, as well as creation of a procedure for operational implementation.

Action 3.2, 3.3	The Copernicus Academy
Expected Benefits: ▪ Extend, support and strengthen the educational, scientific and technological background of practitioners and their respective institutions ▪ Initiate inter-regional, multilateral and intercontinental communities of practitioners and stimulate synergies ▪ Construct, widen and branch out the paths for mutual exposure to Copernicus educational systems by amalgamating the processes previously mentioned ▪ Provide intuitive, easy-to-access learning materials and user-friendly interfaces ▪ Support and strengtheng the user uptake of Copernicus so that Copernicus services are truly consolidated in day-to-day workflows ▪ Systematic evaluation including user feedback after each training event	**KPIs:** ▪ Number of students reached in Copernicus related academic degrees ▪ Number of staff reached in public administrations ▪ Number of users which participated to online webinars ▪ Number of universities part of the Copernicus Universities Alliance ▪ Number of participants to the summer school
Schedule: ▪ In a **first phase** of 6-12 months the creation of the Copernicus Universities Alliance will be started by having dedicated meetings with potential members. ▪ First outreach and education events will take place (e.g. during a Copernicus4all special session at the AGIT Conference / GI-Forum 2016 in Salzburg (July 6-8 2016) ▪ Survey on existing BSc/MSc programmes as well as training initiatives for public administration and private sector across Europe; with focus on geospatial information services/products. This will also strengthen network of future members of the Copernicus Universities Alliance). ▪ An inventory of different learning modules based on core Copernicus curricula will take place in this first phase as well. ▪ The environment for the web-based platform will be developed in close cooperation with the target groups so as to include their specific needs and requirements to the best extent possible. ▪ In a **second phase** of 12-18 months, the stepwise extension of the available content	**ROM Costs:** ▪ For both phases together an envisaged ROM is ranging from 550,000 – 650,000 € for a two-year period and includes the items listed below. ▪ Setup and management of the Copernicus Academy platform. Setup of the Copernicus Universities Alliance ▪ Development, upgrade and hosting of web-based platform ▪ Development of online webinars ▪ Development of a systematic plan for Copernicus lectures incl. train-the-trainer sessions ▪ Development of initial course material to educate and inform (provision of editable materials for continuous updates from within the community is envisaged) ▪ Survey of (a) university based programmes relevant to Copernicus (BSC/MSc), (b) training courses for public administrations and private sector in the field of geospatial analysis ▪ Design, organisation and implementation of the 1st Copernicus Summer School of the Copernicus Academy

will be carried out ▪ Improvement of existing material and further content of the web-based platform. ▪ Dedicated education and training sessions will be held to increase the number of future users and trainers quantitatively as well as geographically. ▪ An international Copernicus Summer School will be held in 2017 as on-site event for mid-career experts from academia, administrations and private sector.	

Description:

The Copernicus Academy coordinates and supports the implementation of all training and educational aspects relevant to Copernicus User Uptake. The concept of the Copernicus Academy with an online anchored "Copernicus User Community" consists of three main components: *gateway*, *bridge*, *and facilitator*. The *gateway* opens the link to the Copernicus Universities Alliance and other research institutions to ensure active communication and exchange of ideas, information and best practice examples through the *bridge* by the users as a community of practice (e.g. through regular postings of new research results close to the market (research briefs). The *facilitator* component offers a platform for linking administrations, service providers and academia for specific needs/offers to be advertised.

The supporting functions of the Copernicus Academy are (i) the inventory of formal and commercial training offers, (ii) the distribution of free and open educational material, eLearning modules and information kits to all interested users, (iii) the offer and implementation of Copernicus lectures (and dedicated Summer Schools) as well as non-technical Copernicus presentations e.g. in academic institutions.

From an educational point of view there are several pillars that foster the successful implementation of User Uptake initiatives by means of the Copernicus Academy:

- The creation of a **Copernicus Universities Alliance** establishes a comprehensive network of entities containing both a broad expertise in the field of Copernicus and wide ranging teaching and education capabilities. The main purpose of this alliance is the continuing education and learning opportunities on Copernicus for students and scientists with links to practitioners/user organisations in various application domains. Many researchers working in fields related to geodata are not yet aware of the potential of Copernicus data and services for their research and the alliance closes this gap.

  The initial Copernicus Universities Alliance comprising an identified selected set of universities carefully elaborates the basic requirements for certification of new partner universities. This leads to a continuous expansion of the alliance and ensures a good coverage of Europe by having partner universities distributed evenly across the different countries.
- Subsequent to the foundation of the Copernicus Universities Alliance the **development of Copernicus university curricula** takes place. The written framework will also link to the *dynamic e-EO Body of Knowledge* as well as further cross-cutting issues and priorities identified in the H2020 SPACE call. This framework supports the integration of relevant courses already existing at different universities and establishes a common standard of the content required for the evolution of Copernicus. The endorsement of the curricula by the alliance is sought to ensure its usage.

- A **systematic plan for Copernicus in-class lectures** at universities is designed to ensure an initial reach within the Copernicus Universities Alliance and beyond. The introductory course material can also serve to **train future civil servants** engaged in relevant study programmes. In order to ensure the sustainability for continuous education/lifelong learning of the target audience, a train-the-trainer concept will be applied: academic lecturers will be educated on the different topics in order to be able to extend the acquired knowledge to further users at their respective affiliation (multiplier effect). In addition, public users and experts from the private sector are made familiar with the training material provided by the Academy to support the up-take by staff within their organisations.
- In addition, **online webinars** complementing the developed curricula of Copernicus lectures are offered, in order to reach more university students and researchers, but as well users in public and private sector in dedicated sessions. A special set of webinars will address the access to (a) Sentinel data and (b) Copernicus Service data & information
- All material will be available from a web-based platform fulfilling several requirements: available free of cost for non-commercial purposes, content editable online by assigned users whilst ensuring accessibility also in areas without high-speed internet access. Fostering the information exchange will be ensured by an online forum on this platform that will also include all types of two-way social media such as Facebook, Twitter, Foursquare, LinkedIn, etc. for information exchange. Additionally, upcoming events will be scheduled in a calendar and distributed to all subscribed members in a newsletter.
- Additionally, power users can propose and provide their own learning modules in the context of Copernicus to be included in the eLearning platform (after peer review by an administrator). This can enable the development of a database of (retrievable) individual and self-managed training opportunities/materials for the Copernicus User Community, created by the same community. Simultaneously, the multiplication of knowledge by the direct transfer of information is ensured.
- A notable online learning environment identified is Moodle, an open-source, object-oriented learning platform. This platform can provide an environment to support self-paced learning. Besides traditional lecture notes, these tools can include e.g. self-assessed quizzes, short lecture videos and recorded webinars, video tutorials, discussion fora, community chats. Case-study based learning forms a basis for problem-based learning, jointly serving as a key pedagogical concept. Existing eLearning courses will be implemented or referred to being certified as *Copernicus relevant* by the Copernicus Academy.

4.2.3 Engaging Copernicus users in public and private sector

Converting the interest and desire of a potential customer into a transaction is the last step of successful marketing, the recommendations and actions in this section have this conversion as objective.

#	Type	Action	Priority
Stimulate the creation of start-ups using Copernicus data or information for their service offering			
13.1	S	Organise hackathons	A
13.2	S	Expand the idea competitions	B
13.3	S	Explore voucher schemes	B
13.4	S	Create a free or reduced price cloud-based platform for integrated services	C
13.5	S	Strengthen the relationship between Copernicus and business incubators & accelerators	B
13.6	S	Copernicus Mission for Growth	C
Increase funding opportunities for user uptake of Copernicus data and information in the private sector			
14.1	F	Publish guide to funding	A
14.2	F	Increase Copernicus presence in the SME instrument	A
14.3	F	Implement an inducement prize	B
Increase funding opportunities for user uptake of Copernicus data and information in the public sector			
15.1	F	Funding instrument for a technical and economic feasibility study	A
15.2	F	Implement an innovation procurement instrument	A

Table 8: Actions for engaging Copernicus users in public and private sector

Action 13.1, 13.3	Hackatons & voucher scheme
Expected Benefits: ▪ Educating the end user about the capabilities (and also limitations) of Copernicus data and attract them to new business opportunities ▪ Raise awareness amongst intermediate users and educate them on the capabilities of and access to Copernicus data and services. ▪ Simplified access to Earth Observation data for users in a Digital Data Library via a dedicated API ▪ Acceleration of the maturity level of Copernicus based applications and services, fostering their market readiness through the innovative support offered in the voucher scheme ▪ Dissemination of Copernicus-related applications among the appropriate user groups	**KPIs:** ▪ End user engagement for App Camp Challenge definition ▪ No. of intermediate users applying for App Camp participation ▪ No. of experts attracted to voucher platform ▪ No. of intermediate users applying for vouchers

Schedule:
▪ A hackathon could be organised every 6 months with a Digital Data Library via a dedicated AP setup for each one of them
▪ The timing should consider other major innovation events in the sector, such as the Copernicus Masters
▪ The implementation of the voucher scheme would start shortly before the first hackathon
	ROM Costs:
	▪ The costs for a two-year hackathon plan are listed below.
	  ○ Strategy Development/ Roadmap / Set-up: ~115 K EUR
	  ○ Price for 4 AppCamps incl. preparatory workshops: ~320 K EUR
	▪ Voucher Scheme Set-up: ~45 K EUR
	▪ Voucher Scheme Operation two years: ~100 K EUR

Description: This action focuses on the organisation of app developer camps that provide technical support to both end users and intermediate users. Complimentarily to that, an innovation voucher scheme could be designed. Both measures could be executed in combination or separately and could also be complemented optionally by integrating a Challenge e.g. dedicated to the needs of municipalities/city administrations in the global Copernicus Masters competition also supporting the take up of Copernicus data by intermediate users. ▪ **AppCamps**: The logistics needed for every app camp location will be assessed in a standardised way drawing from experience about typical requirements (e.g. for event venues, hotels or travel arrangements). At the app camps participants shall work in teams of 2 people. 16 intermediate users shall be invited to each camp for 5 days (arrival on separate day). It has been proven that combining different skills of team members improve the outcome (e.g. researches/students + experienced developers). Already pre-existing teams tend to achieve promising results. Key to a successful app camp is an agenda that provides broad and useful information about the Copernicus program, the end users´ needs and direct one2one meetings with dedicated EO	

experts. Furthermore, dedicated experts will provide support during all project phases also in terms of business and market aspects of the proposed services. At the end of the App Camps all teams shall present their prototypes to a jury which will select a winning team. This team shall receive an incentive prize of EUR 5,000 to be used for the further implementation of the awarded app prototype.

- **Voucher Scheme**: The starting point and success factor is to provide an expert and knowledge provider pool continuously matching the demands and needs of potential innovators. The core of the voucher scheme will be an online matching platform which facilitates the building of a knowledge directory / expert pool, application for vouchers and matching between needs of solution developers and experts. This platform will be designed using the Copernicus corporate identity to meet all requirements of the voucher blueprint and will be launched together with the open calls.
- **Accompanying promotional campaigns**: Content and graphics will be developed based on the EC-defined Copernicus visual identity document. To address appropriate intermediate users several channels (e.g. placement in relevant newsletters, press releases and social media) will be used. For the app camps the official Copernicus websites shall link to a registration page including all relevant information in the same look and feel to increase flexibility. To ensure an optimal visibility and popularity of the voucher scheme and the matching platform, the open calls will be launched along with a strong awareness raising campaign. Besides traditional instruments such as newsletters (targeted distribution list > 10,000), social media, all communication channels mentioned above will be used.

Action 14.1, 14.2	Increase funding opportunities for user uptake of Copernicus data and information in the private sector
Expected Benefits: ▪ More involvement of SMEs in the EU projects ▪ More competitive and market-oriented Copernicus projects ▪ Supporting development of European economy and entrepreneurship ▪ Increase awareness of Copernicus programme and data in the private sector ▪ More involvement of new users among start-ups and young entrepreneurs ▪ More media coverage and "buzz" about Copernicus hackathons etc. ▪ Funding development of new applications with relatively low budget	**KPIs:** ▪ Number of downloads of the funding guide and distribution of printed copies (if relevant) ▪ Number and % of SMEs involved in Copernicus-related EC-funded projects in H2020 ▪ Number and % of Copernicus-related projects funded in SME instrument ▪ Number of market-successful Copernicus applications after completion of the projects by SMEs and start-ups ▪ Number of participants in inducement prize competitions ▪ Number of media outreach about the inducement prize

Schedule:
▪ 3 months for publishing guide to funding
▪ Implementing an inducement prize – discrete 3 months total, every year
▪ Continuous activities:
  ○ Regular updates of the funding guide
  ○ Production of promotion materials based on it
  ○ Regular follow-ups of KPIs
	ROM Costs:
	▪ Publishing guide to funding: ~50 K EUR
	▪ Promotion of the guide to funding in social media, SMEs networks etc.: ~5 K EUR
	▪ Implementing an inducement prize: ~250-~500 K EUR per prize, including ~50-75 K EUR for management and selection

Description:

The Copernicus programme has finally reached its operational phase and the positive impacts of the services and data it offers could be leveraged through a larger involvement of European private players, especially SMEs. SMEs represent 99% of all businesses in Europe (91% are microenterprises), employ more than 90 million people (67% of total employment) and create 85% of new jobs. At the same time, SMEs are operating on considerably lower level of expenses; therefore sustainable Copernicus services provide attractive business opportunities for micro-companies and SMEs. Increasing awareness on existing funding opportunities could contribute to a stronger involvement of micro-companies and SMEs in the development of Copernicus downstream applications. In this perspective, the following actions could be envisaged:

- Creation a funding guide for SMEs and private entities. Often the funding instruments limit participation of SMEs by strict eligibility criteria regarding entities size, turnover etc. The funding guide for SMEs should include analysis of the EU finance instruments available to SMEs pointing out these criteria. The funding guide should especially address the EO sector, and include different EU instruments (grants, procurement, loans, guarantees, equity funding, co-financing/ full financing etc). The analysed programmes will especially focus on H2020 funds in Space call and also other synergetic calls, COSME actions, SME instrument etc.
- Publication of the funding guide on the Copernicus.eu website, where a section dedicated to downstream providers and more specifically to SMEs and start-ups would be created (synergy

with Action 5).

- Make sure that the funding guide is promoted in the EC events, showcased at events for SMEs and in social media/press.
- By communicating the funding opportunities to SMEs, it will increase their presence in the Copernicus-related projects funded by EU, ensuring more market-oriented results with end users, create new entrepreneurship opportunities. The special focus should be put on the SME instrument, where Copernicus projects are underrepresented and at the same time, there is a lot potential to be leveraged upon.
- Implementation of an inducement prize or series of prizes, as a very effective and economical way for creating new ideas and applications. Apart from existing companies, it will additionally generate more entrepreneurship around Copernicus. There could be thematic prizes per domains such as Energy, Oil &Gas, etc., or overarching prizes targeting the value chain.

4.2.4 Enabling access to Copernicus data and information

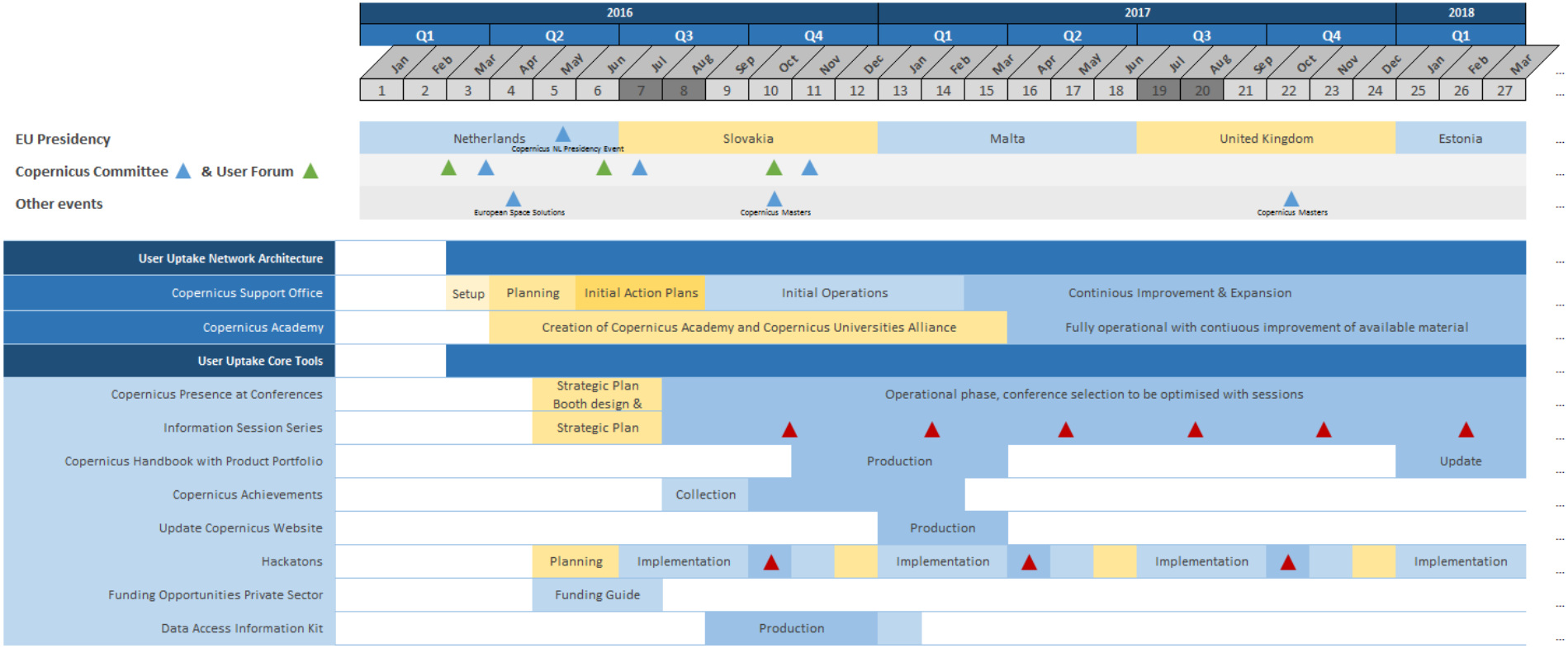
Data access is a prerequisite for the successful uptake of Copernicus data and information. Technical improvements of the data access platforms are not discussed within the scope of this report, but recommendations and actions are presented that have as primary objective to facilitate access to the Copernicus data and information.

#	Type	Action	Priority
Inform about the different information products, increase focus on data and information access, communicate transparently about Copernicus governance issues			
16.1	D	Produce a Product Portfolio of the Copernicus Services	A
16.2	D	Communicate the Copernicus data policy	A
16.3	D	Remove doubts about the continuity/sustainability	A
16.4	D	Define the border between EU-funded Services and private sector developed downstream applications	A
Inform about the different information products, increase focus on data and information access, communicate transparently about Copernicus governance issues			
17.1	D	Data Access Information Kit	A
17.2	D	Open data discovery functions on the data portals	A
17.3	D	Data access webinars (CA)	A
17.4	D	Collect statistics on data access for analysis	B
17.5	D	Improve data portals UI with stronger user perspective	A
17.6	D	Enable access to historical data	C

Table 9: Actions for enabling access to Copernicus data and information

Action 17.1 Data Access Information Kit	
Expected Benefits: ▪ Inform about the data and information available already today or near term ▪ Educate on how to access the data with clear examples ▪ Ultimately create new or expand existing implementations of Copernicus data in public and private sector	**KPIs:** ▪ Number of distributed kits (where possible by market segment or field of administration) ▪ Number of visitors to the data portals
Schedule: ▪ 4-5 months to design the format and develop the content ▪ 1 month for printing and other production (e.g. USB key)	**ROM Costs:** ▪ ~150 K EUR
Description: While promotional material for Copernicus has had several generations, data access was never properly addressed as the infrastructure is still being further developed. The time has come to start addressing data access both in the general promotional material as well as with dedicated communication. The Data Access Information Kit entails: ▪ An attractive package with both hardcopy promotional material, as a USB key with more detailed information electronically. ▪ Focus on fast and easy examples, by using open source software and clear instructional material, examples that are close to commonly used processes within public and private sector ▪ Maximum synergy to be sought with the material for the Copernicus Academy webinar on data access	

4.2.5 Proposed timeline



5. ANNEX – DETAILED MAPPING CARDS

5.1 Overview table

A detailed description and evaluation of every identified user uptake initiative is provided in this Annex. These detailed mapping card served as the base for the analysis of Chapter 3 and Chapter 4. The table below provides an overview of all mapped initiatives sorted by geography, and lists the reference numbers and initiative types.

Table 10: Overview of mapped user uptake initiatives

Country Code	Reference Number	Initiative Name	Type
AT	AT.01	GI_Forum (Geoinformatics Forum)	E, U
AT	AT.02	AGIT (Angewandte Geoinformatik)	E, U
AT	AT.03	Precision Agriculture: The added value of geo-information and LBS	U
AT	AT.04	Innsbruck Summer School of Alpine Research 2015 - Close Range Sensing Techniques in Alpine Terrain	U
AT	AT.05	1st Central European Polar Meeting	E, U
AT	AT.06	SAtellite Technologies for Improved Drought-Risk Assessment (SATIDA)	S
AT	AT.07	Capturing Reality: 3D, laser scanning and LiDAR technologies forum	E, U
AT	AT.08	1st ICA European Symposium on Cartography	E, U
AT	AT.09	European Geosciences Union General Assembly	E, N
AT	AT.10	FFG (Austrian Research Promotion Agency)	F, C
AT	AT.11	Earth Observation Data Centre for Water Resources Monitoring	S, D
AT	AT.12	Umweltbundesamt GmbH – Environment Agency Austria	U, N, C
AT	AT.13	Alpbach Summer School	E, U
AT	AT.14	Austrospace	N, P
AT	AT.15	Austrian Space Forum	N
AT	AT.16	ESA BIC and Ambassador Platform Austria	S
AT	AT.R.17	Science Park Graz	S, N
AT	AT.18	AGEO – Austrian Umbrella Organization for Geographic Information	N, U
AT	AT.19	Geo-enabled smart processes and services – GeoSPS	U
BE	BE.01	Earth Observation Help Desk (EODesk)	C
BE	BE.02	EOEdu	P
BE	BE.03	Support to the Exploitation and Research in Earth Observation (STEREO)	F
BE	BE.04	Proba-V Preparatory Programme	F
BE	BE.05	Product Archiving, Distribution and User Access programme (PADUA)	D
BE	BE.06	Belgian Earth Observation Days (BEODays)	E
BE	BE.07	Happy BEarth Day	E
BE	BE.08	SPACE DAYS	P, E
BE	BE.09	The Dark Side of Remote Sensing	U
BE	BE.10	Belgian Geography Days	E

BE	BE.11	Proba-V Symposium	U
BE	BE.12	Master of Space Studies	U
BE	BE.R.13	ESA Business Incubation Centre Flanders	S
BE	BE.R.14	ESA Business Incubation Centre Wallonie Redu	S
BE	BE.15	International Liège Colloquium on Ocean Dynamics	U
BE	BE.16	AM/FM-GIS Belgium / Luxembourg Seminars	E, N
BG	BG.01	OBSERVE CARAVAN Workshop, Sofia 2012	E
BG	BG.02	EO-GMES Operational Capacity Workshop, Sofia	E
BG	BG.03	Bulgarian Information Office for GMES-Copernicus	P, C
BG	BG.04	Fundamentals of GEO and GEOSS Training Sofia 2012	P, U
BG	BG.05	Spaceedu.net	P, U
HR	HR.01	Workshops from the FP7 BalkanGEONET project for the EO community	E, U
HR	HR.02	Networking Air Quality Observations and Models: From Virtual to Real, Solta 2011	E
HR	HR.03	Institut za GIS (iGIS)	N, P
HR	HR.04	CROPOS conference	E
HR	HR.05	Proposal of national body for the space programme of the Republic of Croatia	N
HR	HR.06	Workshop “Natural resources, remote sensing and GIS”	U
HR	HR.07	ISZO - Environmental Information System ISZO - Informacijski sustav zaštite okoliša	D
CY	CY.01	Cyprus Embraces Space 2015	E
CY	CY.02	Applications of Earth Observations and Modelling	E
CY	CY.03	International Conference on Remote Sensing and Geoinformation of Environment	E, U
CY	CY.04	Cyprus Remote Sensing Society	N
CZ	CZ.01	Copernicus National User Forum	E
CZ	CZ.02	Earth Observation Website Družicové snímky	P, E
CZ	CZ.03	Copernicus website	P
CZ	CZ.04	Academy of Geoinformatics Skills	U
CZ	CZ.05	EO Environmental trainings and workshops from EOPOWER FP7 project	U
CZ	CZ.06	National Secretariat for GEOSS/Copernicus (Copernicus Committee)	C, N
CZ	CZ.07	Czech national R&D funds	F
DK	DK.01	International Conference on Environmental Monitoring and Assessment, Aarhus	E, U
DK	DK.02	EnviroInfo & ICT4S, Copenhagen	E, U
DK	DK.03	Geoforum Denmark - the Danish Association for Geographic Information	N, U
DK	DK.04	The Danish Geodata Agency, National User Forum	C
DK	DK.05	GI NORDEN	N
DK	DK.06	Kortdage - Danish Mapping Days	E
EE	EE.01	Meeting to discuss collaborations of Baltic States in Copernicus Ground Segment	E
EE	EE.02	Copernicus User Awareness Training Event	U
EE	EE.03	“Usage, development and future perspectives of space downstream activities in Estonia”	P
EE	EE.04	Space Downstream Services 2010 International Conference - SATFUTURIS in Tallinn	E

EE	EE.05	ESTGIS (Estonian Geoinformation Society)	N
FI	FI.01	Copernicus Suomen User Forum & Website	P, C
FI	FI.02	Copernicus Finland User Forum Workshop	E
FI	FI.03	SEN3APP Project 1st Stakeholder workshop	E
FI	FI.04	Finnish Remote Sensing Days 2015	E
FR	FR.01	Forum National des utilisateurs Copernicus (National Copernicus User Forum)	E
FR	FR.02	PEPS (Plateforme d'Exploitation des Produits Sentinelles)	D
FR	FR.03	Pôle thématique surfaces continentales THEIA	D, P
FR	FR.04	AERIS	D, P
FR	FR.05	Pole Océan	D, P
FR	FR.06	ForM@Ter	N
FR	FR.07	Equipex Geosud	D
FR	FR.08	Programme "Boosters"	S, N, F
FR	FR.09	"Pôles de compétitivité" (Competitiveness Clusters)	N
FR	FR.10	National Contact Points	C
FR	FR.11	"Regional dynamics in Geographic Information" meetings ("Rencontres des dynamiques régionales en information géographique")	E
FR	FR.12	IGN Fab	S, F
FR	FR.13	merIGEO	E
FR	FR.14	Urban Observation Seminar (Séminaire de l'Observation Urbaine)	E
FR	FR.15	International Paris Air Show	E
FR	FR.16	A^2S (Programme Alsace Aval Sentinelle)	D, U, N
FR	FR.17	Toulouse Space Show	E
FR	FR.R.18	ESA BIC Sud France	S
FR	FR.19	GEOSTORM platform	D
FR	FR.R.20	Aerospace Valley Cluster	N
FR	FR.R.21	RCO Midi Pyrénées	C
FR	FR.22	Copernicus session at SAFERSEAS and Sea Tech Week	E
FR	FR.R.23	NEREUS workshop “Monitoring of the environment”	E
FR	FR.R.24	RCO database website	P
FR	FR.R.25	GIS Bretel	N
FR	FR.R.26	Cross-regional Masters on Remote Sensing	U
FR	FR.R.27	RCO Brittany	C
FR	FR.28	“Dynamiques régionales” by Afigeo	E
DE	DE.01	Nationale Fachkoordinatoren für Copernicus	C
DE	DE.02	Nationales Forum für Fernerkundung und Copernicus	E
DE	DE.03	National EO/GMES/Copernicus Grant Programme	F
DE	DE.04	INNOspace	F
DE	DE.05	INNOspaceEXPO „ALL.TÄGLICH! “	E
DE	DE.06	GeoLizenz.Org - WebApplication for uniform licencing for Geodata	D
DE	DE.07	SARedu	U
DE	DE.08	GeoMonitoring	E
DE	DE.09	Geoinformatik	E
DE	DE.R.10	What can Sentinels Do for Regions? Management natürlicher Ressourcen mit Hilfe von Copernicus Diensten und Daten	E

DE	DE.11	Legal Symposium for GeoData	E
DE	DE.12	Contracting for Space - Contract practice in the European Space Sector	E
DE	DE.13	INSPIRE-GMES test platform of TU München	U
DE	DE.14	INTERGEO Conference and Trade-Fair for Geodesy, Geoinformation and Land Management	E
DE	DE.15	International Symposium on Remote Sensing of Environment	E
DE	DE.16	Photogrammetrische Woche	E
DE	DE.17	Space Tech Expo & Conference Europe	E
DE	DE.18	WorldView Global Alliance User Conference 2015	E
DE	DE.19	GEO BON Open Science Conference	E
DE	DE.20	German Future Earth Summit	E
DE	DE.R.21	Export Workshop on Application Potential for GMES in Geo Information Market	E
DE	DE.R.22	InGeoForum – GIS network in Hesse – member based organisation	N
DE	DE.R.23	Geoinformation in der Cloud	E
DE	DE.R.24	Geoinformation der Metropolregion Rhein-Neckar e.V.	N
DE	DE.R.25	Fachaustausch Geoinformation	E
DE	DE.R.26	Mitteldeutsches GEOforum	E, N
DE	DE.R.27	Mit Geodaten den demografischen Wandel aktiv gestalten	E
DE	DE.28	Copernicus in Deutschland	P
DE	DE.29	Copernicus - das europäische Erdbeobachtungsprogramm - für Deutschland	P
DE	DE.30	Copernicus Services - dedicated one-page brochures	P
DE	DE.31	Copernicus: Europas Weltraum-Wächter (Special)	P
DE	DE.32	DLR Publication Erdbeobachtung	P
DE	DE.33	DLR magazin	P
DE	DE.R.34	ESA BIC Bavaria	S
DE	DE.R.35	ESA BIC Darmstadt	S
DE	DE.R.36	Brochure “Monitoring for Environment and Security – Bavaria’s capabilities in GMES”	P
DE	DE.R.37	Study “Demand for Copernicus Services in Bavaria”	P
DE	DE.R.38	bavAIRia Copernicus- WG	N
DE	DE.R.39	Bavarian space programme of the Bavarian State Ministry of Economic Affairs	F
DE	DE.R.40	Copernicus Office Bavaria: bavAIRia e. V.	C
DE	DE.R.41	RCO Bremen	C
DE	DE.42	CLOUDEO	D
DE	DE.43	DeCover2 - Dienstekonzept zur Aktualisierung von harmonisierten Landbedeckungsinformationen	D
DE	DE.44	GI-PLUS e.V.	P
DE	DE.45	Deutscher Dachverband für Geoinformation e.V. (DDGI)	N
DE	DE.46	DVW – Gesellschaft für Geodäsie, Geoinformation und Landmanagement e.V.	N
DE	DE.47	WorldView Global Alliance User Conference 2015	E
GR	GR.01	Kostas Nittis Scientific and Strategic Workshop	E
GR	GR.02	LDA Appathon	S
GR	GR.03	EVITA	U

GR	GR.04	SPACE & SECURITY CONFERENCE	E
GR	GR.05	BEYOND (fp7 project), Urban Monitoring from Space	U
GR	GR.06	NETSPACE Workshop	E
GR	GR.07	Copernicus- Sentinels Serving Society and the Environment	E
GR	GR.08	OBSERVE final symposium	E
GR	GR.09	NOA Hellenic National Sentinel Data Mirror Site	D
GR	GR.10	The Hellenic Space Technologies and Applications Cluster (si-Cluster)	N
GR	GR.11	Space Training Course for Young Scientists and Professionals on Earth Observation	U
GR	GR.12	The Hellenic Association of Space Industry	N
GR	GR.13	National PNF (permanent networking facility) Promotional Day - Greece	E
GR	GR.14	14th International Conference of the Geological Society of Greece	E
GR	GR.15	NOA Hellenic National Sentinel Data Mirror Site	D
HU	HU.01	HSO (Hungarian Space Office)	C
HU	HU.02	HSB (Hungarian Space Board)	C
HU	HU.03	HUNAGI (Hungarian Association for Geo-information)	N
HU	HU.04	HUCO (UNSDI HUNGARIAN COORDINATION OFFICE)	N
HU	HU.05	FÖMI Remote Sensing Center	C
HU	HU.06	Hungarian Society of Surveying, Mapping and Remote Sensing (MFTTT)	N
HU	HU.07	Hungarian Meteorological Service (OMSZ)	C
HU	HU.08	MH Geoinformation Services (MH GEOSZ)	C
IS	IS.01	Earth Sciences / academic programme	U
IS	IS.02	NORDVULK Summer School n Remote sensing techniques in a dynamic geological setting	U
IS	IS.03	2nd Workshop on Hyperspectral Image and Signal Processing: Evolution in Remote Sensing	U
IS	IS.04	The 13th International Circumpolar Remote Sensing Symposium	U
IS	IS.05	International Symposium on Hydrology of Glaciers and Ice Sheets	U
IE	IE.01	Irish Earth Observation Symposium (IEOS)	E
IE	IE.02	GIS Ireland Conference	E
IE	IE.03	IMGS Geospatial User Group	U
IE	IE.04	Irish Industry Space Day	P
IE	IE.05	GeoScience Conference	E
IE	IE.06	Space Innovation Powering Blue Growth	E
IE	IE.07	GeoDATA Seminars	U
IE	IE.08	IRLOGI Space & Place Awards	P
IE	IE.09	EPA GeoPortal	D
IE	IE.10	Environment Ireland	E
IE	IE.11	IRLOGI	N
IE	IE.12	Irish Organisation for Geographic Information (IRLOGI) Annual Conference and exhibition	E
IE	IE.13	Irish Organisation for Geographic Information (IRLOGI) Annual Awards	E
IT	IT.R.01	NIBS Networking and Internationalisation of Basilicata Space Technologies	N
IT	IT.R.02	Regional workshops	E
IT	IT.R.03	e-catalogue of regional EO services and providers	P
IT	IT.04	Mentoring in EU Regions on space applications including Copernicus	P

IT	IT.R.05	Regional programme based on European Structural and Investment Funds (ERDF and ESF) for funding R&D projects focused on EO (one of the priorities listed in the regional strategies for research and innovation 2007 – 2013)	F
IT	IT.R.06	RCO Basilicata	C
IT	IT.R.07	Basilicata Cluster of Aerospace - CLAS	N
IT	IT.R.08	Space4you and Blue Economy and geo-information services for sustainable growth in coastal regions	E, P
IT	IT.09	Courses, internships and online open courses	U
IT	IT.R.10	Regional contact point for Copernicus	C
IT	IT.R.11	ESA BIC Lazio	S
IT	IT.R.12	What can Sentinels Do for Regions? A Trip from Mountains to Valley: Copernicus Satellites as 'Sentinels' of Environmental and Economic Changes	E
IT	IT.13	ISPRA – Italian National Institute for the Environmental Protection and Research	C, N
IT	IT.14	Civil Protection Department (DPC) - Dipartimento della Protezione Civile	C
IT	IT.R.15	CMCC – Euro-Mediterranea Climate Change Centre	C
IT	IT.16	CNR – National Research Centre (Consiglio Nazionale delle Ricerche)	C
IT	IT.R.17	Regional Agency for Environment – Emilia Romagna (ARPA – Emilia Romagna)	C
IT	IT.18	Italian Space Agency (ASI), Agenzia Spaziale Italiana	C
IT	IT.19	Ministry of Education and Research (MIUR), Ministero dell'istruzione, dell'università e della ricerca	C
IT	IT.20	National Space Strategy	N
IT	IT.21	Italian Collaborative Ground Segment	D
IT	IT.22	National Copernicus User Forum	N
IT	IT.R.23	Space Week	P
IT	IT.24	PI Projects - ASI	F
IT	IT.25	Cluster Tecnologico Aerospaziale Italiano	N
IT	IT.26	AIT – Italian Remote Sensing Association (Associazione Italiana Telerilevamento)	N
IT	IT.R.27	Distretto Tecnologico Aerospaziale (DTA) - Lazio	N
IT	IT.R.28	Lazio Innova	S
IT	IT.R.29	Distretto Tecnologico Aerospaziale (DTA) - Puglia	N
IT	IT.R.30	Distretto Tecnologico Aerospaziale (DTA) - Campania	N
IT	IT.R.31	Lombardia Aerospace Cluster	N
IT	IT.32	BIC Italia Net	S
IT	IT.R.33	COSMO-SkyMed Hackathon (ASI/BIC Lazio)	U
IT	IT.34	Programma Operativo Nazionale (PON), Ricerca e Competitività (UE, MIUR, MISE)	F
IT	IT.35	Piano di Azione e Coesione (PAC) (UE, MIUR, MISE)	F
IT	IT.R.36	Associazione per le Imprese delle Attività Spaziali (AIPAS) - Puglia	N
IT	IT.37	Associazione per i Servizi, le Applicazioni e le Tecnologie ICT per lo Spazio (ASAS)	N
IT	IT.38	Associazione per i Servizi, le Applicazioni e le Tecnologie ICT per lo Spazio (ASITA)	N
IT	IT.39	Sistema Nazionale Protezione dell'Ambiente (SNPA)	N
IT	IT.40	AIAD - Federazione Aziende Italiane per l'Aerospazio, la Difesa e la	N,C,P

		Sicurezza – Italian Federated Enterprises for Aerospace, Defence and Security	
IT	IT.41	LTER Italy - Long-Term Ecosystem Research	N,C,P
IT	IT.42	ANCI – National Association of Italian Municipality	N,C
IT	IT.R.43	Satellite Applications for business events - L'altimetria nell'Infrastruttura dati Territoriali (IDT) (The elevation in the Spatial Data Infrastructure (SDI)) - Meeting of European students on spatial technologies (University of Padova)	E
IT	IT.44	AM/FM GIS Italia	N
LV	LV.01	Study "SPACE DOWNSTREAM SERVICES IN LATVIA"	P
LV	LV.02	Website: "Copernicus* user training – materials and informative events"	U
LV	LV.03	Involvement in the MyOcean network	U
LT	LT.01	Space Event @ Vilnius Innovation Forum 2015	E
LU	LU.01	Luxembourg Earth Observation Day	E
LU	LU.02	Luxembourg Space Cluster	N
LU	LU.03	Ministry of the Economy – Space Affairs for the Copernicus Programme	C
LU	LU.04	LuxLAUNCH Special national support measure	F
MT	MT.01	Satellite Solutions for Smarter Islands	E
MT	MT.02	Malta App Challenge	S
MT	MT.03	Earth Observation (EO) Data Training Day	U
MT	MT.04	Malta GeoPortal	D
MT	MT.05	Training Course - Synthetic Aperture Radar and Earth Observation Techniques	U
MT	MT.06	Location: Exploiting the Benefits	E
NL	NL.01	Earth Observation Science & Society Symposium (EO3S)	E
NL	NL.02	GMES in-situ Workshop	U
NL	NL.03	Aardobservatie op de Kaart: Samen voor Veiligheid die Rendeert	E
NL	NL.04	GeoBusiness Nederland (GBN)	N
NL	NL.05	GeoBuzz	E
NL	NL.06	Satellietdataportaal (Satellite Data Portal)	D
NL	NL.07	ESA Business Incubation Centre (BIC) Noordwijk	S
NO	NO.01	Copernicus Competition on Innovative Applications (Copernicus Konkurranse)	S, P, F
NO	NO.02	Workshop: Preparations for Sentinel 2 in Europe	E
NO	NO.03	Geomatikkdagene - Norwegian National Conference for Geomatics Community (Geomatics Week)	E, U
NO	NO.04	GeoKlar 2015 - a National Preparedness Conference, Oslo 2015	E
NO	NO.05	GI NORDEN	N
NO	NO.06	Nordic Course in Cartography	U
NO	NO.07	Norwegian Space Centre (Norsk Romsenter)	C
PL	PL.01	Space Start-up Weekend Gdansk	S
PL	PL.02	International Conference "Copernicus - the road to economic development", Warsaw 2015	E, P
PL	PL.03	Space Days	E, P
PL	PL.04	Communication Platform for Earth Observation community	E, P
PL	PL.05	Science Picnic and Festival of Science	P
PL	PL.06	EO trainings and workshops from Geonetcab FP7 project for EO	U

		professionals	
PL	PL.07	Satellite support of the EU Carpathex 2011	U
PL	PL.08	EO trainings and workshops from Geonetcab FP7 project for policy makers	U
PL	PL.09	Satellite support of POLEX Demonstration 2013 International Search and Rescue Exercise	U
PL	PL.10	Satellite support of PIONEX Demonstration 2014	U
PL	PL.11	Satellite support of EDEN Demonstration 2015	U
PL	PL.12	Snow Cover Portal for Europe	U, P
PL	PL.13	GIS Day	U, P
PL	PL.14	ESA's Geospatial Services for environmental management in Poland	U, P
PL	PL.15	Open learning courses on Copernicus services	U
PL	PL.16	National R&D Funds	F
PL	PL.17	Ministry of Science & Higher Education in Poland, Coordination Committee for Copernicus Programme	C
PL	PL.18	EO Innovation Platform Testbed Poland	D
PT	PT.R.01	DORIS_Net workshops/seminars	P
PT	PT.R.02	What can Sentinels Do for Regions? The use of sentinel data for supporting land and marine spatial planning and management.	P
PT	PT.R.03	RCO - Azores	C
PT	PT.R.04	ESA BIC Portugal	S
PT	PT.05	GTOT – Grupo de Trabalho de Observação da Terra (Portuguese Working Group for Earth Observation)	N
PT	PT.06	Copernicus web pages of the Directorate-General for Territory Development (DGT)	P
PT	PT.07	Portuguese Copernicus Training Activities	U
PT	PT.08	IPSentinel	D
PT	PT.09	Portuguese Space Office	C
PT	PT.10	GPPQ - Gabinete de Promoção do Programa Quadro de I&DT (Office for Promoting the Framework programme of Innovation, development and technology)	C
PT	PT.11	PROESPAÇO	N
PT	PT.12	Earth Observation Network	N
PT	PT.13	National Conference of Cartography and Geodesy	E
PT	PT.14	SOPHIA Project	U
PT	PT.15	CMEMS REGIONAL USER AND TRAINING WORKSHOP	E
PT	PT.16	MSFDsat, Measure of Marine Strategy Framework Directive	D
PT	PT.17	Fish & Ships project	D
PT	PT.18	Marsurv/ IMDatE	D
PT	PT.19	"EEA PT02 - Integrated Marine and Coastal Waters Management"	F
PT	PT.20	DGPM	C
RO	RO.01	ROSA – Romanian Space Agency	C
RO	RO.02	East-European Copernicus Conference	E
RO	RO.03	STAR Programme (Space Technology and Advanced Research)	F
RO	RO.04	ESERO Romania, European Space Education Resource Office - Romania	U
RO	RO.05	COMPETITION EXO-RO	U
RO	RO.06	National Strategy of research, Development and Innovation 2014-2020	F
RO	RO.07	The Space Subcommittee. Parliament of Romania	C

RO	RO.08	Ministry of National Education - ANCS	C
RO	RO.08	ROMANIAN SPACE WEEK	P
SK	SK.01	enviro-I-forum	E
SK	SK.02	EO Environmental trainings and workshops from EOPOWER FP7 project	U
SK	SK.03	Slovak Environmental Agency	C
SI	SI.01	INFORMATION SOCIETY 2015 – session Space technologies for smart cities	E, U
SI	SI.02	Presentation of space technologies and programmes, panel of experts of Space Technologies	E
SI	SI.03	GMES and GEO initiatives	U
SI	SI.04	20th EIONET Workshop on Air Quality Assessment and Management	U
SI	SI.05	Collection, processing and application of data on environment and spatial planning: GEO, GMES and national activities in Slovenia	U
SI	SI.06	Slovenian networking meeting in the frame of BalkanGEONET	U
SI	SI.07	Space SI	N
SI	SI.08	GEOPEDIA platform	D
SI	SI.09	OTS – Sodobne tehnologije in storitve (OTS – Advanced Technologies and Services)	E, P, U
ES	ES.R.01	ESA BIC Barcelona	S
ES	ES.R.02	ESA BIC Madrid	S
ES	ES.03	INSTITUTO Geografico Nacional (IGN)	C
ES	ES.04	Ministerio de Agricultura, Alimentacion y Medio Ambiente (magrama)	C
ES	ES.05	National Civil Protection General Directorate	C
ES	ES.06	CDTI (Centre for the Development of Industrial Technology)	C
ES	ES.07	CIRCABC: Copernicus	N
ES	ES.08	AEMET	C
ES	ES.09	Puerto del Estado	C
ES	ES.10	Spanish Remote Sensing Association (AET)	N
ES	ES.11	National Network on Big Data in Earth Observation	N
ES	ES.12	Working Group on Remote Sensing of the Madrid Professional Association of Industrial Engineers	N
ES	ES.13	Aerospace Cluster of the Madrid Region	N
ES	ES.14	Spanish Association of Defence, Aeronautics, Security and Space Technology Companies (TEDAE)	N
ES	ES.15	Living Labs on space applications	N
ES	ES.16	National Congress on Remote Sensing (IESM 2015)	E
ES	ES.17	Infoday Horizon 2020 Space	P
ES	ES.18	Polytechnic University of Madrid - Master on Satellite Technology	U
ES	ES.19	Autonomous University of Barcelona - Master on Geographic Information Systems and Remote Sensing	U
ES	ES.20	University of Alcala - On-line Course on Cartography, Geographic Information Systems and Remote Sensing	U
ES	ES.21	Research Park of the Autonomous University of Barcelona - Prize on New Ideas Generation - new applications of space technology	F
ES	ES.22	National Institute of Aerospace Technology (INTA) - Ground Segment of Sentinel 1 and Sentinel 2	D
SE	SE.01	Fjärranalysdagarna 2015 (Remote Sensing days)	E, U
SE	SE.02	Skola	P

SE	SE.03	Cosmo Skymed seminar	E
SE	SE.04	National User Forum	N
SE	SE.05	Forum för skogliga laserdata i praktiken (Forum on Forestry laser data in practice)	U
SE	SE.06	Forest data portal	D
SE	SE.07	SNS (Nordic Forest Research) - meeting in Forest Inventory and Forest Planning	U
SE	SE.08	Undergraduate and Master's Studies	U
SE	SE.09	HYPE Open Source Community (OSC)	U
SE	SE.10	Harmful Algal Blooms and Climate Change – Scientific Symposium	U
SE	SE.11	An outlook to the future Baltic Sea: how can we reach the targets of the Baltic Sea Action Plan?	E
SE	SE.12	7th Study Conference on BALTEX	E
SE	SE.13	Impact of climate change on the marine environment with special focus on the role of changing extremes	U
SE	SE.14	21st Century Challenges in Regional Climate Modelling	U
CH	CH.01	Swiss Start-up Day	S
CH	CH.02	Global Entrepreneurship Week 2015	S
CH	CH.03	Space Summer camps 2015	P
CH	CH.04	Space Prize powered by Inmarsat and AP-Swiss	S
CH	CH.05	Space Projects: An opportunity for cutting-edge research and advanced technology development	E
CH	CH.06	MDP call for proposals 2014	F
CH	CH.07	Space Entrepreneurship - How is space conquered today?	E
CH	CH.08	GEO Water Quality Summit	U
CH	CH.09	From Earth Observation to Telecoms - New capacities in space for improved services and applications	E
CH	CH.10	Swiss IB Geographers Meeting 2015	U
CH	CH.11	6th Workshop on Hyperspectral Image and Signal Processing: Evolution in Remote Sensing	U
CH	CH.12	Swiss Space Centre	N
CH	CH.13	National Point of Contact (NPOC) for Satellite Images	D
CH	CH.14	Société Suisse de Photogrammétrie et de Télédétection Swiss Network of Geospatial Imaging Experts (SGPBF)	N
CH	CH.15	Swiss Earth Observation Service Providers Society	N
CH	CH.16	SOGI	N
GB	GB.01	Satellite Applications Catapult-Copernicus	D, N, F
GB	GB.02	Supporting Space Start-Ups; Business Incubator Call 2015-16	S
GB	GB.03	Space for Smarter Government	F
GB	GB.04	National Centre for Earth Observation	D, C, N
GB	GB.05	Satellite Applications Catapult Regional Centres of Excellence	N, C
GB	GB.06	Satellite Application Small Business Support Programme	S
GB	GB.07	Earth Observation Knowledge Exchange Fellowships	U
GB	GB.08	Knowledge Transfer Network for Satellite Applications	C, N
GB	GB.09	Satellites for Everyone: The Big Picture	P
GB	GB.10	Space EO Foresight: EO21. ICT for EO Alliance.	P
GB	GB.11	UK COLLABORATIVE GROUND SEGMENT (CATAPULT space applications & CEDA)	D

GB	GB.R.12	G-STEP University business-engagement programmes involving Copernicus	S, C
GB	GB.R.13	G-STEP support for start-up and early-maturity regional SMEs	S
GB	GB.R.14	Copernicus Promotion through Targeted Publications	P, N
GB	GB.R.15	East Midlands Satellite Applications Centre of Excellence	C, E, N
GB	GB.R.16	Funding provision for Copernicus related projects.	F
GB	GB.R.17	Inter-regional networks	N
GB	GB.R.18	ESA BIC Harwell	S
GB	GB.R.19	Isle of Man Aerospace Cluster	N
EU	EU.01	How to make INSPIRE useful	U
EU	EU.02	UN-GGIM: Europe	N
EU	EU.03	EARSeL – European Association of Remote Sensing Laboratories	U
EU	EU.04	Switch ON Project	D
EU	EU.05	European Space Solutions	E
EU	EU.06	ESA living planet	U
EU	EU.07	European Civil Protection Forum	E
EU	EU.08	European Space Expo	P
EU	EU.09	EMS National Focal Point Workshop	U
EU	EU.10	European regions Research and Innovation Network	N
EU	EU.11	COSMO+	U
EU	EU.12	H2020 – EO-2-1016	F
EU	EU.13	European Data Portal	D
EU	EU.14	23rd European Biomass Conference and Exhibition 2015	E, U
EU	EU.15	Nordic/European Forum for Geography and Statistics Conference	E, U
EU	EU.16	3rd Advanced Course on Radar Polarimetry	U
EU	EU.17	ESA POLinSAR 2015 - 1st BIOMASS Science Workshop	E
EU	EU.18	Mapping Water Bodies from Space - MWBS 2015	E
EU	EU.19	Fringe 2015 Workshop	E
EU	EU.20	Sentinel-3 For Science Workshop	U
EU	EU.21	GLOBAL SPACE INNOVATION CONFERENCE (GLIC 2015)	E
EU	EU.22	ATMOS 2015	U
EU	EU.23	Third Space for Hydrology Workshop - "Surface Water Storage and Runoff: Modeling, In-Situ data and Remote Sensing"	U
EU	EU.24	Thematic Workshop: Land and Marine planning and management using Sentinel data. Small Oceanic Island as a Model	E
EU	EU.25	Sentinel-5 Precursor Validation Team (S5PVT) Workshop	U
EU	EU.26	4th ESA Advanced Training On Ocean Remote Sensing	U
EU	EU.27	6th ESA Advanced Training Course on Land Remote Sensing	U
EU	EU.28	Earth Observation Open Science 2.0	E
EU	EU.29	Earth Observation for Water Cycle Science 2015	E
EU	EU.30	Hackathon supporting the Sentinel Application Platform (SNAP)	S, U
EU	EU.31	Mapping Urban Areas from Space – MUAS 2015	E
EU	EU.32	Advances In Remote Sensing For Cultural Heritage: From Site Detection, To Documentation And Risk Monitoring	E
EU	EU.33	Monitoring Climate from Space	U
EU	EU.34	GRSG 2015 Conference	E
EU	EU.35	Copernicus Masters	N, E

EU	EU.36	Space App Camp initiated by ESA	E, S
EU	EU.R.37	SPACE4Regions and other events	E, N
EU	EU.R.38	Cluster cooperation	N
EU	EU.39	Copernicus website	P
EU	EU.40	European Geosciences Union	N
EU	EU.41	Horizon2020 Space Information Days	E
EU	EU.42	PCP/PPI in Horizon2020 Project on Earth Observation	E
EU	EU.43	Webinar: Maximising the impact of H2020 projects	E
EU	EU.44	Copernicus Emergency Management User Guide	E
EU	EU.45	European Mobile & Mobility Industries Alliance	F
EU	EU.46	Sentinel Scientific Data Hub	D
EU	EU.47	Copernicus Space Component Data Access / CSCDA	D
EU	EU.48	Copernicus Land Monitoring Services	D
EU	EU.49	Copernicus Marine Environment Monitoring Services	D
EU	EU.50	Copernicus Atmosphere Monitoring Services	D
EU	EU.51	CLIPC (Climate Information Platform for Copernicus)	D
EU	EU.52	EUMETCAST	D
EU	EU.53	ESA Thematic Exploitation Platforms	D
EU	EU.54	Copernicus Expert Group	U
EU	EU.55	imaGIne – Opportunities Everywhere	E, P
EU	EU.56	MPP – Market pull packs	E, P, U
EU	EU.57	EM-GI Survey and other activities	E, P, U
INT	INT.01	Space Generation Advisory Council (SGAC)	N
INT	INT.02	Joint International Symposium on Deformation Monitoring	E
INT	INT.03	GEO / GEOSS	N
INT	INT.04	AARSE Conferences	E
INT	INT.05	C-SIGMA	N
INT	INT.06	International Symposium on Remote Sensing of Environment	E
INT	INT.07	The Climate Symposium	E
INT	INT.08	Free and Open Source Software for Geospatial Conference - FOSS4G	E
INT	INT.09	International Geoscience and Remote Sensing Symposium	E
INT	INT.10	UNIGIS Distance Learning Programme	U
INT	INT.11	UNIGIS u_Lectures	P, U

5.2 Austria

Reference number	AT.01
Initiative name	**GI_Forum (Geoinformatics Forum)**
Initiative type	Event (E)
Period active	• Since 2007
Frequency	• Annually in Salzburg • Upcoming Salzburg, July 5-8, 2016
Scale	• 200+ presentations and 1,200 visitors per year from all over the world
Indicative budget	• Main sponsors: International Cartographic Association and ESRI, Trimble
Client / organisational partners	• The Interfaculty Department of Geoinformatics – Z_GIS (Josef Strobl, Adrijana Car, Thomas Jekel), together with a group of international partners from academia, industry and education. • Austrian Academy of Sciences – GISciences Commission • Media partners: Wichmann, VDE Verlag, GIS.business, 3D Visualisation World Magazine, Sensors&Systems, Geospatial World, GeoConnexion, GW Unterricht, FIG
Implementing partners	• Same as above
Targeted geography	• International
Target user group	• Research and Academic Organisations
Website address / contact details	• http://www.gi-forum.org/ • office@gi-forum.org • Thomas Jekel Programme Chair Thomas.jekel@sbg.ac.at
Reference Documents	• http://epub.oeaw.ac.at/gi_forum
Description	• Symposium and Exhibit - Geographic Information Science • International conference that promotes interest in translating theory, methods and techniques of GIScience into a broad range of GI application domains. • Provides a platform for dialogue among geospatial minds in an ongoing effort to support the creation of an informed GISociety. • Prominent keynote speakers highlight new developments, offer insights into trends and visions, and at the same time are available for our Young Researchers' Corner for more individualised interaction with young researchers.
Impact potential	• E4, P4, N4
Actual impact	• E3, P3, N3
Areas for improvement	• Wider geographical reach span • Dedicated Topics/Sessions on Copernicus
Best practice & scaling opportunity	• Different perspectives from a variety of professions, presentations, workshops and exhibitions, it concentrates on innovations in education, science and technologies, in the spatial domain and their possible contribution to a more just, ethical and sustainable society. • Global multiplication of outreach due to international participants

Reference number	AT.02
Initiative name	**AGIT (Angewandte Geoinformatik)**
Initiative type	Event (E)
Period active	• Since more than 25 years
Frequency	• Annual in Salzburg • Upcoming Salzburg, July 6-8, 2016
Scale	• 200+ presentations, more than 1200 participants expected for 2016
Indicative budget	• Sponsors: ESRI, Synergis, ORACLE, GRINTEC, EPSON, RM data; amount not available
Client / organisational partners	• Z_GIS (team lead by Josef Strobl and Bernhard Zagel) • Strategic partners: WFG BGL Salzburg, Salzburg Standort Agentur, Satellite Navigation BGL Salzburg, GIS Cluster, Rosik, Runder Tisch GIS • Media partners: Wichmann, VDE Verlag, GIS.business, AutoCAD Inventor, Bibliotels, HARZER
Implementing partners	• Same as above
Targeted geography	• International
Target user group	• Research and Academic Organisations, International Organisations and Bodies, Downstream Industry End Users, Downstream Value-Added Service Providers
Website address / contact details	• http://www.agit.at/ • office@agit.at • Stefan Lang Abteilungsleiter | Ass. Prof. | Projektakquisition und –koordination Tel: +43 (0) 662 / 8044-7562 Stefan.Lang@sbg.ac.at
Reference Documents	• http://gispoint.de/gisopen.html (need to use the search tool)

Description	• The AGIT Symposium is the meeting point for Applied Geoinformatics: the aim is to provide the geospatial community with a platform for the exchange of ideas and innovations.
	• In the upcoming AGIT Symposium in 2016, there will be a dedicated special entitled Copernicus4all which intends to provide all relevant information about the programme.
	• Includes also 2 other events:
	  • HGD Symposium (Hochschulverband für Geographiedidaktik)
	  • FOSSGIS Conference (Free and Open Source Software, Geo software and OpenStreetMap)

Impact potential	• E5, P4, N5
Actual impact	• E4, P3, N4
Areas for improvement	• Wider geographical reach span • Dedicated session on Copernicus (currently under discussion with NCP, FFG Vienna)
Best practice & scaling opportunity	

Reference number	AT.03
Initiative name	**Precision Agriculture: The added value of geo-information and LBS**
Initiative type	Event (E)
Period active	• 21 April 2015
Frequency	• Single event
Scale	• ~50 attendees
Indicative budget	• Not available
Client / organisational partners	• BOKU, EURISY in cooperation with UNIFARM USER FORUM (supported by FFG - Austrian Research Promotion Agency)
Implementing partners	• Same as above
Targeted geography	• Europe
Target user group	• Agriculture stakeholders: representatives of farms, farming associations, networks and interest groups, agriculture machinery companies etc • Satellite services and ICT stakeholders: satellite services providers and specialists • Institutes and academia
Website address / contact details	• http://www.eurisy.org/event-precision-agriculture-the-added-value-of-geoinformation-and-lbs_32/about • Teodora Secara, User Programme Coordinator – Eurisy, teodora.secara@eurisy.org
Reference Documents	• http://www.eurisy.org/event-precision-agriculture-the-added-value-of-geoinformation-and-lbs_32/outline-programme
Description	• Information on soil parameters (humidity, fertiliser content, crop maturity or disease) derived from Earth Observation satellites has already been used successfully by farmers to reduce water consumption and fertiliser use, with no reduction in yield. Furthermore, using satellite navigation systems to guide farming machinery has become almost standard practice in some countries (Denmark, Germany, and the Netherlands). • However, while the technology has been proved to work, the innovative services related to the technology are currently emerging, and not yet in use on a sufficiently large scale, given their added value. The development of GNSS applications relative to EO applications is often treated separately, even though the technologies have more impact together than separately, when applied to the same problems. • This workshop made an inventory of the current precision agriculture solutions that have been proven to work, and of the needs and constraints of their users, in order to pave the way for a more extensive use of effective satellite services, whether based on EO or GNSS.
Impact potential	• N3, E4
Actual impact	• N2, E3
Areas for improvement	• Promotion, continuity
Best practice & scaling opportunity	• Connecting farmers (end users) with service providers

Reference number	AT.04
Initiative name	**Innsbruck Summer School of Alpine Research 2015 - Close Range Sensing Techniques in Alpine Terrain**
Initiative type	User feedback, training & education (U)
Period active	• 5.7.2015-11.7.2015
Frequency	• Single event (TBC)
Scale	• Number of participants: limited to 21
Indicative budget	• Attendance fee: approx. 700€ => Budget of around 15,000.00 €
Client / organisational partners	• University of Innsbruck, Faculty of Geo- and Atmospheric Sciences • International Society for Photogrammetry and Remote Sensing (ISPRS)
Implementing partners	• Same as above
Targeted geography	• Europe
Target user group	• Research and Academic Organisations
Website address / contact details	• http://www.uibk.ac.at/geographie/summerschool/ • Prof. Dr. Johann Stötter Organising Committee Hans.Stoetter@uibk.ac.at Tel.: +43 512 507-5403
Reference Documents	
Description	• Objectives: The main goal of the Joint Summer School 2015 is to provide students with innovative practical and methodological skills to characterise complex terrain and object features using close- and near range remote sensing techniques. • Teaching Methods: Theoretical lectures will be complemented by fieldwork assignments and hands-on data processing sessions using different novel softwares. The assignments will be divided into two different tracks. One track will focus on mountain research, the other on sensor and data processing techniques. A variety of sensor systems will be available for data acquisition in the high mountain surroundings of the summer school venue, including terrestrial laser scanners, unmanned aerial vehicles and spectral cameras. A poster session on the participants' current research interests and work will stimulate open exchange and discussion between students and lecturers in a relaxed atmosphere.
Impact potential	• U4
Actual impact	• U3
Areas for improvement	• Increase the number of participants • More sessions/year
Best practice & scaling opportunity	

Reference number	AT.05
Initiative name	**1st Central European Polar Meeting**
Initiative type	Event (E)
Period active	• Since 2015
Frequency	• Foreseen as annual (this is the 1st edition)
Scale	• ~ 50 attendees
Indicative budget	• Not available
Client / organisational partners	• Wolfgang Schöner (Austrian Polar Research Institute & University of Graz, AT) • Günter Köck (Austrian Academy of Sciences, National Committee for Global Change, AT)
Implementing partners	• Same as above
Targeted geography	• Europe, International
Target user group	• Research and Academic Organisations
Website address / contact details	• http://www.polarresearch.at/conference/ • cepm2015@polarresearch.at
Reference Documents	
Description	• The 1st Central European Polar Meeting was held in November 2015 in Vienna. It has been jointly organised by the Committee on Polar Research of the Polish Academy of Sciences, the Centre for Polar Ecology, Czech Republic, and the Austrian Polar Research Institute, in cooperation with the National Committee for Global Change of the Austrian Academy of Sciences. • It brought together polar researchers including distinguished scientists and the next generation of polar researchers, from Central European countries and around the globe. This meeting is one of the first international activities of the newly established Central European Polar Partnership, which aims at increasing the visibility and coordinating polar research in and among the participating countries.
Impact potential	• E4, N4
Actual impact	• E3, N3
Areas for improvement	• Address Copernicus specifically as means of data acquisition and collection • Promotion • More detailed website
Best practice & scaling opportunity	

Reference number	AT.06
Initiative name	**SAtellite Technologies for Improved Drought-Risk Assessment (SATIDA)**
Initiative type	Start-up initiative(S)
Period active	• Since May 2014
Frequency	• Unique project
Scale	• National, with international cooperation and support
Indicative budget	• Financed by FFG, exact amount not available
Client / organisational partners	• TU Vienna - Department of Geodesy and Geoinformation - Research Group Remote Sensing Partners • BOKU, Institut für Vermessung, Fernerkundung und Landinformation • Ärzte ohne Grenzen - österreichische Sektion • ZAMG • IIASA, International Institute for Applied Systems Analysis
Implementing partners	• Same as above
Targeted geography	• National, International
Target user group	• Geospatial Industry, Scientists
Website address / contact details	• http://satida.net/
Reference Documents	
Description	• SATIDA (SAtellite Technologies for Improved Drought-Risk Assessment) was developed to decrease the gap between what researchers consider necessary and what end users actually need. Funded by the Austrian Research Promotion Agency (FFG) Scientists from different fields of researchers collaborate with Doctors without Borders, the largest private humanitarian aid organisation, to improve the monitoring and forecasting of food insecurity that is caused by agricultural droughts. • SATIDA is characterised by four complementary components: 1) A combined drought indicator that links rainfall, surface air temperature, the vegetation status, surface and profile soil moisture. 2) The calibration and validation of seasonal forecasts up to three months 3) A mobile application to disseminate relevant information to field staff and to provide a standardised tool for the collection of socio-economic information 4) A database that links all three elements
Impact potential	• S5
Actual impact	• S3
Areas for improvement	
Best practice & scaling opportunity	

Reference number	AT.07
Initiative name	**Capturing Reality: 3D, laser scanning and LiDAR technologies forum**
Initiative type	Event (E)
Period active	• Since 2013 (formerly two separate events since 2010)
Frequency	• Annual
Scale	• ~50 papers
Indicative budget	• Not available
Client / organisational partners	• Diversified Communications
Implementing partners	• Same as above
Targeted geography	• World-wide
Target user group	• Industry (geospatial data capture, visualisation and imaging)
Website address / contact details	• http://www.capturingrealityforum.com/ • info@capturingrealityforum.com
Reference Documents	• http://www.capturingrealityforum.com/wp-content/uploads/CRF15_ConferenceProgramme.pdf
Description	This conference is a conjunction of two events being held separately in the past, the SPAR Europe, focussing on terrestrial Laser Scanning and the European LiDAR Forum (ELMF) which concentrated on all things related to LiDAR. Since 2013 the events take place together and offer various topics ranging from Data Acquisition to data management and modelling as well as application domains. Though neither EO nor Copernicus are mentioned in particular, there are many opportunities to include them as separate themes in future events.
Impact potential	• E3
Actual impact	• E2
Areas for improvement	• Address Copernicus/EO in particular
Best practice & scaling opportunity	

Reference number	AT.08
Initiative name	**1st ICA European Symposium on Cartography – Eurocarto 2015**
Initiative type	Event (E)
Period active	• Since 2015 – 3-day event in November
Frequency	• Envisioned as annual
Scale	• 202 participants from 32 countries, 79 paper presentations and 32 poster presentations
Indicative budget	• Not available
Client / organisational partners	• International Cartographic Association • Vienna University of Technology, Research Group Cartography
Implementing partners	• Same as above
Targeted geography	• European
Target user group	• Research and Academic Organisations, National /MS Institutions and Bodies, Downstream Industry End Users, Downstream Value-Added Service Providers
Website address / contact details	• info@eurocarto.org • http://eurocarto.org/
Reference Documents	• http://eurocarto.org/wp-content/uploads/2015/10/Online_Proceedings.pdf
Description	As a conference which was held for the first time, it brought together cartographers and those working in related disciplines with the goal of offering a platform of discussion, exchange and stimulation of research and cooperation. It mainly focussed on utilisation of data and how to analyse and visualise information as gathered by EO satellites. As cartographers mainly use satellite data, they will clearly benefit from operational Copernicus services, which was however not yet present as a theme.
Impact potential	• E4
Actual impact	• E3
Areas for improvement	• Dedicated sessions for Copernicus services and added benefits
Best practice & scaling opportunity	

Reference number	AT.09
Initiative name	**European Geosciences Union General Assembly**
Initiative type	Event (E), Network (N)
Period active	• Since 2013 (still ongoing – planned until at least 2019)
Frequency	• Annual in Vienna
Scale	• Around 4,500 oral presentations and over 9,000 posters. • Attracts over 11,000 scientists from all over the world, of which more than a quarter are students.
Indicative budget	• Not available
Client / organisational partners	• EGU
Implementing partners	• EGU
Targeted geography	• Global (108 countries attended in 2015)
Target user group	• Scientists, young researchers, students
Website address / contact details	• http://www.egu2015.eu/home.html
Reference Documents	• http://www.egu2015.eu/A-voyage-through-scales-book.pdf
Description	• The meeting's sessions, typically over 500, cover a wide range of topics, including volcanology, planetary exploration, the Earth's internal structure and atmosphere, climate, as well as energy and resources. • Aside from disciplinary sessions, dealing with the topics covered by each scientific division, the meeting also features Union-wide sessions such as great debates, Union symposia (including the EGU Awards Ceremony), medal lectures, short courses and education and outreach symposia (such as the Geosciences Information For Teachers workshop, GIFT), to name a few. • Other features of the Assembly include the daily newsletter, EGU Today, which highlights sessions and events each day of the meeting, the GeoCinema and a job market. These and other activities, as well as the scientific sessions, are often highlighted on GeoLog, the EGU blog, and EGU social media channels, which see keen presence during the Assembly. • The EGU also hosts journalists and organises press conferences in a dedicated Press Centre at the meeting.
Impact potential	• N5, P5, E
Actual impact	• N5, P5, E4
Areas for improvement	• Quieter/more isolated location • More examples/detailed guidelines on how to create a PICO • Longer discussion session (with author) • More space between screens (easier access) • Fix screen-jumping problems • Make PICOs accessible for longer during the GA (without author) • More PICO sessions & PICOs for more divisions • Fewer presentations per session *PICO – Presenting Interactive COntent
Best practice & scaling opportunity	

Reference number	AT.10
Initiative name	**FFG (Austrian Research Promotion Agency)**
Initiative type	Funding Instruments (F), Contact Point (C)
Period active	• Founded on 1 September 2004 (Founded by BMVIT – Bundesministerium fuer Verkehr, Innovation und Technologie)
Frequency	• Permanent
Scale	• National, with European involvement
Indicative budget	In 2015 the Austrian total space budget (including EUMETSAT, ESA Programmes and National Programmes) amounted to 69 million €. • ESA Mandatory programmes = 17.96 million € • ESA Optional programmes = 35.53 million € • **Austrian Space Applications programme = 8 million €** • FFG – ALR = 2.09 million € • EUMETSAT = 7.3 million €
Client / organisational partners	• Austrospace • AAI (Austrian Aeronautics Industries Group) • FFG (Austrian Research Promotion Agency)
Implementing partners	• Same as above
Targeted geography	• National/Europe
Target user group	• Austrian and international scientists, scientific institutions, industrial enterprises and other companies, including SMEs located in Austria.
Website address / contact details	• http://www.bmvit.gv.at/innovation/raumfahrt/weltraumprogramm.html • https://www.ffg.at/en/austrian-space-applications-programme • https://www.ffg.at/en/space • Dr. Thomas Geist (National Point of Contact for Copernicus) Tel.: +43 (0) 05 7755-3310 thomas.geist@ffg.at
Reference Documents	
Description	• FFG-ALR incorporates the Galileo Contact Point, whose key role is to provide Austrian companies with constant information about ongoing international developments in satellite navigation and the opportunities and potential they offer. In addition, FFG is the Copernicus National Point of Contact. • The Austrian Space Applications programme, managed by FFG, has a budget of EUR 8 M in 2015.
Impact potential	• F4, C5
Actual impact	• F3, C3
Areas for improvement	• Establish a dedicated Contact Point for Copernicus as has been done already for the Galileo-Programme (https://www.ffg.at/services/galileo-contact-point) and promote it accordingly.
Best practice & scaling opportunity	

Reference number	AT.11
Initiative name	**Earth Observation Data Centre for Water Resources Monitoring**
Initiative type	Data access (D)
Period active	• Since 01/06/2014, first services opened mid 2015
Frequency	• Continuous
Scale	• International collaboration
Indicative budget	• Funding model : 25k€ per year from principal cooperation partners & 10k€ per year from associate cooperation partners
Client / organisational partners	• Vienna University of Technology, Department of Geodesy and Geoinformation
Implementing partners	Main cooperation partners : They contribute to the collaborative development process and delegate one representative to the EODC *Advisory Board* • Vienna University of Technology • GeoVille Information Systems GmbH • Universität für Bodenkultur Wien • Zentralanstalt für Meteorologie und Geodynamik – ZAMG • Catalysts GmbH • CLS: Collecte Localisation Satellites • EURAC research • MEEO S.r.l. Associate cooperation partners : actively support the overall EODC mission • AW Software und Technologie GmbH • Transmissivity B. V.
Targeted geography	• International
Target user group	• Research and Academic Organisations, International Organisations and Bodies, Copernicus Entrusted Entities, EU Institutions and Bodies
Website address / contact details	• https://www.eodc.eu/ • Dr. Christian Briese Managing Director christian.briese@eodc.eu Tel.: +43 699 1668 7510
Reference Documents	
Description	The mission of EODC is to work together with its partners from science, the public and the private sectors in order to foster the use of Earth Observation data for monitoring of global water resources by : • setting up, managing and operating a virtualized, distributed EO data centre • providing collaborative IT infrastructure for archiving, processing, and distributing EO data • organising collaborative software development processes for establishing fully automatic end-to-end EO data processing chains • building up comprehensive competence in processing large quantities of EO data Services available : • Sentinel-1 Coverage Maps Services in preparation: • Sentinel-1 Near real-time Surface Soil Moisture - a near real-time (NRT) processor for surface soil moisture on a 500 x 500 m2 grid based on Sentinel-1 (S-1) data)

	• Sentinel-1 Wetland Mapping (an operational mapping service for wetland monitoring , dedicated to and fully exploiting the capabilities of the Sentinel-1 mission) • Sentinel-2 Crop Monitoring (an operational mapping service for crop monitoring dedicated to and fully exploiting the capabilities of the Sentinel-2 mission)
Impact potential	• D5
Actual impact	• D2
Areas for improvement	• Establish similar data centres for other Copernicus services, e.g. Land resources or provide links to already existing ones. • Seek systematically what can be transferred • Industry motivation for Copernicus reach out
Best practice & scaling opportunity	

Reference number	AT.12
Initiative name	**Umweltbundesamt GmbH – Environment Agency Austria**
Initiative type	User feedback, training & education (U), Network (N), Contact point (C)
Period active	• Since 1985
Frequency	• Continuous
Scale	• National, Pan-European and Regions neighbouring EU
Indicative budget	• In 2014 the Environment Agency Austria achieved a turnover of 42,6 million Euros. National projects accounted for 38.1m Euros, international projects for 4.5m Euros.
Client / organisational partners	• Stakeholder network includes companies and enterprises, the federal government and the provinces, scientific institutions, EU institutions and civil society representatives. • Clients: European Parliament, Eurostat, European Commission, European Environment Agency, United Nations, OMV, Raiffeissenbank Group, Vienna International Airport, All nine federal provinces in Austria, bmvit, bmwfj, etc
Implementing partners	• Same as above
Targeted geography	• Austria and European
Target user group	• EU and international institutions, Companies, public institutions and federal provinces in Austria, Countries and territories neighbouring Europe and the EU
Website address / contact details	http://www.umweltbundesamt.at/en/
Reference Documents	http://www.umweltbundesamt.at/fileadmin/site/en/about_us/Customers.pdf
Description	EAA is Austria's largest organisation of experts on all environmental issues and was appointed as the Austrian Delegate to the Copernicus User Forum.
Impact potential	• TBD
Actual impact	• TBD
Areas for improvement	• Possibly create a grant/crowd-funding platform
Best practice & scaling opportunity	

Reference number	AT.13
Initiative name	**Alpbach Summer School**
Initiative type	Event (E), User feedback, training & education (U)
Period active	• Since 1975
Frequency	• Annually, 10 days in July
Scale	• National level
Indicative budget	• Not available
Client / organisational partners	• FFG • ESA • Austrospace • International Space Sciences Institute
Implementing partners	• Same as above
Targeted geography	• ESA Member and cooperating states
Target user group	• Students and graduates in engineering and science
Website address / contact details	http://www.summerschoolalpbach.at/index.php?file=programme.htm
Reference Documents	
Description	The Alpbach Summer School is a think tank and training ground for Europe's aerospace sector. Every year, it allows 60 young researchers, scientists and engineers take part into in-depth studies to partial areas of space research.
Impact potential	• TBD
Actual impact	• TBD
Areas for improvement	
Best practice & scaling opportunity	

Reference number	AT.14
Initiative name	**Austrospace**
Initiative type	Network (N), Promotional activities (P)
Period active	• Since 1991
Frequency	• Permanent
Scale	• National, 8 industrial members, 6 research organisations, 5 institutional members
Indicative budget	• Not available
Client / organisational partners	• GeoVille, Magna Steyr, RUAG, Siemens, FFG, WKO etc
Implementing partners	• Same as above
Targeted geography	• Austria
Target user group	• Aerospace Industry
Website address / contact details	http://www.austrospace.at/index.htm
Reference Documents	
Description	AUSTROSPACE is the association of Austrian space industries and research institutions. In the field of remote sensing and Earth Observation applications members GeoVille, EOX, Joanneum Research and a number of university institutes have established a broad range of activities.
Impact potential	• TBD
Actual impact	• TBD
Areas for improvement	
Best practice & scaling opportunity	

Reference number	AT.15
Initiative name	**Austrian Space Forum**
Initiative type	Network (N)
Period active	• 1997
Frequency	• Permanent
Scale	• N/A
Indicative budget	• N/A
Client / organisational partners	• Austrian Space Forum
Implementing partners	• Same as above
Targeted geography	• Austria, Europe to a certain extent
Target user group	• Space Professionals, Space enthusiasts
Website address / contact details	http://oewf.org/en/
Reference Documents	
Description	Austrian Space Forum (OeWF) is a network of space professionals and people with a passion for space in collaboration with national and international research, industry & policy institutions.
Impact potential	• TBD
Actual impact	• TBD
Areas for improvement	
Best practice & scaling opportunity	

Reference number	AT.16
Initiative name	**ESA BIC and Ambassador Platform Austria**
Initiative type	Start-up initiative (S)
Period active	• Scheduled to be implemented in the next 5 years
Frequency	• Permanent
Scale	• N/A
Indicative budget	• ESA: 1.2 mil + Austrian government contribution
Client / organisational partners	• ESA/ESTEC
Implementing partners	• Same as above
Targeted geography	• Austria
Target user group	• Aerospace Industry
Website address / contact details	• N/A
Reference Documents	
Description	The set-up of an ESA BIC in Austria is fully supported by the Austrian delegation through the Austrian Research Promotion Agency (FFG). The objective of FFG is to generate a start-up community of space spin-offs by setting up an ESA BIC in Austria, closely with the academic and business community. Also, FFG expects that ESA BIC Austria will be tasked with the handling of the Integrated Application Promotion (IAP) Programme's Ambassador Platform (AP) and the procurement of small application (SmallApps) activities. The objective of these activities is to identify and prepare promising projects for consortia that can then apply for the full IAP activity. The overall goal of FFG is to cluster all space application activities in Austria in order to create more synergies between them, whilst at the same time to achieve economy of scope, saving on networking and operating costs. ESA is requested to organise a national limited tender for Austrian business innovation organisations and to select the most appropriate bidder to implement and manage the ESA BIC/IAP AP Austria for the next 5 years.
Impact potential	• TBD, as not yet in place
Actual impact	• TBD, as not yet in place
Areas for improvement	• Dedicated Copernicus oriented instruments/compartments
Best practice & scaling opportunity	

Reference number	AT.R.17
Initiative name	**Science Park Graz**
Initiative type	Start-up initiative (S), Network (N)
Period active	• Since 2002
Frequency	• Permanent
Scale	• Over 70 start-ups
Indicative budget	• Not available
Client / organisational partners	• AplusB • Funding: FFG, SFG • Academia, TU Graz, KFU, FH JOANNEUM • Companies: Sparkasse,
Implementing partners	• Same as above
Targeted geography	• Graz and Styria
Target user group	• Academia, Start-up founders, Experienced Managers
Website address / contact details	http://sciencepark.at/en/
Reference Documents	
Description	The Science Park Graz (SPG) provides a wide-ranging offer both to start-up founders as well as to experienced managers wishing to share their knowledge with start-up teams. Furthermore, investors also have the opportunity to benefit from our growth-oriented companies and their innovative products and services. Examples of projects that have received funding: http://sciencepark.at/en/our-projects-and-companies/680/deermapper http://sciencepark.at/en/our-projects-and-companies/682/holistic-imaging http://sciencepark.at/unsere-firmen/informations-und-kommunikationstechnologien.php
Impact potential	• TBD, as only small number of EO-related initiatives supported
Actual impact	• TBD, as only small number of EO-related initiatives supported
Areas for improvement	• Dedicated Copernicus oriented instruments/compartments
Best practice & scaling opportunity	

Reference number	AT.18
Initiative name	**AGEO – Austrian Umbrella Organization for Geographic Information**
Initiative type	Networks (N); User feedback, training & education (U)
Period active	• N/A
Frequency	• Continuously
Scale	• International, national, regional and local
Indicative budget	• N/A
Client / organisational partners	• Full list of members (>30) available here: http://www.ageo.or.at/ageo/mitgliedschaft/ageo-mitglieder/
Implementing partners	• N/A
Targeted geography	• National, regional, local
Target user group	• Thematic: N/A • Copernicus service: • User categories:
Website address / contact details	• http://www.ageo.at/ • http://www.ageo.or.at/ageo/
Reference Documents	
Description	• The Austrian umbrella organisation for Geographic Information (AGEO) is the interdisciplinary association of all GI prospects in Austria. AGEO serves as their representative within Austria as well as in international organisations.
Impact potential	• N4-5, U4-5
Actual impact	• N3-4, U3-4
Areas for improvement	• Link with centralised Copernicus information exchange platform (to be created)
Best practice & scaling opportunity	

Reference number	AT.19
Initiative name	**Geo-enabled smart processes and services – GeoSPS**
Initiative type	User feedback, training and education (U)
Period active	• 01.01.2014 – 31.07.2016
Frequency	• Seminars
Scale	• > 100 participants
Indicative budget	• ~430,000 €
Client / organisational partners	• Department of Geoinformatics – Z_GIS
Implementing partners	• ~25 lecturers
Targeted geography	• National, regional
Target user group	• Thematic: N/A • Copernicus service: • User categories: employees from different companies
Website address / contact details	• Mag. Hubert Schöndorfer Department of Geoinformatics – Z_GIS Schillerstraße 30 | 5020Salzburg | Austria Phone: +43 (0)662 8044 7510 | Email: hubert.schoendorfer@sbg.ac.at
Reference Documents	
Description	• GeoSPS provides seminars in the GI domain for employees to broaden their knowledge on GI in general and more specifically provide them with possible future solutions on how to incorporate GI into their workflows, routines.
Impact potential	• U4
Actual impact	• U3
Areas for improvement	• Closer cooperation with the partners during the phase of defining user requirements.
Best practice & scaling opportunity	

5.3 Belgium

Reference number	BE.01
Initiative name	**Earth Observation Help Desk (EODesk)**
Initiative type	Contact point (C)
Period active	• 1997 – present
Frequency	• Permanent
Scale	• 2 coordinators
Indicative budget	• Not publically disclosed
Client / organisational partners	• Belgian Federal Science Policy Office (BELSPO) • Public • Belgium
Implementing partners	• Belgian Federal Science Policy Office (BELSPO) • Public • Belgium
Targeted geography	• National
Target user group	• General (Earth Observation) • Copernicus service: all • User categories: National /MS Institutions and Bodies, Regional and Local Public Authorities, Downstream Value-Added Service Providers, Downstream Industry End Users, Research and Academic Organisations
Website address / contact details	• http://eo.belspo.be/About/Us/EODesk.aspx • Martine Stelandre, Project Manager, martine.stelandre@belspo.be, Tel: +32 (0)2 238 35 59
Reference Documents	• http://eo.belspo.be/About/Us/EODesk.aspx
Description	• EODesk serves as a supporting interface between the Belgian EO user community and EO data distributors, while also informing the general public about Earth Observation • Responsible for the acquisition and archiving of remote sensing imagery for BELSPO projects • Offers online portal (Belgian Earth Observation Platform) with up-to-date information on remote sensing through news items, event announcements, newsletters • Responsible for management of the EOEdu platform (see BE.2) • Supports the promotion of remote sensing and valorisation of research results of Belgian EO projects via posters, workshops and exhibition in Belgium and abroad
Impact potential	• C4-5
Actual impact	• C3-4
Areas for improvement	• Limited availability of Copernicus outreach materials and know-how (FR and NL)
Best practice & scaling opportunity	• Two-way communication channels that can serve to communicate on Copernicus services, as well as interact with user community to understand present needs & requirements

Reference number	BE.02
Initiative name	**EOEdu**
Initiative type	Promotional activities (P)
Period active	• 2006-present
Frequency	• Permanent
Scale	• Extensive EO portal with (basic) technical content, and links to external information sources
Indicative budget	• Not publically disclosed
Client / organisational partners	• Belgian Federal Science Policy Office (BELSPO) • Public • Belgium
Implementing partners	• Belgian Federal Science Policy Office (BELSPO) • Public • Belgium
Targeted geography	• National
Target user group	• General (Earth Observation) • Copernicus service: all • User categories: General Public
Website address / contact details	• http://eoedu.belspo.be/ • Pieter Rottiers, Project Member, Pieter.ROTTIERS@belspo.be, Tel: +32 (0)2 238 35 83
Reference Documents	• http://eo.belspo.be/About/Education.aspx
Description	• Trilingual (EN/NL/FR) educational website which allows teachers and the public at large to learn about remote sensing and the processes of satellite data acquisition, image processing and analysis, as well as applications • It contains a tutorial, a glossary, the characteristics of the most common satellites and sensors, numerous examples of applications, topical links and a "Teacher's Corner" with educational announcements and resources • Mailing list to receive updates • Links to external information sources
Impact potential	• P4
Actual impact	• P3
Areas for improvement	• Content focused on Copernicus is currently limited • Broad outreach opportunities to general public, beyond high school students & teachers
Best practice & scaling opportunity	• EO-focused outreach channel that could assist in general awareness raising of Copernicus services and benefits for general public and students

Reference number	BE.03
Initiative name	**Support to the Exploitation and Research in Earth Observation (STEREO)**
Initiative type	Funding instruments (F)
Period active	• September 2013 – December 2020 (STEREO III)
Frequency	• Permanent
Scale	• Team of 5 project members (BELSPO)
Indicative budget	• EUR 28.600.000
Client / organisational partners	• Belgian Federal Science Policy Office (BELSPO) • Public • Belgium
Implementing partners	• Belgian Federal Science Policy Office (BELSPO) • Public • Belgium
Targeted geography	• National
Target user group	• General (Earth Observation) – thematic priority areas (see 'Description') • Copernicus service: all • User categories: Research and Academic Organisations, National /MS Institutions and Bodies, Regional and Local Public Authorities
Website address / contact details	• http://eo.belspo.be/About/Stereo3.aspx • Joost Vandenabeele, Project Manager, Tel.: +32 (0)2 238 35 23, Joost.VANDENABEELE@belspo.be
Reference Documents	• http://eo.belspo.be/About/Programmes/Stereo3-Description.aspx
Description	• STEREO III is the current Belgium programme for remote sensing research • Aimed at stimulating innovative research in remote sensing and the development of downstream applications • Programme elements include: 1. Development of applications 2. Scientific research 3. Support of research and Belgian infrastructure and applications 4. Promotion and valorisation of EO data • Inclusion of international partner(s) to increase international cooperation in EO • Five thematic research priorities: 1. Global monitoring of vegetation and evolution of terrestrial ecosystems 2. Management of the environment on a local and regional scale 3. Interaction between (change in) land cover and climate change 4. Epidemiology and humanitarian aid 5. Security and risk management
Impact potential	• F5
Actual impact	• F4
Areas for improvement	• Larger numbers of EO stakeholders could be reached through increased promotion
Best practice & scaling opportunity	• Stimulation of use of Copernicus data • Increased involvement of industry (can participate in projects, but cannot obtain funding)

Reference number	BE.04
Initiative name	**Proba-V Preparatory Programme**
Initiative type	Funding instruments (F)
Period active	• December 2010 - December 2011
Frequency	• One-off
Scale	• 7 research projects funded
Indicative budget	• EUR 1.000.000
Client / organisational partners	• Belgian Federal Science Policy Office (BELSPO) • Public • Belgium
Implementing partners	• Belgian Federal Science Policy Office (BELSPO) • Proba-V International Users Committee • Public • Belgium / International
Targeted geography	• National
Target user group	• Thematic: PROBA-V (vegetation & land monitoring) • Copernicus service: Land Monitoring, Maritime Monitoring, Climate Change, Atmospheric Monitoring • User categories: Research and Academic Organisations
Website address / contact details	• http://eo.belspo.be/About/Programmes/ProbaV.aspx • Joost Vandenabeele, BELSPO, Tel.: +32 (0)2 238 35 23, Joost.VANDENABEELE@belspo.be
Reference Documents	• http://eo.belspo.be/Directory/ProgrammeDetail.aspx?progId=19
Description	• Funding programme to make future users acquainted with new data sets and their full characteristics and quality, as well as to prepare the full exploitation of Proba-V data sets with respect to the technical enhancements planned, which serves as follow-up of the VEGETATION 1 & 2 missions • Research projects concentrated on the evaluation of Proba-V specific characteristics, making use of any existing data set as simulation of actual Proba-V data • Study of applications which will be enabled by Proba-V data
Impact potential	• F5
Actual impact	• F4
Areas for improvement	• Limited budget and timeframe • Focus on research community
Best practice & scaling opportunity	• Similar funding programme could be used in preparing the user community for specific Sentinels and highlights the effect of their capabilities

Reference number	BE.05
Initiative name	**Product Archiving, Distribution and User Access programme (PADUA)**
Initiative type	Data Access (D)
Period active	• November 2013 - present
Frequency	• Permanent
Scale	• Satellite data available from 5 different EO missions
Indicative budget	• Not publically disclosed
Client / organisational partners	• Belgian Federal Science Policy Office (BELSPO) • European Space Agency (ESA) • Public • Belgium / International
Implementing partners	• VITO nv • Public • Belgium
Targeted geography	• National
Target user group	• Thematic: Vegetation, Environment • Copernicus service: Land Monitoring, Maritime Monitoring, Climate Change, Atmospheric Monitoring • User categories: Research and Academic Organisations, National /MS Institutions and Bodies, Regional and Local Public Authorities, Downstream Value-Added Service Providers, Downstream Industry End Users
Website address / contact details	• http://www.vito-eodata.be/PDF/portal/Application.html#Home • Erwin Goor, Project Manager, Tel: +32 14 336725, erwin.goor@vito.be
Reference Documents	• http://www.vito-eodata.be/PDF/portal/Application.html#Home
Description	• An end-to-end solution to drastically improve the exploitation of the data from the Earth Observation missions by both researchers and end-users • Includes a Web-based data portal for the centralised distribution of EO data, connected to multiple processing facilities & Long Term Archive
Impact potential	• D4
Actual impact	• D3
Areas for improvement	• Absence of reference to Copernicus data access
Best practice & scaling opportunity	• Could be use as portal to facilitate access to available Copernicus data

Reference number	BE.06
Initiative name	**Belgian Earth Observation Days (BEODays)**
Initiative type	Event (E)
Period active	• 2008-present
Frequency	• Repetitive (annual) • Last occurrence: 20 November, 2014
Scale	• Approximately 120 participants
Indicative budget	• Not publically disclosed
Client / organisational partners	• Belgian Federal Science Policy Office (BELSPO) • Public • Belgium
Implementing partners	• Belgian Federal Science Policy Office (BELSPO) • Public • Belgium
Targeted geography	• National
Target user group	• General (Earth Observation) • Copernicus service: all • User categories: Research and Academic Organisations, National /MS Institutions and Bodies, Regional and Local Public Authorities, Downstream Value-Added Service Providers, Downstream Industry End Users
Website address / contact details	• http://eo.belspo.be/beoday2014 • Ms. Chantal Oudaert, BELSPO, Tel.: +32 2 23 83 410, Chantal.OUDAERT@belspo.be
Reference Documents	• http://eo.belspo.be/beoday2014/2014_Programme%20BEOday_small.pdf
Description	• Annual event to raise awareness among researchers, industry and local authorities about Earth Observation opportunities in Belgium, mainly in the framework of the STEREO programme • Presentations of recent EO projects, as well as presentations from industry looking for partnerships with academia • Focus on networking between EO stakeholders (industry, academia and administrations)
Impact potential	• E5
Actual impact	• E4
Areas for improvement	• Additional focus on Copernicus data availability and related cooperation opportunities
Best practice & scaling opportunity	• Integrate Copernicus-focused or Sentinel/thematic workshop as part of conference

Reference number	BE.07
Initiative name	**Happy BEarth Day**
Initiative type	Event (E)
Period active	• 17/09/2015
Frequency	• One-off event
Scale	• Approximately 100 participants
Indicative budget	• Limited – ½ day presentations + ½ day walking lunch & networking • Not publically disclosed
Client / organisational partners	• Belgian Federal Science Policy Office (BELSPO) • Public • Belgium
Implementing partners	• Belgian Federal Science Policy Office (BELSPO) • Public • Belgium
Targeted geography	• National – Belgium
Target user group	• General (Earth Observation) • Copernicus service: all • User categories: Research and Academic Organisations, National /MS Institutions and Bodies, Regional and Local Public Authorities, Downstream Value-Added Service Providers, Downstream Industry End Users
Website address / contact details	• http://www.happybearthday-belspo.be/ • Ms. Chantal Oudaert, BELSPO, Tel.: +32 2 23 83 410, Chantal.OUDAERT@belspo.be
Reference Documents	• http://www.happybearthday-belspo.be/programme/
Description	• One-time event in the context of the 30th anniversary of the Belgian Research Programme for Earth Observation • Exploitation and promotion of project results in the framework of the STEREO funding programme • Speakers from international institutions (e.g. EC, ESA,), as well as (inter)national research community (e.g. GEO, BELSPO) • Networking and stakeholder interaction opportunities in afternoon
Impact potential	• E4
Actual impact	• E3 – E4
Areas for improvement	• No industry speakers
Best practice & scaling opportunity	• Possibility to organise similar event in the framework of Copernicus programme birthday, offering a platform for institutional Copernicus representatives to reach EO community

Reference number	BE.08
Initiative name	**SPACE DAYS**
Initiative type	Promotional Activity (P) / Event (E)
Period active	• 2006-present
Frequency	• Repetitive (bi-annual), rotating through cities in Wallonia • Last occurrence: 13-14 October, 2014 (5th edition)
Scale	• Approximately 300 participants (2014) • 2 full days of event, including 2 round tables, 4 parallel workshops and an exhibition (2014)
Indicative budget	• Not publically disclosed
Client / organisational partners	• Wallonie Espace • Public • Belgium
Implementing partners	• Wallonie Espace • Public • Belgium
Targeted geography	• National
Target user group	• Thematic: Space - rotating topics, e.g. 2014: *Space Value on Earth: Galileo & Copernicus – Boosting Business & Innovation* • Copernicus service: All • User categories: Research and Academic Organisations, National /MS Institutions and Bodies, Regional and Local Public Authorities, Downstream Value-Added Service Providers, Downstream Industry End Users
Website address / contact details	• http://www.space-days.com/
Reference Documents	• http://www.space-days.com/programme
Description	• Two-day thematic event (General Day + Industry Day) • 2014 focus on end-users of Galileo & Copernicus • Exhibition focusing on Copernicus & Galileo (2014) • Hands-on demonstrations, exhibition, round table discussion and thematic workshops focused on industry users, business opportunities and financing opportunities • High-level speakers (ESA, EC, GSA) • Dedicated workshops for industry, regional & local authorities, and research community • Ample networking opportunities for industry and local authorities
Impact potential	• E4
Actual impact	• E3-E4
Areas for improvement	• Mostly reaches French speaking space community (cf. organisation Wallonie Espace)
Best practice & scaling opportunity	• Permanent topic/workshop inclusion of Earth Observation (cf. rotating topics)

Reference number	BE.09
Initiative name	**The Dark Side of Remote Sensing**
Initiative type	User feedback, training & education (U)
Period active	09/12/2015
Frequency	• One-off • Last occurrence: 09/12/2015
Scale	• Number of participants TBD
Indicative budget	• Not publically disclosed
Client / organisational partners	• Belgian Science Policy Office (BELSPO) • Centre Spatial de Liège (CSL) • Royal Museum of Central Africa (RMCA) • European Center for Geodynamics and Seismology (ECGS - Luxembourg) • Public • Belgium / Luxembourg
Implementing partners	• Belgian Science Policy Office (BELSPO) • Centre Spatial de Liège (CSL) • Royal Museum of Central Africa (RMCA) • European Center for Geodynamics and Seismology (ECGS - Luxembourg) • Public • Belgium / Luxembourg
Targeted geography	• National
Target user group	• Thematic: Radar interferometry (InSAR) • Copernicus services: Marine Monitoring, Land Monitoring, Emergency Management • User categories: Research and Academic Organisations, Downstream Value-Added Service Providers, Downstream Industry End Users
Website address / contact details	• https://dark-side-of-rs.eventbrite.com/ • Dominique Derauw, CLS, dderauw@ulg.ac.be
Reference Documents	• Programme: http://eo.belspo.be/Docs/DocExt/Dark-side.pdf
Description	• One-day workshop on satellite radar interferometry (InSAR) and related applications, aimed at triggering the setting-up of a Belgian community of InSAR users • Presentations on technical and downstream aspects of InSAR • Key Copernicus presentation by P. Potin (ESA Sentinel-1 Mission Manager) • Official launch of the Belgian Interferometric Group (BIG) • Round table discussion to engage with community stakeholders
Impact potential	• U4-U5
Actual impact	• U4
Areas for improvement	• Absence of industry-focused topic areas
Best practice & scaling opportunity	• Similar technical workshop could be held, fully focused on specific Copernicus service or Sentinel • Newly launched Belgian Interferometric Group (BIG) as possible stakeholder group to engage in future Copernicus workshops

Reference number	BE.10
Initiative name	**Belgian Geography Days**
Initiative type	Event (E)
Period active	• 2004-present
Frequency	• Repetitive (biannual) • Last occurrence: 13/11/2012 – 14/11/2015
Scale	• Two-day event
Indicative budget	• Not publically disclosed
Client / organisational partners	• Vrije Universiteit Brussel (VUB) • Public • Belgium
Implementing partners	• Vrije Universiteit Brussel (VUB) • Public • Belgium
Targeted geography	• National
Target user group	• Thematic: rotating (2015: *Mapping the Future of Geography*) • Copernicus service: Land Monitoring, Maritime Monitoring, Emergency Management • User categories: Research and Academic Organisations, National /MS Institutions and Bodies, Regional and Local Public Authorities, Downstream Value-Added Service Providers, Downstream Industry End Users
Website address / contact details	• http://we.vub.ac.be/en/belgian-geography-days • Prof. Matthieu Kervyn, Geography Programme Director, makervyn@vub.ac.be; Tel: +32-2-629-3661
Reference Documents	• Programme (Researchers Day): http://we.vub.ac.be/sites/default/files/images/BGD15_ResearchersDay_FullProgramme_adj.pdf
Description	• Two-day conference with different thematic sessions and poster session • Researchers Day (English) featuring 5 parallel sessions in topic areas (2015): 1. GIS & Environmental Monitoring 2. Geomorphology, Natural Resources & Hazards 3. Climate, Meteorology & Ice 4. Economic, Transport & Tourism Geography 5. Urban & Cultural Geography • Teachers Day (Dutch/French) with workshops educating teachers on geography teaching materials, geo-software solutions and related application domains
Impact potential	• E3
Actual impact	• E2
Areas for improvement	
Best practice & scaling opportunity	• Opportunity to reach both teacher community and research institutes • Inclusion of thematic Copernicus session in framework of mapping applications possible

Reference number	BE.11
Initiative name	**Proba-V Symposium**
Initiative type	User feedback, training & education (U)
Period active	• Ongoing
Frequency	• One-off event • Next occurrence: 26/01/2016 – 28/01/2016
Scale	• Two and a half day event • Number of participants TBD
Indicative budget	• Not publically disclosed
Client / organisational partners	• Belgian Science Policy Office (BELSPO) • European Space Agency (ESA) • Public • Belgium / European
Implementing partners	• Belgian Science Policy Office (BELSPO) • European Space Agency (ESA) • Public • Belgium / European
Targeted geography	• European / International
Target user group	• Thematic: Proba-V / land classification & monitoring • Copernicus service: Land Monitoring, Maritime Monitoring, Climate Change, Atmospheric Monitoring • User categories: Research and Academic Organisations, National /MS Institutions and Bodies, Regional and Local Public Authorities, Downstream Value-Added Service Providers, Downstream Industry End Users
Website address / contact details	• http://congrexprojects.com/2016-events/16c01/introduction • Bianca Hoersch, Proba-V Mission Manager; Tel: +39 06 94 180 912
Reference Documents	• http://congrexprojects.com/2016-events/16c01/introduction • https://twitter.com/PROBAVsymposium
Description	• Symposium dedicated to the scientific and operational exploitation of the Proba-V mission • Open to Proba-V users, scientists, students, representatives from national, European and international agencies, operational end-users and value adding industries • Presents the Proba-V mission status, calibration results, algorithms and products quality • Reports on and promotes the use of Proba-V data for downstream operational services • Provides a forum for international exchange on land, inland/coastal water and cryosphere applications • Consults scientists to formulate community recommendations for algorithm and products improvements
Impact potential	• U5
Actual impact	• U5
Areas for improvement	
Best practice & scaling opportunity	• Scalable event format for technical Copernicus/Sentinel event, including application development, user feedback and forum for international exchange of best practice

Reference number	BE.12
Initiative name	**Master of Space Studies**
Initiative type	User feedback, training & education (U)
Period active	• 2009-present
Frequency	• Repetitive • Last occurrence: Academic year 2015-2016
Scale	• Repetitive • Approximately 10 students / year
Indicative budget	• Not publically disclosed
Client / organisational partners	• KU Leuven • University of Ghent (UGent) • Public (university) • Belgium
Implementing partners	• KU Leuven • University of Ghent (UGent) • Public (university) • Belgium
Targeted geography	• National, EU, international
Target user group	• General: space • Copernicus service: general • User categories: potentially all (graduates + possibility to follow Master while employed)
Website address / contact details	• http://fys.kuleuven.be/ster/education/mss/master-of-space-studies • Prof. Dr. Christoffel Waelkens (Programme Director), Tel.: +32-16-32.79.99; Christoffel.Waelkens@ster.kuleuven.be
Reference Documents	• http://fys.kuleuven.be/ster/education/mss/master-of-space-studies
Description	• One year advanced programme for students having already obtained a Master's degree in a field with links to the space sector • Students chose a major subject based on their academic background (Space Law, Policy, Business & Management ; Space Sciences ; Space Technology & Applications) • Course 'Earth Observation' part of compulsory courses for all students
Impact potential	• U3-U4
Actual impact	• U2-U3
Areas for improvement	• Need for better outreach & promotion to increase students reached
Best practice & scaling opportunity	• (Inter)national cooperation between universities on Master Programme(s) • Additional focus on Copernicus infrastructure & applications during compulsory 'Earth Observation' course • Guest lecture(s) from Copernicus-related public institutions and/or industry stakeholders

Reference number	BE.R.13
Initiative name	**ESA Business Incubation Centre Flanders**
Initiative type	Start-up initiatives (S)
Period active	• 2012-present
Frequency	• 4 TEBs per year
Scale	• No EO-related start-ups so far • Support for 10 new business projects using space technologies for downstream applications
Indicative budget	• Available subsidy of EUR 25.000 per project
Client / organisational partners	• European Space Agency (ESA) • Belgian Science Policy Office (BELSPO) • Flemish Government
Implementing partners	• INNOTEK vzw • IMEC • VITO • VUB-PHOT • Enterprise Flanders (Agentschap Ondernemen) • Belgian Nuclear Research Centre (SCK-CEN) • Government Agency for Innovation by Science and Technology (IWT)
Targeted geography	• Regional (Flanders)
Target user group	• General (space) • Copernicus service(s): all • User categories: Research and Academic Organisations, Downstream Value-Added Service Providers, Downstream Industry End Users
Website address / contact details	• http://www.esa-bic-flanders.be/en • Luc Peeters (Managing Director), Tel: +32 (0)14 570 573; lp@innotek.be
Reference Documents	• http://www.esa-bic-flanders.be/en
Description	In order to provide a platform for space technology transfer in Flanders, ESA, together with BELSPO and the Flemish Government have opened an ESA Business Incubation Centre (BIC) in Geel, Belgium. This BIC, called ESA BIC Flanders, is the seventh ESA BIC site in Europe and is managed by Innotek, the knowledge centre for innovation and technology. Innotek has teamed up with several partners who contribute to the successful realisation and financing of the ESA BIC Flanders businesses. The renowned research institutions VITO, SCK•CEN, IMEC and VUB B-PHOT act as technical partners. The Flemish government agency for Innovation by Science and Technology, IWT and the Flemish Investment Company, PMV are financial partners.
Impact potential	• S5
Actual impact	• S2
Areas for improvement	• Low outflow related to Earth Observation applications • Limited outreach and promotion for EO-related industry • Dedicated Copernicus oriented instruments/compartments
Best practice & scaling opportunity	• Increased promotion and outreach in stakeholder community • Creation of Copernicus/EO-focused support mechanism as part of BIC

Reference number	BE.R.14
Initiative name	**ESA Business Incubation Centre Wallonie Redu**
Initiative type	Start-up initiative (S)
Period active	• Since 2011
Frequency	• 4 TEBs per year
Scale	• No EO related start-ups so far (support provided for 10 space related projects)
Indicative budget	• Available subsidy of EUR 50.000 per project
Client / organisational partners	• European Space Agency (ESA) • Wallonia Government
Implementing partners	• Wallonia Space Logistics (WSL) • IDELUX • Luxembourg Développement
Targeted geography	• Regional (Wallonia)
Target user group	• General (space) • Copernicus service: general • User categories: Research and Academic Organisations, Downstream Value-Added Service Providers, Downstream Industry End Users
Website address / contact details	• http://esa-bic.be/fr • Herbert Hansen, Manager, Tel: +32 61 23 17 15; h.hansen@wsl.be
Reference Documents	• http://esa-bic.be/fr
Description	The ESA BIC Wallonie Redu is the 6th member of the network of incubators recognised by the European Space Agency (ESA). Located on the Galaxia Business Park (Transinne, Belgium), it is administered by WSLlux. To join this network, WSLlux formed itself as a GIE (Groupement d'Intérêt Economique - Economic Interest Group). This is made up of three partners: Services • Funded up to €100,000 (subsidy and subordinated loan) • Technical support • Market, technology and team analysis • Business plan drafting and intellectual property consultancy advice • Leasing for equipment and prototype development • Support for advertising strategy • Assistance with good governance Incubation as part of ESA BIC Wallonie Redu is scheduled for two years. At the end of this period, the incubated entity will continue to benefit from WSL services for an additional three years. All official communications with ESA shall be carried out in English. ESA BIC Wallonie Redu is the only one out of six members of the network to work in both French and English on a daily basis. Multiple possible incubation sites managed by WSL (Luxembourg, Charleroi, Liège, Louvain-la-Neuve)
Impact potential	• S4
Actual impact	• S2
Areas for improvement	• Low outflow related to Earth Observation applications • Limited outreach and promotion for EO-related industry • Dedicated Copernicus oriented instruments/compartments
Best practice & scaling opportunity	• Increased promotion and outreach in stakeholder community • Creation of Copernicus/EO-focused support mechanism as part of BIC

Reference number	BE.15
Initiative name	**International Liège Colloquium on Ocean Dynamics**
Initiative type	User feedback, training & education (U)
Period active	• 1969-present
Frequency	• Repetitive • Last occurrence: 4-8 May, 2015
Scale	• 5-day conference • Approximately 200 participants
Indicative budget	• Not publically disclosed
Client / organisational partners	• University of Liège • Government of Wallonia • Public • Belgium
Implementing partners	• University of Liège • Government of Wallonia • Ad-hoc partners based on annual topic • Public • Belgium / European / International
Targeted geography	• Regional (Wallonia), National, International
Target user group	• Thematic: ocean dynamics • Copernicus service: Maritime Monitoring • User categories: Research and Academic Organisations, National /MS Institutions and Bodies, Regional and Local Public Authorities
Website address / contact details	• http://modb.oce.ulg.ac.be/colloquium/ • oceanphys@ulg.ac.be
Reference Documents	• Programme (2015): http://gher-diva.phys.ulg.ac.be/PresentationManager/
Description	• Annual one-week conference bringing together the scientific community in the context of Ocean Dynamics • Thematic sessions and poster sessions within overall rotating conference topic • Presents the scientific community with a forum to express scientific needs and priorities based on actual requirements
Impact potential	• U3
Actual impact	• U2
Areas for improvement	• Absence of fully EO-focused workshop/session
Best practice & scaling opportunity	• Inclusion of technical session on most relevant Sentinels for maritime monitoring and ocean dynamics, reaching international research community in that domain

Reference number	BE.16
Initiative name	**AM/FM-GIS BELGIUM/LUXEMBOURG seminars**
Initiative type	Event (E), Network (N)
Period active	• 14/12/95 → today
Frequency	• 3 seminars/year
Scale	• Between 50-250 participants each
Indicative budget	• 7,500 euro/seminar
Client / organisational partners	• Private companies (Sponsor members) and public authorities (Administration members) sponsor the organisation. Individual membership is also possible.
Implementing partners	• 1Spatial
Targeted geography	• Belgium – G.D. Luxembourg
Target user group	• Automated mapping, facility mapping, GIS and geospatial information users and providers, surveyors, scientific staff and students, public authorities
Website address / contact details	http://www.amfmgis-belux.be
Reference Documents	
Description	AM/FM-GIS BELUX is an association pursuing science and education goal, to the exclusion of lucrative objectives; It aims to stimulate the exchange of information in the field of AM (Automated mapping), management of production facilities (FM), Geographic Information Systems (GIS) and geospatial information to encourage users to introduce these technologies in administrations and Businesses. To achieve these goals, the association regularly (3 times a year) organises seminars combined with networking events.
Impact potential	• N/A (Strongly depending on the thematic of the workshop)
Actual impact	• N/A (Strongly depending on the thematic of the workshop)
Areas for improvement	• Promote participation outside usual attendees • International collaboration
Best practice & scaling opportunity	

5.4 Bulgaria

Reference number	BG.01
Initiative name	**OBSERVE CARAVAN Workshop, Sofia 2012**
Initiative type	Events (E)
Period active	• March 1, 2012
Frequency	• One-off in Sofia. First of a series of informational events (second was in Belgrade in May, 2012) from FP7 CARAVAN project
Scale	• 58 participants from 15 countries
Indicative budget	• Not available, funded by FP7 OBSERVE project
Client / organisational partners	• UACEG of Sofia University • OBSERVE project consortium • ISPRS
Implementing partners	• OBSERVE project • ISPRS
Targeted geography	• International – Balkan region
Target user group	• Any potential user, intermediate and end-users, private and public: • Private and public-sector professionals such as administration officials and local government representatives, press, business people, academics and students.
Website address / contact details	http://www.observe-fp7.eu/index.php?option=com_wrapper&view=wrapper&Itemid=249
Reference Documents	All the materials (videos and presentation files) presented are available on the OBSERVE website: http://www.observe-fp7.eu/index.php?option=com_wrapper&view=wrapper&Itemid=249
Description	• The aims of the Workshop were to inform participants on Earth Observation (EO) activities with focus on European Union and GEO, exchange views on how the above relates or can relate to EO activities in the Balkans, inform speakers and leading EO institutions on needs regarding EO in the Balkans and build-up networks and co-operations, with focus on capacity building and more extensive use of EO. • The speakers in the Workshop were all by invitation and highly esteemed experts and officials from European and international organisations.
Impact potential	• E4
Actual impact	• E3
Areas for improvement	• Information flow and knowledge transfer needs were the main points of the conclusions. It was postulated that cooperation would be impossible unless information, such as was presented and discussed in the CARAVAN would be available to local EO users and added value providers. One bottleneck that could be for some local stakeholders was that the workshop was held in English.
Best practice & scaling opportunity	• The 1st OBSERVE CARAVAN seemed to be a good benchmark for all the participants for additional EO activities in the Balkan region.

Reference number	BG.02
Initiative name	**EO-GMES Operational Capacity Workshop, Sofia**
Initiative type	Events (E)
Period active	• 17-18.03.2011
Frequency	• One from the series. One-off in Sofia.
Scale	• 250 participants from 22 countries
Indicative budget	• Not available
Client / organisational partners	• Council of Ministers of Bulgaria • European Commission, Directorate General "Enterprise and industry" • GMES Bureau
Implementing partners	• Same as above
Targeted geography	• International
Target user group	• Any potential user
Website address / contact details	http://www.gmes-bg.org/workshop_2/ Contact: Mr Stefan Daskalov office@gmes-bg.org Tel/Fax: (+359 2) 470 90 75 Postal Address: 9, Kokiche Str. BG, 1164 Sofia, Bulgaria
Reference Documents	All list of participants, abstracts, posters (in PDF), presentations (in PDF) are available at the workshop website: http://www.gmes-bg.org/workshop_2/conclusions.php#
Description	The key objective of the GMES Sofia workshop was to raise awareness on the European Earth monitoring programme Copernicus (formerly known as GMES), and to foster information exchange among the different stakeholders. Specific objectives were to: • Display the existing capacity and running GMES activities already realised especially in the field of security and crisis management, and risk monitoring; • Demonstrate the potential impact of GMES services on local and regional administrations and generic users; • Present the role of industry for development and implementation of GMES services • Launch vision for development of regional centres for integrated security and risk management as part of an Euro-Mediterranean network.
Impact potential	• E5
Actual impact	• E3
Areas for improvement	• The event was not targeted at the local market and users, and might be limiting for those that do not speak English. The presentations had rather general character, without showing the practical examples of Copernicus products capability, which is not enough for the user uptake.
Best practice & scaling opportunity	• The workshop participants concluded that there is a need for organising such events to streamline the governance of Copernicus, to clarify the roles, relations and coordinated actions between the different actors at European and national levels.

Reference number	BG.03
Initiative name	**Bulgarian Information Office for GMES-Copernicus**
Initiative type	Promotional activities (P), Contact point (C)
Period active	• Since 2011
Frequency	• Still active (but information on the website outdated)
Scale	• One country - Bulgaria
Indicative budget	• Not available
Client / organisational partners	• UE, ESA, Bulgarian authorities
Implementing partners	• UE, ESA, Bulgarian authorities
Targeted geography	• Bulgaria
Target user group	• Any potential user: intermediate/end-users, private/public • All Bulgarian institutions, companies, from each sector connected to the EO sector.
Website address / contact details	http://gmes-bg.org/ Contact: Mr Stefan Daskalov office@gmes-bg.org Tel/Fax: (+359 2) 470 90 75
Reference Documents	
Description	GMES - Bulgaria project aims to support the participation of Bulgaria and other Member States and candidate countries in the European Earth Observation Programme. The establishment of a single national point called Bulgarian Information Office for GMES (BIOG) concentrates on sharing information, advisory and support activities related to GMES in one institution, what should result in an increased efficiency and synergy. The project focuses on the following priorities: Support for participation of Bulgarian institutions, organisations in GMES thematic projects and introduction of institutions from other candidate countries into these projects; Support in developing national and regional operational capacity in GMES services; Support for growth of user segment of GMES-related projects; Enhance the active participation of the Community's small and medium enterprises, especially those from the (new) member states still not so experienced in the space applications market; Support to the realisation of a special capacity building unit as part of the GMES programme (including the space segment) in the (new) member states; Clear distinction and different approach between environmental monitoring and risk and security management; Support to the close cooperation between EU Programme GMES and EU Directive INSPIRE and the use of reference information systems (data bases) for harmonisation in the process of integration of the spatial data base; Support for the establishment of a European Mediterranean Network for risk and security management. There is a doubt how active the initiative still is, as the name of the GMES Programme changed already 3 years ago and still Copernicus is not used on the website.
Impact potential	• P5, C5
Actual impact	• P3, C3
Areas for improvement	• The website is mainly in English (and some parts only in Bulgarian), which might be limiting for the local users. The information on the website is not updated, as there is still 'GMES' instead of 'Copernicus' name used in all sections, including name of the website. Some sections are still under construction (e.g. "GMES Regional Approach").
Best practice & scaling opportunity	• Idea applicable for other regions to have one-point source of information available in the local language.

Reference number	BG.04
Initiative name	**Fundamentals of GEO and GEOSS Training Sofia 2012**
Initiative type	Promotional activities (P), User feedback, training & education (U)
Period active	• 11 July 2012
Frequency	• One-off in Sofia, part of BalkanGEONET project
Scale	• Number of participants not available.
Indicative budget	• Not available, funded by FP7 BalkanGEONET project
Client / organisational partners	• Group on Earth Observations (GEO) • National Institute of Geophysics, Geodesy and Geography
Implementing partners	• Same as above
Targeted geography	• Bulgaria
Target user group	• Bulgarian authorities, public and private sector, researchers
Website address / contact details	http://www.balkangeo.net/index.php?option=com_content&view=article&id=164%3Abgn-training-1-bulgaria&catid=66%3Atrainings&Itemid=113
Reference Documents	http://www.balkangeo.net/index.php?option=com_content&view=article&id=164%3Abgn-training-1-bulgaria&catid=66%3Atrainings&Itemid=113
Description	The initiative was the part of the FP7 BalkanGEONET project event series. The main objective was to identify and coordinate EO activities in the wider Balkan region and to pave the way for future full inclusion of all Balkan countries into GEO.
Impact potential	• P4, U3
Actual impact	• P3, U2
Areas for improvement	• The Copernicus direct coverage at the event was not strong. • The information provided had limited technical coverage, so the potential users could not get a lot of practical information about EO products. • The event was financed by FP7 project, so with the end of the project funding, the initiative was not maintained and it should be continued to have long-term impact.
Best practice & scaling opportunity	• Training in local language increases the range of local end users.

Reference number	BG.05
Initiative name	**Spaceedu.net**
Initiative type	Promotional activities (P), User feedback, training & education (U)
Period active	• September 2015 – November 2015
Frequency	• On-going
Scale	• European (but designed for Bulgaria)
Indicative budget	• Not available
Client / organisational partners	• America for Bulgaria Foundation • Telenor
Implementing partners	• A group of Bulgarian space enthusiasts, some of them graduated from International Space University
Targeted geography	• International (but designed for Bulgaria)
Target user group	• Pupils • Students • Young scientists
Website address / contact details	http://www.spaceedu.net/
Reference Documents	
Description	Spaceedu.net has as mission to help to develop a generation of young scientists and technology professionals with an entrepreneurial mindset, who have been exposed to the best practices in space research and high technologies worldwide. Space Challenges opens innovative sciences and technology and enables unprecedented opportunities for entrepreneurial initiatives. The programme has revolved around three components: science, technology and entrepreneurship. Space Challenges is a multidisciplinary educational programme that is completely practice-oriented. The programme format is comprised by 3 main activities: • Core lectures led by leading experts • Weekly homework assignments • Team projects The main advantage of the programme is that the participants are engaged into active participation, workshops and exercises in more than 70% of the whole duration of the programme. At the end of the programme's activities, the participants have designed, developed and built technological products and solutions.
Impact potential	• P3, U3
Actual impact	• Project is on-going. Hard to evaluate the Copernicus user uptake impact. (P2)
Areas for improvement	• Only small part of the topics in the programme is connected to Copernicus. It focuses mainly on space upstream education and Earth Observation is not visible.
Best practice & scaling opportunity	• The website is very user-friendly and many prestigious trainers are involved in its educational programme, which could be a very appealing for potential Copernicus users.

5.5 Croatia

Reference number	HR.01
Initiative name	**Workshops from the FP7 BalkanGEONET project for the EO community**
Initiative type	Events (E), User feedback, training & education (U)
Period active	• 24-25 September 2012 - Towards inclusion of Balkan countries into global EO initiatives, September 2012 • 24 September 2012 Fundamentals of GEO and GEOSS Training, Split 2012
Frequency	• Two events as part of the FP7 BalkanGEONET project
Scale	• 130 participants in both workshops
Indicative budget	• Not available, funded from FP7 projects: BalkanGEONET and OBSERVE
Client / organisational partners	• University of Split, Faculty of Civil Engineering, Architecture and Geodesy • Group on Earth Observations (GEO) • OBSERVE project
Implementing partners	• Same as above
Targeted geography	• International, mainly Balkan countries
Target user group	• Croatian and Balkan authorities, public and private sector, researchers
Website address / contact details	http://www.balkangeo.net/index.php?option=com_content&view=article&id=110&Itemid=1
Reference Documents	http://www.balkangeo.net/index.php?option=com_content&view=article&id=110&Itemid=1 Workshop materials available at the website. Presentations in PDF format. Minutes and conclusions of panel discussions in PDF format.
Description	• Activity was the part of BalkanGEONET event series. The main objective of the project was to identify and coordinate EO activities in the wider Balkan region and to pave the way for future full inclusion of all Balkan countries into GEO.
Impact potential	• E4, U4
Actual impact	• E3, U3
Areas for improvement	• The training enjoyed interest from the local stakeholders, however, after the project finished there was no funding for ensuring sustainable continuation of workshops.
Best practice & scaling opportunity	

Reference number	HR.02
Initiative name	**Networking Air Quality Observations and Models: From Virtual to Real, Solta 2011**
Initiative type	Events (E)
Period active	• 23-15 August 2011
Frequency	• One-off
Scale	• 16 participants attending the workshop in Croatia others participated through video/phone. In total there were about 30 participants.
Indicative budget	• Not available, funded from FP7, FP7 EGIDA project
Client / organisational partners	• Air Quality Data Network (ADN): •CNR from Italy •DLR and FZ Julich from Germany •NILU and MetNO from Norway •ESIP, EPA, NGC, NOAA, STI, UNIDATA, WUSTL from USA •EEA •JRC
Implementing partners	• Same as above
Targeted geography	• International (Europe and USA)
Target user group	• User categories: intermediate/end-user, public/private • Specific industry thematic: managers and programmers of the major air quality data hubs in Europe and US, as well as experts on interoperability and networking. • Specific Copernicus Service: general
Website address / contact details	• http://wiki.esipfed.org/index.php/Air_Quality_Data_Network_Solta_2011
Reference Documents	• All documents (detailed) as: reports, minutes for all workshop, agendas, participants lists are available at the webpage.
Description	The workshop constituted the first in-person meeting of the core grouping within the AQ CoP. The meeting allowed the participants to learn about each other's data systems and general perspectives. This was a necessary step toward a shared understanding and for building trust for future inter-dependent data networking. During the open discussion-oriented sessions, the participants were willing and able to articulate the key impediments to networked AQ data systems at their respective organisations. With this, remedies can be pursued. At the end of the meeting the managers and programmers of the major data hubs made a remarkable set of commitments toward making the AQ Data Network happen.
Impact potential	• E3
Actual impact	• E2-3
Areas for improvement	• In case similar events are organised in the future, the Copernicus presence should be strengthened. • The scale of the event was small and did not have many participants. • The event was part of the FP7 project, which makes it not sustainable in longer run and it is not enough for user uptake.
Best practice & scaling opportunity	

Reference number	HR.03
Initiative name	**Institut za GIS (iGIS) Association**
Initiative type	Networks (N), Promotional activities (P)
Period active	• Since 2012
Frequency	• On-going initiative
Scale	• The most popular GIS network in Croatia (900 "likes" on Facebook in December)
Indicative budget	• Not available
Client / organisational partners	• Institute for GIS (IGIS) Association
Implementing partners	• Not applicable
Targeted geography	• National
Target user group	• User categories: pupils, students, young scientists, GIS enthusiasts
Website address / contact details	• http://www.i-gis.hr/ Koprivnička 38, Zagreb, Croatia
Reference Documents	• Not available
Description	IGIS is an open organisation that promotes and popularises the use of technologies of geographic information systems amongst associated professionals and other potential users. It is founded by its members. A supporting member of the Association can be any interested natural or legal person who expresses a desire to regularly help the development of the Association and the realisation of its programme. The annual membership fee for all members of the holding amounts to 50 kn. The IGIS main objective is to connect the GIS intermediate users with the end users of the GIS products, including EO.
Impact potential	• N3, P3
Actual impact	• N2, P2 - Main focus is on GIS, EO is only additional information
Areas for improvement	• Strengthening Copernicus coverage in the network and in the promotional communication could be done.
Best practice & scaling opportunity	• National networks are key for the user uptake, as they communicate in local language and know the local users the most.

Reference number	HR.04
Initiative name	**CROPOS Conference**
Initiative type	Events (E)
Period active	• 8th June 2009 • 8th April 2011 • 24th and 25th October 2013 • 22nd May 2015
Frequency	• Regular, every two years • Last occurrence in 2015
Scale	• 1 or 2 day event • Over 400 participatns
Indicative budget	• Not available
Client / organisational partners	• State Geodetic Directorate and Faculty of Geodesy, • University of Zagreb • Croatian Chamber of Licensed Geodetic Engineers • Croatian Geodetic Society
Implementing partners	• Same as above
Targeted geography	• National
Target user group	• User categories: scientists, representatives of economic and public bodies from Croatia • Specific industry thematic: mostly navigation satellite systems • Specific Copernicus Service: general, as side topic
Website address / contact details	http://www.cropos-konferencija.org/ (in Croatian)
Reference Documents	http://www.cropos-konferencija.org/ or https://www.fig.net/resources/
Description	Objective of the conference is thru exchange of national and international experiences related to the operation and use of permanent GNSS network to improve application CROPOS system, expand its application to other government bodies, public enterprises and the economy and inform the participants with the activities of maintenance and system upgrades. Copernicus is discussed only in the context of GNSS and it is not the focus of the conference.
Impact potential	• E2
Actual impact	• E1
Areas for improvement	• Copernicus could be also part of the event, which suits well to GNSS applications.
Best practice & scaling opportunity	

Reference number	HR.05
Initiative name	**Proposal of national body for the space programme of the Republic of Croatia**
Initiative type	Networks (N)
Period active	• First released 16 July 2015
Frequency	• On-going
Scale	• 35 signatories from all Europe
Indicative budget	• Not applicable
Client / organisational partners	• Croatian government
Implementing partners	• Croatian government
Targeted geography	• Croatia
Target user group	• Croatian officials
Website address / contact details	• Not applicable
Reference Documents	http://www.satgeo.geof.unizg.hr/prezentacije/15%2007-17%20SDBosanac-pismo%20Vladi%20za%20povjerenstvo%20za%20svemir.pdf
Description	The initiative is still on-going and it is a proposal for the Croatian government by researchers and space activists to create the National Office for Space. To catch up with global trends in high technology and applied sciences Croatia should establish the national body for the space. This institution in future would be responsible for activities connected to space sector and will be the official representative in relations on international level (e.g. with EC and ESA). National office for space will also represent the interests of Croatian organisations in the national and international scale. It will favor establishment of partnerships with innovation centers, research institutions and companies involved in high technology. National space office will also have an impact on higher education, the economy and the convergence of science to business.
Impact potential	• N3
Actual impact	• N/A - impact still not known
Areas for improvement	• Consistent pressure and promotion of the idea by the signatories is needed. Copernicus users contact point is still unclear.
Best practice & scaling opportunity	

Reference number	HR.06
Initiative name	**Workshop "Natural resources, remote sensing and GIS"**
Initiative type	User feedback, training & education (U)
Period active	• 30 June 2015
Frequency	• One-off
Scale	• Not available
Indicative budget	• Not available, supported by Croatian Science Foundation
Client / organisational partners	• Croatian Forest Research Institute • Faculty of Geodesy, University of Zagreb • Croatian Science Foundation
Implementing partners	• Croatian Forest Research Institute • Faculty of Geodesy, University of Zagreb
Targeted geography	• National
Target user group	• User categories: scientific and professional community from public and private sector • Specific industry thematic: forestry • Specific Copernicus Service
Website address / contact details	http://www.sumins.hr/vijesti/poziv-na-radionicu-prirodni-resursi-daljinska-istrazivanja-i-geografsko-informacijski-sustavi/
Reference Documents	About AFORESENA http://www.sumins.hr/en/projekti/napredne-metodologije-procjene-ekoloskih-funkcija-sumskih-ekosustava-aforensa/
Description	The aim of the workshop was to gather a wide range of scientific and professional community and encourage communication between them. Main attention was paid to the increased use of advanced technologies to observation and analysis of land resources, especially those connected to forestry. Workshop topics: ▪ Data Sources for Remote Sensing ▪ Open source systems for processing the data obtained by remote sensing ▪ The analysis of spatial data ▪ Digital Cartography ▪ Application of GIS During the workshop the activities carried out during the first year of the project AFORENSA (Advanced Forest Environmental Services assessment - Analysis functions forests using advanced technologies) funded by Croatian Science Foundation were presented
Impact potential	• E4
Actual impact	• E4
Areas for improvement	• One-off events are usually not enough for real user uptake.
Best practice & scaling opportunity	

Reference number	HR.07
Initiative name	**ISZO - Environmental Information System** **ISZO - Informacijski sustav zaštite okoliša**
Initiative type	Data access (D)
Period active	• From 2002
Frequency	• Still available
Scale	• Not applicable
Indicative budget	• Not available
Client / organisational partners	• Croatian Environment Agency
Implementing partners	• Same as above
Targeted geography	• National
Target user group	• Ministries, government departments, universities, NGOs for environmental protection, professional community and general public. • Specific industry thematic: general
Website address / contact details	Spatial Data Portal: http://gis.azo.hr/index.html Branimir Pavlinec - branimir.pavlinec@azo.hr
Reference Documents	Documentation in Croatian: http://iszo.azo.hr/ Additional information in English: http://www.eea.europa.eu/soer/countries/hr/national-and-regional-story-croatia
Description	The Croatian Environment Agency was established at the end of 2002, with the overall goal to collect, integrate, process and maintain environmental data at the national level, and with specific objectives: • To establish, manage and develop the Croatian Environmental Information System - CEIS (i.e. assist in linking together all existing data/data systems), • To follow and calculate trends in environmental sectors and pressures from specific sectors (industry, energy, tourism, transport, agriculture, etc.), • To prepare sectorial and overall environmental status reports, • To coordinate data exchange with EU Institutions: European Environment Information and Observation Network (EIONET) and Shared Environmental Information System (SEIS), • To organise prompt and easy access to the environmental data for a wide range of stakeholders (general public, experts, and authorised institutions). Spatial Data Portal consist many databases, divided to following subject, such as Air, Inland waters, Sea, Nature, Pedosphere and lithosphere, Waste, Agriculture and forestry, Industry and Energy, Transport and Tourism, Health and Safety, General environmental issues. Data is available in vector format, wms or wfs. CORINE LAND COVER available for all editions: 1980, 1990, 2000, 2006 and 2012
Impact potential	• D4
Actual impact	• D3
Areas for improvement	• The platform is an available tool that could provide more data, including EO and Copernicus raw data and data products.
Best practice & scaling opportunity	• Well known, frequently visited and easy-to-use platform with access to rich GIS Croatian database. CORINE dataset is available for free through user-friendly interface.

5.6 Cyprus

Reference number	CY.01
Initiative name	**Cyprus Embraces Space 2015**
Initiative type	Events (E)
Period active	• May 2015
Frequency	• One-off
Scale	• One-day event
Indicative budget	• N/A
Client / organisational partners	• Cyprus Research Promotion Foundation, the Department of Electronic Communications (Ministry of Transport, Communications and Works), public, national • Department of Computer Science & Engineering of European University Cyprus, public, international
Implementing partners	• Cyprus Research Promotion Foundation, the Department of Electronic Communications (Ministry of Transport, Communications and Works), public, national • Department of Computer Science & Engineering of European University Cyprus, public, international
Targeted geography	Cyprus
Target user group	• General • Copernicus service: All • User categories: Research and Academic Organisations, Downstream Value-Added Service Providers, Downstream Industry End Users, Participants to EU Research Projects- Space
Website address / contact details	http://www.euc.ac.cy/easyconsole.cfm/id/2980
Reference Documents	http://www.euc.ac.cy/easyconsole.cfm/id/2980 Agenda of the meeting available on line
Description	• The National Representatives to the Horizon 2020 Programme Committee and the National Contact Point highlighted the funding opportunities that are available through H2020 research grants. • Speakers from various organisations presented their experiences and insight on Satellite Communications, Earth Observation, Astronomy and Navigation, as well as showcasing the opportunities for funding through cooperation with the European Space Agency (ESA) • The themes addressed span the entire domain of space (EO, Navigation, Exploration, etc.)
Impact potential	• E4
Actual impact	• E2
Areas for improvement	• One presentation on Copernicus done by ESA (policy coordinator at Copernicus Space Office). No representatives of the European Commission took part of this event.
Best practice & scaling opportunity	

Reference number	CY.02
Initiative name	**Applications of Earth Observations and Modelling**
Initiative type	Events (E)
Period active	• November 2011
Frequency	• One-off
Scale	• 2 days event
Indicative budget	• N/A
Client / organisational partners	• The Cyprus Institute, public, national • Tel Aviv University, public, national
Implementing partners	• The Cyprus Institute, public, national • Tel Aviv University, public, national
Targeted geography	• Global
Target user group	• Atmosphere, Climate Change, Water • Copernicus Service: all • User categories: Research and Academic Organisations, Participants to EU Research Projects- Space
Website address / contact details	http://www.cyi.ac.cy/system/files/Agenda.pdf http://www.cyi.ac.cy/cyi/general-information/contactus.html
Reference Documents	http://www.cyi.ac.cy/system/files/List%20of%20participants_0.pdf http://www.cyi.ac.cy/system/files/Agenda.pdf
Description	• Conference mainly for academia and research on exchange new insights on application of EO. • The presentations touch upon topic such as geo physical events and remote sensing for atmosphere, climate change but as well cultural heritage, and even a demonstration of an UAV took place. • The event has been organised by the Cyprus community together with the Israel community in order to foster partnership, exchange views and discuss common topic as atmospheric composition and the role of remote sensing.
Impact potential	• E4
Actual impact	• E3
Areas for improvement	• Good focus on EO domain, no specific target for Copernicus
Best practice & scaling opportunity	

Reference number	CY.03
Initiative name	**International Conference on Remote Sensing and Geoinformation of Environment**
Initiative type	Events / User feedback, training and education
Period active	• From 2013 – onward
Frequency	• Once per year
Scale	• 4 days • Participants 400 - 500
Indicative budget	• NA
Client / organisational partners	• Cyprus Remote Sensing Society, public, national • Cyprus University of Technology, public, national
Implementing partners	• Cyprus Remote Sensing Society, public, national • Cyprus University of Technology, public, national
Targeted geography	• European
Target user group	• General • Copernicus Service: all • User categories: International Organisations and Bodies, National /MS Institutions and Bodies, Regional and Local Public Authorities, Research and Academic Organisations, Downstream Value-Added Service Providers, Downstream Industry End Users
Website address / contact details	http://www.cyprusremotesensing.com/rscy2015/
Reference Documents	http://www.cyprusremotesensing.com/rscy2015/sites/default/files/docs/conference%20agenda.pdf
Description	• Conference in the style of ESA Living Planet. Exchange of idea / networking at high level as well as practical examples and workshops. • The conference is the highlight on the Cyprus scene, featuring many international partners as well as local actors. • The technical programme is open to all topics such as remote sensing applications, geo-information, geophysics, remote sensing & geo-information in education, oil and gas, marine spatial planning, coastal zone management, geoinformation for blue economy & blue growth, environmental monitoring and protection, risk assessment, field spectroscopy, cultural heritage, archaeology, crop marks, land use and land cover, artificial neural networks, urban remote sensing, oceans, coastal zones and inland waters, natural and man-made disasters, natural hazards, forestry and forest fires, burned areas, land survey, real estate, mapping of buildings/land for taxation, climate changes, meteorology, atmospheric chemistry, air pollution, water resources management, hydrology, 3D remote sensing, LIDAR, thermal remote sensing, new instruments and methods, laser scanning, 3D-modelling, UAV and its applications, agriculture, evapotranspiration, diseases, geology, security & defence, and transport planning.
Impact potential	• E5, U5
Actual impact	• E4, U4
Areas for improvement	• Better visibility of Copernicus
Best practice & scaling opportunity	

Reference number	CY.04
Initiative name	**Cyprus Remote Sensing Society**
Initiative type	Network (N)
Period active	• 2007 – onward
Frequency	• Always
Scale	• N/A
Indicative budget	• N/A
Client / organisational partners	• Cyprus Remote Sensing Society • Public (CY)
Implementing partners	• Cyprus Remote Sensing Society • Public (CY)
Targeted geography	• Cyprus
Target user group	• General • Copernicus Service: all • User categories: Research and Academic Organisations, Downstream Value-Added Service Providers, Downstream Industry End Users
Website address / contact details	http://www.cyprusremotesensing.com/
Reference Documents	http://www.cyprusremotesensing.com/
Description	The Cyprus Remote Sensing Society is a network that also features a lab and was established in 2007. It is a member of the 'Eratosthenis Research Centre', which is the first, established and largest research centre at the Cyprus University of Technology. The mission of the network is to conduct both basic and applied research towards improved understanding, management, and monitoring of natural resources and infrastructures and to offer expert services and products of excellent qualities in line with the latest developments in remote sensing and related geospatial technologies or other high-tech tools. The lab takes part into research project mainly in the area of atmosphere and cultural heritage. Other areas of interest are civil engineering, meteorology, atmospheric sciences, environmental sciences, geology, archaeology, architecture, cultural heritage, urban design, marine sciences, transport, electrical engineering, public health, marine spatial planning and blue growth. The network is also a member of EARSeL network.
Impact potential	• N2
Actual impact	• N2
Areas for improvement	
Best practice & scaling opportunity	

5.7 Czech Republic

Reference number	CZ.01
Initiative name	**Copernicus National User Forum**
Initiative type	Events (E)
Period active	• Start date: May 2012
Frequency	• Annual event, always in May • Last one: May 2015, next one: May 2016
Scale	• Number of participants: 120
Indicative budget	• N/A, financed from different sources, including FP7 projects
Client / organisational partners	• Organisers: - Ministry of the Environment of the Czech Republic - CENIA, Czech Environmental Information Agency - Ministry of Transport of the Czech Republic - Each year additional different sponsors • Public and private entities
Implementing partners	• Same as above
Targeted geography	• National Czech event with international guests
Target user group	• User categories: intermediate/end-users, public/private • Specific industry thematic: each one has lead topic • Specific Copernicus Service or general
Website address / contact details	• http://www.konference-copernicus.cz/en/ • http://ec.europa.eu/eurostat/documents/3859598/5916917/KS-RA-11-011-EN.PDF
Reference Documents	• http://www.konference-copernicus.cz/en/content/outputs-conference
Description	The Copernicus National User Forum consists of regular conferences for users of remote sensing data with a special focus on data from the Copernicus programme that can be used to help solving different problems in Czech Republic. The main goals of the conference are to: - Inform the user community about data, services and applications available within the Copernicus programme, - Develop the user community and support for utilisation of remote sensing data and Copernicus data among all sectors (state administration, academic and research spheres and the private sector). Each year the event attracts a bigger audience.
Impact potential	• E5
Actual impact	• E4
Areas for improvement	• The presentations could be complemented by more practical exercises and local success stories for the potential users.
Best practice & scaling opportunity	• The event is already a well-known, established initiative in the Czech (and not only) EO community. It is a perfect initiative for informing all the stakeholders about updates in Copernicus programme and discuss about the user requirements. There is no language barrier, as the presentations are in Czech. The initiative could be organised in each country on a regular basis.

Reference number	CZ.02
Initiative name	**Earth Observation resources website http://druzicovesnimky.cz/**
Initiative type	Promotional activities (P), Events (E)
Period active	• Start date: January 2014
Frequency	• On-going
Scale	• Website statistics not available
Indicative budget	• Not available, funded by FP7 EOPOWER project
Client / organisational partners	• Organisers: Prague Charles University, EOPOWER FP7 project • Public sector • Nationality: Czech
Implementing partners	• Same as above
Targeted geography	• Czech Republic and Slovak Republic
Target user group	• User categories: intermediate/end-users, public/private: EO community in Czech Republic and Slovakia • Specific industry thematic: general • Specific Copernicus Service or general
Website address / contact details	http://druzicovesnimky.cz/
Reference Documents	N/A
Description	The Earth Observation resources website (Druzicove Snimky) is the local portal that includes the information about the initiatives and stakeholders of EO community in Czech Republic and Slovakia. Objectives of the portal are to create: - Database of resources and remote sensing technologies in the Czech Republic and Slovakia - Publication of learning materials about remote sensing - Network sharing information about DPZ between Czech Republic and Slovakia - Promotion of remote sensing in public administration, including local success stories There is a plan to connect this portal with http://copernicus.gov.cz/ for better networking and cooperation.
Impact potential	• P4, E3
Actual impact	• P3, E1
Areas for improvement	For the current version: • The website seems not to be updated since the end of the EOPOWER project • There is not much information about Copernicus on the website • It seems that there is no real community through the portal, which was one of the objective of the website.
Best practice & scaling opportunity	• A portal in the local language is the key in each country as a source of information for the local users, including EO tutorials. The local success stories are important to be promoted to local stakeholders. Something which is also considered useful are the surveys for the EO users, which should measure the user requirements. These aspects could be taken as best practice for the other countries.

Reference number	CZ.03
Initiative name	**Copernicus website**
Initiative type	Promotional activities (P)
Period active	• Start date: 2010
Frequency	• On-going
Scale	• Website statistics not available
Indicative budget	• Not available
Client / organisational partners	• Organisers – the National Secretariat for GEO/Copernicus: - Ministry of the Environment of the Corech Republic - Ministry of Education, Youth and Sports - Ministry of Transport of the Czech Republic - CENIA, Czech Environmental Information Agency - Czech Hydrometeorological Institute • Organisation type: public • Nationality: Czech
Implementing partners	• Same as above
Targeted geography	• Czech Republic
Target user group	• User categories: intermediate/end-users, public/private: EO community in Czech Republic • Not specific industry thematic • General Copernicus Services
Website address / contact details	• http://copernicus.gov.cz/en
Reference Documents	• http://copernicus.gov.cz/en
Description	• The aim of the web portal is sharing information about Copernicus programme and related activities in Czech Republic in order to use this gained data and information to serve more efficiently both policy makers as well as public institutions, private sector and directly Czech citizens. • The website contains information about Copernicus related events, grants, trainings and other. • The website is regularly updated, as the news from Copernicus.eu portal seems to be translated every day.
Impact potential	• P5
Actual impact	• P4
Areas for improvement	• Practical information for potential Copernicus users could be added to the website, including technical guides through Copernicus data and local success stories.
Best practice & scaling opportunity	• The website is publishing all the Copernicus news in local language and is regularly updated, a similar dedicated portal could be created in each Member State.

Reference number	CZ.04
Initiative name	**Academy of Geoinformatics Skills**
Initiative type	User feedback, training & education (U)
Period active	• Start date: 2010
Frequency	• On-going
Scale	• Over a hundred of Czech schools and some Slovakian
Indicative budget	• Not available
Client / organisational partners	• Organizers: - Scientica Agency, s.r.o. - Charles University in Prague • Organisation type: public and private • Nationality: Czech
Implementing partners	• Same as above
Targeted geography	• Czech Republic and partially Slovakia
Target user group	• User categories: intermediate, public: primary, secondary and high school (university) levels • Not specific industry thematic • General Earth Observation
Website address / contact details	www.agid.cz http://esero.scientica.cz/
Reference Documents	www.agid.cz
Description	As a part of ESERO (European Space Education Resource Office), this initiative aims to systematically develop awareness about EO and GIS at Czech schools. The Academy organizes practical trainings and workshops for the young generation and teachers, filling the gap of the educations system that does not provide GIS and remote sensing lessons in its curriculum. There are also practical materials published on its website. All the materials are in Czech, so there is no language barrier for the participants.
Impact potential	• U4
Actual impact	• U3
Areas for improvement	• The Copernicus topics are not addressed directly in the programme. The impact for the user uptake is still hard to evaluate, as the future situation of EO market in Czech Republic will prove the skills of intermediate users and end users.
Best practice & scaling opportunity	• The initiative is a great example how to 'bring up' the future potential users of Copernicus and build national skills for the future generation of specialists. As Earth Observation is usually not part of official education programme in most European countries, this example could be implemented in other countries as well.

Reference number	CZ.05
Initiative name	**EO Environmental trainings and workshops from EOPOWER FP7 project**
Initiative type	User feedback, training & education (U)
Period active	• June 2013 to May 2015
Frequency	Series of events during FP7 EOPOWER project: • 10.-11.2.2015 - „The applications of EO in environmental studies" • 02/2014 and 03/2015 - EO workshops organized in Šumava National Park
Scale	• Number of participants: together about 200
Indicative budget	• N/A, funded by FP7 project EOPOWER
Client / organisational partners	• Organizers: Charles University in Prague • Organisation type: public • Nationality: Czech
Implementing partners	• Same as above, with other cooperation partners, such as National Secretariat for GEOSS/Copernicus (Copernicus Committee) and National Parks Representatives
Targeted geography	• Czech Republic and Slovakia
Target user group	• User categories: intermediate/end-users, public: institutions for nature protection, national parks • Specific industry thematic: environmental monitoring, forests • General EO thematic, not Copernicus specific
Website address / contact details	http://www.eopower.eu/sites/default/files/D7.10.pdf
Reference Documents	Not available
Description	The trainings under FP7 project EOPOWER targeted environmental protection stakeholders, especially from national parks in Czech Republic and Slovakia. Expert's lectures and practical training sessions were delivered by professionals from an expert network of capacity building activities in the Czech Republic.
Impact potential	• E5
Actual impact	• E3
Areas for improvement	• The trainings did not have sustainable funding and finished after completion of FP7 project. • The trainings do not have their separate websites and practical materials that could be downloaded by other interested users, are not available online (or not found). • The impact on Slovak stakeholders seems to be much lower than on Czech potential users. • For these reasons the impact is evaluated much lower than its potential.
Best practice & scaling opportunity	• In many cases, the European funding is more effective for implementation of local initiatives, where the local funding is not available for such activities.

Reference number	CZ.06
Initiative name	**National Secretariat for GEOSS/Copernicus (Copernicus Committee)**
Initiative type	Contact Point (C), Networks (N)
Period active	• Start date: 2010
Frequency	• On-going
Scale	• Number of participants: 5 public institutions
Indicative budget	• N/A, financed from different sources, including FP7 projects
Client / organisational partners	• Organizers: - Ministry of the Environment of the Czech Republic - Ministry of Education, Youth and Sports - Ministry of Transport of the Czech Republic - CENIA, Czech Environmental Information Agency - Czech Hydrometeorological Institute • Their organisation type: public • Nationality: Czech
Implementing partners	• Same as above
Targeted geography	• Czech Republic
Target user group	• User categories: intermediate/end-users, public/private • General Copernicus Services
Website address / contact details	• http://copernicus.gov.cz/en/narodni-sekretariat/members-and-activities-ns
Reference Documents	• http://copernicus.gov.cz/en/narodni-sekretariat/members-and-activities-ns
Description	The National Secretariat GEOSS/Copernicus is the executive body of the Coordinating Council for integration of the Czech Republic into building an integrated and sustainable Global Earth Observing System (GEOSS) and to participate in the Copernicus Programme. It is an advisory body to the Ministry of Environment which is, in cooperation with the Ministry of Education, Youth and Sport, coordinator of membership of the Czech Republic in the GEO and participation of the Czech Republic to the European Copernicus programme. Members are representatives from Ministry of Environment, Ministry of Transport, Ministry of Education and CENIA. Their responsibilities include: • Consultations of making of ground monitoring networks and all data and applications of remote sensing useful for GEOSS/Copernicus with the members of the Czech government and heads of other central administrative authorities. • Cooperation with the Coordination Council for GEOSS/Copernicus (advisory body to the Ministry of the Environment). • Maintaining contacts with concerned authorities (members of the government, regional council presidents, mayor of Prague, state administration bodies, professional community) • Communication with the state administration bodies in case of utilising and participating in Copernicus. • Strengthening of participation within FP7 (coordination with the Technology Centre of the Academy of Sciences of the Czech Republic). • Ensure everyday operational requirements for coordination and engagement of Czech workplaces and organisations in activities of both programmes. • Participation in meetings of the Copernicus Committee, Copernicus User Forum, Copernicus Security Board and other European or international events (ESA, GEO, EUMETNET). • Gaining experience from international partners. • Raising of awareness about GEOSS/Copernicus (publicity, brochures, web, media).

Impact potential	• C5, N4
Actual impact	• C4, N3
Areas for improvement	• It is not clear if the users can also address technical questions regarding Copernicus to the National Secretariat • As a network, the members include only representatives of public institutions and could also include the other users, including private stakeholders
Best practice & scaling opportunity	• It is easy to find direct contact points responsible for Copernicus, so that users do not know who to approach with questions. • The members of National Secretariat are also organising the Copernicus National User Forum • The website of the Contact Point (copernicus.gov.cz) is publishing all the Copernicus news in local language

Reference number	CZ.07
Initiative name	**Czech national R&D funds**
Initiative type	Funding (F)
Period active	• Not available
Frequency	• On-going
Scale	• Number of participants: open to all R&D entities
Indicative budget	• Not found
Client / organisational partners	• Organizers: • The Grant Agency of the CR • Technology Agency of the Czech Republic (TA CR) • Their organisation type: public • Nationality: Czech
Implementing partners	• Same as above
Targeted geography	• Czech Republic
Target user group	• User categories: intermediate users, public • Copernicus services not addressed directly
Website address / contact details	• http://www.vyzkum.cz/ • http://www.tc.cz/en/
Reference Documents	• http://eeas.europa.eu/delegations/china/documents/eu_china/ • science_tech_environment/20131010_04-czech_republic.pdf
Description	• Technology Agency of the Czech Republic (TA CR) is responsible for preparation and realization of its own programmes of applied research, experimental development and innovation; and realization of programmes from those governmental departments without public financial support for, evaluation and selection of programme proposals, administration of functional financial support of applied research from the national budget. • The Grant Agency of the CR announces a public competition for the solution of the grant projects of basic research in specified disciplines and approved programmes. The grant applicant may draw up and submit a grant application for the public competition in the following disciplines of basic research: - Technical sciences - Natural science - Medical sciences - Human and social sciences - Agricultural sciences • In both cases, remote sensing applications can be addressed in the calls, but not direct link to Copernicus applications was found.
Impact potential	• F3
Actual impact	• F2
Areas for improvement	• Copernicus applications could be included as part of the grants topics
Best practice & scaling opportunity	• The sustainability of development of Copernicus applications and user uptake should rely not only on EU funds, but also regional commitments.

5.8 Denmark

Reference number	DK.01
Initiative name	**International Conference on Environmental Monitoring and Assessment, Aarhus**
Initiative type	Event (E), User feedback, training & education (U)
Period active	• 5-6 October 2011 • 1-2 October 2013 • 1-2 October 2015
Frequency	• Repetitive, every 2 years • 4th of a series is planned in 2017
Scale	• 400 participants (estimation) • 2011: 15 sessions, over 60 presentations, 25 posters, 5 thematic workshops • 2013: 20 sessions, about 80 oral presentations, 14 posters • 2015: 21 sessions, 26 posters, about 100 oral presentations
Indicative budget	• Not available
Client / organisational partners	• Aarhus University, DCE – Danish Centre for Environment and Energy • Danish Ministry of the Environment • Partnership for European Environmental Research (PEER) • European Environment Agency (EEA) • DA Miljo
Implementing partners	• Same as above
Targeted geography	• International
Target user group	• User categories: policy-makers, researchers, NGOs, industry (but it's minority) • Intermediate/end-user, public, private • Specific industry thematic: environmental monitoring • Not specific to the Copernicus
Website address / contact details	http://dce-conference.au.dk/
Reference Documents	http://dce-conference.au.dk/abstracts/
Description	The objective of the conference is to discuss the future challenges and opportunities for environmental monitoring and assessment, with the aim of: • Discussing and sharing ideas on future methods and technologies • Document and discuss the value of combining research and monitoring • Strengthen the chain from monitoring and assessment to environmental policies, regulation and management. • Strengthen an interdisciplinary, joint international and integrated approach.
Impact potential	• E3, U4
Actual impact	• E2, U2
Areas for improvement	• The Copernicus coverage in the programme could be strengthened, as not visible directly in the programme • The conference is organised only every two years
Best practice & scaling opportunity	• Collecting feedback from participants is a good practice of organisers • Stable local funding and cooperation between organisers gives sustainability for conference continuation

Reference number	DK.02
Initiative name	**EnviroInfo & ICT4S, Copenhagen**
Initiative type	Event (E), User feedback, training & education (U)
Period active	• 7-9 September 2015
Frequency	• Repetitive, annual event • Third of a series in 2015. Previous in 2014 in Stockholm and in 2013 in Zurich
Scale	• 11 workshops, ~90 presentations, 25 posters
Indicative budget	• Not available
Client / organisational partners	• Organised by: University of Copenhagen; European Environment Agency; ICT4S; Umweltinformatik / Environmental Informatics • Sponsored by: Federal Ministry for the Environment, Nature Conservation Building and Nuclear Safety, Germany; Google
Implementing partners	• University of Copenhagen • European Environment Agency • ICT4S • Umweltinformatik / Environmental Informatics
Targeted geography	• International
Target user group	• Intermediate/end-user, public, private • Researchers, decision makers, and domain experts with an interest in the environment and interested in the application of information and communication technologies for sustainable development
Website address / contact details	http://enviroinfo2015.org/
Reference Documents	http://enviroinfo2015.org/
Description	The aim of the conference is building the knowledge base for environmental action and sustainability. It aims to: • Strengthen international, national and regional research and cooperation, - develop the knowledge base for Europe's 7th Environmental Action Programme and the transition towards sustainable development, • Build knowledge base upon high-quality data, adequate and relevant analyses and up-to-date and timely information through open and transparent sharing, • Promote information and communication technologies to ensure adequate actions and contribute to a transition towards sustainable development, • Presentation of the European Environment Agency's State of the Environment Report 2015, • Discussion among the experts from the information and communication technology and environmental communities on the above topics.
Impact potential	• E4, U4
Actual impact	• E2, U2
Areas for improvement	• The Copernicus coverage in the programme could be strengthened, as not visible directly in the programme. That is why the actual impact is low. • The event takes place in different city and country each year, which has limited impact on local users.
Best practice & scaling opportunity	• The event proves that there can be good cooperation between research institutes and commercial companies, such as Google, who is sponsor of the event. It provides very good visibility.

Reference number	DK.03
Initiative name	**Geoforum Denmark - the Danish Association for Geographic Information**
Initiative type	Network (N), User feedback, training & education (U)
Period active	• Established in 2001
Frequency	• Still active
Scale	• 250 companies and organisations from both the public and private sectors • 300 private members • 90 volunteers
Indicative budget	• Funded by participation fees and by professional activities like organizing workshops and trainings.
Client / organisational partners	Geoforum Denmark: • 250 companies and organisations from both the public and private sectors • 300 private members • 90 volunteers
Implementing partners	• Geoforums Board members elected for a two year period. • Volunteers are also strongly involved in GeoForum activities.
Targeted geography	• National, Dennmark
Target user group	• User categories: to all whom may concern • Specific industry thematic: general
Website address / contact details	http://geoforum.dk/ GeoForum Denmark Kalvebod Brygge 31-33 1780 Copenhagen V E-mail: geoforum@geoforum.dk Phone: 3886 1075
Reference Documents	http://geoforum.dk/
Description	Geoforum the Danish forum for spatial information, with members from both public and private companies and its activities are supported by voluntaries. The network promotes the use of GIS and spatial data for different applications in Denmark and organizes many professional trainings and workshops related to GIS Geoforum publishes the monthly magazine GEOFORUM. No direct coverage of Copernicus found.
Impact potential	• N3, U3
Actual impact	• N2, U2
Areas for improvement	• The Copernicus coverage in the network and use of Copernicus data for applications during GeoForum workshops could be strengthened. That is why the actual impact is low.
Best practice & scaling opportunity	• A good practice could be to use the potential of existing, well-established networks and initiatives for Copernicus user uptake.

Reference number	DK.04
Initiative name	**National User Forum**
Initiative type	Contact Point (C)
Period active	• Created in 2014
Frequency	• 4-5 meetings yearly synchronized with CUF meetings. The national Copernicus user forum acts as public consultation concerning the annual Copernicus work programme as well as other subjects under the responsibilities of the Copernicus Committee.
Scale	• Major national stakeholders in Copernicus
Indicative budget	• Not available
Client / organisational partners	• The Ministry of Energy, Utilities and Climate of Denmark, The Danish Geodata Agency and the Ministry of Higher Education and Science, the Danish Agency of Science, Technology and Innovation (national Copernicus Committee representative).
Implementing partners	• The same as above
Targeted geography	• Denmark, Greenland and the Faeroe Islands
Target user group	• Denmark stakeholders
Website address / contact details	• Not available
Reference Documents	• Not available
Description	• The purpose of the National Copernicus User Forum is to facilitate and secure a direct link between the national representatives of the Copernicus Committee, the Copernicus User Forum and Danish users of EO data and services. The overall goal is to maximise the utilisation of Copernicus in Denmark.
Impact potential	• C4
Actual impact	• C2
Areas for improvement	• It is not easy to find direct contact to person responsible for Copernicus, so that users do not know who to approach with questions. • The technical issues are not coordinated by the Contact Point, it is rather policy making and administration. • It is difficult to get feedback from the stakeholders. There is a lot of material to go through. • Some key stakeholder representatives are absent at the meetings.
Best practice & scaling opportunity	

Reference number	DK.05
Initiative name	**GI NORDEN**
Initiative type	Networks (N)
Period active	• Founded in 1989
Frequency	• Still active
Scale	• 5 organisations representing interests of 5 Nordic countries
Indicative budget	• Not available
Client / organisational partners	• Geoforum Denmark (Denmark) • GeoForum (Norway) • LISA (Iceland) • ProGIS (Finland) • ULI Geoforum (Sweden)
Implementing partners	• Same as above
Targeted geography	• Nordic countries of Europe
Target user group	• GIS community in the Nordic countries (private/public, intermediate users)
Website address / contact details	http://ginorden.org/
Reference Documents	History, members details, statutes and events are at the website: http://ginorden.org/
Description	GI Norden is a Nordic network within geographic information (GI) and geographic information Science (GIS). The Network works for increased use of GI for social benefit, and shall contribute to the utilisation of competence and technology within the field. The network board, consisting of one representative from each member association, including one network coordinator elected among the network board members, handles issues and tasks for GI Norden. The national GI associations appoint the national network representatives. The network engaged in organisation of regional events.
Impact potential	• N3
Actual impact	• N2
Areas for improvement	• More attention could be paid for the role of EO data in Geographic Information Systems. Copernicus coverage in the network is limited and could be strengthened.
Best practice & scaling opportunity	• These kind of regional networks could be used as the best platform to discuss regional user requirements and promote Copernicus user uptake through it. Often the countries associated in regional networks have similar user communities and needs.

Reference number	DK.06
Initiative name	**Kortdage - Danish Mapping Days**
Initiative type	Event / Conference (E)
Period active	• From 2000
Frequency	• Annual – every year October / November
Scale	• About 800 visitors
Indicative budget	• Varies
Client / organisational partners	• N/A
Implementing partners	• GeoForum Denmark
Targeted geography	• Denmark and the Nordic countries
Target user group	• Professionals working with all aspects of Geographic Information
Website address / contact details	www.geofroum.dk
Reference Documents	
Description	The Danish Mapping Days is a three days conference with GI professionals from municipalities, state agencies, universities, and private companies. Main language is Danish but there are also English based sessions
Impact potential	• E2
Actual impact	• E1
Areas for improvement	• Representation from Copernicus team at the conference
Best practice & scaling opportunity	• N/A

5.9 Estonia

Reference number	EE.01
Initiative name	**Meeting to discuss collaborations of Baltic States in Copernicus Ground Segment**
Initiative type	Event (E)
Period active	• Beginning 2016 (preferably January)
Frequency	• Annually
Scale	• Geographic Baltic States (Latvia, Estonia, Lithuania), about 30 participants
Indicative budget	• 5000 - 10.000 EUR
Client / organisational partners	• Baltic Space community (e.g. Lithuanian Aerospace Association)
Implementing partners	• Hosted by Ministry of Economic Affairs and Communications for Estonia, Economic Development Department
Targeted geography	• Baltic States (Estonia, Latvia, Lithuania)
Target user group	• Space Community (research, companies)
Website address / contact details	Sille Kraam Economic Development Department Ministry of Economic Affairs and Communications for Estonia Email: Sille.Kraam@mkm.ee Website: https://www.mkm.ee/en
Reference Documents	
Description	Meeting amongst Baltic Space Community to discuss possible paths of co-operations related to the Collaborative Ground Segment in the region. The idea is to establish a platform to synchronize each country's interests and expectations concerning the distribution of Sentinel data and to plan next steps.
Impact potential	• E4
Actual impact	• E3-4
Areas for improvement	
Best practice & scaling opportunity	

Reference number	EE.02
Initiative name	**Copernicus User Awareness Training Event**
Initiative type	User feedback, training & education
Period active	• 9th – 10th April 2014
Frequency	• Series of three workshops
Scale	• N/A
Indicative budget	• N/A
Client / organisational partners	• European Commission
Implementing partners	• Implemented by the 'GIO Lot2 User Uptake' project
Targeted geography	• International
Target user group	• Public/private user; Intermediate/final end-user; general
Website address / contact details	Events website does not work; info found on http://earsc.org/news/copernicus-user-awareness-training-event
Reference Documents	
Description	A two-day event bringing together users and experts to raise awareness of the benefits of Copernicus data and information, and providing attendees with the opportunity to participate in hands-on training and knowledge exchange activities.
Impact potential	• U4
Actual impact	• U3
Areas for improvement	• Stronger outreach to actual user-communities
Best practice & scaling opportunity	

Reference number	EE.03
Initiative name	**"Usage, development and future perspectives of space downstream activities in Estonia"**
Initiative type	• Promotional activity (P)
Period active	• 2nd Semester 2009/ updated 2013
Frequency	• One-off
Scale	• Made available to all space stakeholder in Estonia
Indicative budget	• N/A
Client / organisational partners	• Estonian Space Office (Enterprise Estonia)
Implementing partners	• Invent Baltic
Targeted geography	• National
Target user group	• General
Website address / contact details	http://www.eas.ee/images/doc/ettevotjale/innovatsioon/kosmos/materials/010_kosmosetehnoloogia_rakenduste_kasutamine_ja_arendamine_eestis.pdf Report only in Estonian
Reference Documents	
Description	First large scale background analysis of the status quo of space downstream services' market segments and their future potential in Estonia. The analysis had three main sub-goals: • Map the developers and providers of space downstream services in Estonia • Map the users of satellite navigation data in the public and private sectors in Estonia • Perform a comparative analysis of the potential of Estonian enterprises and organisations
Impact potential	• P3-4
Actual impact	• P3-4
Areas for improvement	
Best practice & scaling opportunity	

Reference number	EE.04
Initiative name	**Space Downstream Services 2010 International Conference - SATFUTURIS in Tallinn**
Initiative type	Events
Period active	• 05th – 07th May 2010
Frequency	• One-off
Scale	• 300 delegates from 15 countries
Indicative budget	• N/A
Client / organisational partners	• The event was supported by Enterprise Estonia, European Social Fund, EstSpacE and GMES Bureau. Gold Sponsor of the Conference was EADS Astrium.
Implementing partners	• Organized by Invent Baltics, Tartu Observatory, InnoEurope and Enterprise Estonia
Targeted geography	• International: Participants from Baltic States, Nordic countries, Russia and whole Europe
Target user group	• Public/Private end-user, space community in general
Website address / contact details	• Outdated
Reference Documents	
Description	The conference goal was to fuel discussions about challenges delivering the services to users while developing innovative business models and demonstrate how satellite services contribute to sustainable economic development of the regions. Distinguished speakers were to present possible solutions provided by existing and planned space applications in the areas of Earth Observation, satellite positioning and navigation. The conference elaborated how to integrate regions into Global Monitoring for Environment and Security (GMES) Programme.
Impact potential	• E3
Actual impact	• E3
Areas for improvement	
Best practice & scaling opportunity	

Reference number	EE.05
Initiative name	**ESTGIS (Estonian Geoinformation Society)**
Initiative type	Network (N)
Period active	• Since 2010
Frequency	• Permanent
Scale	• National level
Indicative budget	• Not disclosed
Client / organisational partners	• Alphagis Ltd. • Affecto Estonia OÜ • Datel • Ministry of the Environment Information Centre • Hexagon Geospatial - Mikrokods
Implementing partners	• Same as above
Targeted geography	• National
Target user group	• GI companies, cartographers
Website address / contact details	http://www.estgis.ee/en/
Reference Documents	
Description	ESTGIS activities are dedicated to the following fields: • to rise the GI awareness in society and support the good reputation of the GIS field • to support the development of the geoinformatics professional skills and education based on the labour market needs • to support effective national and international co-operation and exchange of GIS/GI expertise and experience • to support and contribute to the development of framework documents of Estonian geoinformatics, spatial data and geo infrastructure • to contribute to the GI/GIS and related fields related development processes • to rise the competitiveness of the field in the international level • to protect the members common interests and rights
Impact potential	• N5
Actual impact	• N3
Areas for improvement	• No specific Copernicus / Earth Observation activities
Best practice & scaling opportunity	• Cross-continental cooperation with Africa

5.10 Finland

Reference number	FI.01
Initiative name	**Copernicus Suomen User Forum & Website**
Initiative type	Promotional activity (P), Contact Point (C)
Period active	• From 5/2011 until present
Frequency	• Constantly online
Scale	• Rough estimate of the site's popularity - Global ranking: 147,671 • Visitors by country: Finland 95,1% (Rank in Country 774) and United Stated 1,2% (Rank in country 991,245) - (Source: Alexa.com)
Indicative budget	• There is no indicative budget. The Finnish Metrological Institute (FMI) is committed to support participation in Copernicus UF in Brussels 4 times/year and managing Copernicus UF activities, maintaining webpage, communication with end-users and organizing workshop/trainings with limited budget and resources.
Client / organisational partners	• N/A
Implementing partners	• Dr. Ali Nadir Arslan, Arctic Research Department, Finnish Meteorological Institute (FMI).
Targeted geography	• National, Finland
Target user group	• Certified EU authorities and decision makers
Website address / contact details	http://cufin.fmi.fi (General website) http://cufin.fmi.fi/index.php?page=Contact%20Information (Contact information)
Reference Documents	
Description	The *Copernicus Committee* is made of Full Members and Alternative Members, respectively a representative from the Finnish Funding Agency for Innovation and the Adviser for Space in the Finnish Ministry of Transport and Communication. The *Finnish User Forum* is directed by a Senior Scientist of the Finnish Meteorological Institute (FMI) and the Development Manager of the Finnish Environment Institute (SYKE). There is also a Security Board, and contact persons for the 5 Copernicus thematic areas, namely Atmosphere, Marine, Land, Security and Emergency management and In-Situ. Copernicus User Forum (GUF) is a forum where Member States indicate their user needs towards European Commission. National user forums have been created to serve the European user forum. The *Finnish User Forum website* includes information about User forum meetings; latest news; information on EU Funding opportunities, tenders and grants as well as information on Copernicus-related events (in Brussels and in Finland).
Impact potential	• P5, C5, U4
Actual impact	• P1-2, C3, U3
Areas for improvement	• Websites are efficient tools within a general communication strategy based on brand awareness. Main areas of improvement are the design of an integrated communication strategy which leads to more traffic on the website and the necessity to update the website and create links with other events
Best practice & scaling opportunity	• The National Copernicus User Forums (and their respective communication tools) could develop a combined communication strategy

Reference number	FI.02
Initiative name	**Copernicus Finland User Forum Workshop**
Initiative type	Event (E)
Period active	• 20 October 2014
Frequency	• Annually (one per year)
Scale	• National, Finland
Indicative budget	• 1000 EUR
Client / organisational partners	• N/A
Implementing partners	• Dr. Ali Nadir Arslan, Arctic Research Department, Finnish Meteorological Institute
Targeted geography	• National, Finland
Target user group	• Local and Regional Authorities, potential public end-users, service providers
Website address / contact detailsji	http://cufin.fmi.fi/index.php?page=20.10.2014
Reference Documents	Workshop Agenda http://cufin.fmi.fi/wsmaterial/20141020/FIN_UF_Workshop_20102014_AGENDA_FINAL.pdf
Description	Copernicus National User Workshop on "Satellite services – the European Copernicus Earth Observation Programme held at FMI's premises in Kumpula, Helsinki
Impact potential	• E5
Actual impact	• E3
Areas for improvement	• Number of participants can be increased • Profiles of participants can be multi-disciplinary • Dissemination & Awareness of the workshop
Best practice & scaling opportunity	• National User Workshops are very good platforms and opportunity to disseminate and inform to national end-users about National and International Copernicus current services & activities and future opportunities.

Reference number	FI.03
Initiative name	**SEN3APP Project 1st Stakeholder workshop**
Initiative type	Event (E)
Period active	• 19 November 2015
Frequency	• Once per year, the last two years of the project (total duration 2013-2016)
Scale	• European
Indicative budget	• 2 916 586 EUR
Client / organisational partners	• European Commission
Implementing partners	• Finnish Meteorological Institute, Gamma Remote Sensing, Enveo, Syke, VTT
Targeted geography	• Pan European and Alpine region
Target user group	• The list of end-users consists of potential public and private sector end users of snow, ice and land cover/ phenology products from the new Sentinel satellites.
Website address / contact details	http://sen3app.fmi.fi/index.php?style=main&page=Workshop_1
Reference Documents	Project Brochure http://sen3app.fmi.fi/project/deliverables/SEN3APP_D6.2.pdf Workshop Agenda http://sen3app.fmi.fi/project/workshops/ws1/EU_SEN3APP_workshop_1.pdf Workshop Video (Youtube) https://www.youtube.com/watch?v=HgTUetNLPWE Workshop Page 240 of 370 http://sen3app.fmi.fi/index.php?style=main&page=Workshop_1
Description	Sen3App is a project funded under the European FP7 Programme. The overall objective of the project is to provide end-users with products and services relevant to different challenges, such as numerical weather prediction, ecosystem studies as well as environmental monitoring, including disasters, forest diseases and crop yield. Stakeholder workshops are workshops intended to assess the user requirements: a questionnaire for products planned to be provided by SEN3APP was sent to interested users. List of questions can be found in the brochure: http://sen3app.fmi.fi/project/deliverables/SEN3APP_D6.2.pdf Two are planned during the whole 2015-2015 period. http://sen3app.fmi.fi/index.php?style=main&page=Deliverables
Impact potential	• E5
Actual impact	• E4
Areas for improvement	• There will be one day 2nd Sen3app project stake holder workshop under planning during EGU conference, 17-22 April, 2016. This workshop will be organized together with COST Action ES1404 working group meeting. 24 countries from Europe are participating to this COST Action ES1404 and most of the Management Committee representatives from Met-Offices. This workshop should be well-planned and coordinated towards to possible future end-users.
Best practice & scaling opportunity	• This workshop can be very good opportunity to increase potential future end-users of Copernicus services & products
Additional Comment	• FMI will organize another SEN3APP project workshop where they intend to demonstrate SEN3APP's project services. Envisioned date and venue is to schedule it during the EGU

	conference 17-22 April, 2016 in Vienna-Austria. They would like to combine this initiative also with a COST Action ES1404 activity so that they can get more end-users participation to the workshop. Most of Met-Offices in Europe are participating to the COST Action and they may use SEN3APP services into their NWP or Hydrological modelling. They consider this a very good opportunity for Copernicus services. • COST Action ES1404 is very good platform where Copernicus data, services & products can be disseminated. This Action continues till end of 2018 and FMI are going to organize 3-4 meetings per year.

Reference number	FI.04
Initiative name	**Finnish Remote Sensing Days 2015**
Initiative type	Events (E)
Period active	• Since 2010 as a national event
Frequency	• Annual event
Scale	• 200-300 participants (estimate)
Indicative budget	• N/A
Client / organisational partners	• Finnish Remote Sensing Club
Implementing partners	• Each year the event is hosted by a different institution or university
Targeted geography	• National
Target user group	• National Remote Sensing Community
Website address / contact details	http://www.kaukokartoituskerho.fi/2015
Reference Documents	
Description	The event gives an overview on latest advances in Finnish remote sensing and provides an inspiring environment for professional networking. In 2015 the main emphasis was on future of remote sensing and business opportunities. Several start-up companies attending the event.
Impact potential	• E4
Actual impact	• E4
Areas for improvement	
Best practice & scaling opportunity	

5.11 France

Reference number	FR.01
Initiative name	**Forum National des utilisateurs Copernicus (National Copernicus User Forum)**
Initiative type	Events (E)
Period active	• Since Nov. 2009
Frequency	• Forums not organised on a regular basis
Scale	• 6 forums organised to date, 80 participants per forum in average
Indicative budget	• Not available
Client / organisational partners	• Ministry of Ecology, Sustainable Development and Energy (MEDDE)
Implementing partners	• Same as above
Targeted geography	• National level
Target user group	• Mainly public users from national, regional and local public authorities
Website address / contact details	• Contact Person: Vincent Pircher (MEDDE)
Reference Documents	• Meeting at MEDDE + V. Pircher's slide presentation
Description	The National Copernicus User Forum has been created by the Ministry of Ecology, Sustainable Development and Energy (MEDDE) to create awareness on the Copernicus services among potential national (public) users. A total of 6 forums were organised between 2009 – 2013: • 4 Thematic Forums addressing: - Marine Environment Monitoring (Nov. 2009 / 90 participants) - Land Monitoring (Jul. 2010 / 80 participants) - Atmosphere Monitoring (Nov. 2010 / 90 participants) - Emergency Management (Jan. 2012 / 70 participants) • 1 Expert Forums dedicated to Climate Change Monitoring (Jun. 2011 / 50 participants); • 1 general Forum presenting all Copernicus services (Sep. 2013 / 110 participants). Different formats were tested during the forums (plenary sessions / mix with splinter sessions). Each Forum was preceded by a consultation in order to gather participants' views. A next forum should take place in April 2016, with a main focus on the availability of Sentinels data. A situation overview for Copernicus services might also be on the agenda if time allows.
Impact potential	• E5
Actual impact	• E4 - The actual impact is considered to be slightly lower that the expected one as these events alone are not sufficient to keep "alive" a network of users on the long-term.
Areas for improvement	• As mentioned previously, different forum formats were tested, some of them including splinter sessions with end-users. These sessions have shown that it may be difficult for end users to express requirements with regards to Earth Observation products and services. • The organisers also consider that the benefits that this kind of event brings are not always commensurate to required efforts for organising them.
Best practice & scaling opportunity	• In spite of a good attendance in absolute value, the attendance remains relatively low compared with the potential number of public users of Copernicus in the country. A possibility to leverage impacts would be to make sure that participants are "mandated" to disseminate information within their own "community" (e.g. at regional scale), using existing structure when appropriate (e.g. regional centres of scientific expertise established through Theia).

Reference number	FR.02
Initiative name	**PEPS (Platforme d'Exploitation des Produits Sentinelles)**
Initiative type	Data access (D)
Period active	• Since 2014
Frequency	• Continious
Scale	• Currently 250 user accounts registered
Indicative budget	• 500k€
Client / organisational partners	• CNES (National Space Agency)
Implementing partners	• ATOS
Targeted geography	• From local to national
Target user group	• Institutional users, scientific users and industry • The THEIA (see separate card) community will also be a user of PEPS
Website address / contact details	https://peps.cnes.fr/rocket/#/home Vincent Garcia (Head of PEPS Operations) / Mireille Paulin (PEPS Project Manager)
Reference Documents	• CNES website • https://peps.cnes.fr/docs/peps-manuel-utilisateur-v1_0.pdf
Description	The ESA data access and dissemination system is complemented by national mirror sites set up in the "Collaborative Ground Segments" framework. Several countries (Germany, Italy, United Kingdom, Greece, Finland...) are already involved in this process. France is developing its own mirror site: PEPS (Plateform for Exploiting Products from Sentinels). The national mirror sites have a unique access right (only one registered user per country) to a dedicated hub which will offer the required performances at server level. The link between the mirror site and ESA's hub (Wide Area Network) remains under the responsibility of the Member State. The PEPS platform aims to provide a free and open access to the Sentinel data and to guaranty performance which should fit with end user's requirements: • Easy access to the data • Processing capability nearest to the data • Web processing service in order to decrease the volume of data to download • Sharing tools and facilities • Training, user uptake, dissemination & communication
Impact potential	• D5
Actual impact	• D3-D4
Areas for improvement	• Sentinel 2 data delivery at level 2A (with atmospheric correction)
Best practice & scaling opportunity	• In Europe, 8 countries have already signed an agreement with ESA to establish a national mirror site to the portal providing access to Sentinel satellite data (Greece, Norway, Italy, Finland, Germany, France, UK and Sweden). Canada also signed a similar agreement on 10 November 2015. • This first phase of PEPS (2014 – 2017) is expected to evolve towards a harmonisation at EU level, with the objective to achieve a better integration of the available data dissemination platforms.

Reference number	FR.03
Initiative name	**Pôle thématique surfaces continentales THEIA**
Initiative type	Data access (D) and promotional activities (P)
Period active	• From Dec. 2012
Frequency	• Not applicable
Scale	• National organisation + 7 Regional Centres • The first seminar organised by Theia (jointly with Equipex Geosud) attracted 150 participants (including users from Ministries, and public national and regional bodies).
Indicative budget	• Not available
Client / organisational partners	• Created by 9 public institutions: • CEA (French Atomic Energy Commission) • CEREMA (a resource centre for scientific and technical expertise) • CIRAD (organisation for international cooperation in agricultural research for development) • CNES (French space agency) • CNRS (National Centre for Scientific Research) • IGN (National Institute of Geographic and Forest Information) • INRA (French National Institute for Agricultural Research) • IRD (Research Institute for Development) • IRSTEA (National Institute of Sciences and Technology for Environment and Agriculture) • Meteo France • ONERA (French national aerospace research centre)
Implementing partners	• Same as above
Targeted geography	• National, but relies on a group of regional centres having a regional focus
Target user group	• Scientific community (national and international), Public institutions
Website address / contact details	https://www.theia-land.fr
Reference Documents	List of Scientific Expertise Centres: https://www.theia-land.fr/en/presentation/scientific-expertise-centres List of regional coordination networks: https://www.theia-land.fr/en/presentation/theia-regional-coordination-network-art Theia Bulletins This paper describes the Theia Land Data Centre, its service and data infrastructure, network of scientific expertise centres, product portfolio and main activities : https://www.theia-land.fr/sites/default/files/imce/Extended_Abstract_Theia_RSDI%20Workshop_v0.pdf
Description	Theia is one of the four national thematic poles created in the domain of Earth Observation. Theia is based on distributed services and data infrastructure, and a network of thematic and regional expertise centres in various regions in France and in overseas French territories. Theia is thus offering the national and international scientific communities as well as the public policy for the monitoring and management of environmental resources, a broad range of images at different scales, methods and services related to the land surface observation from space. Theia is a national effort and one of its goals is to become an element of a European network of actors carrying similar activities and to be well articulated with the Copernicus European programme. Theia's product portfolio is therefore conceived to be complementary to that of Copernicus. As a thematic pole, Theia aims to: • Provide a single access portal to data and products with high added value used in the scientific activities;

	• Distribute tools and software of data manipulation and processing; • Provide expert support on the use of data; • Host shared resources (data processing services; execution platform software; documentation; archiving; etc.); • Provide collaborative tools (forum, wiki, etc.); • Contribute to the animation of the concerned scientific community. Theia covers ten thematic areas of Land Surface: agriculture, biodiversity, hydrology, forestry, natural hazards, littoral, snow and ice, surface-atmosphere interface, health and urban planning. The main objectives assigned to Theia are: • To establish a common system able to provide value-added spatial data (from local to global scale) for continental surfaces; • To capitalise on experience and good practices; • To promote national achievement at European and international levels. Theia relies on: • A Service and Data Infrastructure (IDS). The Theia IDS is an infrastructure created specifically for the needs of Theia and supported by existing distributed infrastructures (e.g. Geosud – See separate fiche). • Scientific Expertise Centres (CES). They consist in laboratories or groups of national laboratories leading research and developing innovative processes to use space data for "land surfaces" issues. • A Coordination Regional Network consisting of "Regional CES" (now referred to as "Animation Régionale Theia" or "ART"). Seven Regional CES (or ARTs) exist to date. The objective of ARTs is to make sure that (public and private) users and data providers (Theia & Geosud) meet together at regional scale in order to collect requirements, share experience and knowledge, share information on available data. The current ARTs are ART Alsace; ART Aquitaine; ART Bretagne; ART Languedoc-Roussillon; ART Midi-Pyrénées; ART PACA; ART Sud (addresses relationships with Southern Countries). Theia organise national seminars to disseminate information among users while Regional CES / ARTs organise regional workshops and events to disseminate information among users.
Impact potential	• D4 and P4
Actual impact	• Not available (D2)
Areas for improvement	• By design, the topics addressed by Theia focus on land. However, some of the topics addressed by Theia do not relate to a single domain but to several ones (For instance "Health" can also relate to atmosphere monitoring, "littoral" to marine environment monitoring, etc.). A possible improvement could be to make sure that the programmes of the seminars organised by Theia also include a few presentations addressing other domains than Land. • Another improvement could consist in making sure that the products and services offered by Copernicus are systematically emphasised during the seminars organised by Theia (it must be noted that one of the presentations made at the first seminar mentioned the opportunities offered by the availability of Sentinel-2 data.
Best practice & scaling opportunity	• For the time being, regional centres (ARTs) have not been created in all the regions. A first scaling opportunity would be to make sure that a centre is created in each region. • The pole mainly targets the scientific community, and to a lesser extent users from public administrations. Addressing other user communities beyond the scientific community might be useful. • More generally, the concept of a national entity offering access to satellite images, supported by a network of regional centres for providing expertise and creating awareness at regional/local level is very interesting and could be implemented in other EU Member States. • Last but not least, an interesting point is that Theia builds on other existing initiatives (e.g. Geosud), thus maximising synergies.

Reference number	FR.04
Initiative name	**AERIS**
Initiative type	Data access (D) and promotional activities (P)
Period active	• From Dec. 2014
Frequency	• Not applicable
Scale	• National organisation, with e.g. more than 1900 registered users for the ICARE data centre
Indicative budget	• Not available
Client / organisational partners	• CNRS, CNES, Météo-France, Université de Lille 1, Région Nord – Pas de Calais, Université Paul Sabatier, CEA, Université Pierre et Marie Curie, Ecole Polytechnique, IGN and IRD
Implementing partners	• Same as above
Targeted geography	• National
Target user group	• Scientific community, public institutions
Website address / contact details	http://www.aeris-data.fr/ (Contact Person: Nicole Papineau)
Reference Documents	See http://www.aeris-data.fr/
Description	The atmosphere and service data "pole" AERIS is one of the four national thematic poles created in the domain of Earth Observation. It aims to facilitate and enhance the use of atmospheric data (originating from satellites measurements, ground based measurements, airplanes or balloons). As a thematic pole, AERIS aims to: • Provide a single access portal to data and products with high added value used in the scientific activities; • Distribute tools and software of data manipulation and processing; • Provide expert support on the use of data; • Host shared resources (data processing services; execution platform software; documentation; archiving; etc.); • Provide collaborative tools (forum, wiki, etc.); • Contribute to the animation of the concerned scientific community. In line with the above objectives, the AERIS pole generates products from observations. It also provides many support services for the use of data (processing and archiving capabilities), help to conduct campaigns, or interface with models. It aims to strengthen the existing system. AERIS builds on 4 Centres for Data and Services (CDS): • ESRI (part of the IPSL – Institut Pierre Simon Laplace) – See http://cds-espri.ipsl.jussieu.fr • ICARE (part of Université Lille 1) – See http://www.icare.univ-lille1.fr • SEDOO (Observatoire Midi-Pyrénées Data Service) – See http://www.sedoo.fr/ • SATMOS (Service for Archiving and Processing Meteorological Observations from Space) – See http://satmos.aeris-data.fr For algorithmic development and prototyping, the pole also relies on laboratories, laboratory networks or centres of expertise.
Impact potential	• D4 and P4
Actual impact	• Not known yet (the pole has been operating only for a few months)
Areas for improvement	• The creation of the pole is relatively recent and it is too early in the process for identifying areas for improvement.
Best practice & scaling opportunity	• As for the other thematic poles, AERIS mainly targets the scientific community, and, to a lesser extent, users from public administrations. Addressing other user communities beyond the scientific community might be useful.

Reference number	FR.05
Initiative name	**Pole Océan**
Initiative type	Data access (D) and promotional activities (P)
Period active	• 2014: Creation • 2015: Establishment of organisation, governance etc. • 2016 – 2017: Beginning of operations and creation of thematic sites (see below) • 2018: Consolidation phase
Frequency	• Not applicable
Scale	• National organisation
Indicative budget	• Not available.
Client / organisational partners	• IFREMER, CNES, CNRS / INSU, IGN, IRD, Météo-France, SHOM and Universités Marines
Implementing partners	• Same as above
Targeted geography	• National
Target user group	• Scientific community, Public institutions
Website address / contact details	http://www.pole-ocean.fr Fabienne Gaillard (IFREMER)
Reference Documents	See http://www.pole-ocean.fr website
Description	The "Pole Océan" is one of the four national thematic poles created in the domain of Earth Observation. It aims to promote and facilitate the use of marine monitoring data (originating from satellites measurements, in situ measurements, etc.). As a thematic pole, Pole Océan aims to: • Provide a single access portal to data and products with high added value used in the scientific activities; • Distribute tools and software of data manipulation and processing; • Provide expert support on the use of data; • Host shared resources (data processing services; execution platform software; documentation; archiving; etc.); • Provide collaborative tools (forum, wiki, etc.); • Contribute to the animation of the concerned scientific community. In particular, the pole aims to better describe, characterise and understand: ocean dynamics; physics & chemistry evolutions; biogeochemicals cycles and marine ecosystems. The pole more specifically addresses the four following themes: oceanic circulation and sea level; salinity and water cycle; ocean colour and coastal ecosystems. The pole builds on a data access portal, data processing and management centres and a network of scientific expertise, based on existing structures.
Impact potential	• D4 and P4
Actual impact	• Not known yet (2015 has been dedicated to organising the pole. Operations should start in 2016)
Areas for improvement	• Operations have not started yet. It is too early to identify improvements.
Best practice & scaling opportunity	• As for the other thematic poles, Pole Océan mainly targets the scientific community, and, to a lesser extent, users from public administrations. Addressing other user communities beyond the scientific community might be useful.

Reference number	FR.06
Initiative name	**ForM@Ter**
Initiative type	One of the four national thematic poles created in the domain of Earth Observation.
Period active	• 2012: Formal launch • 2014: Establishment of the governance and specification of the pole • 2015 – 2016: Implementation of the first services, additional technical studies • 2017: beginning of operations
Frequency	• Not applicable
Scale	• National
Indicative budget	• Not available
Client / organisational partners	• CNRS, CNES, IGN, IPGP, Université Paris Diderot (Paris VII)
Implementing partners	• Same as above
Targeted geography	• National
Target user group	• Scientific community, Public institutions
Website address / contact details	http://poleterresolide.fr Olivier Jamet / Emilie Ostanciaux
Reference Documents	See http://poleterresolide.fr website
Description	ForM@Ter is one of the four national thematic poles created in the domain of Earth Observation. ForM@Ter is future national data centre dedicated to solid Earth Observation. The pole aims to federate the solid Earth scientific community especially in the field of shape and movements of the Earth's surface. As a thematic pole, ForM@Ter aims to: • Provide a single access portal to data and products with high added value used in the scientific activities; • Distribute tools and software of data manipulation and processing; • Provide expert support on the use of data; • Host shared resources (data processing services; execution platform software; documentation; archiving; etc.); • Provide collaborative tools (forum, wiki, etc.); • Contribute to the animation of the concerned scientific community. For the period 2014-2015, the four main lines of work of the pole are: • Governance of the pole; • Organisation and partners. In addition to the founding partners, it is expected that the pole relies on more than 20 research laboratories and institutes (see http://poleterresolide.fr/organisation); • Technical studies: data portal / InSAR data / GNSS data / Imagery (incl. cooperation with Theia); • European strategy (incl. relationships with Copernicus).
Impact potential	• D4 and P4
Actual impact	• Not known yet (the pole has been operating only for a few months)
Areas for improvement	• The pole is being implemented. It is too early to identify improvements.
Best practice & scaling opportunity	• As for the other thematic poles, Form@Ter mainly targets the scientific community, and to a lesser extent users from public administrations. Addressing other user communities beyond the scientific community might be useful.

Reference number	FR.07
Initiative name	**Equipex Geosud**
Initiative type	Data Access (D)
Period active	• 2011 - 2020
Frequency	• Not applicable
Scale	The following entities benefit from the free access to the data released by Geosud • 97 laboratories or higher education bodies • 180 National / Regional / Departmental / Local administrations or public bodies • 19 Environmental protection bodies • 36 other bodies (development agencies, urban planning agencies, etc.)
Indicative budget	• 11.5 M EUR from the Ministry of Research and 9.6 M EUR from Members. Covers a 5-year period for "investment" and a 9-year period for operations.
Client / organisational partners	• Institutional partners representing research, academia, public administrations: AgroParisTech, CETE sud-ouest, CINES (National Computing Centre for Higher Education), CIRAD (organisation for international cooperation in agricultural research for development), CNRS (National Centre for Scientific Research), IGN (National Institute of Geographic and Forest Information), IRD (Research Institute for Development), IRSTEA (National Institute of Sciences and Technology for Environment and Agriculture), Université de Montpellier, Université Antilles Guyane, Université de la Réunion • Associations & private partners: AFIGEO, Geomatys • The project is also supported by the National Space Agency (CNES), the Ministry of Agriculture and the Ministry of Ecology, Sustainable Development and Energy (MEDDE).
Implementing partners	• Same as above
Targeted geography	• National
Target user group	• Scientific research and Public Administrations
Website address / contact details	http://geosud.teledetection.fr
Reference Documents	Geosud website & Geosud Bulletin
Description	Equipex Geosud is part of the "Equipex programme", launched in 2010 and aiming at acquiring high quality scientific equipment in order to strengthen competitiveness of scientific research. Equipex Geosud aims to develop a national infrastructure to make satellite data freely accessible to the scientific community and public stakeholders. Includes the annual acquisition and delivery of HR satellite images of France. The objectives are to provide a sustainable access to spatial information on ecosystems and land surface, based on yearly-refreshed HR satellite imagery; to provide access to data management and data processing capacities; to support to upstream R&D on data processing; and stimulate interaction and experience sharing between the scientific community and public stakeholders involved in environmental management and land management
Impact potential	• D5
Actual impact	• D5 - Geosud provides a wide range of users with data
Areas for improvement	
Best practice & scaling opportunity	• A noticeable fact is that the Geosud initiative is not limited to make data and processing capacities available to users. It also includes interactions and experience sharing with end users (public stakeholders) to accompany them in using data.

Reference number	FR.08
Initiative name	**Programme "Boosters"**
Initiative type	Start-up initiative (S), Network (N) and Funding Instruments (F)
Period active	• Launched in September 2015 for a 3-year duration
Frequency	• Not Applicable
Scale	• For the first phase, the programme remains relatively limited in scope (3 Boosters supporting a total of 10-15 projects) but the intention is to extend it if the first phase reveals to be successful.
Indicative budget	• Not available
Client / organisational partners	COSPACE (State-Industry Concertation Committee on Space), which consists of: • Ministry of Higher Education and Research • Other concerned Ministries (Ministry of Economy, Ministry of Foreign Affairs, Ministry of Ecology, Ministry of Defence…) • CNES (National Space Agency) • ONERA (French national aerospace research centre) • GIFAS (French Aerospace Industry Association) • + Space Industry representatives (including SME representatives)
Implementing partners	• Mainly CNES & GIFAS
Targeted geography	• National
Target user group	• By design the programme targets "intermediate users" (e.g. companies using EO data to develop value-added downstream services). Final users are the customers of these intermediate users.
Website address / contact details	COSPACE: https://www.gifas.asso.fr/node/69300 & http://www.enseignementsup-recherche.gouv.fr/cid73593/installation-du-comite-de-concertation-etat-industrie-sur-l-espace-cospace.html "Booster" Call for proposals: https://entreprises.cnes.fr/fr/faites-vos-propositions-pour-booster-leconomie-en-utilisant-le-spatial
Reference Documents	COSPACE Website Press release from COSPACE "Booster" tender specifications
Description	Launched by the COSPACE (Public/Private Concertation Committee on Space), the "Boosters" programme aims to group together within consortia the stakeholders of the digital economy, of the Space sector and of the downstream sector (maritime sector, agriculture, climate, urbanism…). The programme aims at setting up "Boosters". A Booster consisting in a consortium hosted and coordinated by a "Pôle de Compétitivité" (see separate fiche on Competitiveness Clusters) and having at its disposal innovation tools and existing structures (e.g. incubators). In a first stage, the programme will launch three Boosters. They will have to organise cross-sectoral and multi-actors meetings, to create a favourable environment for the emergence of innovative ideas, and to select and support promising projects. Projects will be selected through a Call for projects built on the same model as the "World Innovation competition" ("Concours mondial de l'innovation") launched in December 2013 by President Hollande. The first projects should start in 2016. It is expected that each Booster supports 5 projects per year in average (projects may have different maturity levels: feasibility studies, prototyping, etc.). Projects will be funded through existing national funding mechanisms (PIAVE mechanism, "Space-based Services" theme). The final objective is to boost the creation of new start-ups and the provision of new services.

Impact potential	• S4, N4, F3
Actual impact	• Cannot be assessed (the programme has just been launched)
Areas for improvement	• Not applicable (the programme has just been launched)
Best practice & scaling opportunity	Some elements are worth being emphasised: • Boosters must have competences in three key different domains (Space, digital economy, applications) thus multiplying their chances to be effective • Boosters will not be "alone". They will benefit from the support from a network providing access to data, technical expertise, testing facilities, etc. • Boosters do not start "from scratch": To compete, consortia must already have innovation structures and tools at their disposal and commit to make them available to the Booster. • The Booster initiative results from a political decision and is supported by major stakeholders

Reference number	FR.09
Initiative name	**"Pôles de compétitivité" (Competitiveness Clusters)**
Initiative type	Networks (N)
Period active	• Since 2005 (Aerospace Valley, Pôle Risques) • Since 2007 (Pégase and Astech)
Frequency	• Not Applicable
Scale	• Regional. See "Description" for more details.
Indicative budget	• Not available. • Clusters are co-funded by public funds (national and local) and private funds (companies). Public grants (Fonds Unique Interministériel – FUI) support the best R&D projects
Client / organisational partners	• Depend on the cluster
Implementing partners	• Depend on the cluster
Targeted geography	• Regional scale, the considered region being depending on the cluster
Target user group	• By design the clusters target "intermediate users" (e.g. companies using EO data to develop value-added downstream services). Final users are the customers of these intermediate users.
Website address / contact details	General address for "Competitiveness Clusters": http://competitivite.gouv.fr/ Space-related clusters: • Aerospace Valley: www.aerospace-valley.com • Astech: http://www.pole-astech.org • Pégase: http://www.pole-pegase.com/ • Other potentially relevant cluster: • Pole Risques: http://www.pole-risques.com/
Reference Documents	Documentation available at http://competitivite.gouv.fr/
Description	The creation of "Competitiveness Clusters" was launched in 2004, with the objective to bring together large and small firms, research laboratories and educational establishments, all working together in a specific region to develop synergies and cooperative efforts. Other partners may be brought in, such as public authorities, either local or national, as well as firms providing business services. Among the 71 existing clusters, three clusters deal with aeronautics and space (they are not specifically focussed on Earth Observation): • Astech, Paris Region (304 Members); • Pégase, PACA Region (270 Members); • Aerospace Valley, Aquitaine and Midi-Pyrénées Regions (859 Members, including 507 SMEs). A fourth cluster, "Pôle Risques" (PACA and Languedoc-Roussillon Regions), deals with "risks" and is therefore related to the Emergency Management domain. The objectives of the clusters are: • To foster partnerships between stakeholders • To encourage the implementation of strategic collaborative R&D projects • To create an environment favourable to innovation (awareness on and support to access to funding, industrial property, …)

Impact potential	• N4
Actual impact	• N3 - The competitiveness clusters are very active, notably in supporting the setting up of R&D projects involving their members, and in particular SMEs (e.g. 754 labelled R&D projects for the Aerospace Valley cluster).
Areas for improvement	• Competitiveness Clusters have been established in regions where there was already a critical mass of actors involved in the domain addressed by the Clusters (e.g. Aerospace in Midi-Pyrénées, etc.). It could be useful that the actions undertaken by the Clusters go beyond the regions they are settled in (e.g. organisation of information sessions on space applications in regions where there is no Space-related cluster) in order to address as many users as possible.
Best practice & scaling opportunity	

Reference number	FR.10
Initiative name	**National Contact Points**
Initiative type	Contact Point (C)
Period active	• Not applicable
Frequency	• Not applicable
Scale	• Not applicable
Indicative budget	• Not applicable
Client / organisational partners	• Ministry of Higher Education and Research (MENESR), Ministry of Ecology, Sustainable Development and Energy (MEDDE)
Implementing partners	• Ministry of Higher Education and Research (MENESR), Ministry of Ecology, Sustainable Development and Energy (MEDDE)
Targeted geography	• National
Target user group	• Any potential user
Website address / contact details	https://copernicus.cnes.fr/en/contacts-19
Reference Documents	• See above website
Description	Official Copernicus contact persons have been appointed at national level. Their details are available to anyone on the internet. These persons are: • The Copernicus national coordinator (who is also the national delegate to the Copernicus Committee) • The alternate delegate the Copernicus Committee • The Copernicus Special Advisor (who is also the national representative to the Copernicus User Forum). In addition to the above official contact persons, additional "Copernicus" contact persons are also appointed within the National Space Agency (CNES): • A national point of contact • A person responsible for Copernicus coordination with EU/ESA In the context of the EU-funded DORIS-Net project, supported by NEREUS, 2 Regional Contact Offices were created in 2012 respectively in the Aquitaine-Midi Pyrénées region (supported by CEREMA) and in the Bretagne region (supported by the Pôle mer and GIS-BreTel).
Impact potential	• C5
Actual impact	• C5
Areas for improvement	• In order to strengthen proximity with regional / local users, it could be worth having official contact persons at regional level (this could be achieved through initiatives like Theia for instance –see separate fiche, provided that regional centres are deployed in all regions)
Best practice & scaling opportunity	

Reference number	FR.11
Initiative name	**"Regional dynamics in Geographic Information" meetings ("Rencontres des dynamiques régionales en information géographique")**
Initiative type	Event (E)
Period active	• Since June 2005
Frequency	• Annual (each meeting taking place in a different region)
Scale	• 300+ participants
Indicative budget	• Not available
Client / organisational partners	• AFIGEO (French Association for Geographic Information)
Implementing partners	• AFIGEO (French Association for Geographic Information)
Targeted geography	• Organised at national level but focus on regional activities
Target user group	• Regional and local public authorities are the main targets
Website address / contact details	http://www.afigeo.asso.fr
Reference Documents	Meeting proceedings (e.g. http://www.afigeo.asso.fr/voir-toutes-les-news/977-diffusion-du-programme-des-8%C3%A8mes-rencontres-des-dynamiques-r%C3%A9gionales-5.html)
Description	The main objectives of these meetings are to: • Create awareness on what is available in the hosting Region (GIS tools, services,…) among regional and local users in the other regions and in their own territories; • Discuss topics at stake (e.g. Open Data, Reference Databases,…); • Foster networking among the various actors. These meetings focus on the use of geographic information, wherever this information comes from. They do not focus on Earth Observation or satellite applications.
Impact potential	• E1
Actual impact	• E1-2
Areas for improvement	• A possible improvement would be to make sure that future meetings always include a short presentation on Copernicus and an update on the products and services offered by the programme.
Best practice & scaling opportunity	

Reference number	FR.12
Initiative name	**IGN Fab**
Initiative type	Start-up initiative (S) and Funding Instrument (F)
Period active	• Since 2014
Frequency	• 1 – 2 Calls per year
Scale	• First Call (2014): 21 proposals received, 5 projects selected • Second Call (Spring 2015): 4 projects selected.
Indicative budget	• Not available
Client / organisational partners	• IGN (National Institute of Geographic and Forest Information)
Implementing partners	• IGN (National Institute of Geographic and Forest Information)
Targeted geography	• National
Target user group	• Start-ups and innovative SMEs
Website address / contact details	http://ignfab.ign.fr
Reference Documents	IGN Fab leaflet
Description	IGN Fab aims to support SMEs willing to develop innovative geoinformation services by providing them with: • Access to technical expertise in geoinformation services • Access to the data and development platforms available at IGN • Access to institutional users • Access to other supporting structures (e.g. Competitiveness Clusters) Beneficiaries are selected through a "Call for projects" procedure (each project being supported during a period varying between 3 and 18 months). To date, two calls for projects have been launched. The theme addressed by the second call was "Climate change and risk prevention". The third call is about to be launched. The theme addressed by this call is "Tourism and Leisure, valorisation of territories and cultural heritage".
Impact potential	• S1, F2
Actual impact	• Not available yet.
Areas for improvement	• Awareness could be created on the fact that in addition to the data available at IGN, all the products and services offered by Copernicus are also available to beneficiaries.
Best practice & scaling opportunity	

Reference number	FR.13
Initiative name	**merIGEO**
Initiative type	Event (E)
Period active	• First edition in 2015
Frequency	• Every 2 years if first edition successful
Scale	• Not available
Indicative budget	• Not available
Client / organisational partners	• IFREMER, SHOM and Agence des Zones Marines Protégées (Marine Protected Areas Agency)
Implementing partners	• Same as above
Targeted geography	• National
Target user group	• All professionals using geomatics in the marine sector (public institutions, research organisations, universities, national, regional and local public authorities, etc.
Website address / contact details	http://www.merigeo.fr
Reference Documents	Information available on the above website
Description	merIGEO is a national colloquium dedicated to geomatics applied to the marine environment. It aims to bring together professionals in geomatics in order to investigate all the issues related to the use of geomatics in the domain of marine environmental monitoring and management. The colloquium will address themes such as: • Data acquisition and processing • Imagery • Software and applications • Marine and coastal geographic data infrastructure • Modelling, observation and forecast • Etc.
Impact potential	• E1
Actual impact	• Cannot be assessed (first edition scheduled end of November 2015)
Areas for improvement	• In the future, a possible improvement from a Copernicus perspective would be to make sure that Speakers representing Copernicus are systematically incorporated in the programme in order to make sure that users attending the event are kept informed on the programme and the available products and services.
Best practice & scaling opportunity	• This kind of event could be generalised in all EU Member States interested in Marine Monitoring.

Reference number	FR.14
Initiative name	**Urban Observation Seminar (Séminaire de l'Observation Urbaine)**
Initiative type	Event (E)
Period active	• Since 2003
Frequency	• Yearly
Scale	• 200+ participants
Indicative budget	• Not available
Client / organisational partners	• CEREMA (Study and expertise centre on risks, environment, mobility and spatial planning), INSEE (national institute for statistics and economic studies), the National Federation of Urbanism Agencies) and from 2012 AdCF (Assembly of the French Communities)
Implementing partners	• Same as above
Targeted geography	• National
Target user group	• Study managers and researchers
Website address / contact details	http://www.territoires-ville.cerema.fr/seminaire-de-l-observation-urbaine-r185.html
Reference Documents	• Information available on the above website + Proceedings of past seminars
Description	This annual seminar is dedicated to methods and tools for the observation of urban areas. The seminar has a twofold objective: exchange views between stakeholders and promote a better understanding of urban phenomena through local and/or thematic case studies. Although not specifically focused on Earth Observation, the seminar may include topics directly related to Earth Observation. For instance, the seminar held in 2014 included: • Contribution of satellite technologies to the study of urban heat islands (illustrated with Landsat and Pleiades images). • GIS and nature in cities (explicitly mentions the Copernicus land monitoring service as well as the Urban Atlas). The list below provides an overview of the themes addressed by the seminars since 2003: • 2003 Tools and Methods for municipalities • 2004 How to track urban developments - Tools and Methods • 2005 Identify possible scenarios - assumptions, projections and inflections • 2006 Making sense from data • 2007 Building summary information • 2008 Observe locally: mobilizing local specific data and national data • 2009 Observe territories in a context of crisis • 2010 Modelling / Observing territories and establishing standards • 2011 Sustainability and urban areas • 2012 Observe to act • 2013 Economic observation of territories • 2014 Observe the environment in town: resources and nuisances
Impact potential	• E1
Actual impact	• E1-2
Areas for improvement	• Some of the presentations made at the last seminar included references to some Copernicus products (HR layers and Urban Atlas). An improvement could consist in making sure that these events always include at least one presentation providing participants with an update on existing Copernicus products and services.
Best practice & scaling opportunity	• This kind of event could be generalised to all EU Member States.

Reference number	FR.15
Initiative name	**International Paris Air Show**
Initiative type	Event (E)
Period active	• Since 1909
Frequency	• Every two years.
Scale	2015 edition: • 150,000 business visitors • 200,000+ visitors from the general public • 2,300+exhibitors from 48 countries
Indicative budget	• Not available
Client / organisational partners	• GIFAS (French Aerospace Industry Association) though a subsidiary called
Implementing partners	• Same as above
Targeted geography	• International
Target user group	• Both general public and professionals
Website address / contact details	http://www.siae.fr
Reference Documents	http://www.siae.fr and Wikipedia for the history of the Show
Description	Created in 1909, the Show was initially dedicated to aviation and then to "aeronautics" (as of 1949). The Paris Air Show became an "Aeronautics and Space Show" in 1961. Although the main focus of the Paris Air Show remains on aeronautics, the exhibition is also the occasion for ESA, satellite manufacturers (e.g. Airbus DS, Thales Alenia Space), national space agencies (e.g. CNES, DLR,…) or satellite operators to show the latest achievements in the domain of Earth Observation and Copernicus.
Impact potential	• E2-3
Actual impact	• E2
Areas for improvement	• Coordinated actions could be envisaged to make sure that all the actors involved in Copernicus (CNES, ESA, Airbus DS, Thales Alenia Space, etc.) have promotional materials presenting Copernicus available on their booth.
Best practice & scaling opportunity	

Reference number	FR.16
Initiative name	**A^2S (Programme Alsace Aval Sentinelle)**
Initiative type	Data Access (D), and to a certain extent User Feedback, training & education (U) and Network (N)
Period active	• 2015 - 2020
Frequency	• Not applicable
Scale	• Cannot be assessed at that stage (the initiative has just been launched) but the initiative targets at minimum the regional users, with the objective to address the whole country in the longer term.
Indicative budget	• Total estimated cost: ~17 M EUR • Co-funding by the State, the Alsace Region, FEDER, Interreg, H2020.
Client / organisational partners	SERTIT (University of Strasbourg - UNISTRA), CNES (French space agency), IGN (National Institute of Geographic and Forest Information) Other partners: • Institutional partners: Région Alsace (RA), Conseil Général du Bas Rhin (CG67), la Communauté Urbaine de Strasbourg (CUS) • Schools and research laboratories: l'École nationale des sciences géographiques (ENSG), l'École et observatoire des sciences de la terre (EOST), l'École nationale du génie de l'eau et de l'environnement de Strasbourg (ENGEES), le laboratoire des sciences de l'ingénieur, de l'informatique et de l'imagerie ICube, le Laboratoire image, ville, environnement (LIVE) • Foreign partners: Deutsches Zentrum für Luft und Raumfahrt Zentrum für Satellitengestützte Krisen information (DLR ZKI)
Implementing partners	Same as above
Targeted geography	From regional to European: • Regional: Federate existing educational and research capacities with the Alsace Region; • National: Join the Theia initiative (see corresponding fiche); • European: Fit into the "Collaborative Centre" approach initiated by ESA in the context of the Copernicus programme.
Target user group	Public and private decision makers involved in the following areas: • Management of natural and man-made disasters • Environmental management • Protection and surveillance of areas at risk and large infrastructures
Website address / contact details	https://www.theia-land.fr/fr/projets/a%C2%B2s-programme-alsace-aval-sentinelle Jean-Marc Jeltsch (Unistra – SERTIT)
Reference Documents	Contrat de Plan Etat-Région (CPER) 2015 – 2020 (Région Alsace) Contrat de Plan 2014 – 2020 Volet "Enseignement Supérieur, Recherche et Innovation"
Description	The A^2S initiative aims at creating an "economic development pole" for the downstream production and dissemination among users of geographical information in the field of Environment and Security, based on the data made available by the Copernicus Sentinels satellites. The A^2S initiative builds on 7 complementary projects: • Project 1: Create a rapid mapping agency • Project 2: Establish a centre for "change detection and mapping" ("cartographie des changements" in French) • Project 3: Federate a multi-disciplinary research pole focused on the use of satellite images for land management • Project 4: Train and educate engineers and decision makers to the use of satellite data for land management • Project 5: Establish an Innovation "Fab Lab" (manufacturing laboratory) for satellite imagery

	• Project 6: Establish a downstream Space-based service incubator • Project 7: Export good practices and downstream services
Impact potential	• D5, U5 and N5
Actual impact	• Cannot be assessed (the initiative has just been launched)
Areas for improvement	• Not relevant (the initiative has just been launched)
Best practice & scaling opportunity	• If successful, this kind of initiative could be generalised to all regions

Reference number	FR.17
Initiative name	**Toulouse Space Show**
Initiative type	Event (E)
Period active	• Since 2008
Frequency	• Every 2 years
Scale	• 1500+ participants • 100+ exhibitors
Indicative budget	• Not available
Client / organisational partners	• CNES (National Space Agency), Midi-Pyrénées Region, Toulouse Metropole, Chambre de Commerce et d'Industrie de Toulouse (Business and Industry Chamber).
Implementing partners	• Same as above
Targeted geography	• Although the event is a regional initiative, it has a broader scope and welcomes participants from the whole European Union as well as non-EU participants.
Target user group	• Users of Space-based applications and services (not specifically focussed on Earth Observation)
Website address / contact details	http://www.toulousespaceshow.eu
Reference Documents	See above website
Description	The Toulouse Space Show is an international conference organised in Toulouse by the National Space Agency in collaboration with the Midi-Pyrénées Region and several regional and local partners (Toulouse urban community, Business and Industry Chamber). The conference is entirely dedicated to Space applications (i.e. satellite navigation, Earth Observation, satellite telecoms,…).
Impact potential	• E3
Actual impact	• E3
Areas for improvement	
Best practice & scaling opportunity	

Reference number	FR.R.18
Initiative name	**ESA BIC Sud France**
Initiative type	Start-up initiative (S)
Period active	• Since 2013
Frequency	• 4 TEBs per year
Scale	• 2 EO-related start-ups since 2013
Indicative budget	• N/A
Client / organisational partners	• ESA
Implementing partners	• Aerospace Valley
Targeted geography	• Everyone of adult age with citizenship in Europe or ESA member states
Target user group	• Entrepreneurs
Website address / contact details	http://www.esabic.fr/index.php?kat=about.html&anzeige=about_en.html&langue=en
Reference Documents	
Description	ESA BIC Sud France, founded in 2013, is a business incubator that allows to promote entrepreneurship based on technology transfer from the spatial domain to other domains and the development of services and applications from space technologies. The ESA BIC were born from an initiative of the European Space Agency to facilitate business creation around the space in Europe. Today, 9 ESA BICs are active or about to start, two in Belgium, two in Germany, one in France, one in the UK, one in Italy, one in the Netherlands and one in Spain. The principle of ESA BIC is to provide project holders a number of ways to carry out their goals. These resources are distributed over a period of two years as follows: Access to grants (up to 50 000 euros, half of which comes from the ESA) Access to bank loans (up to 50 000 euros) Access to equipped facilities Access to technical support (the incubated have 80 hours support by CNES experts)
Impact potential	• S5
Actual impact	• S3
Areas for improvement	• Dedicated Copernicus oriented instruments/compartments
Best practice & scaling opportunity	• N/A

Reference number	FR.19
Initiative name	**GEOSTORM platform**
Initiative type	Data access (D)
Period active	• From 2014
Frequency	• Continuous
Scale	• N/A
Indicative budget	• 500k€
Client / organisational partners	• CS SI (FR)
Implementing partners	• N/A
Targeted geography	• Global
Target user group	• Academic and private end users in various thematic areas (agriculture, security, environment, defence,….)
Website address / contact details	https://geostorm.eu/
Reference Documents	
Description	CS SI developed GeoStorm, which is a geospatial platform made to offer storage, processing and broadcast of all kind of geo-informations. The Geostorm Plaform has the capability to easily integrate a large set of geo data , to ensure their geo localisation and enhance the viewing capability of full resolution images at various scale. The Geostorm platform also provides dedicated and innovative tools for data analysis and added value product processing, in order to bring decision making solution in various thematic areas (environment, farming, economic intelligence, defence intelligence, security and crisis management..) In terms of deployment, Geostorm proposes fast and optimised deployment capacity whatever the type of infrastructures: • Software As A Service mode • Data centre & cluster compatibility • Stand alone and offline mode • Mobile device access The Geostorm Platform has been proposed in the frame of the ESA TEPs (Coastal TEP) and already tested in CLOUDEO infrastructures.
Impact potential	• D5
Actual impact	• D2
Areas for improvement	• Needs additional funds to be developed in order to suit specific end users requirements
Best practice & scaling opportunity	

Reference number	FR.R.20
Initiative name	**Aerospace Valley Cluster**
Initiative type	Network (N)
Period active	• Since 2005
Frequency	• Continuous
Scale	• With 124,000 industrial employees, Aerospace Valley represents around 1/3 of the French aerospace workforce. Similarly, 8,500 researchers and scientists are active within the Aerospace Valley territory, thus representing 45% of French national R&D potential in the aerospace sector. As of October 2015, Aerospace Valley has obtained funding for 450 R&D projects representing an accumulated value of 1.1 billion Euro covering most scientific and technical fields related to the sectors of aerospace.
Indicative budget	• N/A
Client / organisational partners	• Regional government, SMEs
Implementing partners	• SMEs • Industry leaders • Training organisations • Research Centres • Economic development organisations • Public and regional bodies • Trade organisations and related partners.
Targeted geography	• Midi Pyrénées and Aquitaine
Target user group	• Aeronautics, Agriculture, Downstream Industry end users, Downstream Value Added service providers, Regional and Local Public Authorities, Participant to EU Research Projects Space
Website address / contact details	http://www.aerospace-valley.com/
Reference Documents	
Description	With today 859 members from both industry and academia, Aerospace Valley is the most significant innovation “pôle de compétitivité” in France in the field of aeronautics, space and embedded systems. With offices in Toulouse (HQ) and Bordeaux, the cluster covers the two geographically adjacent regions of South-West France, Midi-Pyrénées and Aquitaine.
Impact potential	• N3
Actual impact	• N2
Areas for improvement	• More emphasis on EO, Copernicus
Best practice & scaling opportunity	

Reference number	FR.R.21
Initiative name	**RCO Midi Pyrénées**
Initiative type	Contact point (C)
Period active	• 2011-2013
Frequency	• Everyday
Scale	• 2 to 100 persons
Indicative budget	• N/A
Client / organisational partners	• EU institutions and bodies, Regional authority
Implementing partners	• Cerema/Pole satellitaire
Targeted geography	• Regional
Target user group	• Regional and local authorities, Downstream added value service provides, Data providers, Participants to EU Projects Space.
Website address / contact details	http://www.sud-ouest.cerema.fr/bureau-de-contact-regional-gmes-doris_net-r279.html
Reference Documents	
Description	RCO Midi Pyrénées organised more than 30 events and face to face meetings to raise awareness on Copernicus potential for territorial use. Those activities continue after the end of the project but could be more dynamic with a funding of the Regional Contact Office and the network that created emulation to communicate on Copernicus and also communicate to Copernicus feedbacks on the products and uses. Those actions contributed to the meeting of end users and providers of service or data.
Impact potential	• P4,N4
Actual impact	• P2,N2
Areas for improvement	• Be funded by the Region or the EU
Best practice & scaling opportunity	

Reference number	FR.22
Initiative name	**Copernicus session at SAFERSEAS and Sea Tech Week**
Initiative type	Events (E)
Period active	• October 2014 – 9th Marine Science Conference, October 2015, October 2016
Frequency	• Annual (one year Seatechweek and the next one Saferseas)
Scale	• Over 1000 attendees
Indicative budget	• Substantial (Conference + workshops + small trade-show)
Client / organisational partners	• Companies and Academics related to maritime issues
Implementing partners	• Brest Métropole
Targeted geography	• Brittany, France, International
Target user group	• National institutions and bodies; Regional and local public authorities; Research and Academic organisations, Downstream value-added service providers; Downstream industry end users; • User categories: all (intermediate/end-user + public/private) • Industry thematic: Marine • Copernicus Service: Marine
Website address / contact details	http://www.saferseas-brest.org http://www.saferseas-brest.org/Programme-534-0-0-0.html http://www.brest.fr/developpement-rayonnement/tous-les-ans-a-brest/seatechweek.html (www.seatechweek.com - temporary offline)
Reference Documents	
Description	SAFERSEAS and Sea Tech Week - International Conferences held in Brest about maritime issues. Saferseas is more maritime security orientated as SeaTech Week has changing maritime topics every year (last year was about Marine Renewable; 2016 will be on Sea and digital Technologies) Since few years now, a specific session is dedicated to Copernicus activities (maritime focus)
Impact potential	• E1-2
Actual impact	• E1
Areas for improvement	• Try to perpetuate a workshop or conference dedicated to Copernicus activities
Best practice & scaling opportunity	

Reference number	FR.R.23
Initiative name	**NEREUS workshop "Monitoring of the environment" in the framework of the NEREUS working group on GMES/COPERNICUS**
Initiative type	Event (E)
Period active	• May-June 2012
Frequency	• Sporadic event
Scale	• A 2-day event bringing together 30 to 40 attendees
Indicative budget	• 10 k€
Client / organisational partners	• NEREUS, Région Bretagne
Implementing partners	• GIS Bretange Teledetection (BreTel); University Rennes 1; University Rennes 2; Pôle Mer Bretagne Atlantique
Targeted geography	• Brittany Region
Target user group	• Regional and local public authorities; Research and Academic organisations, Downstream value-added service providers; Downstream industry end users; • User categories: all (intermediate/end-user + public/private) • Industry thematic: Maritime security and energy • Copernicus Service: Marine + land
Website address / contact details	http://recherche.telecom-bretagne.eu/bretel/workshop-bretel-2012/
Reference Documents	http://recherche.telecom-bretagne.eu/bretel/workshop-bretel-2012/final-programme/
Description	NEREUS workshop organized by RCO Brittany (Pole Mer Bretagne Atlantique + GIS breTel) on Monitoring of the environment in the framework of the NEREUS working group on GMES/COPERNICUS, St Malo 31 May- 1 June 2012
Impact potential	• E3
Actual impact	• E3
Areas for improvement	• Make private companies more involved/interested
Best practice & scaling opportunity	

Reference number	FR.R.24
Initiative name	**RCO database website**
Initiative type	Promotional (P)
Period active	• Since 2013
Frequency	• Continuous
Scale	• A catalogue of services including 173 services, 67 providers across 8 regions
Indicative budget	• 10 k€
Client / organisational partners	• RCO Brittany (GIS Bretel + Pole Mer Bretagne Atlantique)
Implementing partners	• RCO Brittany (GIS Bretel + Pole Mer Bretagne Atlantique)
Targeted geography	• International
Target user group	• All potential 'downstream services end users' • User categories: all (intermediate/end-user + public/private) • Industry thematic: Security, Energy, Agriculture etc... • Copernicus Service: All
Website address / contact details	http://www.earthobs-services.eu/
Reference Documents	Initial RCO database
Description	RCO database website - inventory of COPERNICUS services and applications http://www.earthobs-services.eu/
Impact potential	• P5
Actual impact	• P4
Areas for improvement	• Database more regular update
Best practice & scaling opportunity	

Reference number	FR.R.25
Initiative name	**GIS Bretel (Scientific Interest Group Brittany Remote Sensing)**
Initiative type	Network (N)
Period active	• Since 2009
Frequency	• N/A
Scale	• Gather major academic players in remote sensing in Brittany
Indicative budget	• N/A
Client / organisational partners	• N/A
Implementing partners	• Telecom Bretagne (Labsticc; Equipe TOMS: Observation, Processing and Statistical Methods); Ifremer (Equipe LOS); Université de Rennes 1 (IETR; Equipe Saphir); Université de Rennes 2 (LETG; Equipe COSTEL); Université de Bretagne Occidentale (IUEM; Equipe Geomer); INRIA (FLUMINANCE Research Group); AGROCAMPUS-OUEST (INRA; Equipe CAREN); CNRS
Targeted geography	• Brittany region, France; cross-regional
Target user group	• Academics and research laboratories
Website address / contact details	(under construction) http://recherche.telecom-bretagne.eu/bretel User categories: Private and public research teams Industry thematic: not directly related Copernicus Service: Could be all but mainly Marine + land
Reference Documents	
Description	The GIS BreTel (Bretagne Télédétection) or Scientific Interest Group (Bretagne Remote Sensing) – was founded in December 2009 in conjunction with the VIGISAT station which was operational in September 2009.
Impact potential	• N4
Actual impact	• N4
Areas for improvement	• Involve more research laboratories on remote sensing
Best practice & scaling opportunity	

Reference number	FR.R.26
Initiative name	**Cross-regional Masters on Remote Sensing**
Initiative type	User feedback, educational & training (U)
Period active	• Should start in 2016
Frequency	• Annual
Scale	• Host by 1 entity, but will involve several universities and training sites
Indicative budget	• N/A
Client / organisational partners	• N/A
Implementing partners	• GIS Bretel
Targeted geography	• Regional, National and international
Target user group	• Students • Industry thematic: n/a • Copernicus Service: Could be all but mainly Marine + land
Website address / contact details	
Reference Documents	
Description	Cross-regional Master about 'remote sensing' is about to be set up between Brittany and region of Pays de la Loire (schedule in 2016)
Impact potential	• U4
Actual impact	• TBD
Areas for improvement	
Best practice & scaling opportunity	

Reference number	FR.R.27
Initiative name	**RCO Brittany**
Initiative type	Contact Point (C)
Period active	• Since 2013
Frequency	• N/A
Scale	• N/A
Indicative budget	• 30-50 k€
Client / organisational partners	• N/A
Implementing partners	• Brittany council financially supported RCO Brittany for 2 years (2013-2014). Partners implementing are Pole Mer Bretagne Atlantique + GIS Bretel
Targeted geography	• Brittany, France; cross-regional
Target user group	• Regional and local Public authorities, Downstream Industry End users, Research and Academic organisations, Downstream value-added service providers, Downstream services end users • Industry thematic: mainly environmental terrestrial and marine • Copernicus Service: Could be all but mainly Marine + land
Website address / contact details	http://www.earthobs-services.eu/
Reference Documents	http://cordis.europa.eu/result/rcn/57196_en.html
Description	RCO Brittany is the only RCO that have been supported by its region after DORIS_Net. It has set up the online RCO database, organised the first NEREUS workshop and lot of dissemination activities through Pole Mer Bretagne events.
Impact potential	• C4
Actual impact	• C2
Areas for improvement	• Be more active in term of dissemination information related to Copernicus and other satellite activities
Best practice & scaling opportunity	• See RCO document on best practices

Reference number	FR.28
Initiative name	**"Dynamiques régionales" a national geographic information event organized by Afigeo the umbrella GI organisation in France**
Initiative type	Events (E)
Period active	• Since 12 years ago approximately
Frequency	• Every year or every other year
Scale	• France
Indicative budget	• Variable
Client / organisational partners	• All SDI in France
Implementing partners	• Depend on the edition
Targeted geography	• France and French-speaking countries
Target user group	• User categories: National Institutions and Bodies, Regional and Local Public Authorities, Industry, end Users and academic sector.
Website address / contact details	http://www.afigeo.asso.fr/la-vie-en-region/dynamiques-r%C3%A9gionales.html AFIGEO, 73 Avenue de Paris, 94165 St Mandé Cedex Tél +33 1 43 98 82 62 afigeo@afigeo.asso.fr
Reference Documents	http://www.afigeo.asso.fr/la-vie-en-region/dynamiques-r%C3%A9gionales.html
Description	An opportunity to spread Copernicus to all SDI in France, each SDI having hundreds of members in each French region
Impact potential	• E2 N2
Actual impact	• E1 N1
Areas for improvement	• Impact of Copernicus reach-out could be multiplied
Best practice & scaling opportunity	

5.12 Germany

Reference number	DE.01
Initiative name	**Nationale Fachkoordinatoren für Copernicus**
Initiative type	Contact Point (C)
Period active	• Since 2011 (TBC)
Frequency	• Continuous
Scale	• 5 coordinators
Indicative budget	• Small budget through a call for proposal by DLR
Client / organisational partners	• BMVI (Bundesministerium für Verkehr und digitale Infrastruktur)
Implementing partners	• DLR Agency (public) • Bundesamt für Kartographie und Geodäsie • Umweltbundesamt • Bundesamt für Seeschifffahrt und Hydrographie • Bundesamt für Bevölkerungsschutz und Katastrophenhilfe • Deutscher Wetterdienst
Targeted geography	• National
Target user group	• Research and Academic Organisations, National /MS Institutions and Bodies, Downstream Industry End Users, Downstream Value-Added Service Providers
Website address / contact details	• http://www.d-copernicus.de (since at least 2009, formerly www.d-gmes.de) • Dr. Vanessa Keuck 0228 / 447 577 vanessa.keuck@dlr.de Christiane Hohmeister 0228 / 99 300 6224 christiane.hohmeister@bmvi.bund.de
Reference Documents	• http://www.d-copernicus.de/nationale-fachkoordinatoren-fuer-copernicus
Description	The Federal Government has nominated technical coordinators for each of the Copernicus topics. These Coordinators are representatives of the respective federal agencies and shall: • Join the Copernicus services professionally and support the federal government in the development of these services, • Inform users in Germany, including authorities at national, possibly even municipal levels of government, and commercial users about the Copernicus services, • Be available as technical contact person, and • Represent the Federal Republic of Germany in the EU Copernicus-user forum. With the appointment of these coordinators a recommendation of the GMES user forum from 2010 was implemented.
Impact potential	• C5
Actual impact	• C4
Areas for improvement	• A centralised single first Contact Point is contemplated
Best practice & scaling opportunity	• Germany is one of the few Member States with dedicated Contact Points that are covering the different topics. These coordinators have a mandate and a small budget for promotional activities. • Opportunity for other Member States with same critical mass to implement a similar structure.

Reference number	DE.02
Initiative name	**Nationales Forum für Fernerkundung und Copernicus**
Initiative type	Event (E)
Period active	• Since 2010
Frequency	• Annually in November (mostly Berlin, in past: Munich, Düsseldorf)
Scale	• Typically 200+ attendees
Indicative budget	• Unknown
Client / organisational partners	• BMVI (Bundesministerium für Verkehr und digitale Infrastruktur)
Implementing partners	• DLR Agency (public)
Targeted geography	• National
Target user group	• Research and Academic Organisations, National /MS Institutions and Bodies, Downstream Industry End Users, Downstream Value-Added Service Providers
Website address / contact details	• http://www.d-copernicus.de/nationales-forum-2015 • Dr. Vanessa Keuck 0228 / 447 577 vanessa.keuck@dlr.de Christiane Hohmeister 0228 / 99 300 6224 christiane.hohmeister@bmvi.bund.de
Reference Documents	• http://www.d-copernicus.de/programm-forum-2015
Description	The 3-day event is free of charge and also includes various excursions to relevant institutions (DLR locations). Following introductions by politic officials it provides extensive workshops and sessions about potentials, technologies and the latest software toolboxes to utilise Copernicus data.
Impact potential	• E5
Actual impact	• E4
Areas for improvement	• Fine-tune the format to allow more interaction in workshop also with high participation
Best practice & scaling opportunity	• Encourage other member states to adapt format for own purpose • Explore how other German-speaking countries could benefit

Reference number	DE.03
Initiative name	**National EO/GMES/Copernicus Grant Programme**
Initiative type	Funding Instruments (F)
Period active	• Since 2012 until 2020
Frequency	• Approximately once every 18 months
Scale	• Several projects in recurring calls
Indicative budget	• 50% funded grants - exceptions for scientific players up to 100%, but to be compensated by others • Typically two stage: 1) Project draft max. 7 pages 2) Project proposal
Client / organisational partners	• BMVI (Bundesministerium für Verkehr und digitale Infrastruktur) • DLR Agency
Implementing partners	• DLR Agency
Targeted geography	• National
Target user group	• Research and Academic Institutions, National /MS Institutions and Bodies
Website address / contact details	• http://www.d-copernicus.de/foerdermassnahmen • Dr. Vanessa Keuck, 0228 / 447 577, vanessa.keuck@dlr.de; Christiane Hohmeister, 0228 / 99 300 6224, christiane.hohmeister@bmvi.bund.de
Reference Documents	• http://www.d-copernicus.de/sites/default/files/dokumente/Bekanntmachung_BMVI-Copernicus_2015_final_281014_0.pdf
Description	• Topics 2012 - Public sector services: „GMES-Dienste für den öffentlichen Bedarf in Deutschland“ 8 Projects (BMWi) • 2013: Entwicklung und Implementierungsvorbereitung von Copernicus Diensten für den öffentlichen Bedarf in Deutschland (BMVI) – 1st call 2013 – project start early 2015 – 2nd call deadline was end of January 2015 – 3rd call foreseen for end of 2016
Impact potential	• F5
Actual impact	• Not known yet, F2
Areas for improvement	Too small number of sustained projects
Best practice & scaling opportunity	

Reference number	DE.04
Initiative name	**INNOspace**
Initiative type	Funding instruments (F)
Period active	• Since 2013
Frequency	• Continuous
Scale	• Unknown
Indicative budget	• Unknown
Client / organisational partners	• DLR Agency • BMWi (Bundesministerium für Wirtschaft und Energie)
Implementing partners	• DLR Raumfahrtmanagement
Targeted geography	• National
Target user group	• Downstream Industry End Users, Downstream Value-Added Service Providers
Website address / contact details	• http://www.dlr-innospace.de • Dr. Franziska Zeitler Koordinatorin Innovation und Neue Märkte Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR) Raumfahrtmanagement Königswinterer Str. 522-524, 53227 Bonn E-Mail: franziska.zeitler@dlr.de Tel: +49 228 447-434
Reference Documents	• http://www.dlr-innospace.de/fileadmin/user_upload/downloads/C21_INNOspace.pdf
Description	Mainly aimed at supporting and funding ideas and initiatives for spin-offs and spin-ins between the space sector and other industries, the INNOspace initiative also supports applications and technologies close to Copernicus services. Besides cross-industry events across Germany, it also organises regional workshops relevant to specific technologies (e.g. in Baden-Württemberg, Bremen, Hessen, Nordrhein-Westfalen) In 2015 an InnoSpace Masters innovation contest has been started (ongoing). No specific EO focus.
Impact potential	• F4
Actual impact	• F3
Areas for improvement	• To be investigated after first round of InnoSpace Masters in Mid 2016
Best practice & scaling opportunity	

Reference number	DE.05
Initiative name	**INNOspaceEXPO „ALL.TÄGLICH! “**
Initiative type	Event (E)
Period active	• 2015 - 2018
Frequency	• Continuous
Scale	• Unknown
Indicative budget	• Unknown
Client / organisational partners	• DLR Agency • BMWi (Bundesministerium für Wirtschaft und Energie)
Implementing partners	• Deutsches Technikmuseum Berlin
Targeted geography	• National
Target user group	• General Public
Website address / contact details	• http://www.dlr-innospace.de/startseite/innospace/innospaceexpo
Reference Documents	• http://www.dlr-innospace.de/startseite/innospace/innospaceexpo/kapitel-und-inhalteuebersicht/
Description	The travelling exhibition is primarily designated for the general public to present the benefits of space in general. It was opened by the respective Secretary of State, Brigitte Zypries, during the 2015 open day of the BMWi. One of the key themes is Earth Observation and Copernicus is specifically introduced with its marine environment monitoring service. After Berlin, the exhibit will move across major cities in Germany such as Stuttgart, Bremen and Munich.
Impact potential	• E3, P4
Actual impact	• Not known yet
Areas for improvement	
Best practice & scaling opportunity	• Innovative Box-Exhibition format (“SpaceExpo in Boxes”) – might be interesting lower cost variant for a European Space Expo Concept 2.0

Reference number	DE.06
Initiative name	**GeoLizenz.Org - WebApplication for uniform licencing for Geodata**
Initiative type	Data access (D)
Period active	• Since 2012
Frequency	• Continuous
Scale	• Unknown
Indicative budget	• Unknown
Client / organisational partners	• BMWi (Bundesministerium für Wirtschaft und Energie) • GIW (Kommission für Geoinformationswirtschaft)
Implementing partners	• GIW (Kommission für Geoinformationswirtschaft)
Targeted geography	• Germany
Target user group	• Geo Industry and institutions
Website address / contact details	• Andrea Satli GeoBusiness - Kommission für Geoinformationswirtschaft andrea.satli@GeoBusiness.org +49 511 643 2997 / +49 160 96395673 Hannover/Germany
Reference Documents	• http://geolizenz.org/
Description	• Web application toolkit for Geodata licensing with a standardised contract vehicle • Toolkit for easy contracting of Geo-data • Standard contract vehicle to be used for geo-related data
Impact potential	• D4
Actual impact	• D3
Areas for improvement	• Implementation by Copernicus users is lagging behind
Best practice & scaling opportunity	• To be tested if it could be used internationally, i.e. a toolkit proven and endorsed by key Copernicus partners. In particular suitable for in-situ data.

Reference number	DE.07
Initiative name	**DLR Earth Observation Center**
Initiative type	Data access (D)
Period active	• Since 2011 (TBD)
Frequency	• Continuous
Scale	
Indicative budget	• Institutional funding of the EOC is governed by the research programme of the Helmholtz-Association
Client / organisational partners	• BMWi (Bundesministerium für Wirtschaft und Energie) • DLR Agency
Implementing partners	• DLR Agency • Technische Universität München • Universität Würzburg
Targeted geography	• National/ESA/EC/Europe/International
Target user group	• Research and Academic Organisations, Downstream Industry End Users, Downstream Value-Added Service Providers, International Organisations and Bodies
Website address / contact details	• http://www.dlr.de/eoc • Prof. Dr. Richard Bamler Remote Sensing Technology Institute Tel.: +49 8153 28-2673 Prof. Dr. Stefan Dech German Remote Sensing Data Center Tel.: +49 8153 28-2885
Reference Documents	N/A
Description	The Earth Observation Center (EOC) at DLR consists of the German Remote Sensing Data Center (DFD) and the Remote Sensing Technology Institute (IMF) and is the center of competence for Earth Observation in Germany. The primary tasks are: • Conception, development and operation of an integrated ground segment for Earth Observation missions which includes a network of data reception stations and a German satellite data archive • Development of generic processors for data from a variety of remote sensing sensors, systems integration, and operational processing of large amounts of data • Development and generation of value-added geoinformation for environmental monitoring, climate and atmospheric research, and for applications in the domain of civil security and humanitarian aid • Development and operation of user-oriented service centres for rapid and long-term access to data, value-added products and derived information • Provision and operation of optical sensor systems for aerial remote sensing in order to prepare, calibrate and validate satellite sensors and data products • Conception of advanced sensor systems and missions (SAR, infrared, multispectral and hyperspectral)
Impact potential	• D5, U3, N4, C4
Actual impact	• TBD
Areas for improvement	
Best practice & scaling opportunity	• Excellent for showcasing various applications and the processing chain behind them

Reference number	DE.08
Initiative name	**SARedu**
Initiative type	User Feedback, Training & Education (U)
Period active	• Since 2014
Frequency	• Continuous
Scale	• Unknown
Indicative budget	• Unknown
Client / organisational partners	• DLR Agency • Friedrich-Schiller-University Jena • BMWi (Bundesministerium für Wirtschaft und Energie)
Implementing partners	• TUM Technische Universität München • Earth Observation Services Jena • Friedrich-Alexander-Universität Erlangen-Nürnberg • GFZ German Research Centre for Geosciences Potsdam • Johanneum Research • Clausthal University of Technology
Targeted geography	• International (Welcome message in 8 languages, portal completely in English)
Target user group	• Research and Academic Institutions
Website address / contact details	• https://saredu.dlr.de • Bock, Michael German Aerospace Center (DLR) Space Administration (RD-RE) Earth Observation (BO) Königswinterer Str. 522-524 53227 Bonn Email: Michael.Bock@dlr.de
Reference Documents	N/A
Description	The SAR-EDU remote sensing education initiative is an online information and learning platform that consists of 40 lessons, 12 tutorials and 10 video talks about the technology and opportunities of SAR data and further about how to use dedicated software to analyse and interpret the data. It thus offers tutorials for commonly used software as well as sample data and provides dedicated tutorials.
Impact potential	• U5
Actual impact	• U3
Areas for improvement	• Judging from the limited number of comments below the different units, it has only few users; thus, increase awareness about existence of this webportal, even beyond the participating institutions.
Best practice & scaling opportunity	• Explore with other country coordinators how this platform could be used

Reference number	DE.09
Initiative name	**GeoMonitoring**
Initiative type	Event (E)
Period active	• Since 2011
Frequency	• Annual in March (none in 2014)
Scale	• Around 120 professional participants
Indicative budget	• Unknown
Client / organisational partners	• TU Clausthal • TU Braunschweig • Leibniz University Hannover
Implementing partners	• Deutscher Markscheider Verein (DMV e.V.) • DWV Gesellschaft für Geodäsie, Geoinformation und Landmanagement e.V.
Targeted geography	• National
Target user group	• Research and Academic institutions, Regional and Local Public Authorities
Website address / contact details	• http://geo-monitoring.org/index.html Dr.-Ing. Björn Riedel Dipl.-Ing. Martin Lehmann Tel.: ++49 (0)531 391-94593 Tel.: ++49 (0)531 391-94577 Technische Universität Braunschweig Institut für Geodäsie und Photogrammetrie Pockelsstr. 3 38106 Braunschweig Mail: gp@tu-bs.de
Reference Documents	• http://geo-monitoring.org/Tagung2015/Tagungsband_inh_2015.pdf
Description	The event series „GeoMonitoring“ presents measuring methods from Geodesy, geotechnology and Geophysics as well as from neighbouring sciences. Relevant and applicable modelling approaches to describe the complex behaviour of various geo objects are introduced. The event series understands itself as an interdisciplinary forum for members from research, management and industry of areas like Geodesy, Geology, Geophysics, Civil Engineering, Energy and Resources. Its location changes annually between Clausthal, Braunschweig and Hannover according to the organising University. The major topics from the most recent event were: • Spatial reference and Copernicus services • Radar interferometry supported by satellites • Monitoring methods • Current major monitoring-projects
Impact potential	• E4
Actual impact	• E3
Areas for improvement	
Best practice & scaling opportunity	

Reference number	DE.10
Initiative name	**Geoinformatik**
Initiative type	Event (E)
Period active	• 2009
Frequency	• Annual
Scale	• ~540 participants in 2014 (in conjunction with the 62. Deutscher Kartographentag)
Indicative budget	• Unknown
Client / organisational partners	• GiN e.V.
Implementing partners	• Geomatik Tagungs GmbH
Targeted geography	• National
Target user group	• Research and Academic Organisations, National /MS Institutions and Bodies
Website address / contact details	• http://www.geoinformatik2013.de/index.php/de/ • http://www.gin-online.de/index.php/veranstaltungen/icalrepeat.detail/2016/06/14/3/-/geoinformatik-2016 • http://www.geoinfo.dgfk.net/
Reference Documents	
Description	The event series Geoinformatik brings together experts from research, industry and administration. It aims to provide an opportunity for a vivid exchange regarding the latest developments, solutions and of interest for research projects. Although primarily targeting the GNSS-community, it also addresses questions and topics of EO. Major topics from 2013 included: • Technical and human sensors • Innovative GDI-applications • Ubiquitous geoinformation services • Geoinformation in 3D: Detection, analysis and visualisation • Energy transition and Geoinformation The conference will be comprised by the following events: • Scientific presentations • Presentations about technology and usage • Poster presentations • Exhibition In 2016, the conference will take place in conjunction with the 64. Deutscher Kartographentag.
Impact potential	• E4, N4
Actual impact	• N3
Areas for improvement	
Best practice & scaling opportunity	

Reference number	DE.11
Initiative name	**What can Sentinels Do for Regions? Management natürlicher Ressourcen mit Hilfe von Copernicus Diensten und Daten**
Initiative type	Event (E)
Period active	• 12.11.2015
Frequency	• 3rd event in a series of 3 (Azores, Lombardy, Bavaria respectively)
Scale	• 75 participants
Indicative budget	• N/A
Client / organisational partners	• bavAIRia e.V. (private) • ESA • EC (through EMMIA)
Implementing partners	• bavAIRia e.V. (private) • IHK München und Oberbayern (public) • NEREUS • Partnerregions Wallonia, Belgium, with clusters SkyWin and infopole
Targeted geography	• National/EU
Target user group	• Regional and Local Public Authorities, National /MS Institutions and Bodies
Website address / contact details	• http://www.bavairia.net/dienstleistungen/fachveranstaltungen/copernicus-workshop • Copernicus Büro Bayern Jürgen Vogel, Manfred Schroeder bavAIRia e.V. Sonderflughafen Oberpfaffenhofen Friedrichshafener Str. 1, 82205 Gilching T. +49 8105 27 29 27-45 vogel@bavAIRia.net
Reference Documents	http://www.bavairia.net/fileadmin/Redaktion/downloads/pdf/Flyer_Copernicus_Workshop_fin_021115.pdf
Description	This one day event aims to provide public authorities and their officials with the background knowledge about Copernicus and its opportunities, especially with regards to inland waters, influence of mining activities, land use/land cover and forest areas. Due to similar environmental challenges in the Belgian region of Wallonia, this region provides participated in the workshop with own contributions. Further, the workshop shall coordinate public demand for information with products and data as offered by geoinformation industry.
Impact potential	• E5
Actual impact	• E4
Areas for improvement	
Best practice & scaling opportunity	

Reference number	DE.12
Initiative name	**Legal Symposium for GeoData**
Initiative type	Event (E)
Period active	• Since 2008
Frequency	• Biennial
Scale	• 60-100 participants, 70% from outside Germany (2015)
Indicative budget	• 40 KEUR
Client / organisational partners	• BavAIRia e.V. (public) • BHO Legal (private) • DDGI Deutscher Dachverband für Geoinformation e.V. (public)
Implementing partners	• BavAIRia e.V. (public) • BHO Legal (private) • DLR Agency (public)
Targeted geography	• National/EU
Target user group	• European Commission, EU Agencies, ESA, national agencies, research organisations, space industry, national authorities, academic experts
Website address / contact details	• http://www.bavairia.net/nachrichten/newsdetails/?tx_ttnews[tt_news]=77&cHash=5faa71e2025a8ae47686a1239c281bec
Reference Documents	• Flyer of the event
Description	Most space law events are highly academic and focus on the international space treaties. The BavAIRia/BHO Legal events concentrate on practical legal and contractual issues related to satellite services. During its sessions, the event addressed specifically EO/Copernicus. The first three conferences were held in German with around 60 participants; the last conference was held in English and had around 100 participants from all stakeholders in Europe. Interdisciplinary approach for practical legal issues of the European Space Policy, networking of practitioners, open platform for exchange.
Impact potential	• E4
Actual impact	• E4
Areas for improvement	• Regular organisation
Best practice & scaling opportunity	• Scalability via networks such as NEREUS, SME4Space, Eurospace, EARSC, Galileo Services etc. • Legal issues of the European Space Policy are highly important, however find little attention in stakeholder organisations. The only other regular forum for practical issues of Space Law is the yearly Practitioners Forum of the European Centre for Space Law (ESCL), which nevertheless is a pure lawyers' event and still relatively academic.

Reference number	DE.13
Initiative name	**Contracting for Space - Contract practice in the European Space Sector**
Initiative type	Event (E)
Period active	• 2009 - 2011
Frequency	• Two events only
Scale	• 100 registrants, 60% from outside Germany
Indicative budget	• 45 KEUR
Client / organisational partners	• BHO Legal • Leuphana University Lüneburg • DLR Agency
Implementing partners	• Prof. Dr. Lesley Jane Smith • BHO Legal
Targeted geography	• EU
Target user group	• European Space Law Practitioners from EU, ESA, national agencies, research organisations, space industry, space industry associations and academia
Website address / contact details	• www.contracting-for-space.eu
Reference Documents	Contracting for Space - Contract Practice in the European space sector, L.J.Smith and Ingo Bauman (Edit.), Ashgate 2011
Description	Composed of two conferences and a comprehensive publication with more than 40 practitioner authors from all over Europe and stakeholders in the European space industry. Consolidation of legal and contractual practice in the European space industry. The book is planned to be translated in Chinese and re-edited in China.
Impact potential	• E2
Actual impact	• E2
Areas for improvement	
Best practice & scaling opportunity	• Bringing together the leading legal practitioners in the European space sector

Reference number	DE.14
Initiative name	**INSPIRE-GMES test platform of TU München**
Initiative type	User Feedback Training & Education (U)
Period active	• Last update 2011 (7th version)
Frequency	• Used in several R&D Projects – e.g. INGEOSAT
Scale	• German and English version, several hundred downloads every year
Indicative budget	• Unknown
Client / organisational partners	• TU München, Prof Schilcher (Retired) (public) • Runder Tisch GIS e.V. (private)
Implementing partners	• TU München, Prof Schilcher (Retired) (public) • Runder Tisch GIS e.V. (private)
Targeted geography	• International
Target user group	• Research and Academic Organisations, International Organisations and Bodies, Downstream Industry End Users, Downstream Value-Added Service Providers
Website address / contact details	• http://www.rtg.bv.tum.de/index.php/en/aktuelles-v15-42/top-infos/618-inspire-gmes-informationsbroschuere-version-7
Reference Documents	• http://www.e-envi2009.org/presentations/S4/Kraut.pdf
Description	The testbed for INSPIRE and GMES services of the Runder Tisch GIS e.V. is a collection of different distributed Geographic Information Systems, data sources and services which are used to implement scenarios in the context of the INSPIRE directive. • Comprehensive documentation of INSPIRE related insights and interfaces to GMES/Copernicus providing implementation guidance for institutions and their staff • Starting point for students and scientists • Was updated for INTERGEO conferences
Impact potential	• U4
Actual impact	• U4
Areas for improvement	
Best practice & scaling opportunity	

Reference number	DE.15
Initiative name	**INTERGEO Conference and Trade-Fair for Geodesy, Geoinformation and Land Management**
Initiative type	Event (E)
Period active	• Since 1995
Frequency	• Annual (October), rotating through German cities: 2014: Berlin: 2015 Stuttgart • Upcoming Hamburg 11-13 Oct 2016
Scale	• More than 17,000 visitors from 92 countries
Indicative budget	• Huge – significant trade-show with typically 3-4 halls
Client / organisational partners	• HINTE Expo and Media on behalf of DVW
Implementing partners	• HINTE Expo and Conference
Targeted geography	• International
Target user group	• International Organisations and Bodies, Research and Academic Organisations, Downstream Industry End Users, Downstream Value-Added Service Providers
Website address / contact details	• http://www.intergeo.de/ • Christoph Hinte, CEO Tel.: +49 721 93133-160 bchinte@hinte-messe.de
Reference Documents	• Survey results 2014: http://www.intergeo.de/media/docs/intergeo/ENG/INTERGEO_2015_Trade_visitors_survey.pdf
Description	• Annual get together of the geo-scene, exhibits include service providers and surveying equipment companies • In the last 5 years gradual increase of presence of EO and NAV community, more recently also RPAS • Several side events, partly privately organised • Exhibition entry fee 25 EUR, conference
Impact potential	• E5
Actual impact	• E3, N4
Areas for improvement	• Include Copernicus in GSA/ESA-BIC/DLR- common booth • International coordinated Copernicus Presence was already suggested by German DLR D-Copernicus team
Best practice & scaling opportunity	• Impact of Copernicus reach-out could be multiplied • Smaller Intergeo derivates have been tested in 2014 in Eurasia: http://www.intergeo-eurasia.net/ in Istanbul, another edition planned for 2016

Reference number	DE.16
Initiative name	**Photogrammetrische Woche**
Initiative type	Event (E)
Period active	• Since 1973 (1909)
Frequency	• Biennial
Scale	• Unknown
Indicative budget	• Unknown
Client / organisational partners	• Institute for Photogrammetry, University of Stuttgart
Implementing partners	• Institute for Photogrammetry, University of Stuttgart • "Open PhoWo partners" (Hexagon, Trimble, IGI, Microsoft Vexcel, BAE, Vision Map)
Targeted geography	• International
Target user group	• Research and Academic Organisations, Downstream Industry End Users, Downstream Value-Added Service Providers
Website address / contact details	• http://www.ifp.uni-stuttgart.de/index.en.html • Institute for Photogrammetry Prof. Dr.-Ing. Dieter Fritsch Geschwister-Scholl-Str. 24D 70174 Stuttgart Germany +49 711/685-83386 +49 711/685-83297 info@ifp.uni-stuttgart.de
Reference Documents	http://www.ifp.uni-stuttgart.de/phowo/Programme2015.pdf
Description	This regular event brings together the most renowned experts in photogrammetric research that deal with data collection, analyses and visualisation for remote sensing applications. Although the Copernicus programme is not mentioned in particular, it clearly is one of the key instrumental tools for collection of remote sensing data and thus photogrammetric research plays a substantial role in creating downstream added value products and services. In 2015, the programme consisted of the following topics: • Remotely Sensed Data Acquisition - An Update • Advanced Modeling in Photogrammetry, Computer Vision and Computer Graphics • Excellence in Geoinformatics The programme was supplemented with demonstrations and comments on practical examples.
Impact potential	• E4, N4
Actual impact	• E3, N3
Areas for improvement	
Best practice & scaling opportunity	

Reference number	DE.17
Initiative name	**Space Tech Expo & Conference Europe**
Initiative type	Event (E)
Period active	• Since 2015
Frequency	• Biennial (next 24-26 October 2017)
Scale	• Over 2,600 attendees from 50 countries, more than 200 exhibiting companies
Indicative budget	• 50k€ contribution from Bremen
Client / organisational partners	• Smartershows • ESA • DLR • Space Foundation • Industry
Implementing partners	• Smartershows • Bremen Invest
Targeted geography	• International
Target user group	• International Organisations and Bodies, Downstream Industry End Users, Downstream Value-Added Service Providers
Website address / contact details	• http://www.spacetechexpo.eu • Gordon McHattie Event Director gordon.mchattie@smartershows.com Europe: +44 (0) 1273 916 309
Reference Documents	http://www.spacetechexpo.eu/visit/space-tech-expo-europe-end-of-show-report
Description	Space Tech Expo Europe is the sister event of its US counterpart, an annual trade show and conference in its fifth year in California. The industry's only free-to-attend speaking programme focusing on business opportunities and technical challenges facing the industry, including a focus on small sats. Topics will cover themes concerned with the full lifecycle of testing, evaluation and inspection applications for civil/military aerospace, airborne defence systems, launch vehicles, satellites and space platforms. Among those, the third day was specifically targeted at the small satellite market with Earth Observation being one of the key themes. A unique feature of the show was the integrated two-track Industry and Technology Forums providing insights and lively discussion on the challenges, opportunities, business models and technologies driving the European space market. The forums brought together national space agencies, commercial industry and academics who discussed a range of issues and questions including the impact of the 'new space economy' on the global space sector, and bilateral cooperation and the future roles of the public sector and industry.
Impact potential	• E2, N2
Actual impact	• E2
Areas for improvement	• Include more local academics
Best practice & scaling opportunity	

Reference number	DE.18
Initiative name	**WorldView Global Alliance User Conference 2015**
Initiative type	Event (E)
Period active	• Since 2015
Frequency	• One-time
Scale	• ~120 participants
Indicative budget	• Unknown
Client / organisational partners	• European Space Imaging (private) • Digital Globe (private) • Space Imaging Middle East (private)
Implementing partners	• European Space Imaging (private) • Digital Globe (private) • Space Imaging Middle East (private)
Targeted geography	• International (focus on Europe and North Africa)
Target user group	• Downstream Industry End Users, Downstream Value-Added Service Providers
Website address / contact details	• http://www.euspaceimaging.com/conference • Penelope Richardson, Marketing Manager, European Space Imaging info@euspaceimaging.com
Reference Documents	• http://www.euspaceimaging.com/images/publications/WVGAUCReport2015.pdf
Description	European Space Imaging, DigitalGlobe and Space Imaging Middle East hosted the WorldView Global Alliance User Conference which took place from 12th-14th October this year at the historic Künstlerhaus in Munich. Welcoming more than 120 participants over two days the event provided ample opportunity for networking and the exchange of ideas. The keynote talk from Geoff Sawyer, EARSC, set the tone for the event looking at the status of the Earth Observation industry now and a look at changes and developments into the future. Over the course of two days we learnt how the Earth Observation industry is in a constant state of renewal. As satellite imagery with higher resolution becomes available it is being used in new ways to give deeper understanding and to provide greater situational awareness. While in traditional areas of remote sensing, such as agriculture, the new image resolutions are providing more detail and information to support and improve existing services and monitoring.
Impact potential	• E5
Actual impact	• E4
Areas for improvement	• Start a regular event series, to be held in various countries.
Best practice & scaling opportunity	

Reference number	DE.19
Initiative name	**GEO BON Open Science Conference**
Initiative type	Event (E)
Period active	• First in 2016 (July 4-9)
Frequency	• First major event
Scale	• Not yet known
Indicative budget	• Unknown
Client / organisational partners	• iDiv (German Centre for Integrative Biodiversity Research Halle-Jena-Leipzig) • UFZ (Helmholtz-Centre for Environmental Research) • SASSCAL (Southern African Science Service Centre for Climate Change and Adaptive Land Management) • OBIS (Ocean Biogeographic Information System) • GOOS (The Global Ocean Observing System)
Implementing partners	• iDiv (German Centre for Integrative Biodiversity Research Halle-Jena-Leipzig)
Targeted geography	• International
Target user group	• Research and Academic Institutions, International Organisations and Bodies
Website address / contact details	• http://conf2016.geobon.org • Jörg Freyhof Executive Director of GEO BON joerg.freyhof@idiv.de
Reference Documents	• http://www.geobon.org/Downloads/brochures/2015/Conf2016.pdf
Description	This conference will be held in Leipzig in 2016, for the first time as a global event. It will foster scientifically sound biodiversity monitoring by **in-situ** and remote sensing methodologies, monitoring of ecosystem services, modelling of biodiversity at all scales and in all dimensions and especially encourage interdisciplinary research. It will show ways forward in biodiversity observation and the development of Essential Biodiversity Variables. Contributing to the following key topics are invited: • New monitoring methodologies and technologies and global data standards • Global data standards and data depositories - how do they serve the community? • New visions and pathways for in situ and remote sensing biodiversity monitoring • Making observations count: Engagements with the policy sector Members of the Working Groups and BONs will develop a new GEO BON implementation plan for 2016-2020. Also, Working Groups and BONs will meet and discuss new cooperative projects and future products.
Impact potential	• N4, E4, P4
Actual impact	• Not known yet
Areas for improvement	
Best practice & scaling opportunity	

Reference number	DE.20
Initiative name	**German Future Earth Summit**
Initiative type	Event (E)
Period active	• Since 2014
Frequency	• Biennial (planned)
Scale	• more than 260 participants and 75 theme ideas
Indicative budget	• Unknown
Client / organisational partners	• DKN Future Earth (by DFG, public)
Implementing partners	• DKN Future Earth (by DFG, public)
Targeted geography	• National
Target user group	• Research and Academic Organisations, National /MS Institutions and Bodies
Website address / contact details	• www.dkn-future-earth.org/en/calendar/german-future-earth-summit/german-future-earth-summit-2014
Reference Documents	• http://www.dkn-future-earth.de/files/pdf/ConferenceSummary_final_140429.pdf
Description	To provide a platform for the discussion and further development of research foci and key aspects in Future Earth on national level, the DKN Future Earth hosted the "German Future Earth Summit" in January 2014. The event shall contribute to strengthen the German community; to initialize interdisciplinary networks and to discuss innovative topics in an interdisciplinary environment. Earth Observation is at the core of data collection for the information presented during the talks and topics. The next event will be held in January 2016 in Berlin.
Impact potential	• E4, P4, N4
Actual impact	• E3, P2, N2
Areas for improvement	• Address Copernicus more specifically
Best practice & scaling opportunity	

Reference number	DE.R.21
Initiative name	**Export Workshop on Application Potential for GMES in Geo Information Market**
Initiative type	Event (E)
Period active	• March 2011 as a pre-cursor to Annual Conference of regional GIS cluster
Frequency	• One-Off in Munich at TU Munich
Scale	• Around 50 Attendees
Indicative budget	• Unknown
Client / organisational partners	• TU Munich / Runder Tisch GIS e.V. • Prof Schilcher (Retired)
Implementing partners	• TU Munich / Runder Tisch GIS e.V. • Prof Schilcher (Retired) • Supported by Godela Rossner and others of DLR Agency • Dr. Thomas Häusler, GAF AG, München
Targeted geography	• National/Regional
Target user group	• Research and Academic Organisations, National /MS Institutions and Bodies, Downstream Industry End Users, Downstream Value-Added Service Providers
Website address / contact details	• N/A
Reference Documents	• http://www.rtg.bv.tum.de/index.php/en/component/content/article/55-Aus--und-Weiterbildung/Fortbildungsseminare/528-16-muenchner-fortbildungsseminar-geoinformationssysteme-21-24032011?id=532&view=article
Description	• One day event brought GIS and Copernicus Stakeholder together • Presentations and interactive roundtable discussions • Advertised the INSPIRE-GMES Testplattform of TU Munich
Impact potential	• N4, E4
Actual impact	• N2
Areas for improvement	
Best practice & scaling opportunity	• An annual event was organised after this pre-cursor workshop

Reference number	DE.R.22
Initiative name	**InGeoForum – GIS network in Hesse – member based organisation**
Initiative type	Network (N)
Period active	• Since 1997
Frequency	• 5-6 events p.a. in different cities
Scale	• Around 40 member organisations from industry and federal state administration
Indicative budget	• Unknown
Client / organisational partners	• Fraunhofer Institut für Graphische Datenverarbeitung IGD • HA Hessen Agentur GmbH • Hessisches Landesamt für Bodenmanagement und Geoinformation • Ingenieurkammer Hessen • TU Darmstadt
Implementing partners	• As above
Targeted geography	• Hesse +/ Germany
Target user group	• National /MS Institutions and Bodies, Research and Academic Organisations, Industry
Website address / contact details	• http://www.ingeoforum.de/en/contact.html • Information and Cooperation Forum for Geodata of ZGDV e.V. Fraunhoferstraße 5 D-64283 Darmstadt Telefon: +49 (0)6151/155400 Telefax: +49 (0)6151/155410 E-Mail: info@ingeoforum.de
Reference Documents	• http://www.ingeoforum.de/en/information/news.html
Description	InGeoForum is the information and cooperation forum shared by providers and users of spatial data, geographic information systems (GIS) and services (geo-information). Our basic intention is to promote geo-information on a national and regional level and to encourage the development of a national and regional infrastructure for spatial data. Its instruments: • **Seminars and information events:** In the scope of information events different topics or application areas of geo-information are prepared from various points of view and discussed in public events. • **RoundTable:** In the scope of a RoundTable series of events the market for geo-informaton is addressed in detail as well as the potential and the obstacles that must be overcome to open the market for geo-information. For RoundTable events InGeoForum temporarily cooperates with an association or a neutral organisation of the particular market. The geodata world within a RoundTable is represented by members of the Forum. • **InGeoForum-Projects:** InGeoForum accompanies and initiates pre-competitive projects with strategic relevance for the geodata market. As mediator between users, represented by representatives of the particular markets, and providers, represented by members of InGeoForum, the Forum especially acts as moderator for the internal and external communication.
Impact potential	• N3, P3
Actual impact	• TBD, N3
Areas for improvement	• Facilitate exchange with other regions
Best practice & scaling opportunity	

Reference number	DE.R.23
Initiative name	**Geoinformation in der Cloud**
Initiative type	Event (E)
Period active	• Since 2012
Frequency	• 2 events per year (next 19.01.2016 in Munich)
Scale	• N/A
Indicative budget	• N/A
Client / organisational partners	• InGeoForum
Implementing partners	• Regional
Targeted geography	• National/Regional/Local
Target user group	• N/A
Website address / contact details	• http://www.ingeoforum.de/veranstaltungen/aktuell?id=170 • InGeoForum Geschäftsstelle Fraunhofer Straße 5 64283 Darmstadt Tel: 06151/155-400 Fax: 06151/155-410 gs@ingeoforum.de
Reference Documents	
Description	Flexible and demand-oriented IT-Services out of the Cloud with relation to practical usage and GEO-related data are introduced. Further, the advantages of the most recent cloud technologies for safe and efficient usage based on current IT technologies are presented.
Impact potential	• E3, N3
Actual impact	• TBD
Areas for improvement	• To be checked further how Copernicus could be made more prominent in there
Best practice & scaling opportunity	

Reference number	DE.R.24
Initiative name	**Geoinformation der Metropolregion Rhein-Neckar e.V.**
Initiative type	Network (N)
Period active	• Since 2009
Frequency	• Continuous
Scale	• 3 participating Federal States, 15 registered entities
Indicative budget	• In total ~400.000€ until 2014
Client / organisational partners	• GeoNet.MRN e.V.
Implementing partners	• GeoNet.MRN e.V.
Targeted geography	• Regional/National
Target user group	• Regional and Local Public Authorities, Research and Academic Organisations, Industry
Website address / contact details	• https://www.geonet-mrn.de/portal/fep/de/dt.jsp • Lukas Berkel Geschäftsstelle GeoNet.MRN e.V P 7, 20 - 21 (Planken), 3. OG 68161 Mannheim Mail: Lukas.Berkel@m-r-n.com Tel. +49 621 10708-122
Reference Documents	• N/A
Description	Main goals of the network are to link the relevant entities together and promote the exchange of information between those. Further, it aims to improve opportunities for utilisation and accessability to geoinformation data and to establish a broad awareness for the meaning of geoinformation in the digital society. In order to reach these goals, the network creates concepts for various events and organises several projects across the region. One goal is the creation of a modern regional geoinformation structure which includes geodata from various sources and to link them together digitally. The network further aims to position geoinformation as a relevant industry factor. Thus, the following measures are implemented: • Networking of the regional Geo-information industry • Encouraging professional exchange and knowledge transfer • Raising awareness of the value and potential of geoinformation for industry, authorities and the general public • Optimisation of access to geo-information data • Cultivation of potentials for growth and innovation through geoinformation • Intensification of education and training of skilled workforce • Marketing innovative services and products of cluster members inside and outside Germany
Impact potential	• N4, P3
Actual impact	• N3
Areas for improvement	
Best practice & scaling opportunity	

Reference number	DE.R.25
Initiative name	**Fachaustausch Geoinformation**
Initiative type	Event (E)
Period active	• Since 2009
Frequency	• Annual event
Scale	• ~140 participants
Indicative budget	• Unknown
Client / organisational partners	• GeoNet.MRN e.V.
Implementing partners	• GeoNet.MRN e.V.
Targeted geography	• Regional/National
Target user group	• Research and Academic Institutions, Regional and Local Public Authorities, Industry
Website address / contact details	• http://www.fachaustausch-geoinformation.de/home • Lukas Berkel Geschäftsstelle GeoNet.MRN e.V P 7, 20 - 21 (Planken), 3. OG 68161 Mannheim Mail: Lukas.Berkel@m-r-n.com Tel. +49 621 10708-122
Reference Documents	• http://www.fachaustausch-geoinformation.de/news/nachlese-zum-7-fachaustausch-geoinformation-am-25-11-2015
Description	This conference is the main event of the GeoNet MRN e.V. network and is held annually in a major city of the region. Besides presentations and workshops, the conference also is the event for awarding the price for the "European Satellite Navigation Competition 2015 Baden-Württemberg Challenge". The 2015's topics of the dedicated workshops were: • Virtual Buildings • Geoinformation for sustainable Energy systems and Climate protection • Small-scale statistics for local and regional planning
Impact potential	• E3, N3
Actual impact	• E2, N2
Areas for improvement	• Seek increased synergy with Copernicus Masters competition
Best practice & scaling opportunity	

Reference number	DE.R.26
Initiative name	**Mitteldeutsches GEOforum**
Initiative type	Event (E), Network (N)
Period active	• Since 2004
Frequency	• Annual in October
Scale	• Around 100 professionals and regional officials
Indicative budget	• Unknown
Client / organisational partners	• GEO LEIPZIG e.V.
Implementing partners	• VDV e.V.
Targeted geography	• Regional Central Germany
Target user group	• Research and Academic Organisations, Downstream Value-Added Service Providers, Regional and Local Public Authorities
Website address / contact details	• http://www.geoleipzig.de/de/geoforum+1.html • GEO LEIPZIG e.V. c/o Dr. Ralf Grabaum Herr Steffen Römer Jadebogen 7 D-04319 Leipzig Telefon: (0171) 433 5520 Telefon: (07 00) 22 63 62-10
Reference Documents	• http://www.geoleipzig.de/images//file/GeoForum_Tagungsband2015.pdf
Description	The annual event brings together local experts, company owners from the regions of central Germany and public officials that deal with Geo-related information. Besides presentations and an information exchange, the networking event also issues an annual award, the "Preis der Geographischen Gesellschaft zu Leipzig". Most of the presentation topics deal with applications and data utilisation which will benefit from the availability of Copernicus data.
Impact potential	• E3, N3
Actual impact	• E3
Areas for improvement	
Best practice & scaling opportunity	

Reference number	DE.R.27
Initiative name	**Mit Geodaten den demografischen Wandel aktiv gestalten**
Initiative type	Event (E)
Period active	• 08.12.2015 (Hannover)
Frequency	• One-time
Scale	• Unknown
Indicative budget	• Unknown
Client / organisational partners	• BMWi (Bundesministerium für Wirtschaft und Energie)
Implementing partners	• GIW (Kommission für Geoinformationswirtschaft) • GiN e.V. (Verein zur Förderung der Geoinformatik in Norddeutschland)
Targeted geography	• Regional/National
Target user group	• Regional and Local Public Authorities, National /MS Institutions and Bodies
Website address / contact details	• http://www.geobusiness.org/GEOBUSINESS/Redaktion/DE/Veranstaltungen/2015/2015-12-08-mit-geodaten-den-demographischen-wandel-aktiv-gestalten.html;jsessionid=F6DB7C0A014C211053DEBD1C4AFC194F • Andrea Satli (Marketing), Miriam Riemann (PR) Geschäftsstelle der Kommission für Geoinformationswirtschaft Tel. +49 511 643-2997 Andrea.Satli@GeoBusiness.org Miriam.Riemann@GeoBusiness.org
Reference Documents	• http://www.geobusiness.org/GEOBUSINESS/Redaktion/DE/Downloads/mit-geodaten-den-demographischen-wandel-aktiv-gestalten-12-08-2015.pdf?__blob=publicationFile&v=11
Description	An event specifically addressed to present the future demographic changes in Germany, it tries to explore how these challenges can be actively managed by utilizing Geo data. As such it presents the responsible government entities the benefits of geo data as acquired through EO satellites.
Impact potential	• E3
Actual impact	• TBD
Areas for improvement	• Hold an event series throughout Germany.
Best practice & scaling opportunity	

Reference number	DE.28
Initiative name	**Copernicus in Deutschland**
Initiative type	Promotional Material (P)
Period active	• Since 2009 (formerly www.d-gmes.de, still active)
Frequency	• Continuous
Scale	• Unknown
Indicative budget	• Unknown
Client / organisational partners	• BMVI (Bundesministerium für Verkehr und digitale Infrastruktur) • DLR Agency
Implementing partners	• BMVI (Bundesministerium für Verkehr und digitale Infrastruktur) • DLR Agency
Targeted geography	• National
Target user group	• General Public, Research and Academic Organisations, Downstream Industry End Users, Downstream Value-Added Service Providers, National /MS Institutions and Bodies
Website address / contact details	• http://www.d-copernicus.de • Dr. Vanessa Keuck 0228 / 447 577 vanessa.keuck@dlr.de Christiane Hohmeister 0228 / 99 300 6224 christiane.hohmeister@bmvi.bund.de
Reference Documents	N/A
Description	The dedicated web portal was specifically created to promote Copernicus and its services and products for use within Germany or by German entities from academia, research and industry. If further is also meant to inform the interested public about funding initiatives regarding Earth Observation and the benefit of each of the specific Copernicus services.
Impact potential	• P5
Actual impact	• P4
Areas for improvement	
Best practice & scaling opportunity	

Reference number	DE.29
Initiative name	**Copernicus - das europäische Erdbeobachtungsprogramm - für Deutschland**
Initiative type	Promotional Material (P)
Period active	• Printed 2014
Frequency	• Continuous
Scale	• 10 pages
Indicative budget	• Unknown
Client / organisational partners	• BMVI (Bundesministerium für Verkehr und digitale Infrastruktur) • DLR Agency
Implementing partners	• BMVI (Bundesministerium für Verkehr und digitale Infrastruktur) • DLR Agency
Targeted geography	• National
Target user group	• General Public
Website address / contact details	• http://www.d-copernicus.de • Dr. Vanessa Keuck 0228 / 447 577 vanessa.keuck@dlr.de Christiane Hohmeister 0228 / 99 300 6224 christiane.hohmeister@bmvi.bund.de
Reference Documents	No digital version of the brochure available.
Description	The dedicated brochure was specifically created to promote Copernicus and its services and products for use within Germany or by German entities from academia, research and industry. Similar to the one by the EC, it is also meant to inform the interested public about the benefit of each of the specific Copernicus services.
Impact potential	• P5
Actual impact	• P3
Areas for improvement	• Create a digital version for download on the web portal.
Best practice & scaling opportunity	•

Reference number	DE.30
Initiative name	**Copernicus Services - dedicated one-page brochures**
Initiative type	Promotional Material (P)
Period active	• Printed in 2015
Frequency	• Continuous
Scale	• 5 different brochures
Indicative budget	• Unknown
Client / organisational partners	• BMVI (Bundesministerium für Verkehr und digitale Infrastruktur) • DLR Agency
Implementing partners	• DWD (Deutscher Wetterdienst) • Umweltbundesamt • Bundesamt für Kartographie und Geodäsie • Bundesamt für Bevölkerungsschutz und Katastrophenhilfe • BSH (Bundesamt für Seeschifffahrt und Hydrographie)
Targeted geography	• National
Target user group	• General Public
Website address / contact details	• http://www.d-copernicus.de • Dr. Vanessa Keuck, 0228 / 447 577, vanessa.keuck@dlr.de Christiane Hohmeister, 0228 / 99 300 6224, christiane.hohmeister@bmvi.bund.de
Reference Documents	No digital versions
Description	The dedicated one-page brochures for each Copernicus service present an overview about the basic principles of the service, its implementation and the data products to be derived from it. Further, the benefits are presented together with the relevant federal agency using the products, which are for: • Copernicus Atmosphere Monitoring Service: Deutscher Wetterdienst • Copernicus Climate Change Service: Deutscher Wetterdienst • Copernicus Land Monitoring Service: Umweltbundesamt • Emergency Management Service: Bundesamt für Bevölkerungsschutz und Katastrophenhilfe • Copernicus Marine Environment Monitoring Service: Bundesamt für Seeschifffahrt und Hydrographie
Impact potential	• P5
Actual impact	• P4
Areas for improvement	• Create a digital version for download on the web portal.
Best practice & scaling opportunity	

Reference number	DE.31
Initiative name	**Copernicus: Europas Weltraum-Wächter (Special)**
Initiative type	Promotional Material (P)
Period active	• Since 2014
Frequency	• Continuous
Scale	• Intro page 3745 hits
Indicative budget	• Unknown
Client / organisational partners	• ESA
Implementing partners	• ESA
Targeted geography	• National
Target user group	• General Public, Research and Academic Organisations
Website address / contact details	• http://www.esa.int/ger/ESA_in_your_country/Germany/Copernicus_Europas_Weltraum-Waechter_Special
Reference Documents	
Description	The country-specific webpages of ESA include this special about Copernicus and about the specific role the ESA establishment in Germany (ESOC) plays for the operation of the space segment. It further includes videos and overviews about the satellites, technologies used and the different services. Also included are the links to the dedicated websites of “Copernicus in Germany", DLR, BMVI and the Copernicus Masters.
Impact potential	• P5
Actual impact	• P4
Areas for improvement	
Best practice & scaling opportunity	

Reference number	DE.32
Initiative name	**DLR Publication Erdbeobachtung**
Initiative type	Promotional Material (P)
Period active	• Since 09.04.2013
Frequency	• Continuous
Scale	• 72 pages, in German and English
Indicative budget	• Unknown
Client / organisational partners	• DLR Agency • BMWi (Bundesministerium für Wirtschaft und Energie)
Implementing partners	• DLR Agency
Targeted geography	• National/EU
Target user group	• General Public, Research and Academic Institutions
Website address / contact details	• http://www.dlr.de/dlr/desktopdefault.aspx/tabid-10012#/DLR/Media/Broschueren • Sabine Hoffmann Leitung DLR-Kommunikation Deutsches Zentrum für Luft- und Raumfahrt (DLR) Kommunikation Linder Höhe D-51147 Köln Tel.: +49 2203 601-2116 E-Mail: kommunikation@dlr.de
Reference Documents	http://www.dlr.de/dlr/PortalData/1/Resources/documents/2013/Erdbeobachtung_280313_web_72dpi.pdf
Description	The very detailed publication of DLR features a comprehensive overview of Earth Observation in general, focussing especially on the Copernicus programme as well as indigenous capabilities (i.e. SAR-satellites). It provides an overview of all the satellites in orbit and to be launched.
Impact potential	• P5
Actual impact	• P4
Areas for improvement	
Best practice & scaling opportunity	• A dedicated publication in two languages providing a detailed overview on Copernicus.

Reference number	DE.33
Initiative name	**DLR magazin**
Initiative type	Promotional Material (P)
Period active	• Since 2010
Frequency	• 4 per year (not all with EO-topics)
Scale	• Unknown
Indicative budget	• Unknown
Client / organisational partners	• DLR Agency
Implementing partners	• DLR Agency
Targeted geography	• National
Target user group	• General Public, Research and Academic Organisations
Website address / contact details	• http://www.dlr.de/dlr/desktopdefault.aspx/tabid-10081/151_read-15859#/gallery/21407 • Cordula Tegen Deutsches Zentrum für Luft- und Raumfahrt (DLR) Kommunikation Tel.: +49 2203 601-3876 Fax: +49 2203 601-3249
Reference Documents	http://www.dlr.de/dlr/portaldata/1/resources/documents/DLR_Magazin_148/24536_Magazin-148-DE/index.html#1
Description	The quarterly issued publication of DLR magazine featured a comprehensive description about Copernicus, its working mechanisms and its potentials in the most recent issue. The publication frequently features articles about Earth Observation and its potentials with Copernicus becoming increasingly more often mentioned. Mainly targeting the general public, the magazine can be subscribed to free of charge and is released in two different languages, German and English.
Impact potential	• P3
Actual impact	• P2
Areas for improvement	
Best practice & scaling opportunity	

Reference number	DE.R.34
Initiative name	**ESA BIC Bavaria**
Initiative type	Start-up initiative
Period active	• Since 2009
Frequency	• 4 TEBs per year
Scale	• 16 EO-related start-ups since 2009
Indicative budget	• N/A
Client / organisational partners	• ESA
Implementing partners	• Anwendungszentrum GmbH Oberpfaffenhofen
Targeted geography	• Everyone of adult age with citizenship in Europe or ESA member states
Target user group	• Entrepreneurs
Website address / contact details	http://www.esa-bic.de/
Reference Documents	
Description	ESA's Business Incubation Centre Bavaria was launched in 2009 and is since managed by Anwendungszentrum GmbH Oberpfaffenhofen (AZO). ESA BIC Bavaria has four branch offices: Oberpfaffenhofen, Ottobrunn, Nürnberg and Berchtesgadener Land. During the Incubation Programme of up to 2 years Incubatees at ESA BIC Bavaria receive: • Incentive funding of 50,000 Euro • Loan of up to 50,000 Euro • Technical support and expertise from renowned partners • German Aerospace Center (DLR), Oberpfaffenhofen • Airbus Defence & Space, Ottobrunn • Fraunhofer Insitute for Integrated Circuits IIS, Nürnberg • Economic Development Corporation Berchtesgadener Land (WFG BGL) • Office space and shared facilities • Business development support and advice • Access to tailored coaching activities and network support Bavaria is one of the five aerospace hotspots in the world and one of few international locations that cover virtually the entire value chain of the industry - from research and development to production and maintenance. To strengthen Bavaria's position as a hub of space entrepreneurship, a number of support programmes and initiatives have been established. Thanks to this support programmes and the numerous companies located nearby, ESA BIC Bavaria is an ideal partner for start-ups seeking to realise their business ideas and transfer technologies from the aerospace sector to other areas of the economy.
Impact potential	• S5
Actual impact	• S5
Areas for improvement	• Increased technical support for EO-related start-ups; data access • Dedicated Copernicus oriented instruments/compartments
Best practice & scaling opportunity	• Since initiating the Copernicus Masters and the App Camps significant increase of EO-relates start-ups in ESA BIC Bavaria

Reference number	DE.R.35
Initiative name	**ESA BIC Darmstadt**
Initiative type	Start-up initiative
Period active	• Since 2007
Frequency	• 4 TEBs per year
Scale	• 6 EO-related start-ups since 2007
Indicative budget	• N/A
Client / organisational partners	• ESA
Implementing partners	• Centrum für Satellitennavigation Hessen
Targeted geography	• Everyone of adult age with citizenship in Europe or ESA member states
Target user group	• Entrepreneurs
Website address / contact details	http://www.cesah.com/Home.188.0.html
Reference Documents	
Description	cesah is contracted to run one of ESA's business incubators in Europe and supports young businesses and start-up companies with development, technical realisation and market implementation of new products and services concerning satellite navigation. A major focus with regard to opening up new areas of application is in the field of transport aviation, maritime navigation, road and rail traffic - but also in geodesy and agriculture. An accurate position determination using satellite navigation is just as important as providing a high-precision time measurement which can be used for synchronization of telecommunication networks, measuring energy workload of power suppliers, accurate timing of complex transactions in banking, finance and insurance industry. Thanks to the ESA initiative called the European Space Incubator (ESI) European entrepreneurs with innovative ideas receive help in getting their business started. cesah's duty is to organise this process and to squire these businesses actively. This starts when an active search for promising ideas is engaged and ends in a Europe wide ESA alumni network. ESI provides European entrepreneurs with a complete package of all they need through the initial and very challenging development period. This includes seed funding, office space, technology expertise, management support, networking and legal services.
Impact potential	• S5
Actual impact	• S5
Areas for improvement	• Increased technical support for EO-related start-ups; data access • Dedicated Copernicus oriented instruments/compartments
Best practice & scaling opportunity	• N/A

Reference number	DE.R.36
Initiative name	**Brochure "Monitoring for Environment and Security – Bavaria's capabilities in GMES"**
Initiative type	Promotional activities (P)
Period active	• First published in Oct 2006, 2nd print February 2009
Frequency	• One-off
Scale	• N/A
Indicative budget	• N/A
Client / organisational partners	• bavAIRia GMES office Bavaria; Bavarian Ministry of Economy Affaires, Infrastructure, Transport and Technology
Implementing partners	• Same as above
Targeted geography	• Bavaria/National/International
Target user group	National institutions and bodies; Regional and local public authorities; Research and Academic organisations, Downstream value-added service providers; Downstream industry end users;
Website address / contact details	http://www.dlr.de/eoc/en/Portaldata/60/Resources/dokumente/8_arch_2006/gmes_english.pdf http://issuu.com/jbehrends/docs/gmes_2009_en http://www.bavairia.net/fileadmin/Redaktion/downloads/pdf/GMES_2009_de.pdf
Reference Documents	
Description	This brochure gives a brief overview of Bavaria's potential and current GMES activities. It aims to increase interest in and knowledge about the forward-looking GMES-programme, and provide inspiration for further thoughts on the shaping of partnerships.
Impact potential	• P4-P5
Actual impact	• P4 – P5
Areas for improvement	• Brochure should be updated regularly
Best practice & scaling opportunity	

Reference number	DE.R.37
Initiative name	**Study "Demand for Copernicus Services in Bavaria"**
Initiative type	Promotional activity (P)
Period active	• 2012/2013
Frequency	• N/A
Scale	• N/A
Indicative budget	• N/A
Client / organisational partners	• Bavarian Ministry for Economic Affairs
Implementing partners	• GAF AG; ESRI
Targeted geography	• Bavaria, Germany
Target user group	• National institutions and bodies; Regional and local public authorities; Research and Academic organisations, Downstream value-added service providers; Downstream industry end users;
Website address / contact details	
Reference Documents	Study is for internal use only
Description	"Demand of Copernicus services in Bavaria", a study to define Copernicus based services for Bavaria, funded by the Bavarian State Ministry of Economic Affairs. 23 GMES relevant processes in public authorities were identified. For 6 processes a detailed analysis was made.
Impact potential	• P5
Actual impact	• P4
Areas for improvement	• Such type of studies should be made for more regions
Best practice & scaling opportunity	

Reference number	DE.R.38
Initiative name	**bavAIRia Copernicus- WG**
Initiative type	Networks (N)
Period active	• Since 2007
Frequency	• Continuous
Scale	• More than 30 regional stakeholder meetings several times a year
Indicative budget	• N/A
Client / organisational partners	• bavAIRia e.V.; Bavarian Ministry of Economic Affairs
Implementing partners	• Bavarian companies, research institutions and regional agencies
Targeted geography	• Bavaria, Germany
Target user group	• Regional and local public authorities; Research and Academic organisations, Downstream value-added service providers; Downstream industry end users;
Website address / contact details	Prof. Dr.-Ing. Manfred Schroeder T. +49 8105 27 29 27-31 schroeder@bavAIRia.net
Reference Documents	
Description	bavAIRia Copernicus- WG with more than 30 regional stakeholders meet several times a year. The purpose of this WG is networking, exchange of information, stimulating of new projects and initiating of cooperation.
Impact potential	• N5
Actual impact	• N4
Areas for improvement	• Strengthen the cooperation between regional public agencies, research institutes and service providing industry by suitable funding programmes on regional, national and European level
Best practice & scaling opportunity	

Reference number	DE.R.39
Initiative name	**Bavarian space programme of the Bavarian State Ministry of Economic Affairs**
Initiative type	Funding instruments (F)
Period active	• 2011-2014
Frequency	• N/A
Scale	• With respect to Copernicus approx. 15 companies were involved.
Indicative budget	• Approx. 10 Mio. €
Client / organisational partners	• Bavarian State Ministry of Economic Affairs
Implementing partners	• IABG
Targeted geography	• Bavaria
Target user group	• Research and Academic organisations, Downstream value-added service providers; Downstream industry end users;
Website address / contact details	http://www.bayerische-staatszeitung.de/fileadmin/articleAttachements/468813-A.pdf
Reference Documents	See above
Description	Bavarian space programme of the Bavarian State Ministry of Economic Affairs: - Funding of projects on regional level to stimulate cooperation between SMEs and larger companies as well as to develop downstream services; five projects related to Copernicus applications were funded. - Funding of components development for the National Collaborative ground Segment in addition to national funding
Impact potential	• F4
Actual impact	• F4
Areas for improvement	
Best practice & scaling opportunity	

Reference number	DE.R.40
Initiative name	**Copernicus Office Bavaria: bavAIRia e. V.**
Initiative type	Contact point (C)
Period active	• Since 2007
Frequency	• Continuous
Scale	• Regional contact office for Copernicus (RCO)
Indicative budget	• N/A
Client / organisational partners	• Bavarian Ministry of Economic Affairs
Implementing partners	• bavAIRia e. V
Targeted geography	• Bavaria
Target user group	• National institutions and bodies; Regional and local public authorities; Research and Academic organisations, Downstream value-added service providers; Downstream industry end users;
Website address / contact details	http://www.bavairia.net/bavairia-ev/
Reference Documents	http://www.bavairia.net/fileadmin/Redaktion/downloads/pdf/GMES_2009_en.pdf
Description	bavAIRia e. V. is home of the Copernicus Office Bavaria, founded in 2007. Its task is to stimulate and coordinate Copernicus related activities in Bavaria (RCO- function).
Impact potential	• C5
Actual impact	• C5
Areas for improvement	• The activities of RCOs should be supported by user uptake programmes of the EC
Best practice & scaling opportunity	

Reference number	DE.R.41
Initiative name	**RCO Bremen**
Initiative type	Contact point
Period active	• Since 2006
Frequency	• Continuously
Scale	• Numerous
Indicative budget	• 500.000 EUR/a
Client / organisational partners	• OHB, IUP, Astrium, Land/Region Bremen
Implementing partners	• WFB Bremen
Targeted geography	• Bremen region, Germany
Target user group	• Regional and local Public authorities, Downstream Industry End users, Research and Academic organisations, Downstream value-added service providers
Website address / contact details	https://www.wfb-bremen.de/de/wfb-projekt-des-monats-archiv?sv[id]=200656
Reference Documents	DORIS-Net final report http://cordis.europa.eu/result/rcn/57196_en.html
Description	Doris Net - completed CEON - structure was transferred to Bremen Innovation Agency
Impact potential	• C4
Actual impact	• C3
Areas for improvement	• Better promotion and planning, enlarging participant group, EU funding
Best practice & scaling opportunity	

Reference number	DE.42
Initiative name	**CLOUDEO**
Initiative type	Data Access (D)
Period active	• N/A
Frequency	• continuous
Scale	• N/A
Indicative budget	• N/A
Client / organisational partners	• CLOUDEO ag
Implementing partners	• Exelis, Planet Observer, Hexagon Geospatial, GEOSTORM (CSSI), Airbus defence and space
Targeted geography	• Worldwide territory
Target user group	• Users of geo services & developers of geo services, • Providers of geo data & Providers of geo services, applications, tools
Website address / contact details	http://www.cloudeo-ag.com
Reference Documents	
Description	CloudEO is a unique geo collaboration platform for all those who create, interpret and use geo data. CloudEO offers numerous geo-data products as well as GIS software and applications from various providers on the basis of an original business model : • IT and data for rent • Monthly subscription basis • Pay per use models for data and software • Free data for development CLOUDEO by hosting geo data & geo software inside his infrastructure, could propose to service provider and data provider to sell their products and on the other hand could propose to geo-services developers, a cost efficient geo IT framework as well as a market store for end users to purchase data, applications, and relevant services for their needs. So the CLOUDEO workbench brings together geo data and geo software from multiple vendors on one single platform. The Cloudeo solutions are fully virtualized based on VMwares hosted in a hybrid cloud (cloudeo hardware+ global access hardware) and physically hardware hosted in a secure data center in Munich. Copernicus data is available.
Impact potential	• D5
Actual impact	• D3-D4
Areas for improvement	
Best practice & scaling opportunity	

Reference number	DE.43
Initiative name	**DeCover2 - Dienstekonzept zur Aktualisierung von harmonisierten Landbedeckungsinformationen**
Initiative type	Data access
Period active	• 01.07.2009 – 31.07.2012
Frequency	• Once for specific funding period
Scale	• National, regional
Indicative budget	• N/A
Client / organisational partners	Consortium partners: • EFTAS GmbH • DEPLHI IMM Gmbh • RapidEye GmbH • Infoterra GmbH • RSS GmbH • University of Hannover • GAF AG • University of Halle-Wittenberg Consortium users: • Full list available here http://www.de-cover.com/Nutzer/nutzer_list.html
Implementing partners	• Same as above
Targeted geography	• National
Target user group	• Thematic: N/A • Copernicus service: Land • User categories: employees from different companies
Website address / contact details	• http://www.de-cover.com/
Reference Documents	
Description	• Development of methods to update and extend existing land cover information systems
Impact potential	• TBD
Actual impact	• TBD
Areas for improvement	• Provide further information on the outcome in a more tangible way aside of pdf-documents.
Best practice & scaling opportunity	

Reference number	DE.44
Initiative name	**GI-PLUS e.V.**
Initiative type	Promotional activity (P)
Period active	• Since 2007
Frequency	• Permanent
Scale	• National to local
Indicative budget	• N/A
Client / organisational partners	• N/A
Implementing partners	• N/A
Targeted geography	• National to local
Target user group	• Thematic: N/A • Copernicus service: • User categories:
Website address / contact details	• http://giplus.de/
Reference Documents	
Description	• GI-PLUS is a non-profit organisation that aims at broadening the knowledge on GI for everyone on a local and regional level by providing seminars and talks. In addition GI-PLUS acts as project partner for projects and carried out work in the transnational context of Bavaria / Salzburg by analyzing traffic pattern as well as pattern in housing. These findings are used for creating a detailed understanding for upcoming development and enables strategies to cope with upcoming challenges.
Impact potential	• P4-5
Actual impact	• P3-4
Areas for improvement	• Establishing a stronger position within its targeted geography and therefore becoming a more visible stakeholder for the education and uptake of Copernicus users.
Best practice & scaling opportunity	

Reference number	DE.45
Initiative name	**Deutscher Dachverband für Geoinformation e.V. (DDGI)**
Initiative type	Network (N)
Period active	• Since 2005
Frequency	• Permanent
Scale	• National level
Indicative budget	• Not disclosed
Client / organisational partners	• DLR • ESRI Deutschland • InGeoForum • DVW – German Society for Geodesy, Geoinformation and Land management • Etc.
Implementing partners	• Same as above
Targeted geography	• National
Target user group	• GI companies and institutions
Website address / contact details	http://www.ddgi.de/
Reference Documents	
Description	• National umbrella organisation for geographic information industry • Includes a Task Group specialized on Copernicus
Impact potential	• N5
Actual impact	• N5
Areas for improvement	
Best practice & scaling opportunity	• The Copernicus Taskforce

Reference number	DE.46
Initiative name	**DVW – Gesellschaft für Geodäsie, Geoinformation und Landmanagement e.V.**
Initiative type	Network (N)
Period active	• Since 1871
Frequency	• Permanent
Scale	• National level
Indicative budget	• Not disclosed
Client / organisational partners	• The DVW is working closely with neighbouring organisations, ordered in particular with the Association of Publicly Surveyors (BDVI eV), the German Association of Surveyors (VDV eV) and the German Society for Cartography (DGfK eV).
Implementing partners	• Same as above
Targeted geography	• National level
Target user group	• Public and private institutions
Website address / contact details	http://www.dvw.de/dvw-seite/herzlich-willkommen-auf-homepage-des-dvw
Reference Documents	
Description	• Working Group 1 - Training • Working Group 2 - Geoinformation and geodata management • Working group 3 - Measurement Methods and Systems • Working Group 4 - Engineering Geodesy • Working Group 5 - Land Management • Working Group 6 - Real Estate Valuation • Working Group 7 - Experimental, Applied and Theoretical Geodesy
Impact potential	• N4
Actual impact	• N3
Areas for improvement	• More direct focus on Copernicus, maybe create a special WG for Copernicus
Best practice & scaling opportunity	

Reference number	DE.47
Initiative name	**WorldView Global Alliance User Conference 2015**
Initiative type	Event (E)
Period active	• 13-14 October 2015 (Künstlerhaus, Munich) • 14-16 November 2016
Frequency	• Yearly event
Scale	• International level
Indicative budget	• Not disclosed
Client / organisational partners	• European Space Imaging, DigitalGlobe, Space Imaging Middle East, Worldview Global Alliance, DLR
Implementing partners	• Same as above
Targeted geography	• International level, focus on Europe and North Africa
Target user group	• Industry
Website address / contact details	http://www.euspaceimaging.com/conference
Reference Documents	http://www.euspaceimaging.com/images/conference-subpage/AGENDA_1-4ALL%20_WVGA2015-15-v5_FINAL.pdf
Description	• Very important conference, access based on invitation received upon application • A well-developed panel talking about European Programs, with a focus on Copernicus
Impact potential	• E5
Actual impact	• E5
Areas for improvement	
Best practice & scaling opportunity	• European Programs panel, with focus on Copernicus

5.13 Greece

Reference number	GR.01
Initiative name	**Kostas Nittis Scientific and Strategic Workshop**
Initiative type	Event (E)
Period active	• 26/27 May 2015
Frequency	• One-off
Scale	• 82 participants
Indicative budget	• N/A
Client / organisational partners	• Hellenic Center for Marine Research (HCRM), public, national • PERSEUS FP7, private, international
Implementing partners	• N/A
Targeted geography	• Regional (Mediterranean and Black Sea)
Target user group	• Marine • Copernicus service: All • User categories: Research and Academic Organisations, National /MS Institutions and Bodies, Copernicus Entrusted Entities, Downstream Value-Added Service Providers
Website address / contact details	• http://workshop.hcmr.gr/kostas-nittis/
Reference Documents	• Vision document "Strategy for an Integrated Ocean Observing System in the • Mediterranean and Black Seas" • http://workshop.hcmr.gr/kostas-nittis/sites/default/files/Strategy_Integrated_Med_Observatory_Kostas_Nittis_Workshop_Output_FINAL_0.pdf
Description	A two days Scientific and Strategic Workshop that focused on state of the art contribution of operational oceanography (modelling and observations) and its applications in the present and future needs of science and society. The first day was dedicated on the recent advances in operational organography and identifying the key issues that a coordinated European observing systems strategy should address, and on the second day the discussion focused specifically on the Mediterranean and Black Sea areas addressing the gaps and the needs together with a roadmap for the coordination and development of a sustainable observatory across the region.
Impact potential	• E5
Actual impact	• E3-4
Areas for improvement	
Best practice & scaling opportunity	• Initiatives targeting a specific domain, with a good regional coverage

Reference number	GR.02
Initiative name	**LDA Appathon**
Initiative type	Start-up initiatives (S)
Period active	• N/A
Frequency	• Repetitive
Scale	• Not known
Indicative budget	• N/A
Client / organisational partners	• Greek Research and Technology Network (GRNET), public, national • National Observatory of Athens (NOA), public, national • Hellenic Association of Mobile Application Companies (HAMAC), public, national • National Cadastre and Mapping Agency (former OKXE & Ktimatologio S.A), public, national, • Atlantis Consulting S.A., private, national
Implementing partners	• Hellenic Association of Mobile Application Companies (HAMAC), public, national
Targeted geography	• Greece
Target user group	• ICT • Copernicus service: All • User categories: Downstream Value-Added Service Providers, Downstream Industry End Users
Website address / contact details	• http://www.ldathens.eu/?q=node/7
Reference Documents	• http://www.ldathens.eu/?q=node/7
Description	The main objective of the LDA project is to demonstrate the huge potential of mobile services based on Copernicus and GNSS for innovation and for addressing societal challenges. The participants to the LDA Competition should offer innovative mobile applications/services that will address specific societal challenges and facilitate the emergence of new industries in the Region of Attica, Greece. The competition is a mix between an idea competition and hackaton.
Impact potential	• S5
Actual impact	• TBD
Areas for improvement	
Best practice & scaling opportunity	

Reference number	GR.03
Initiative name	**EVITA**
Initiative type	User feedback, training and education (U)
Period active	• 01.03.15 / 31.12.2014
Frequency	• Repetitive
Scale	• EU
Indicative budget	• N/A
Client / organisational partners	• EC / DG ECHO, public, international
Implementing partners	• National Technical University of Athens (Coordinating Beneficiary), public, national, • General Secretarial for Civil Protection of Greece (Associated Beneficiary AB1), public, national • Prodigy Consultores S.L. (Associated Beneficiary AB2), private, national • Region of Sardinia- Department of Tourism, Crafts and Trade (Associated Beneficiary AB3), public, national
Targeted geography	• EU
Target user group	• Emergency / Wildfire • Copernicus service: Emergency management service • User categories: National /MS Institutions and Bodies, Regional and Local Public Authorities, Downstream Industry End Users
Website address / contact details	• http://evita.eu-project-sites.com/
Reference Documents	• http://evita.eu-project-sites.com/
Description	EVITA aims to help national and regional CP authorities as well as industrial managers, hoteliers and local inhabitants answer the following vital question in case they see a wildfire approaching: “Should I initiate an evacuation and how long do I have to evacuate safely?”. This is made possible with the integration of space data and space-based products too.
Impact potential	• U4
Actual impact	• TBD
Areas for improvement	
Best practice & scaling opportunity	• Specific training for a community of user – Civil Protection

Reference number	GR.04
Initiative name	**SPACE & SECURITY CONFERENCE**
Initiative type	Events (E)
Period active	• 19/20 June 2014
Frequency	• One off
Scale	• 2 days
Indicative budget	• N/A
Client / organisational partners	• Greek Presidency of the Council of the EU, public, national • General Secretariat for Research & Technology (GSRT), public, national
Implementing partners	• Greek Presidency of the Council of the EU, public, national • General Secretariat for Research & Technology (GSRT), public, national
Targeted geography	• European
Target user group	• General • Copernicus service: All • User categories: International Organisations and Bodies, National /MS Institutions and Bodies, Regional and Local Public Authorities, Downstream Value-Added Service Providers, Downstream Industry End Users
Website address / contact details	• https://space-security-conference.teamwork.fr/en/home
Reference Documents	
Description	The conference focused on how geospatial information and services empower public administrations and business to improve public services, to better their relations with the citizens and customers respectively, and to take better informed decisions on future territorial development, with socio-economic and environmental considerations in mind.
Impact potential	• E5
Actual impact	• E5
Areas for improvement	
Best practice & scaling opportunity	• General awareness of the EU space activities with the Greek stakeholders

Reference number	GR.05
Initiative name	**BEYOND (fp7 project), Urban Monitoring from Space**
Initiative type	User feedback, training and education (U)
Period active	• 31/03 - 01/04/2014
Frequency	• One off in the context of a FP7 project
Scale	• 2 days
Indicative budget	• Unknown
Client / organisational partners	• Local organiser NOA (IAASARS) public, national
Implementing partners	• Local organiser NOA (IAASARS) public, national
Targeted geography	• European *by invitation only
Target user group	• General • Copernicus service: All • User categories: International Organisations and Bodies, National /MS Institutions and Bodies, Regional and Local Public Authorities, Research and Academic Organisations
Website address / contact details	• http://www.beyond-eocenter.eu/index.php/global-urban-observation-and-monitoring-from-space-home
Reference Documents	• http://www.beyond-eocenter.eu/index.php/global-urban-observation-and-monitoring-from-space-programme
Description	A high-level targeted two-day workshop has been held in Athens, Greece, on 31 March-1 April 2014 to promote scientific exchange and interdisciplinary collaborations. The workshop was organized within the framework of BEYOND "Building Capacity for a Centre of Excellence for EO-based monitoring of Natural Disasters", European Union FP7-REGPOT- 2012-2013-1. Focus of the workshop was urban environment, land use, urban island, etc. and the role of satellite date in helping the authorities to look after those variables highly relevant in the current context of extreme urban development and climate change.
Impact potential	• U4
Actual impact	• U4
Areas for improvement	
Best practice & scaling opportunity	• 4 dedicated session on EO followed by session on Urban planning

Reference number	GR.06
Initiative name	**NETSPACE Workshop**
Initiative type	Event (E)
Period active	• 18/19 February 2014
Frequency	• One off
Scale	• 2 days
Indicative budget	• N/A
Client / organisational partners	• Democritus University of Thrace, public, national • National Observatory of Athens, public, national
Implementing partners	• Democritus University of Thrace, public, national • National Observatory of Athens, public, national
Targeted geography	• Greece
Target user group	• General • Copernicus service: All • User categories: Research and Academic Organisations
Website address / contact details	• http://www.space.noa.gr/netspace/ • Vassilis Tsaousidis Programme co-chair vtsaousi@ee.duth.gr
Reference Documents	• http://www.space.noa.gr/netspace/programme.html
Description	NETSPACE provides an ideal venue for researchers and engineers to present cutting-edge work and results. Space data volume is increasing as new missions generating scientific data are launched. Nevertheless, the necessary mechanisms for disseminating and exploiting space data are not yet in place. Therefore, networking technologies supporting the efficient dissemination of space data should not be considered as a peripheral issue but rather as an urgently-missing mechanism.
Impact potential	• E3
Actual impact	• E2
Areas for improvement	• More focus on EO and Copernicus data
Best practice & scaling opportunity	

Reference number	GR.07
Initiative name	**Copernicus- Sentinels Serving Society and the Environment**
Initiative type	Events (E)
Period active	• 12/13 May 2014
Frequency	• One off
Scale	• 2 days event
Indicative budget	• N/A
Client / organisational partners	• Greek Presidency of the Council of the EU, public, national • ESA, public, international, • EC, public, national
Implementing partners	• Greek Presidency of the Council of the EU, public, national • ESA, public, international, • EC, public, national
Targeted geography	• European
Target user group	• General • Copernicus service: All • User categories: International Organisations and Bodies, National /MS Institutions and Bodies, Regional and Local Public Authorities, Downstream Value-Added Service Providers, Downstream Industry End Users
Website address / contact details	• http://congrexprojects.com/2014-events/Copernicus/introduction
Reference Documents	• http://congrexprojects.com/2014-events/Copernicus/introduction
Description	The conference focussed on how geospatial information and services empower public administrations and business to improve public services, to better their relations with the citizens and customers respectively, and to take better informed decisions on future territorial development, with socio-economic and environmental considerations in mind. This conference highlighted how the launch of Sentinel satellites marked a new era for Copernicus and further: a) provided public administrations and businesses with practical examples of geospatial solutions in sectors such as the environment and risk management, energy, territorial planning and e-governance b) provided the space community with insights into the current and future needs of end-users and downstream service providers so as to discuss what more can be done (in terms of policy, governance, technology etc) to enable them to make the most of Copernicus.
Impact potential	• E5
Actual impact	• E4
Areas for improvement	• Lack of continuity, it could be seen as National EO/Copernicus days
Best practice & scaling opportunity	• 2 days on Copernicus

Reference number	GR.08
Initiative name	**OBSERVE final symposium**
Initiative type	Event (E)
Period active	• 2012
Frequency	• One-time
Scale	• 2 day event
Indicative budget	• N/A
Client / organisational partners	• Aristotle University of Thessaloniki, public, national • OBSERVE project, private international
Implementing partners	• Aristotle University of Thessaloniki, public, national • OBSERVE project, private international
Targeted geography	• European
Target user group	• General • Copernicus service: All • User categories: International Organisations and Bodies, National /MS Institutions and Bodies, Regional and Local Public Authorities, Regional and Local Public Authorities
Website address / contact details	• http://www.observe-fp7.eu/index.php?option=com_wrapper&view=wrapper&Itemid=257
Reference Documents	• http://www.observe-fp7.eu/images/stories/roadmap/pdf/observe_roadmap_strategy_plan.pdf
Description	• The aims of the Symposium are to: 1.Capitalize on the outcomes of the OBSERVE project, 2.Raise awareness in the Balkans, 3.Scale up in challenging times, 4.Serve as a network vehicle for dissemination and capacity development mechanisms • With the symposium, the OBSERVE initiative (a project under FP7, subtitle: Strengthening and development of Earth Observation activities for the environment in the Balkan area) was disseminated but practically discontinued in its form.
Impact potential	• E4
Actual impact	• E2
Areas for improvement	• No direct mentioning of Copernicus; • Reinitiate a similar initiative with regional scope to restart Copernicus promotion activities
Best practice & scaling opportunity	

Reference number	GR.09
Initiative name	**NOA Hellenic National Sentinel Data Mirror Site**
Initiative type	Data access (D)
Period active	• 2014
Frequency	• Continuous
Scale	• Greece national level
Indicative budget	• N/A
Client / organisational partners	• Provided by the National Observatory of Athen (NOA) and the Institute for Astronomy, Astrophysics, Space Applications and Remote Sensing (IAASARS)
Implementing partners	• Powered and developed by the Greek Research and Technology Network (GRNET S.A. www.grnet.gr) • Human and infrastructure resources provided by the Centre of Excellence BEYOND (Building a Centre of Excellence for Earth Observation based monitoring of Natural Disasters)
Targeted geography	• Dissemination of Sentinel data to Greece national area but also to the whole area of South-Eastern Europe (i.e. the Balkans peninsula, alongside with Italy, France and the Iberian peninsula), as well as the Middle East and the North Africa
Target user group	• Institutions and Bodies • scientists & researchers community • Public Authorities • Spatial industry actors
Website address / contact details	• http://sentinels.space.noa.gr • http://sentinels.space.noa.gr/contact.php • NOA Official: Prof. Kanaris C. Tsinganos, President of NOA • Scientific Coordinator: Dr. Haris Kontoes, Research Director
Reference Documents	On line Quick guide : http://sentinels.space.noa.gr/Hellenic_National_Sentinel_Data_Mirror_Site_quick_quide.pdf
Description	Like France and other EU countries, Greece has developed his own Mirror site in order to access and disseminate the sentinel data. In the context of the CollGS agreement signed between the National Observatory of Athens (NOA) and the European Space Agency (ESA), the first collaborative Sentinel Data Hub was designed, developed and implemented in the framework of the BEYOND Centre of Excellence. The collaborative Sentinel Data Hub, the so-called Hellenic National Sentinel Data Hub, or the Greek Mirror Site, disseminates S-1, S-2, S3, and S-5p data to the whole area of South-Eastern Europe (i.e. the Balkans peninsula, alongside with Italy, France and the Iberian peninsula), as well as the Middle East and the North Africa. The Hellenic National Sentinel Data Mirror Site is thus a web based system designed to provide EO data users with Search –querying-Cataloguing -previewing and data transferring capabilities for the Sentinel family of satellites. The current version is the first operational prototype developed under the current EU-ESA GMES / NOA agreement.
Impact potential	• D5
Actual impact	• D3-D4
Areas for improvement	• To be able to share data and product with the private sector as well as infrastructure to run fast through commercial space applications development.
Best practice & scaling opportunity	

Reference number	GR.10
Initiative name	**The Hellenic Space Technologies and Applications Cluster (si-Cluster)**
Initiative type	Network
Period active	• Since 2009
Frequency	• Continuous
Scale	• More than 30 industrial members – including both large businesses and SMEs, academic institutions and research centres (future involvement of other entities involved in the technological field, as well outside of Greece)
Indicative budget	• N/A
Client / organisational partners	• Hellenic Association of Space Industry (HASI), public, national
Implementing partners	• Corallia, private, national
Targeted geography	• Greece
Target user group	• General • Copernicus service: All • User categories: All
Website address / contact details	• http://www.si-cluster.gr/en/si-cluster-activities.html
Reference Documents	• http://www.si-cluster.gr/en/si-cluster-activities.html
Description	The si-Cluster is the first network related to space technologies and applications in Greece. The si-Cluster members represent an important part of the global value chain of space technologies and applications, covering a wide range of space-related thematic areas. In recent years, the cluster has even expanded its capabilities to new specialized fields of space industry, thus further strengthening the Greek value chain.
Impact potential	• N4
Actual impact	• N3
Areas for improvement	• More involvement at EU level
Best practice & scaling opportunity	• Thematic segment of the cluster dedicated to EO

Reference number	GR.11
Initiative name	**Space Training Course for Young Scientists and Professionals on Earth Observation**
Initiative type	User feedback, training and education (U)
Period active	• 12/2015
Frequency	• One-time
Scale	• 5 days
Indicative budget	• Unknown
Client / organisational partners	• Si-Cluster, private national • ESA, public, international • Harokopio University, public, national
Implementing partners	• N/A
Targeted geography	• Greece
Target user group	• General • Copernicus service: All • User categories: Research and Academia
Website address / contact details	• http://www.si-cluster.gr/en/all-events/136-si-cluster-space-course.html
Reference Documents	• http://www.si-cluster.gr/en/all-events/136-si-cluster-space-course.html
Description	The Training Course aims at: • Training the next generation of European Principal Investigators (PIs); • Explaining theoretical principles, processing algorithms, data products and their use in applications; • Introducing tools and methods for the exploitation of EO satellite data, in particular Sentinels data; • Stimulating and supporting the exploitation of ESA EO and Third Party Mission data for SAR and optical remote sensing science and applications.
Impact potential	• U4
Actual impact	• U4
Areas for improvement	
Best practice & scaling opportunity	• The course is dedicated to MSc students, PhD students, postdoctoral fellows, young researchers and young professionals who use EO technology within their daily work and would like to improve their knowledge on Sentinel-1, Sentinel-2 and ESA Toolbox. Candidates from all countries are welcomed to apply and participate.

Reference number	GR.12
Initiative name	**The Hellenic Association of Space Industry**
Initiative type	Network (N)
Period active	• Since 2008
Frequency	• N/A
Scale	• 5 days
Indicative budget	• Unknown
Client / organisational partners	• 28 members (end of 2014)
Implementing partners	• N/A
Targeted geography	• Greece
Target user group	• General • Copernicus service: All • User categories: Research and Academia; Downstream Industry End Users, Downstream Value-Added Service Providers
Website address / contact details	• http://www.hellenic-asi.org/en_index.php
Reference Documents	• http://www.hellenic-asi.org/en_index.php
Description	Industrial association of space industry, contributing in industrial research and development of the country by developing new applications and products.
Impact potential	• N4
Actual impact	• N3
Areas for improvement	• More involvement at EU level
Best practice & scaling opportunity	•

Reference number	GR.13
Initiative name	**National PNF (permanent networking facility) Promotional Day - Greece**
Initiative type	Event (E)
Period active	• 2013
Frequency	• One off
Scale	• 1 day
Indicative budget	• Unknown
Client / organisational partners	• Observe Project, private, international • EGIDA project, private, international • IASON, private, international • EOPower, private international
Implementing partners	• Observe Project, private, international • EGIDA project, private, international • IASON, private, international • EOPower, private international
Targeted geography	• Greece
Target user group	• General • Copernicus service: All • User categories: Research and Academia
Website address / contact details	• http://balkangeo.net/index.php?option=com_content&view=article&id=240&Itemid=91
Reference Documents	• http://balkangeo.net/images/stories/pnfnpe_pa/Greek_PNF_Programme.pdf
Description	Permanent Networking Facility (PNF) is "the Balkan Earth Observation directory", with tools for easy and user-friendly partner and expertise search. Initially PNF included data acquired during the identification of EO players and activities in the Balkan region in the frame of the FP7 project BalkanGEONet. It is open to all users and its database is extended through a continuous voluntary inputs by EO stakeholders.
Impact potential	• E4
Actual impact	• E3
Areas for improvement	• Initiate a dedicated PNF, i.e. Balkan-EO; also to continue the discontinued OBSERVE network
Best practice & scaling opportunity	•

Reference number	GR.14
Initiative name	**14th International Conference of the Geological Society of Greece**
Initiative type	Event (E)
Period active	• Since 1970s (14th edition in 2016)
Frequency	• Every 3 years
Scale	• 3 days
Indicative budget	• Unknown
Client / organisational partners	• Geological Society of Greece, public, national • Aristotle University of Thessaloniki, public, Greece
Implementing partners	• Aristotle University of Thessaloniki, public, Greece • NB Events conference services, private, national
Targeted geography	• Regional (Mediterranean and Black Sea), International
Target user group	• General • Copernicus service: All • User categories: Research and Academic Organisations, National /MS Institutions and Bodies, International Organisations and Bodies, EU Institutions and Bodies
Website address / contact details	• http://www.ege2016.gr • info@ege2016.gr • Tel.: +30-2310-223461
Reference Documents	• http://www.ege2016.gr/wp-content/uploads/2015/07/EGE2016-Second-Circular-2.pdf
Description	GSG conferences are multidisciplinary earth science events, focusing on the broader Aegean region and beyond. The primary goal of the Conference is the presentation of the most recent advances in Geo- and Environmental Sciences, mainly in the Aegean Region and its surroundings, aiming at highlighting their impacts on natural resources, natural hazards, and environmental problems.
Impact potential	• E4
Actual impact	• E4
Areas for improvement	
Best practice & scaling opportunity	

5.14 Hungary

Reference number	HU.01
Initiative name	**HSO (Hungarian Space Office)**
Initiative type	Contact Point (C)
Period active	• 1992– present
Frequency	• Permanent
Scale	• International, European, National
Indicative budget	• Not publically disclosed
Client / organisational partners	• Private sector, university, local public administration entities
Implementing partners	• See above
Targeted geography	• International, European, National and regional
Target user group	• General: (Earth Observation) • User categories: Private sector, university, local public administration entities at national and regional scale • Copernicus Service: All
Website address / contact details	• http://www.hso.hu/page.php?page=215 • Ministry of National Development Hungarian Space Office H-1011 Budapest Főutca 44-50 Hungary
Reference Documents	• http://www.hso.hu/page.php?page=215 • ESA Enlargement: What Interested Countries Can Do to Prepare Themselves for Ultimate Accession – With a Special Focus on the CEE Report, Report 47, January 2014
Description	• The Hungarian Space Office (HSO) manages, coordinates and represents the Hungarian space activities. It is the organisation whose purpose is to coordinate Hungarian space exploration-related activities, both national programs and European Space Agency related programs, where Hungary is a member state. • Active participation in the elaboration and implementation of the ESP(European Space Policy), in particular with the aim of fully utilizing the opportunities offered by the EU flagship Copernicus Programme
Impact potential	• C3-4
Actual impact	• C2
Areas for improvement	• Improve the awareness of the utility and importance of EO data, products and services in the framework of Copernicus Programme opportunities • Improve of Hungarian industrial and scientific presence in Copernicus
Best practice & scaling opportunity	• Excellent national EO contact point • Main political space contact point

Reference number	HU.02
Initiative name	**HSB (Hungarian Space Board)**
Initiative type	Contact Point (C)
Period active	• 1992– present
Frequency	• Permanent
Scale	• International, European, National
Indicative budget	• Not publically disclosed
Client / organisational partners	• Private sector, university, local public administration entities
Implementing partners	• See above
Targeted geography	• International, European, National and regional
Target user group	• General: (Earth Observation) • User categories: Private sector, university, local public administration entities at national and regional scale • Copernicus Service: All
Website address / contact details	• http://www.hso.hu/page.php?page=215 • Ministry of National Development Hungarian Space Office H-1011 Budapest Főutca 44-50 Hungary
Reference Documents	• http://www.hso.hu/page.php?page=215 • ESA Enlargement: What Interested Countries Can Do to Prepare Themselves for Ultimate Accession – With a Special Focus on the CEE Report, Report 47, January 2014
Description	• The Hungarian Space Board (HSB), helps the work of the Minister in strategic cases • HSB works in coordination with the Hungarian Space Office: so, it has an active participation in the elaboration and implementation of the ESP(European Space Policy), in particular with the aim of fully utilizing the opportunities offered by the EU flagship Copernicus Programme
Impact potential	• C3-4
Actual impact	• C2
Areas for improvement	• Improve the awareness of the utility and importance of EO data, products and services in the framework of Copernicus Programme opportunities • Improve of Hungarian industrial and scientific presence in Copernicus
Best practice & scaling opportunity	• Excellent national EO contact point • Main political space contact point

Reference number	HU.03
Initiative name	**HUNAGI (Hungarian Association for Geo-information)**
Initiative type	Network (N)
Period active	• 2002-present
Frequency	• Permanent
Scale	• National
Indicative budget	• Not publically disclosed
Client / organisational partners	• About 100 Institutions and Organisations, and Student section from 14 universities
Implementing partners	• See above
Targeted geography	• National and regional
Target user group	• General: (Earth Observation) • User categories: Institutions, Organisation and Universities • Copernicus Service: All
Website address / contact details	• http://www.hunagi.hu/
Reference Documents	
Description	• Provide representation and visibility of the GI community's interests in the European Umbrella Organisation for Geographic Information (EUROGI), and to build up contacts with similar national GI associations • EO sector is included, and some conferences and workshops were focused on Copernicus Programme, such as: Copernicus 1st MPP Country Survey and Workshop by EUROGI & HUNAGI, Budapest 05/12/2013 and Workshop "Geoinformation Networks for Societal and Commercial Acceptance of Copernicus", Budapest, 12/12/13 • Copernicus Masters (Hungarian winner in 2012) • Very relevant networks associated to space and geospatial information, having also Copernicus implications • Similarly as MFTTT[HUN-06], it is a good network that can provide the necessary technical skills and contacts to orient Copernicus user uptake actions and make them effective in the Hungarian territory
Impact potential	• N3-4
Actual impact	• N2
Areas for improvement	• Greater focus on Copernicus Programme opportunities • Improve of Hungarian industrial and scientific presence in Copernicus
Best practice & scaling opportunity	• Represented sectors include EO data, value added products and service providers • HUNAGI an extremely relevant network, bringing together several institutions to promote, stimulate, encourage and support the development and use of GI and its associated technologies

Reference number	HU.04
Initiative name	**HUCO (UNSDI HUNGARIAN COORDINATION OFFICE)**
Initiative type	Network (N)
Period active	• 1996 - present
Frequency	• Permanent
Scale	• European, National
Indicative budget	• Not publically disclosed
Client / organisational partners	• Public services, SMEs and SDICs (Spatial Data Interest Communities)
Implementing partners	• See above
Targeted geography	• European, National and regional
Target user group	• General: Geo-information • User categories: Public services, SMEs and SDICs (Spatial Data Interest Communities) • Copernicus Service: All
Website address / contact details	• http://unsdihu.blogspot.it/
Reference Documents	
Description	• Mission goals and strategic priorities include: 1) act according to the European Commission INSPIRE principles and coordinate with the UNSDI development process 2) support national/cross-border implementation of the INSPIRE Directive 3) awareness raising on SDI at political level 4) Strengthen cohesion between stakeholders and other interested parties ie. public services, SMEs and SDICs • Provide synergies in local, regional, national and global dimensions with outreach towards EU neighbouring countries • HUCO notes the importance of Earth Observation and geospatial information in the recent UN Resolution 'Transforming our world - the 2030 Agenda for Sustainable Development' and commit to cooperate with GEO and its partners to exploit their contribution toward this plan of action • Has space and geospatial related activities with Copernicus implications
Impact potential	• N2-3
Actual impact	• N1
Areas for improvement	• Greater focus on Copernicus Programme opportunities • Improve of Hungarian industrial and scientific presence in Copernicus • More user friendly web site, not yet bilingual (Hungarian and English)
Best practice & scaling opportunity	• Good national network

Reference number	HU.05
Initiative name	**FÖMI Remote Sensing Center**
Initiative type	Contact Point (C)
Period active	• 1967- present
Frequency	• Permanent
Scale	• International, European, National and regional
Indicative budget	• Not publically disclosed
Client / organisational partners	• Private sector, university, local public administration entities at national and regional scale
Implementing partners	• See above
Targeted geography	• International, European, National and regional
Target user group	• General: (Earth Observation) • User categories: Private sector, university, local public administration entities at national and regional scale • Copernicus Service: Land monitoring
Website address / contact details	• http://www.fomi.hu/portal/index.php/kezdoldal
Reference Documents	• http://www.fomi.hu/portal/index.php/projektjeink/foldfelszin-monitorozas-corine/foldfelszin-monitorozas-corine-eredmenyek
Description	• Is the national cartographic institute which directly manages all the geospatial applications and datasets related to territorial management (Land registry, base layers, etc.) and geodesy • Given the high technical skills available, FOMI has been responsible for the verification and enhancement of the Hungarian part of some important Copernicus Land products (Corine Land Cover and High Resolution Layers 2012)
Impact potential	• C3-4
Actual impact	• C1-2
Areas for improvement	• Improve the awareness of the utility and importance of EO data, products and services in the framework of Copernicus Programme opportunities • Improve of Hungarian industrial and scientific presence in Copernicus
Best practice & scaling opportunity	• Main technical contact points for cartographic applications

Reference number	HU.06
Initiative name	**Hungarian Society of Surveying, Mapping and Remote Sensing (MFTTT)**
Initiative type	Network (N)
Period active	• 1998- present • Active since 1965 as Geodetic and Cartography Society
Frequency	• Permanent
Scale	• International, European, National and regional
Indicative budget	• Not publically disclosed
Client / organisational partners	• Private sector, university, local public administration entities at national and regional scale
Implementing partners	• See above
Targeted geography	• International, European, National and regional
Target user group	• General: (Earth Observation) • User categories: Private sector, university, local public administration entities at national and regional scale • Copernicus Service: All
Website address / contact details	• http://www.mfttt.hu/mfttttportal/ • Contact: mfttt.titkarsag@gmail.com
Reference Documents	• http://www.mfttt.hu/mfttttportal/
Description	• Very relevant networks associated to space and geospatial information, having also Copernicus implications • It is a good network that can provide the necessary technical skills and contacts to orient Copernicus user uptake actions and make them effective in the Hungarian territory
Impact potential	• N3-4
Actual impact	• N2
Areas for improvement	• Improve the awareness of the utility and importance of EO data, products and services • Grater promotion of the use of Copernicus data, products and services
Best practice & scaling opportunity	• Very good internal networking

Reference number	HU.07
Initiative name	**Hungarian Meteorological Service (OMSZ)**
Initiative type	Contact point (C)
Period active	• 1970 – present
Frequency	• Permanent
Scale	• European, National, regional
Indicative budget	• Not publically disclosed
Client / organisational partners	• Private sector, university, local public administration entities, single user at national and regional scale
Implementing partners	• See above
Targeted geography	• European, National and regional
Target user group	• General: (Earth Observation) • User categories: All • Copernicus Service: All
Website address / contact details	• http://www.met.hu/en/omsz/
Reference Documents	
Description	• MSZ fulfils such duties as collecting, processing and (in the last few decades) providing meteorological data and information. • Next to running nationwide monitoring network, OMSZ provides radiosonde upper air measurements, operates meteorological radar system as well as lightning localization system, and guarantees the continuous collection, verification and assimilation of the above information, as well as the maintenance of the meteorological data base • The institute analyses and calculates weather development by using its own numerical model runs as well as up to date forecast products issued from international weather forecast centres • MSZ organizes also events such conferences, summer school, climate forum
Impact potential	• C2-3
Actual impact	• C1
Areas for improvement	• Improve the awareness of the utility and importance of EO data, products and services in the framework of Copernicus Programme opportunities • Improve of Hungarian industrial and scientific presence in Copernicus
Best practice & scaling opportunity	• Main technical contact points for meteorological application

Reference number	HU.08
Initiative name	**MH Geoinformation Services (MH GEOSZ) (inside Honvedelem)**
Initiative type	Contact point (C)
Period active	• 2007 – present
Frequency	• Permanent
Scale	• International, European, National
Indicative budget	• Not publically disclosed
Client / organisational partners	• Hungarian Army
Implementing partners	• See above
Targeted geography	• International, European, National
Target user group	• General: (Earth Observation) • User categories: Hungarian Army • Copernicus Service: All
Website address / contact details	• http://www.honvedelem.hu/szervezet/mh_geosz • Contact: Kovacs2.Monika@mil.hu
Reference Documents	
Description	• Purpose: 1) mapping, geographic and meteorological support to Hungarian Army 2) surveying, mapping, aerial mapping and meteorological activities for the Minister of Defence 3) management and supervision of activities carried out by other organisations for the Hungarian Army
Impact potential	• C2-3
Actual impact	• C1
Areas for improvement	• Improve the awareness of the utility and importance of EO data, products and services • Expand the use of Copernicus Programme opportunities
Best practice & scaling opportunity	• Good national network

5.15 Iceland

Reference number	IS.01
Initiative name	**Earth Sciences / academic programme**
Initiative type	User training, feedback and education (U)
Period active	• N/A
Frequency	• N/A
Scale	• N/A
Indicative budget	• N/A
Client / organisational partners	• University of Iceland, public, national
Implementing partners	• University of Iceland, public, national
Targeted geography	• Undergraduate programmes are only for Icelandic speakers • Graduate and doctoral programmes are taught in English
Target user group	• General • Copernicus service: All • User categories: Research and Academic Organisations
Website address / contact details	http://english.hi.is/von/faculty_of_earth_sciences/main_menu/home
Reference Documents	Undergraduate programme: http://english.hi.is/sens/faculty_of_earth_sciences/undergraduate_programmes Graduate programme: http://english.hi.is/sens/faculty_of_earth_sciences/graduate_programmes
Description	Several courses in Earth Science
Impact potential	• U3
Actual impact	• U3
Areas for improvement	• Not specific on Copernicus, EO but it encompasses the use of Remote Sensing data
Best practice & scaling opportunity	

Reference number	IS.02
Initiative name	**NORDVULK Summer School on Remote sensing techniques in a dynamic geological setting**
Initiative type	User training, feedback and education (U)
Period active	• 2013
Frequency	• N/A
Scale	• 7 days training
Indicative budget	• N/A
Client / organisational partners	• University of Iceland, public, national
Implementing partners	• University of Iceland, public, national
Targeted geography	• European
Target user group	• General • Copernicus service: All • User categories: Research and Academic Organisations
Website address / contact details	http://nordvulk.hi.is/nordvulk_summer_school_remote_sensing_techniques_dynamic_geological_setting
Reference Documents	http://nordvulk.hi.is/nordvulk_summer_school_remote_sensing_techniques_dynamic_geological_setting
Description	The Summer School is primarily intended for PhD students. It addresses the wide geological applications of remote sensing data and focus on application of remote sensing techniques in a dynamic geological setting.
Impact potential	• U3
Actual impact	• U3
Areas for improvement	• Not specific on Copernicus, EO but it is focused the use of RS data
Best practice & scaling opportunity	

Reference number	IS.03
Initiative name	**2nd Workshop on Hyperspectral Image and Signal Processing: Evolution in Remote Sensing**
Initiative type	User training, feedback and education (U)
Period active	• 2014
Frequency	• N/A
Scale	• 4 days
Indicative budget	• N/A
Client / organisational partners	• IEEE GRSS, public, international
Implementing partners	• IEEE GRSS, public, international
Targeted geography	• Global
Target user group	• General • Copernicus service: All • User categories: Research and Academic Organisations, International Organisations and Bodies
Website address / contact details	http://www.ieee-whispers.com/index.php/past-editions/2010-reykjavik-iceland
Reference Documents	http://www.ieee-whispers.com/images/techprograms/whispers_2010_technical_program.pdf
Description	Scientific symposium on latest development in Remote Sensing
Impact potential	• U3
Actual impact	• U3
Areas for improvement	
Best practice & scaling opportunity	

Reference number	IS.04
Initiative name	**The 13th International Circumpolar Remote Sensing Symposium**
Initiative type	User training, feedback and education (U)
Period active	• 2014
Frequency	• N/A
Scale	• 5 days
Indicative budget	• N/A
Client / organisational partners	• Icelandic Organizing Committee, public, national
Implementing partners	• Icelandic Organizing Committee, public, national
Targeted geography	• Global
Target user group	• General • Copernicus service: All • User categories: Research and Academic Organisations, International Organisations and Bodies
Website address / contact details	http://alaska.usgs.gov/science/geography/CRSS2014/
Reference Documents	http://alaska.usgs.gov/science/geography/CRSS2014/program.php
Description	This symposium is of interest to scientists, scholars, and industry and government professionals involved in renewable and non-renewable resource management in both polar environments. The symposium provides a forum for the exchange of current applied international research, the presentation of new technology, and the advancement of internal co-operation in the circumpolar regions of the world.
Impact potential	• U3
Actual impact	• U3
Areas for improvement	
Best practice & scaling opportunity	• Very international scientific symposium, regional coverage of circumpolar area

Reference number	IS.05
Initiative name	**International Symposium on Hydrology of Glaciers and Ice Sheets**
Initiative type	User training, feedback and education (U)
Period active	• 2015
Frequency	• N/A
Scale	• 8 days
Indicative budget	• N/A
Client / organisational partners	• International glaciological society, public, international
Implementing partners	• International glaciological society, public, international
Targeted geography	• Global
Target user group	• Cryosphere, Climate • Copernicus service: Climate Change Monitoring • User categories: Research and Academic Organisations, International Organisations and Bodies
Website address / contact details	https://www.arcus.org/events/arctic-calendar/21049
Reference Documents	https://www.arcus.org/events/arctic-calendar/21049 http://www.igsoc.org/symposia/2015/iceland/
Description	This symposium provides a forum to discuss all aspects of glacier and ice sheet hydrology and their connections to other areas of the cryosphere as well as climate sciences.
Impact potential	• U3
Actual impact	• U3
Areas for improvement	
Best practice & scaling opportunity	

5.16 Ireland

Reference number	IE.01
Initiative name	**Irish Earth Observation Symposium (IEOS)**
Initiative type	Event (E)
Period active	• 2007 – present
Frequency	• Repetitive (annual), rotating through Irish cities • Last occurrence: 21-22 October, 2015
Scale	• Approximately 150 participants (2015)
Indicative budget	• Not publically disclosed
Client / organisational partners	• IEOS Organising Committee • Public • National
Implementing partners	• Rotating partner locations
Targeted geography	• National
Target user group	• General (Earth Observation) • Copernicus service: all • User categories: Research and Academic Organisations, National /MS Institutions and Bodies, Regional and Local Public Authorities, Downstream Value-Added Service Providers, Downstream Industry End Users
Website address / contact details	• 2015 edition: http://www.ryaninstitute.ie/ieos2015/ • Stuart Green, IEOS Founder, stuart.green@teagasc.ie, tel: +353-1-8059955
Reference Documents	• https://earthobservation.files.wordpress.com/2015/10/programme_ieos_2015.pdf
Description	• The IEOS takes place over one day and a half • Showcases several sessions of oral presentations, as well as workshops and poster sessions on different topics within Earth Observation • Irish ESA Sentinel Data Users Workshop was held as part of the IEOS 2015
Impact potential	• E4-E5
Actual impact	• E4
Areas for improvement	• Minor participation from industry
Best practice & scaling opportunity	• Annual landmark event to effectively reach the Irish EO community • Sentinel Data Users Workshop already part conference

Reference number	IE.02
Initiative name	**GIS Ireland Conference**
Initiative type	Event (E)
Period active	• 1995-2015
Frequency	• Permanent
Scale	• Over 25 speakers
Indicative budget	• Not publically disclosed
Client / organisational partners	• Irish Organisation for Geographic Information (IRLOGI) • Private • Ireland
Implementing partners	• Irish Organisation for Geographic Information (IRLOGI) • Private • Ireland
Targeted geography	• National
Target user group	• General (GIS) • Copernicus service: all • User categories: Research and Academic Organisations, National /MS Institutions and Bodies, Regional and Local Public Authorities, Downstream Value-Added Service Providers, Downstream Industry End Users
Website address / contact details	• http://www.irlogi.ie/gis-ireland-2015/ • info@irlogi.ie
Reference Documents	• http://www.irlogi.ie/gis-ireland-2015/
Description	• GIS Ireland Conference is the largest annual GIS event in Ireland • First day is only open for IRLOGI members • Includes workshops for industry and industry exhibition
Impact potential	• E4
Actual impact	• E3
Areas for improvement	
Best practice & scaling opportunity	• Effective platform to raise with Irish GIS industry about Copernicus

Reference number	IE.03
Initiative name	**IMGS Geospatial User Group**
Initiative type	User feedback, training & education (U)
Period active	• 2014-present
Frequency	• Repetitive (annual) • Last occurrence: 22 + 24 September, 2015
Scale	• One-day event
Indicative budget	• Not publically disclosed
Client / organisational partners	• Irish Mapping and GIS Solutions (IMGS) • Private • Ireland
Implementing partners	• Irish Mapping and GIS Solutions (IMGS) • Private • Ireland
Targeted geography	• National
Target user group	• General (GIS) • Copernicus service: all • User categories: Research and Academic Organisations, National /MS Institutions and Bodies, Regional and Local Public Authorities, Downstream Value-Added Service Providers, Downstream Industry End Users
Website address / contact details	• http://www.imgs.ie/events-1/imgs/imgs-geospatial-user-group-2015 • Amanda Donegan, Irish Mapping and GIS Solutions, adonegan@imgs.ie, Tel: +353 1 885 3839
Reference Documents	• http://www.imgs.ie/events-1/imgs/imgs-geospatial-user-group-2015
Description	• Annual user event open for all stakeholders, showcasing latest geospatial technology solutions • Provides attendees with an opportunity to network with their peers in the geospatial community and discuss how they're using GIS technologies in their organisations • Includes interactive practical demonstrations and data trainings for IMGS solutions
Impact potential	• U3
Actual impact	• U3
Areas for improvement	
Best practice & scaling opportunity	

Reference number	IE.04
Initiative name	**Irish Industry Space Day**
Initiative type	Promotional activities (P)
Period active	• 2014 – present
Frequency	• Repetitive (annual) • Last occurrence: 2 September 2015
Scale	• One-day event
Indicative budget	• Not publically disclosed
Client / organisational partners	• Irish Space Industry Group • Private • Ireland
Implementing partners	• Irish Space Industry Group • National Space Centre • Private / Public • Ireland
Targeted geography	• National
Target user group	• General (Space) • Copernicus service: all • User categories: Research and Academic Organisations, National /MS Institutions and Bodies, Regional and Local Public Authorities, Downstream Value-Added Service Providers, Downstream Industry End Users
Website address / contact details	• http://nationalspacecentre.eu/register/ • Danny Gleesson, ISIG Chair Person, dgleeson@curtisswright.com, tel: +353.1.295.1264
Reference Documents	• ISIG presentation: http://nationalspacecentre.eu/wp-content/uploads/2015/09/1-Irish-Space-Industry-Group-Presentation-Peter-Hollidge.pdf
Description	• One-day industry networking event organised by the recently formed Irish Space Industry Group (ISIG) • Aims to present the latest developments and opportunities for the Irish Space Sector, develop channels for new sales and stimulate matchmaking for joint R&D opportunities • Dedicated session on Earth Observation (2015)
Impact potential	• P4
Actual impact	• P3
Areas for improvement	• Insufficient presence of Copernicus under EO topic
Best practice & scaling opportunity	

Reference number	IE.05
Initiative name	**GeoScience Conference**
Initiative type	Events (E)
Period active	• 2010 – present
Frequency	• Repetitive (annual) • Last occurrence: 4 November, 2015
Scale	• Two-day conference with approximately 30 speakers
Indicative budget	• Not publically disclosed
Client / organisational partners	• Geological Survey of Ireland (GSI) • Public • National
Implementing partners	• Geological Survey of Ireland (GSI) • Public • National
Targeted geography	• National
Target user group	• General (Geospatial) • Copernicus service: all • User categories: Research and Academic Organisations, National /MS Institutions and Bodies, Regional and Local Public Authorities, Downstream Value-Added Service Providers, Downstream Industry End Users
Website address / contact details	• https://www.gsi.ie/Geoscience+Initiatives/Geoscience+2015+Conference.htm • Koen Verbruggen, GSI Chair, koen.verbruggen@gsi.ie
Reference Documents	• https://www.gsi.ie/Geoscience+Initiatives/Geoscience+2015+Conference.htm
Description	• Annual conference featuring updates on key activities in the Irish GIS sector • Presentations on new product launches, collaboration & research opportunities • Attached industry exhibition
Impact potential	• E4
Actual impact	• E3
Areas for improvement	• Inclusion of Copernicus-thematic session
Best practice & scaling opportunity	• Polyvalent conference covering GIS industry, R&D and scientific topics

Reference number	IE.06
Initiative name	**Space Innovation Powering Blue Growth**
Initiative type	Events (E)
Period active	• 2013
Frequency	• One-off event (Cork, Ireland) • Founded: 18-19 April, 2013
Scale	• 120 participants
Indicative budget	• Not publically disclosed
Client / organisational partners	• Enterprise Ireland • Coastal and Marine Research Centre • Irish Naval Service • European Commission (DG Maritime Affairs) • European Space Agency (ESA)
Implementing partners	• National Maritime College of Ireland • Enterprise Ireland • Coastal and Marine Research Centre • Irish Naval Service • European Commission (DG Maritime Affairs) • European Space Agency (ESA)
Targeted geography	• National
Target user group	• Thematic: Maritime • Copernicus service: Marine • User categories: Research and Academic Organisations, National /MS Institutions and Bodies, Regional and Local Public Authorities, Downstream Value-Added Service Providers, Downstream Industry End Users
Website address / contact details	• http://www.congrexprojects.com/2013-events/13m23/background • Gordon Campbell, Science Applications and Future Technologies Department Director of Earth Observation Programmes, Gordon.Campbell@esa.int
Reference Documents	• Programme: http://congrexprojects.com/custom/13m23/01_Opening%20Session/SIPBG_Programme_Post_conference_Edit_Acrobat8.pdf
Description	• One-off conference which gathered policy makers, scientists, maritime operators and EO application specialists to determine the policy needs of the space and maritime sectors to enhance growth in Ireland's maritime economies • Focus on how new scientific results and innovative services derived from EO programmes and Horizon 2020 can assist in achieving the targets of the Integrated Maritime Policy (IMP)
Impact potential	• E4
Actual impact	• E3
Areas for improvement	• Could be transformed into a recurrent event
Best practice & scaling opportunity	• Suitable event format to address Copernicus user segment within a specific service area with opportunities for user feedback on proposed policies • Could be organised in selected EU MS

Reference number	IE.07
Initiative name	**GeoDATA Seminars**
Initiative type	User feedback, training & education (U)
Period active	• 2012 – present
Frequency	• Repetitive (annual) • Last occurrence: 30 April, 2015 (Cork, Ireland)
Scale	• One-day seminar
Indicative budget	• Not publically disclosed
Client / organisational partners	• GeoAware • Private • National
Implementing partners	• GeoAware • Private • National
Targeted geography	• National
Target user group	• General (GIS) • Copernicus service: all • User categories: Research and Academic Organisations, National /MS Institutions and Bodies, Regional and Local Public Authorities, Downstream Value-Added Service Providers, Downstream Industry End Users
Website address / contact details	• GeoDATA 2015: http://www.geoaware.info/#!geodata/c8qk • lindab@geoinformationgroup.co.uk
Reference Documents	• http://www.geoaware.info/#!geodata/c8qk
Description	• Series of free professionally organised one day seminars encompassing a range of current data and technology topics and application ideas in GIS • Strong emphasis on learning and GIS applications • Includes a complimentary industry trade exhibition
Impact potential	• U3
Actual impact	• U2-U3
Areas for improvement	• Include sessions on Copernicus
Best practice & scaling opportunity	

Reference number	IE.08
Initiative name	**IRLOGI Space & Place Awards**
Initiative type	Promotional Activity (P) / Prize
Period active	• 2012 - present
Frequency	• Repetitive: annual • Last occurrence: 2015
Scale	• Recognition prize with 5 prize categories (2015)
Indicative budget	• Not publically disclosed
Client / organisational partners	• Irish Organisation for Geographic Information (IRLOGI) • Private • National
Implementing partners	• Irish Organisation for Geographic Information (IRLOGI) • Private • National
Targeted geography	• National
Target user group	• Thematic: GIS • Copernicus service: all • User categories: Research and Academic Organisations, National /MS Institutions and Bodies, Regional and Local Public Authorities, Downstream Value-Added Service Providers, Downstream Industry End Users
Website address / contact details	• http://www.irlogi.ie/gis-awards/ • info@irlogi.ie
Reference Documents	• 2015 Awards rules: http://www.irlogi.ie/gis-awards/about-irlogi-space-and-place-awards-2015/
Description	• Annual open nominations awards aimed at giving independent recognition of great work and best practice in the field of Geographic Information and Location-Based Services & Technology • Open to all organisations and individuals who have worked in the area or on projects that make use of GIS in different categories (e.g. Best GIS Application in Public Sector, Most Innovative use of GIS or Location-Based Content)
Impact potential	• P4-P5
Actual impact	• P3
Areas for improvement	• Suboptimal traction because of absence of monetary or in-kind prize
Best practice & scaling opportunity	• Possibly interesting prize concept to extend towards Copernicus-enabled applications

Reference number	IE.09
Initiative name	**EPA GeoPortal**
Initiative type	Data Access (D)
Period active	• 2007 – present
Frequency	• Permanent
Scale	
Indicative budget	• Not publically disclosed
Client / organisational partners	• Environmental Protection Agency (EPA) • Public • National
Implementing partners	• Environmental Protection Agency (EPA) • Public • National
Targeted geography	• National
Target user group	• General (EO) • Copernicus service: all • User categories: Research and Academic Organisations, Downstream Value-Added Service Providers, Downstream Industry End Users
Website address / contact details	• http://gis.epa.ie/ • Contact: http://gis.epa.ie/ContactUs
Reference Documents	• User manual: http://gis.epa.ie/data/FindYourWayOnNewGeoportal.pdf
Description	• Geoportal designed to make data about the environment easier to find, browse and understand and improve access to geographic data relating to Ireland's environment • Access to maps using web mapping tools and easy-to-use GIS datasets • User help videos and technical information
Impact potential	• D5
Actual impact	• D4
Areas for improvement	• Inclusion of (links to) Copernicus datasets
Best practice & scaling opportunity	• Noteworthy thematic portal format with ample attention for user support – possibly can be expanded towards other Copernicus service areas and associated agencies

Reference number	IE.10
Initiative name	**Environment Ireland**
Initiative type	Event (E)
Period active	• 2005-2015
Frequency	• Repetitive (annual) • Last occurrence: 16 September, 2015
Scale	• One-day conference with approximately 30 speakers
Indicative budget	• Not publically disclosed
Client / organisational partners	• Environmental Protection Agency (EPA) • Irish Department of Environment, Community and Local Government • Public • National
Implementing partners	• Environmental Protection Agency (EPA) • Irish Department of Environment, Community and Local Government • Public • National
Targeted geography	• National
Target user group	• Thematic: environment • Copernicus service: Atmosphere Monitoring, Marine Environment Monitoring, Land Monitoring, Climate Change • User categories: Research and Academic Organisations, National /MS Institutions and Bodies, Regional and Local Public Authorities, Downstream Value-Added Service Providers, Downstream Industry End Users
Website address / contact details	• http://www.eolasmagazine.ie/events/environmentireland2015/
Reference Documents	• http://www.eolasmagazine.ie/events/environmentireland2015/
Description	• Major annual conference on environmental policy and management • Attended each year by delegates representing all the main sectors with an interest in Ireland's environment, including many from Great Britain and Northern Ireland • Thematic parallel sessions and attached exhibition
Impact potential	• E4
Actual impact	• E3
Areas for improvement	• Thematic session on Earth Observation / GIS / Copernicus
Best practice & scaling opportunity	• Attracts a wide attendance of public and private stakeholders who have a key role in issues relating to the environment – potentially thematic sessions on Copernicus environment-related service areas could be beneficial

Reference number	IE.11
Initiative name	**IRLOGI**
Initiative type	Network (N)
Period active	• Since 1995
Frequency	• Permanent
Scale	• National level
Indicative budget	• N/A
Client / organisational partners	• Compass Informatics • ESRI Ireland • GeoDirectory • IMGS • Ordnance Survey Ireland • 1Spatial
Implementing partners	• Same as above
Targeted geography	• National level
Target user group	• Thematic
Website address / contact details	http://www.irlogi.ie/
Reference Documents	N/A
Description	• Organise an annual national conference and exhibition on Geographic Information • Facilitate seminars and workshops on specialist areas relating to GI • Encourage friendship and networking in the GI community • Liaise with users and creators of GI and GI systems • Facilitate discussion and exchange of ideas in the GI community • - See more at: http://www.irlogi.ie/about-irlogi/whatwedo/#sthash.BAHr2Y0H.dpuf
Impact potential	• N5
Actual impact	• N5
Areas for improvement	
Best practice & scaling opportunity	

Reference number	IE.12
Initiative name	**Irish Organisation for Geographic Information (IRLOGI) Annual Conference and exhibition**
Initiative type	Event (E)
Period active	• Since 1995
Frequency	• Annual
Scale	• Normally between 200 and 275 attendees
Indicative budget	• €25 000
Client / organisational partners	• IRLOGI
Implementing partners	• IRLOGI
Targeted geography	• Irish Republic
Target user group	• Irish GI community • GI users and potential users • Public sector policy decision-makers
Website address / contact details	www.irlogi.org Fiona Brown (IRLOGI General Manager) at fbrown@irlogi.ie and +353 086 8110 101
Reference Documents	
Description	• IRLOGI's annual conference which in recent years has had a broad theme which is covered in the morning plenary sessions. The 2015 conference theme was 'The Emerging GI Environment' • The afternoon consists of parallel sessions with speakers/topics based on a call for presentations. The presentations are grouped by thematic areas. Remote Sensing issues are sometimes dealt with by some presenters • In recent years there has been an hour long focussed panel session. The 2015 session was on GI and privacy and RS issues were mentioned
Impact potential	• E1
Actual impact	• E1
Areas for improvement	• Remote sensing could be a theme for one of the afternoon parallel sessions • In the case of morning plenary session presentations speakers could be asked to include reference to remote sensing (including Copernicus) issues if relevant • One of the morning plenary presentations could be directly on Copernicus issues
Best practice & scaling opportunity	• Possible joint event with the UK based Association for Geographic Information (AGI) which focusses on remote sensing issues, including Copernicus

Reference number	IE.13
Initiative name	**Irish Organisation for Geographic Information (IRLOGI) Annual Awards**
Initiative type	Event (E)
Period active	• Since 2012
Frequency	• Annual
Scale	• Normally between 10 and 25 submissions
Indicative budget	• €5 000
Client / organisational partners	• IRLOGI
Implementing partners	• IRLOGI
Targeted geography	• Irish Republic
Target user group	• Web application and GI systems developers
Website address / contact details	www.irlogi.org Fiona Brown (IRLOGI General Manager) at fbrown@irlogi.ie and +353 086 8110 101
Reference Documents	
Description	• The awards highlight best practice in certain specified fields. For example, the 2015 awards were given in the following categories (1) Best use of Location Based information on the Web (2) Most Innovative use of Geographic Information or Location Based Content (3) Most Innovative use of Technical Infrastructure in a GI Solution (4) Best GI Application in the Public Sector. The categories tend to change each year and thus there would be no difficulty in introducing a Remote Sensing/Copernicus category. • The awards ceremony takes place at or immediately after the IRLOGI annual conference (see EI.1) • In the months after the awards ceremony IRLOGI arranges for events at which one or more of the award winners (and possibly an Honourable Mention) have an opportunity to present their award winning products/projects. This provide an additional opportunity for spreading a remote sensing/Copernicus message
Impact potential	• E2
Actual impact	• E1
Areas for improvement	• Remote sensing/Copernicus could be one of the possible award thematic areas
Best practice & scaling opportunity	• Wider promotion through the UK based Association for Geographic Information (AGI)

5.17 Italy

Reference number	IT.R.01
Initiative name	**NIBS Networking and Internationalization of Basilicata Space Technologies**
Initiative type	Network (N)
Period active	• July 2012 – December 2015
Frequency	• One-off
Scale	• Number of partners: 4 • Number of user reached: 11 local SME + 2 European SME, 4-5 Public Authority, 2 Research and Education Body
Indicative budget	• 1.55 M€
Client / organisational partners	• Basilicata Region
Implementing partners	• TERN consortium with CNR-IMAA, Unibas, ARPAB.
Targeted geography	• Mainly regional and national and EU
Target user group	• Regional and Local Authorities, Downstream Industry end users, Downstream Value-Added service providers, Participants to EU research projects Space and Non Space;
Website address / contact details	http://nibs.tern.it/workshop-internazionalizzazione-del-sistema-lucano-della-ricerca-dellimpresa-e-dellalta-formazione-nel-settore-delle-tecnologie-spaziali/ http://nibs.tern.it/
Reference Documents	See above
Description	NIBS: An ERDF 2007-2013 project for the networking and the internationalization of the Basilicata Space Technology sector.
Impact potential	• N4, P4
Actual impact	• N3, P3
Areas for improvement	• More focus on Copernicus
Best practice & scaling opportunity	

Reference number	IT.R.02
Initiative name	**Regional workshops**
Initiative type	Event (E)
Period active	• Since 2013
Frequency	• 2-3 events per year
Scale	• 15-20 attendees per event in average
Indicative budget	• N/A
Client / organisational partners	• Basilicata Region
Implementing partners	• TeRN, CNR-IMAA, University of Basilicata
Targeted geography	• Basilicata
Target user group	• Regional and Local authorities, Research and academic organisations, Downstream service providers
Website address / contact details	www.tern.it/en/eventi/1949-05-06/ www.imaa.cnr.it
Reference Documents	
Description	Regional workshops were organized for Copernicus, H2020 and Space Technology solutions, e.g.: "GMES/Copernicus for EU and Africa partnership", Matera, September 2013. "Emergency response and disaster risk reduction based on GMES/Copernicus and ICT capabilities", Potenza, September 2013. “Integration of remote sensing techniques to enhance environmental monitoring practices for disaster management”, Tito Scalo (Pz), October 2013. "Telerilevamento satellitare per lo studio del gas flaring: stato dell'arte e prospettive future", Marsico Nuovo (Pz), December 2015.
Impact potential	• E3
Actual impact	• E3
Areas for improvement	
Best practice & scaling opportunity	

Reference number	IT.R.03
Initiative name	**e-catalogue of regional EO services and providers**
Initiative type	Promotional activity (P)
Period active	• Since 2013
Frequency	• Periodic updates are foreseen
Scale	• An on-line catalogue of 48 services provided by 8 companies and organisations, with a taxonomy of potential end-users
Indicative budget	• N/A
Client / organisational partners	• Basilicata Region/TERN
Implementing partners	• NIBS project, Networking and Internationalization of Basilicata Space Technologies
Targeted geography	• Basilicata
Target user group	• Regional and Local Authorities, Research and Academic Organisations, Downstream Industry End Users
Website address / contact details	http://nibs.tern.it/catalogo/#headeranchor
Reference Documents	See above
Description	e-catalogue of regional EO services and providers (i.e. 48 services provided by 8 companies and organisations, with a taxonomy of potential end-users)
Impact potential	• P4
Actual impact	• P3
Areas for improvement	• The e-catalogue has been just completed and first version released in Dec 2015. It should increase its diffusion improving dissemination and awareness among user community.
Best practice & scaling opportunity	

Reference number	IT.04
Initiative name	**Mentoring in EU Regions on space applications including Copernicus**
Initiative type	Promotional activity (P), Cross-regional activity
Period active	• 2013-2015
Frequency	• Periodic, about 2 meetings per year
Scale	• 4 meetings, 2 with Greek and 2 with Romanian representatives
Indicative budget	• N/A
Client / organisational partners	• TeRN
Implementing partners	• University of Basilicata, CNR-IMAA
Targeted geography	• Regions in Greece and Romania
Target user group	• SMEs, Local/Regional authorities
Website address / contact details	
Reference Documents	
Description	Mentoring activity on EU regions (e.g. Chania-Crete island, Greece; Wallachia, Romania) not firmly involved in EO/Copernicus activities. Specific mentoring activity on Copernicus, especially on Emergency Response and Marine services
Impact potential	• P3
Actual impact	• P3
Areas for improvement	
Best practice & scaling opportunity	• Greek colleagues, after this mentoring activity, decided to install at their premises a EUMETCast system for MSG direct data reception. The system is now operational at TEIC. Support from Basilicata expert side is continuing.

Reference number	IT.R.05
Initiative name	**Regional programme based on European Structural and Investment Funds (ERDF and ESF) for funding R&D projects focused on EO (one of the priorities listed in the regional strategies for research and innovation 2007 – 2013)**
Initiative type	Funding instrument (F)
Period active	• 2007 – 2013
Frequency	• Continuous (based on calls for proposal or negotiation)
Scale	• 6 (n. R&D projects funded on ERDF on EO each of them involving at least 6 researchers and 1 European research institution) • 9 (n. Training and Education projects funded on ESF on EO each of them involving at least 3 researchers and 1 local SME)
Indicative budget	• ~2.500.000 € on ERDF • ~1.000.000 € on ESF
Client / organisational partners	• Basilicata Region
Implementing partners	• CNR-IMAA, UNIBAS, CNR-IBAM
Targeted geography	• Basilicata
Target user group	• Research and academic organisations, Downstream value-added Service Providers, Downstream Industry End Users
Website address / contact details	http://www.pofesr.basilicata.it/161 http://fse.basilicata.it/fse/home.jsp
Reference Documents	See above
Description	ERDF 2007-2013 funded R&D projects focussed on the use of EO technologies for environmental research and applications (e.g. IOSMOS, PROLAND, MITRA, OSCAR) ESF 2007-2013 funded T&Edu projects (STAMOS, TIPCAM Val d' Agri, LOCAL AIR, MOMEDAS, ScSArchGeo, URBLAND-SAT, ClEneTech) for the training of young researchers in EO and for involving local SME in research programme with a period of stage for the researchers NIBS: a ERDF 2007-2013 Networking project for the networking and the internationalization of the Basilicata Space Technology sector (see above)
Impact potential	• F3
Actual impact	• F3
Areas for improvement	• Within the new Regional Operational Programme (ERDF 2014-2020) there will be specific actions to support CLAS (Regional Cluster for Aero-Space) activities
Best practice & scaling opportunity	

Reference number	IT.R.06
Initiative name	**RCO Basilicata**
Initiative type	Contact point (C)
Period active	• Since 2011
Frequency	• Continuous
Scale	• Organised 2 specific RCO events: > Event in Matera (IT): "Towards a smart specialization in the field of space technologies: the contribution of regional policy to Europe 2020" > 76 attendees (from the local and national business sector, research centres and universities, regional institutions, Italian Space Agency, ESA, EU institutions and bodies, NEREUS) > Event in Chania (GR): "Increasing the awareness on GMES programme and space technologies in outreach regions: the DORIS_Net approach and strategy" > a two-day event, with 3 people from Chania, Crete (Greece) attended, representatives of research centers (i.e. Technological Educational Institute of Crete and CENTER For TECHNOLOGICAL RESEARCH) and LRA (i.e. Chania Metropolitan City). with participation in the organisation of TeRN meeting (at least one per year)
Indicative budget	• N/A
Client / organisational partners	• European Commission
Implementing partners	• TeRN, CNR-IMAA
Targeted geography	• Basilicata
Target user group	• Research and Academic organisations, Regional and local authorities, Downstream service providers; Downstream service end users
Website address / contact details	http://www.earthobs-services.eu/Regions/Basilicata
Reference Documents	http://cordis.europa.eu/project/rcn/97916_en.html
Description	TeRN (through CNR-IMAA's experts) continues to act as the Copernicus RCO in Basilicata. TeRN, Technological Cluster of Basilicata, constituted in 2005 by public and private partners following an agreement between the Economy and Financial Ministry, the Research and University Ministry and the Basilicata Region. TeRN focuses on the development of innovative EO technologies and methodologies aimed at protection and prevention of environmental and natural hazards.
Impact potential	• C5
Actual impact	• C2
Areas for improvement	• Improve awareness among the user community, this requires stable and sustainable funding
Best practice & scaling opportunity	

Reference number	IT.R.07
Initiative name	**Basilicata Cluster of Aerospace - CLAS**
Initiative type	Networks (N)
Period active	• 2014 – 2020
Frequency	• Continuous
Scale	• Large regional involvements of all the public and private actors active in EO and Space sector
Indicative budget	• N/A
Client / organisational partners	• Confindustria Basilicata as organisational partner
Implementing partners	• 25 partners about 20 of which are local SMEs
Targeted geography	• Basilicata
Target user group	• Upstream and downstream industries mainly
Website address / contact details	http://www.ctna.it/
Reference Documents	See above
Description	The Basilicata Cluster of Aerospace (CLAS) has been recently created. It is now member of the Italian Cluster of Aerospace Technology (CTNA).
Impact potential	• N4
Actual impact	• N2
Areas for improvement	• The cluster is just started in mid- 2015. Interesting opportunities should come from the new Regional Operational Programme which has already foreseen specific supporting actions
Best practice & scaling opportunity	• Scaling opportunity will come from the collaboration with other national and international clusters on aerospace.

Reference number	IT.R.08
Initiative name	**Space4you and Blue Economy and geo-information services for sustainable growth in coastal regions**
Initiative type	Events (E), Promotional activities (P)
Period active	• 2014 -2015
Frequency	• One-off
Scale	• Three regional conferences in two years, over 300 attendees
Indicative budget	• N/A
Client / organisational partners	• Organized by Apulia region and NEREUS in collaboration with the Apulian Aerospace District (Distretto Tecnologico Aerospaziale – DTA); Conference of Peripheral and Maritime Regions (CPMR) and Eurisy
Implementing partners	• N/A
Targeted geography	• Puglia
Target user group	• Thematic: general • Copernicus service: general • Regional and Local Authorities, Downstream Industry end users, Participants to EU research projects Space and Non Space; Downstream service providers
Website address / contact details	http://www.nereus-regions.eu/SPACE4YOU http://www.eurisy.org/event-Bari2014/About
Reference Documents	
Description	"Space4you", 27-28 Feb 2014, Bari; With around 300 participants present and more than 800.000 followers via twitter, the SPACE4YOU International conference in Bari was a unique event that contributed to bring European space policy closer to citizens. “Blue Economy and geo-information services for sustainable growth in coastal regions”, 20-21 Nov., 2014, Bari
Impact potential	• E3-E4
Actual impact	• E3–E4
Areas for improvement	
Best practice & scaling opportunity	• Similar events could be fostered around the EU

Reference number	IT.09
Initiative name	**Courses, internships and online open courses**
Initiative type	User training, feedback and education (U)
Period active	• 2015-2016
Frequency	• Repetitive
Scale	• N/A
Indicative budget	• N/A
Client / organisational partners	• Polytechnic of Bari
Implementing partners	• Same as above
Targeted geography	• National/international
Target user group	• Thematic: general • Copernicus service: general • Research and academic institutions
Website address / contact details	http://www.poliba.it/it/didattica/corsi-di-laurea?course_id=10127&year_rule=2015
Reference Documents	
Description	The Polytechnic of Bari activated a new course entitled "Engineering of the aerospace systems". Post graduated II level Master in Technologies for the remote sensing of Polytechnic of Bari; There are numerous conventions for internships of university students in private companies for degree and/or PhD thesis.; MOOC: Massive Online Open Course on Earth Observation organized by the Apulia Space project
Impact potential	• U4-U5
Actual impact	• U3-U4
Areas for improvement	• Promotion of the course • Update the website information • Organisation of internship in space companies
Best practice & scaling opportunity	

Reference number	IT.R.10
Initiative name	**Regional contact point for Copernicus**
Initiative type	Contact point
Period active	• Since 2009
Frequency	• Continuous
Scale	• Regional, inter regional, international
Indicative budget	• N/A
Client / organisational partners	• DTA
Implementing partners	• N/A
Targeted geography	• Puglia
Target user group	• Thematic: general • Copernicus service: general • Regional and local public authorities; Research and academic organisations; Downstream industry end users;
Website address / contact details	http://www.dtascarl.it/
Reference Documents	
Description	The DTA Scarl, was set up in Puglia in July 2009; it is a non-profit organisation, whose aims are research and technology transfer in aerospace. Through scientific and technological excellence, guaranteed by the presence of universities from Puglia and national research centres, DTA offers and implements initiatives and projects aimed at attracting investments in high-tech manufacturing sectors, contribute to the development of technical and scientific skills of the industrial partners, strengthen the research system of Puglia, a national and international level.
Impact potential	• C3-C4
Actual impact	• C3-C4
Areas for improvement	
Best practice & scaling opportunity	

Reference number	IT.R.11
Initiative name	**ESA BIC Lazio**
Initiative type	Start-up initiative
Period active	• Since 2005
Frequency	• 4 TEBs per year
Scale	• 5 EO-related start-ups since 2005
Indicative budget	• N/A
Client / organisational partners	• ESA
Implementing partners	• BIC Lazio SpA - Enterprise Europe Network
Targeted geography	• Everyone of adult age with citizenship in Europe or ESA member states
Target user group	• Entrepreneurs
Website address / contact details	http://www.biclazio.it/it/home/esa-bic-lazio.bic
Reference Documents	
Description	The ESA Business Incubation Centre (BIC) Lazio in Italy was founded in 2005 and is managed by the Italian company BIC Lazio SpA. ESA BIC Lazio offers business start-up support as well as technical expertise throughout their incubation period in a number of space related areas. It is located at the business incubator ITech in Rome, Italy, which is situated near the European Space Research Institute (ESRIN) in Frascati, Italy. ESA BIC Lazio offers business start-up support as well as technical expertise particularly in the areas of systems and software infrastructures for data handling, and integrated Earth Observation, satellite navigation and communication applications. This is your chance to enjoy the expertise from ESA's multi-disciplinary ESRIN site, which hosts teams involved in Earth Observation, the European VEGA launcher programme, ESA's corporate informatics structure and ESA's cooperate website, as well as applications in satellite telecommunication.
Impact potential	• S5
Actual impact	• S4
Areas for improvement	• Dedicated incentives to develop Copernicus-based start-ups
Best practice & scaling opportunity	

Reference number	IT.R.12
Initiative name	**What can Sentinels Do for Regions? A Trip from Mountains to Valley: Copernicus Satellites as 'Sentinels' of Environmental and Economic Changes**
Initiative type	Events (E)
Period active	• 2015
Frequency	• 2nd event in a series of 3 (Azores, Lombardy, Bavaria respectively)
Scale	• 1-day workshop • 70 participants expected
Indicative budget	• N/A
Client / organisational partners	• ESA
Implementing partners	• ESA • NEREUS
Targeted geography	• Regional, cross-regional
Target user group	• Thematic: all • Copernicus service: all • User categories: National/MS Institutions and Bodies, Regional and Local Public Authorities, Research and Academic Organisations, Downstream Value-Added Service Providers, Downstream Industry End Users.
Website address / contact details	http://www.nereus-regions.eu/events-and-news
Reference Documents	http://www.nereus-regions.eu/sites/all/documents/EVENTS2015/SGSW/Lombardy.pdf
Description	The workshop aims at familiarizing regional stakeholders interested in crop monitoring and management with the potential of Copernicus data and services. The intention is to progressively incorporate Copernicus into the existing operational procedures, activities and public tasks of the concerned players. The agricultural sector in Europe is strongly encouraged to maintain competitiveness, reducing production costs as well as minimizing environmental impact of agricultural practices. The Earth Observation (EO) Sentinel satellites can significantly contribute to these topics by providing regular, timely, reliable observations. The workshop will showcase why this data is crucial for monitoring and forecasting as regards crop distribution, status and seasonal dynamics, as well as irrigation and water resource availability from snow and glaciers. Sentinel data also helps out with natural disaster management, such as floods, landslides and forest fires.
Impact potential	• E4
Actual impact	• E4
Areas for improvement	
Best practice & scaling opportunity	

Reference number	IT.13
Initiative name	**ISPRA – Italian National Institute for the Environmental Protection and Research**
Initiative type	Contact Point (C), Network (N)
Period active	• Founded in 2008 by merging 3 PA: APAT (Governmental), INFS and ICRAM (Research)
Frequency	• Permanent
Scale	• National • EU
Indicative budget	• 82M Euro/year
Client / organisational partners	• 21 Regional and Provincial Environmental Agencies (ARPA, APPA) belonging to the National System for Environmental Protection leaded by ISPRA
Implementing partners	• See above
Targeted geography	• National and regional
Target user group	• User Type: National /MS Institutions and Bodies, Research and Academic Organisations • User categories: public intermediate/end-user, institutions and authorities involved in the environmental management at national and regional scale • Copernicus Service: CMEMS, CLMS, CAMS, C3S, CEMS and CGS. Marginally CSS
Website address / contact details	• http://www.isprambiente.gov.it/it
Reference Documents	• http://admin.isprambiente.it/files/STATUTOISPRAnonfirmato.pdf (ISPRA Charter)
Description	• ISPRA leads the National System for Environmental Protection composed by regional environmental agencies • Since 2014 ISPRA coordinates the national Copernicus User Forum • ISPRA President is delegate to the Copernicus User Forum and alternate to the Copernicus Committee • National Focal Point @ EIONET • Technical coordination on behalf of the Ministry of Environment in the framework of INSPIRE directive national implementation • Participation in several Copernicus initiatives • Involvement in EU funded R&D activities
Impact potential	• C5, N5
Actual impact	• C4, N4
Areas for improvement	• Improve communication toward Industry and SME about European policies and obligation in the frame of environmental protection in order to maximise the exploitation of Copernicus potential applied to environmental monitoring; • Improve the communication of outcomes from the working groups and technical boards where ISPRA is representing the National System for Environmental Protection or Italy, especially toward industry.
Best practice & scaling opportunity	• Downstream service development (e.g. land take downstream) and its replication potential • Agreement and Memorandum of Understanding Copernicus based with relevant national Authorities

Reference number	IT.14
Initiative name	**Civil Protection Department (DPC) - Dipartimento della Protezione Civile**
Initiative type	Contact point (C)
Period active	• Founded in 1982
Frequency	• Permanent
Scale	• National
Indicative budget	• Not publically disclosed
Client / organisational partners	• Italian authorities in charge to the Risk and Emergency management • EU Civil Protection Mechanisms providing support to victims of natural and man-made disasters in Europe and elsewhere
Implementing partners	• Country Administrations, Regions, Provinces, Municipalities • National Fire Brigades, Army, Police, Forest Guards, Red Cross, Scientific Community, structures belonging to the Public Health, Volunteer associations and Alpine Rescue teams are operational are the operational implementing bodies
Targeted geography	• National • Global, as part of the EU Civil Protection Mechanism
Target user group	• Specific thematic: risk prevention/preparedness, emergency management, recovery • Copernicus service: Emergency • User categories: National /MS Institutions and Bodies, Regional and Local Public Authorities
Website address / contact details	• http://www.protezionecivile.gov.it/jcms/en/homepage.wp
Reference Documents	• http://www.copernicus.eu/sites/default/files/library/COM-2005-565-Final-Annex.pdf (Identification of the GMES Fast track services and related implementation groups)
Description	• DPC is actively participating to GMES/Copernicus as part of the ERCS (Emergency Response Core Service) since the institution of the relevant Implementation Group in 2005. Currently DPC is participating to the Copernicus User Forum as national expert on the Emergency thematic. DPC is been involved in GMES/Copernicus related initiatives and project as well as space related ones
Impact potential	• C4-5
Actual impact	• C3-4
Areas for improvement	• Limited access to Copernicus core services by the regional and local administrations is the major drawback
Best practice & scaling opportunity	• Strong involvement in the EU Civil Protection mechanism • Good interaction and networking of the MS Civil Protection in the framework of the EC funded initiatives • Participation to the GMES/Copernicus consultation bodies providing requirements that have been used to set up the EMS and are currently included in the recommendation for service tuning and improvement

Reference number	IT.R.15
Initiative name	**CMCC – Euro-Mediterranea Climate Change Centre**
Initiative type	Contact point (C)
Period active	• Since 2005
Frequency	• Permanent
Scale	• National
Indicative budget	• Not publically disclosed
Client / organisational partners	• The Italian Ministry of the Environment, Land and Sea, the Ministry of Education, University and Research, the Ministry for Agricultural and Forestry Policies and the Ministry
Implementing partners	• Same as above
Targeted geography	• European, National and Regional
Target user group	• CMCC's production is addressed to a diverse audience that includes the scientific community, policy decision makers, opinion leaders, and a general public interested in staying abreast on issues related to climate change research and policies.
Website address / contact details	• http://www.cmcc.it/it/
Reference Documents	• http://www.cmcc.it/wp-content/uploads/2015/04/CMCC_Annual-Report-2013.pdf • http://www.cmcc.it/article/costa-concordia-cmcc-participates-in-parbuckling-operations
Description	• ConnectinGEO is a coordination and supporting action with the primary goal is to link existing coordinated Earth Observation networks with science and technology (S&T) communities, the industry sector and the GEOSS and Copernicus stakeholders. • CMCC facing climate change in many ways, with a multidisciplinary approach. First of all, it considers climate change a scientific topic while supporting and fostering research projects such as for example GMES (Global Monitoring for Environment and Security, now Copernicus). Nevertheless, it looks also at climate change as a security issue relevant to economics and politics while promoting debates on human security, planning prevention, mitigation and adaptation strategies or supporting the issue of climate in international politics. • CMCC organize meeting and workshop about Copernicus Programme and Opportunities • CLIPC - CLimate Information Platform for Copernicus will provide access to climate information of direct relevance to a wide variety of users, from scientists to policy makers and private sector decision makers. Information will include data from satellite and in-situ observations, climate datasets and transformed data products to assess indicators for climate change impact
Impact potential	• C4-5
Actual impact	• C4
Areas for improvement	• CMCC is guaranteed thanks R&D projects until the 91% of his budget and 9% of his budget for service contracts (2013 data, latest information): the area for improvement could be ensured by a greater use of Copernicus data, given that it is a R&D company's, is not just a service company.
Best practice & scaling opportunity	• Strong involvement in the Copernicus Programme in CMCC core applications: Climate change on Euro-Mediterranean Area.

Reference number	IT.16
Initiative name	**CNR – National Research Centre (Consiglio Nazionale delle Ricerche)**
Initiative type	Contact point (C)
Period active	• Created on 18.11.1923 and transformed in 1945, it was reorganized in 1999
Frequency	• Permanent
Scale	• National
Indicative budget	• Not publically disclosed
Client / organisational partners	• CNR is distributed all over Italy through a network of institute that have contacts and cooperation with local firms and organisations
Implementing partners	• Same as above
Targeted geography	• International, European, National and Regional
Target user group	• CNR ISAC (Institute of Atmospheric Sciences and Climate), CNR IRPI (Research institute for geo-hydrological protection), CNR IMAA (Institute of Methodologies for Environmental Research), CNR IREA (Institute for Electromagnetic Sensing of the Environment) for Copernicus Regional Contact Offices (RCO), CNR ISMAR (Institute of Marine Sciences)
Website address / contact details	• www.cnr.it; http://www.isac.cnr.it, Dr. Rosalia Santoleri; http://www.irpi.cnr.it, Dr. Fausto Guzzetti; http://www.imaa.cnr.it, Dr. Vincenzo Lapenna, http://www.irea.cnr.it, Dr. Paola Carrara; http://www.ismar.cnr.it/, Dr.S.Carniel
Reference Documents	• Same as above
Description	• CNR IREA (Institute for Electromagnetic Sensing of the Environment) is the Copernicus Regional Contact Offices (RCO) • The other CNR Institute, see Target User Group, participate with scientific papers in several international European and national conferences; it is not easy detailing their contribution to the community Copernicus users, which is definitely still very high
Impact potential	• C5
Actual impact	• C4-5
Areas for improvement	• CNR is guaranteed thanks R&D projects until the 60% of his budget and 30% of his budget for the market): the area for improvement could be ensured by a greater use of Copernicus data in in both areas.
Best practice & scaling opportunity	• Strong involvement in the Copernicus Programme in CNR core activities: Maritime, Landfill, Environmental and Space Network.

Reference number	IT.R.17
Initiative name	**Regional Agency for Environment – Emilia Romagna (ARPA – Emilia Romagna)**
Initiative type	Contact point (C)
Period active	• Since 1996 (L.R. 44/95)
Frequency	• Permanent
Scale	• Mainly Regional
Indicative budget	• Not publically disclosed
Client / organisational partners	• Emilia Romagna Region, Metropolitan city of Bologna, 8 provinces, 340 municipalities, 21 Mountain Community, 8 Public Local Health (AUSL), different associations.
Implementing partners	• Same as above
Targeted geography	• European, National, regional
Target user group	• General (Earth Observation) • Copernicus service: all • User categories: General Public
Website address / contact details	• http://www.arpa.emr.it
Reference Documents	
Description	• Italian web site with all the environmental information of the Emilia Romagna region, many of which acquired using EO data and techniques. Links to external information sources. • Hydro-meteorological and Climate services: agreement with CNR –ISAC (09.09.2015), The agreement concerning collaborative activities between ARPA-ER and CNR-ISAC about the hydro-meteorological and climate services and take in consideration also the opportunities of the Copernicus Programme. Reference person: Dr. Marco Deserti • ARPA-ER three-year program of activities (2015-2017), provides for the use of the opportunities given by Copernicus Programme for the atmosphere and for the modelling of air quality (the latter to interface with their system NINFA with the Copernicus applications). Reference person: Dr. Cinzia Callegari (Assigned to - Unit Secretariat General Manager)
Impact potential	• C4
Actual impact	• C2-3
Areas for improvement	• Reinforcing actions and support the use of the opportunities offered by the Programme Copernicus. The collaborative agreement with CNR-ISAC must be enhanced
Best practice & scaling opportunity	• ARPA-EM, properly guided, could become a better example for best practice: the ARPAs in Italy are 21, and the ARPA-ER is the most efficient and advanced among all

Reference number	IT.18
Initiative name	**Italian Space Agency (ASI), Agenzia Spaziale Italiana**
Initiative type	Contact point (C)
Period active	• Founded in 1988 - present
Frequency	• Permanent
Scale	• National and EU level
Indicative budget	• Not publically disclosed
Client / organisational partners	• Italian institutions requiring remote sensed based services • ESA – European Space Agency as third European contributing country to the overall ESA budget
Implementing partners	• Same as above
Targeted geography	• National
Target user group	• Thematic: all • Copernicus service: all • User categories: National /MS Institutions and Bodies, Regional and Local Public Authorities, Downstream Value-Added Service Providers, Downstream Industry End Users exploiting the CollGS capacities
Website address / contact details	• http://www.asi.it/it
Reference Documents	• http://www.isprambiente.gov.it/files/copernicus/Seminario%20Servizi%20e%20CollGS%20Copernicus%2010%20Giu%2015_ASI.pdf
Description	• Italian and English web site with all the information about his role, initiatives, opportunities to stakeholders, calls, mission and project, events, educational and more • ASI relies on participating entities (consortia of public and private entities) that contribute to the implementation of its mandate • In the framework of the Italian Collaborative Ground Segment, ASI has planned to develop virtual laboratory based on the ESA Thematic Exploitation Platforms (TEP). • Member of the Copernicus Committee • Reference centre for the Civil Protection Service providing satellite based applications, products and services, national Point of Contact vs ESA. Such is the Italian reference for the Copernicus Space Component, including interface to ESA for the development of the Sentinel Core and Collaborative Ground Segment • Key player in the development of the Copernicus downstream services • Supports the institutional and research use of the COSMO-SkyMED constellation
Impact potential	• C5
Actual impact	• C4
Areas for improvement	• More information about Copernicus Programme opportunities
Best practice & scaling opportunity	• Website well set up and organized, easy to use

Reference number	IT.19
Initiative name	**Ministry of Education and Research (MIUR), Ministero dell'istruzione, dell'università e della ricerca**
Initiative type	Contact point (C)
Period active	• Present since 1861
Frequency	• Permanent
Scale	• National
Indicative budget	• Not publically disclosed
Client / organisational partners	• The Ministry of Education, Universities and Research (MIUR), is the ministry of the Italian government for the national education system, the Italian universities and research.
Implementing partners	• National education system, the Italian universities and research
Targeted geography	• National
Target user group	• Thematic: all • Copernicus service: all • User categories: national tender for the use of the Copernicus Program opportunities for all the stakeholders, from large companies and research institutions to individual research grants
Website address / contact details	• http://www.istruzione.it/ • Contact: Dr. Federico Cinquepalmi (MIUR)
Reference Documents	• http://www.istruzione.it/ • http://www.istruzione.it/allegati/2014/Piano_della_performance_2014_2016.pdf
Description	• National tender for the use of the Copernicus Program opportunities for all the stakeholders, from large companies and research institutions to individual research grants • Italian web site with all the information about his role, initiatives, opportunities to stakeholders, calls, mission and project, events, educational and more • Links to external information sources
Impact potential	• C5
Actual impact	• C4
Areas for improvement	• Encourage the joint participation of universities, research organisations and enterprises
Best practice & scaling opportunity	• Promote technology transfer from research to industry • Website well set up and organized, easy to use

Reference number	IT.20
Initiative name	**National Space Strategy**
Initiative type	Network (N)
Period active	• Since 2006
Frequency	• Permanent
Scale	• National
Indicative budget	• Not available
Client / organisational partners	• The Ministry of Economic Development (MISE)
Implementing partners	• Same as above
Targeted geography	• National
Target user group	• Domestic and international markets
Website address / contact details	• http://www.sviluppoeconomico.gov.it • Reference Person: Dr. Antonio Bartoloni (MiSE)
Reference Documents	• http://www.sviluppoeconomico.gov.it
Description	• MiSE incentives are directed to technological innovation, competitiveness and development, so there are no incentives for specific programs such as Copernicus. The companies who want to use the opportunities provided by the Program Copernicus to grow and compete, must respond with projects to the various incentives and support targeted at national enterprises promoted and financed by MISE.
Impact potential	• N3
Actual impact	• N1-2
Areas for improvement	• Greater involvement of MISE in the Copernicus Programme for a better assessment of the receiving projects • Expansion of the network to Copernicus stakeholders
Best practice & scaling opportunity	• Strong involvement in the Copernicus Programme

Reference number	IT.21
Initiative name	**Italian Collaborative Ground Segment**
Initiative type	Data Access (D)
Period active	• Since 06.10.2014 (Agreement ASI-ESA)
Frequency	• Permanent
Scale	• Sentinel user community
Indicative budget	• Not publically disclosed
Client / organisational partners	• The Collaborative Ground Segment is funded by ASI on National funds and supported by ESA through GSC-3 program.
Implementing partners	• Same as above
Targeted geography	• European, National, Regional, Local.
Target user group	• Sentinel user community
Website address / contact details	• www.asi.it, www.esa.it, http://www.isprambiente.gov.it. Reference person: dr. Laura Candela
Reference Documents	• Same as above
Description	• It must ensure access and availability Sentinel data to the national community (institutional, scientific, industrial) through a Mirror archive and a near real-time acquisition and processing. It will become the core of a network structure, including other national centres that use the Copernicus data (products and collaborative cal / val): Thematic Exploitation Platforms & Mission Exploitation Platforms. • It is fundamental to the development of service capabilities national. User Requirement is the COSMO-SkyMed data access • The ITT for the Sentinel Italian Collaborative GS was published January 16, 2015 • ASI is ready to support (limited) also European Community Sentinel
Impact potential	• D5
Actual impact	• D3-4
Areas for improvement	• Finding better/more means of financial support to enhance the quality of results
Best practice & scaling opportunity	• Collaborative GS is very important also in the GS evolution strategy: holds a pivotal role in simple approach to testing and demonstrating many GS federation concepts

Reference number	IT.22
Initiative name	**National Copernicus User Forum**
Initiative type	Networks (N)
Period active	• Since 3/12/2014
Frequency	• Quarterly • Last occurrence: 25/11/2015
Scale	• Number of participants: between 70 and 130, depending from the topic discussed • Number of events: 1 plenary to discuss on each Service and GS and 4-5 thematic workshops each
Indicative budget	• Not disclosed
Client / organisational partners	• ISPRA and Italian Presidency of the Council of the Ministers in collaboration with Forum Representatives on the basis of the handled topic.
Implementing partners	• Same as above
Targeted geography	• National
Target user group	• User Type: National /MS Institutions and Bodies, Research and Academic Organisations, Industry and Enterprises • User categories: public intermediate/end-user, institutions and authorities involved in the environmental monitoring management at national and regional scale • Copernicus Service: All the Services and GS
Website address / contact details	• http://www.isprambiente.gov.it/it/programma-copernicus?set_language=it • Bernardo De Bernardinis – President of the National User Forum • Nico Bonora – Responsible of the organisation of the Forum
Reference Documents	• http://www.isprambiente.gov.it/it/programma-copernicus/eventi/eventi
Description	• The National Copernicus User Forum is a component of the Inter-ministerial "control room" acting for the best development of the national space sector. The aim of the National User Forum is to exchange information and promote activities in the frame of the Copernicus Boundaries, both for Services and Ground Segment • The Forum is composed by Institutional (Both PA and Research), Industrial and Entrepreneurial Representatives, to act so widespread toward their user community
Impact potential	• E/P/N/C 4-5
Actual impact	• E/P/N/C 4-5
Areas for improvement	• Increase the Forum audience toward Industry and Enterprises, in order to improve the capillarity of information maximising the exploitation of Copernicus potential • Contribute to the Identifying of national development sectors to which orient investment and tailor the core services to national/regional/local needs • Improve the communication of the outcomes from the working groups and technical tables where ISPRA is representing Italy, especially toward industry
Best practice & scaling opportunity	• Periodic meetings of the National User Forum proved to be good for information sharing and coordination • Catalogue of Products developed, even partially, by national actors http://193.206.192.213/prodotticopernicus

Reference number	IT.R.23
Initiative name	**Space Week**
Initiative type	Promotional activities (P)
Period active	• From 21/10/2015 to 23/10/2015 (Space week in Rome)
Frequency	• One-off
Scale	• Regional, National
Indicative budget	• Not available
Client / organisational partners	• APRE on behalf of MIUR (Ministry for Education, University and Research), in collaboration with the Italian Space Agency (ASI)
Implementing partners	• Same as above
Targeted geography	• International, European, National, Local
Target user group	• The event was aimed to universities, research centres, industry, SMEs and SME associations, and local administrations with the view of providing new opportunities and competitive advantages for the participants and offering strategic networking opportunities. • Countries (number of participants): Argentina (5), Belgium (7), Brazil (1), Cameroon (1), Canada (6), China (5), Czech Republic (1), Denmark (1), Finland (3), France (10), Germany (16), Greece (5), Ireland (1), Italy (354), Lithuania (2), Malta (3), Mexico (8), Netherlands (5), Portugal (3), Russia (2), Serbia (1), South Africa (13), Spain (9), Sweden (1), Switzerland (1), Turkey (8), United Kingdom (4), United States of America (1)
Website address / contact details	• http://www.copernicus.eu/events/space-week-rome-2015, • https://www.b2match.eu/spaceweek-italy • http://www.apre.it
Reference Documents	• Same as above
Description	Within the context of the European SME Week 2015, APRE on behalf of MIUR (Ministry for Education, University and Research), in collaboration with the Italian Space Agency (ASI), has organizing the "SPACE week in Rome - 2015". The event was hosted by the Italian Space Agency. The 3-day international event included site visit, brokerage event and two different information sessions: international workshop focusing on cooperation opportunities with Third Countries and international information day presenting the SPACE Work Programme 2016/2017, the Copernicus Programme and the GALILEO Programme
Impact potential	• P4-5
Actual impact	• P4-5
Areas for improvement	
Best practice & scaling opportunity	

Reference number	IT.24
Initiative name	**PI Projects - ASI**
Initiative type	Funding instruments (F)
Period active	• Founded in 1988
Frequency	• Permanent
Scale	• National
Indicative budget	• Not publically disclosed
Client / organisational partners	• Scientific and industrial community
Implementing partners	• Same as above
Targeted geography	• Thematic: all • Copernicus service: all • User categories: National /MS Institutions and Bodies, Regional and Local Public Authorities, Downstream Value-Added Service Providers, Downstream Industry End Users exploiting the CollGS capacities
Target user group	• Scientific and industrial community
Website address / contact details	• www.asi.it • http://www.asi.it/en/agency/calls-and-opportunities/calls • Contact: http://www.asi.it/it/contatti
Reference Documents	• Same as above
Description	• Calls for the scientific and industrial community and invitations to tender in Earth Observation area (in example "Call for tenders for technological development projects", "COSMO-SkyMed Constellation: data utilization, Open Call for national and international Scientific Community for Scientific and industrial community", and so on). • Service providers, public authorities, other stakeholders can respond to the ASI invitations to tender to demonstrate as geo-spatial and geo-information products and services today can be effectively based on Remote Sensing and Modelling Systems for applications at regional and national level
Impact potential	• F4-5
Actual impact	• F3-4
Areas for improvement	• Greater support to Community European Sentinel
Best practice & scaling opportunity	• EO multi-platform products, applications and services

Reference number	IT.25
Initiative name	**Cluster Tecnologico Aerospaziale Italiano**
Initiative type	Networks (N)
Period active	• Since 2012
Frequency	• Permanent
Scale	• International, European, National
Indicative budget	• Not publically disclosed
Client / organisational partners	• Distretto Aerospaziale della Campania, Distretto Tecnologico Aerospaziale del Lazio, Distretto Aerospaziale Lombardo, Comitato Distretto Aerospaziale Piemonte, Distretto Aerospaziale Pugliese, Agenzia Spaziale Italiana, Avio Aero, Finmeccanica, AIAD, CNRF
Implementing partners	• Same as above
Targeted geography	• European, National, Regional
Target user group	• See Client/organisational partners
Website address / contact details	• http://www.ctna.it • http://www.ctna.it/ITA/contacts/
Reference Documents	• http://docplayer.it/1299996-Cluster-tecnologico-nazionale-aerospazio.html • http://www.lazio-aerospazio.it/documents/10136/112445/comunicato+Stampa.pdf/69ae86d4-b332-40b1-b768-741a805cbe8e
Description	• CTNA Strategic Plan is aligned and consistent with EU and National aerospace programs. It aims to carry out ACARE (Advisory Council for Aviation Research and Innovation in Europe) and ESA visions at European level, and ACARE Italia and Spin-IT platforms at national level, respectively for aeronautics and space sector • The CTNA activity addresses the following high level strategic goals: the national technological excellences improvement, the research and innovation system expansion, the development of all industrial actors along Aerospace supply chain, the competitiveness increase at national and international scale and the qualitative and quantitative growth of employment • The CTNA is the point of convergence and synthesis of needs and priorities of all different stakeholders in the national aerospace and space system: it is an optimal national network for the promotion of the use of Copernicus products and services
Impact potential	• N2-3
Actual impact	• N1-2
Areas for improvement	• Improve the actual strategic management approach: it is developed starting from World Class Cluster management models and it is organised into four areas: environment, strategic model, operating model and financial model. CTNA defined specific strategic programs to implement over the period 2013-2017 in order to achieve own strategic goals. Strategic programs regard supply chain development, intellectual property valorisation, internationalization, competence development and "brand internationalization and technology marketing" area
Best practice & scaling opportunity	• CTNA is devoted to ensure Italian aerospace industry acts at the highest level in Europe, both in the air transport sector, meeting the challenge of "smart, eco-sustainable and integrated transport system", and in space research requiring to safeguard and develop a competitive space industry aimed to fundamental enabling technologies.

Reference number	IT.26
Initiative name	**AIT – Italian Remote Sensing Association (Associazione Italiana Telerilevamento)**
Initiative type	Networks (N)
Period active	• Since 1986
Frequency	• Permanent
Scale	• National
Indicative budget	• Not disclosed
Client / organisational partners	• Scientifics and privates, AIT national members
Implementing partners	• Same as above
Targeted geography	• Prevalently national, with a large openness to European and International opportunities
Target user group	• Scientifics and privates, AIT national members
Website address / contact details	• http://aitonline.org/ • http://aitonline.org/contatti/
Reference Documents	• Same as above
Description	• The Association has as its primary purpose the development and dissemination of remote sensing in Italy, meaning the body of knowledge of the disciplines that compose it and their applications, with particular regard to the environmental analysis and planning • It represents and serve the interests of scientific and private Italian AIT members concerning remote sensing to institutions, organisations and similar associations operating under national and international communities
Impact potential	• N3-4
Actual impact	• N2-3
Areas for improvement	• Greater involvement on the Copernicus Programme opportunities
Best practice & scaling opportunity	• Already active on the Copernicus Programme opportunities, see http://aitonline.org/?s=copernicus

Reference number	IT.R.27
Initiative name	**Distretto Tecnologico Aerospaziale (DTA) - Lazio**
Initiative type	Networks (N)
Period active	• 2004 - present
Frequency	• Permanent
Scale	• National and regional (Lazio Region)
Indicative budget	• Not publically disclosed
Client / organisational partners	• Approximately 250 companies, 30.000 employees, 5 Billion Euro turnover, 10 Research Centres, 5 Universities, 4 Technological Parks, 3.000 Professors, Researchers and Specialists involved in R&D activities in aerospace fields, is among the leading players in the aerospace and aeronautical market worldwide, counting for approximately 0.8% of the global industry turnover
Implementing partners	• Same as above
Targeted geography	• International, European, National, Regional
Target user group	• See Client/organisational partners
Website address / contact details	• http://www.lazio-aerospazio.it/home • http://www.lazio-aerospazio.it/contatti
Reference Documents	• Same as above
Description	• Italy is the third country in terms of contributions to ESA and, as such, a leading player in the most important European space programmes. For 20 years, thanks to efforts by the Italian Government and local authorities, the aerospace sector has benefited from an intense programme of facilities and financing • In 2004, Regione Lazio, the Ministry of Economics and Finance, and the Ministry of Education, Universities, and Research signed the framework agreement establishing the DTA in the Lazio's regional territory. The programme calls for the implementation of a series of initiatives undertaken by the regional bodies, along with financial institutions, research centres, universities, and hi-tech firms • Regione Lazio entrusted Lazio Innova S.p.A. to coordinate clusters' activities and improve clusters' competitiveness and productivity • To date it hasn't focused on Copernicus as a network
Impact potential	• N3
Actual impact	• N1
Areas for improvement	• Focus on Copernicus
Best practice & scaling opportunity	• Very important and consolidated network in the aerospace field

Reference number	IT.R.28
Initiative name	**Lazio Innova**
Initiative type	Start-up initiatives (S)
Period active	• Since 2013
Frequency	• Permanent
Scale	• National, Regional
Indicative budget	• Not publically disclosed
Client / organisational partners	• Lazio Innova was created from the integration of assets of the following companies: Sviluppo Lazio, Asclepion, Banca Impresa Lazio, Filas and Unionfidi
Implementing partners	• Same as above
Targeted geography	• European, National, Regional
Target user group	• See Client/organisation partners.
Website address / contact details	• http://www.lazioinnova.it • http://www.lazioinnova.it/chi-siamo/contatti/
Reference Documents	• http://www.lazioinnova.it • www.porfesr.lazio.it • www.lazioeuropa.it • http://www.lazioinnova.it/chi-siamo/documentazione/ • http://www.lazioinnova.it/home/retieservizi/cose-spazio-attivo/
Description	• The company operates to the benefit of businesses and local public administration through: · Provision of incentives to apply resources on regional, national and / or European · Information and guidance on the opportunities of European projects · Credit support and guarantees · Interventions in risk capital (venture capital) · Services for internationalization · Promotion of business networks and regional excellence · Services for the creation and development of companies through the "active space" · Microcredit and measures for social inclusion • To date it has not focused on Copernicus as a network
Impact potential	• S3
Actual impact	• S1
Areas for improvement	• Focus on Copernicus
Best practice & scaling opportunity	• Informs and guides its stakeholders on the opportunities of European projects

Reference number	IT.R.29
Initiative name	**Distretto Tecnologico Aerospaziale (DTA) - Puglia**
Initiative type	Networks (N)
Period active	• Since 2009
Frequency	• Permanent
Scale	• National, Regional • Recognized with regional law of the Region Apulia, the Apulian Aerospace District is a system based on trust and cooperation; a modern development tool to design, plan and implement policies and strategies related to a variety of actors: small, medium and large companies, universities and research centres, local and regional institutions
Indicative budget	• Not publically disclosed
Client / organisational partners	• Small, medium and large companies • Universities and research centres • Local and regional institutions
Implementing partners	• Same as above
Targeted geography	• European, National, Regional
Target user group	• See Client/organisation partners
Website address / contact details	• http://www.apulianaerospace.it/ • http://www.dtascarl.it/ • Contact: info@apulianaerospace.it
Reference Documents	• http://www.apulianaerospace.it/ • http://www.dtascarl.it/
Description	• DTA Puglia works for the competitiveness of the aerospace products of Puglia Region and the recognition of skills and specializations of research and training in the whole national and international scene • It implements policies of integration and cooperation between large companies and SMEs, promoting joint participation in regional, national and European support to investments and projects. • It updates its industrial strategy, scientific and training with the support of public institutions • To date it has not focused on Copernicus as a network
Impact potential	• N3
Actual impact	• N1
Areas for improvement	• Focus on Copernicus
Best practice & scaling opportunity	• Represents an important consolidated network in the aerospace field • Informs and guides its stakeholders on the opportunities of European projects

Reference number	IT.R.30
Initiative name	**Distretto Tecnologico Aerospaziale (DTA) - Campania**
Initiative type	Networks (N)
Period active	• Since 2009
Frequency	• Permanent
Scale	• National, Regional
Indicative budget	• Not publically disclosed
Client / organisational partners	• Small, medium and large companies • Universities and research centres • Local and regional institutions
Implementing partners	• Same as above
Targeted geography	• European, National, Regional
Target user group	• Research institutions, Companies
Website address / contact details	• http://www.aerospaziocampania.it • Contact: http://www.aerospaziocampania.it/contatti.html
Reference Documents	• http://www.aerospaziocampania.it
Description	• It works to boost entrepreneurship and innovation, with a focus on the aerospace industry • Platform around which to build a national and international networking activities, by making available to public and private operators the necessary tools for communication and information exchange • To date, it has not focused on Copernicus as a network
Impact potential	• N3
Actual impact	• N1
Areas for improvement	• More focus on satellite applications such as Copernicus
Best practice & scaling opportunity	• Informs and guides its stakeholders on the opportunities of European projects • Consolidate platform around which to build a national and international networking activities

Reference number	IT.R.31
Initiative name	**Lombardia Aerospace Cluster**
Initiative type	Networks (N)
Period active	• Since 2009
Frequency	• Permanent
Scale	• Regional, National
Indicative budget	• Not publically disclosed
Client / organisational partners	• Small, medium and large companies • Universities and research centres • Local and regional institutions
Implementing partners	• Same as above
Targeted geography	• European, national, regional
Target user group	• See Client/organisational partners
Website address / contact details	• http://www.aerospacelombardia.it/aerospace/cms2.nsf/fe_home_new?Readform • Contacts: http://www.aerospacelombardia.it/aerospace/cms2.nsf/fe_home_new?Readform
Reference Documents	• http://www.aerospacelombardia.it/aerospace/cms2.nsf/fe_home_new?Readform • http://www.aerospacelombardia.it/aerospace/cms2.nsf/fe_home_new?Readform
Description	• LOMBARDIA AEROSPACE CLUSTER: an integrated system of companies, technological expertise and advanced scientific capabilities in the aerospace industry. • One of the birthplaces of Italian flight, able to integrate many skills from the production of fixed to rotary wings, satellite avionics, the most qualified materials and equipment systems for flight • Lombardia Aerospace Cluster has adopted a governance model able to make the Association operative designing and promoting concrete initiatives • In this way, the Cluster ensures balanced working, free ideas confrontation and an enlarged interests representation among all of its members.
Impact potential	• N4
Actual impact	• N2-3
Areas for improvement	• Greater involvement in the Copernicus Programme opportunities
Best practice & scaling opportunity	• Research, expertise, know-how

Reference number	IT.32
Initiative name	**BIC Italia Net**
Initiative type	Start-up initiatives (S)
Period active	• Since 1997
Frequency	• Permanent
Scale	• National, regional, local
Indicative budget	• Not publically disclosed
Client / organisational partners	• SMEs
Implementing partners	• Same as above
Targeted geography	• National, regional, local
Target user group	• SMEs
Website address / contact details	• http://www.bic-italia.net
Reference Documents	• http://www.bic-italia.net/documento.asp?sotto=53
Description	• The mission of a BIC is to ensure that public measures to assist SMEs are implemented with the maximum efficiency • To this end, BICs offer a custom-made integrated system of services, from the identification and selection of projects and entrepreneurs, to the strategic guidance and support services for innovative projects • In this way, the BICs help to create and develop local innovative "business communities" • Services provided to firms: - evaluation of innovative projects - strategic advice and assistance in implementing business projects - facilitating access to finance and partnership - helping firms to internationalise their business • It also helps with placing start-up companies in incubators • To date it has not focused on the opportunities of Copernicus Programme, but the sector seems ready for this purpose
Impact potential	• S2-3
Actual impact	• S1
Areas for improvement	• Improve Earth Observation applications and promotion for EO-related industry through the opportunities offered by the Copernicus Program
Best practice & scaling opportunity	• BICs adopt a proactive bottom up approach, services being tailored to match the clients' demand, while they act as interface between demand and supply of innovation services

Reference number	IT.R.33
Initiative name	**COSMO-SkyMed Hackathon (ASI/BIC Lazio)**
Initiative type	Users feedback, training and education (U)
Period active	• 28-29.11.2015 (Rome)
Frequency	• One-off
Scale	• Competition of six teams
Indicative budget	• Unknown
Client / organisational partners	• Promoted by ASI, e-GEOS is BIC Lazio – Companies of the Lazio Region, in collaboration with Telespazio and Thales Alenia Space Italy
Implementing partners	• Same as above
Targeted geography	• European, National
Target user group	• Students, researchers, individual participants
Website address / contact details	• www.asi.it • http://www.asi.it/it/eventi/workshop/cosmosmhack • Contact: cosmosmhack@asi.it
Reference Documents	• www.asi.it • http://www.asi.it/it/eventi/workshop/cosmosmhack • http://www.asi.it/sites/default/files/attach/evento/regolamento_cosmosmhack.pdf
Description	• "#COSMOsmHack" was the first hackathon dedicated to the development of innovative applications based on data from the COSMO-SkyMed satellite constellation • The initiative was a veritable "coding marathon", but it seems to have focused essentially on COSMO-SkyMed data. It is not known if the developers have integrated their applications also with Copernicus data, following the agreement between the Italian Space Agency and ISPRA signed on March 2015 about the use of COSMO-SkyMed and Copernicus data.
Impact potential	• U3
Actual impact	• U1-2
Areas for improvement	• Greater use of the opportunities of the Copernicus Programme
Best practice & scaling opportunity	• The competition was aimed at developing and promoting a "Proof of Concept" for innovative applications, to promote and encourage the development of new businesses in the field of research and innovation, supporting the creation of start-ups capable of building applications that can be used by institutions, businesses, and consumers

Reference number	IT.34
Initiative name	**Programma Operativo Nazionale (PON), Ricerca e Competitività (UE, MIUR, MISE)**
Initiative type	Funding instruments (F)
Period active	• National Operational Programme (NOP) 2007-2013 (the last one) • National Operational Programme (NOP) 2014-2020, current programming
Frequency	• Permanent
Scale	• 4 Italian regions within the "Convergence" Objective (Puglia, Calabria, Sicily and Campania)
Indicative budget	• More than €6 billion EUR for 2007-2013 • More than €7 billion EUR for 2014-2020
Client / organisational partners	• European Regional Development Fund (ERDF) and the European Social Fund (ESF), Italian Ministry of Education, The Ministry of Economic Development (MISE)
Implementing partners	• Same as above
Targeted geography	• National for 4 regions within the "Convergence" Objective (Puglia, Calabria, Sicily and Campania)
Target user group	• Industrial Research, High Technology Districts and Public-Private Laboratories, Structural Improvement, Smart Cities and Communities, Social innovation, Guarantee Fund (Access to credit), Development Contracts, Technological Innovation, Innovative investments, Business creation, Internships, Improvement of industry
Website address / contact details	• http://www.ponrec.it/ • Contact: http://www.ponrec.it/informazioni/contatti/
Reference Documents	• http://www.ponrec.it/
Description	• Italy and the European Union have agreed that a significant part of European Structural Funds should be invested in research and innovation in the four regions within the "Convergence" Objective (Puglia, Calabria, Sicily and Campania). The objective is to transform these regions into drivers of social and economic development • The Programme therefore includes several measures, some administered by MIUR and some by MiSE. Specific measures have also been included in the Cohesion Action Plan (CAP), which was developed by Italy in 2012. The scope of these measures is to adapt some interventions coherently and functionally to the new social needs that have arisen from the present economic crisis. • We do not know (but it is not ruled out) if the measures concerned and relate to activities or projects or other including Copernicus, previously known as GMES (Global Monitoring for Environment and Security), the European Programme for the establishment of a European capacity for Earth Observation.
Impact potential	• F3-4
Actual impact	• F1-2
Areas for improvement	• Greater use of the opportunities of the Copernicus Programme
Best practice & scaling opportunity	• The NOP for R&C finances projects for scientific research, technological development, industrial competitiveness and innovation. Its total budget exceeds €6 billion, 50% of which (€3.1 billion) is co-funded by the European Union through the European Regional Development Fund (ERDF)

Reference number	IT.35
Initiative name	**Piano di Azione e Coesione (PAC) (UE, MIUR, MISE)**
Initiative type	Funding instruments (F)
Period active	• 2011 (the last one) for Structural Funds 2007-2013
Frequency	• Permanent
Scale	• Regional (Southern Italy)
Indicative budget	• 12.1 billion euro
Client / organisational partners	• European authorities, the Italian Government and the national and regional administrations
Implementing partners	• Same as above
Targeted geography	• Regional, local
Target user group	• The investments defined are concentrated in four priority areas of national strategic interest: education, the digital agenda, employment, railway infrastructures
Website address / contact details	• http://www.ponrec.it DG for the Coordination and Development of Research - Office VII Address: Piazza John Kennedy, 20 - 00144 Rome Reference person: Fabrizio Cobis e-mail: sespar.upoc@miur.it
Reference Documents	• N/A
Description	• The Cohesion Action Plan, prepared in November del 2011, was created in order to overcome the delays which, five years from the start of the operational phase of planning for 2007-2013, emerged in the use of the Structural Funds, thus responding to requests for intervention by the European Union • In 2010, with the adoption of the National Plan for the South, an attempt had been made to speed up the implementation of the Programmes, strengthened by CIPE Resolution No. 1/2011 identifying a path for the reprogramming of the resources of the Operational Programmes targeting the under-utilised areas, and for the definition of commitment targets and certified expenditure • We do not know (but it is not ruled out) if the measures concerned and relate to activities or projects or other including Copernicus, previously known as GMES: anyway it is important for the Copernicus Programme the task of PAC to reprogramming of the resources of the Operational Programmes
Impact potential	• F3-4
Actual impact	• F1-2
Areas for improvement	• Greater use of the Copernicus Programme opportunities
Best practice & scaling opportunity	• Reprogramming of the resources of the Operational Programmes targeting the under-utilised areas

Reference number	IT.R.36
Initiative name	**Associazione per le Imprese delle Attività Spaziali (AIPAS) - Puglia**
Initiative type	Networks (N)
Period active	• Permanent
Frequency	• Since 1998
Scale	• National, Regional. AIPAS is made up of about 31 members, including 2 Consortia, thus representing indirectly about 50 companies.
Indicative budget	• Not publically disclosed
Client / organisational partners	• Small, medium and large companies (SMEs) • 2 Consortia
Implementing partners	• Same as above
Targeted geography	• European, National, Regional
Target user group	• SMEs in the aerospace field
Website address / contact details	• http://www.aipas.it • Contact: info@aipas.it, silvia.ciccarelli@aipas.it, Dr. Silvia Ciccarelli
Reference Documents	• http://www.aipas.it/aipas_sito/materiali/Docs/AIPAS_PositionPaper_Copernicus.pdf
Description	• AIPAS considers very important the development and the implementation of the Copernicus program. As a result, in fact, the transformation of Copernicus in an operational program, AIPAS expects a strong impact on both companies operating in mid-stream (satellite operators) and downstream (value adding), sectors referred to in the regulation of Copernicus
Impact potential	• N4
Actual impact	• N2-3
Areas for improvement	
Best practice & scaling opportunity	

Reference number	IT.37
Initiative name	**Associazione per i Servizi, le Applicazioni e le Tecnologie ICT per lo Spazio (ASAS)**
Initiative type	Networks (N)
Period active	• Permanent
Frequency	• Since 2004
Scale	• National, Regional
Indicative budget	• Not publically disclosed
Client / organisational partners	• Large, Medium and Small Enterprises, main players and leaders in Earth Observation, Telecommunications, Navigation, Integrated Applications, Security
Implementing partners	• Same as above
Targeted geography	• European, National, Regional
Target user group	• Existing members and other companies in the ICT space application field
Website address / contact details	• http://www.asaspazio.it • Contact: http://www.asaspazio.it/contatti/
Reference Documents	• N/A
Description	• ASAS main goal is to promote the use of Space based Services and Applications, transferring "from Space to Earth" technological innovation improving the citizen's quality of life. Space-based Services and Applications exploiting the Space infrastructures for terrestrial purposes are key connections to the market and a basic element for the growth of the whole Space sector business • Applications and services are, according to ASAS, key links between the most "commercial" space activities (satellites and platforms) with their associated ground segment and the users and the market. These activities hold a significant growth potential for development, so far not sufficiently exploited, which could contribute significantly to the technological innovation of the CountryASAS participates in Copernicus User Forum
Impact potential	• N4
Actual impact	• N2-3
Areas for improvement	
Best practice & scaling opportunity	

Reference number	IT.38
Initiative name	**Associazione per le Informazioni Territoriali ed Ambietali (ASITA)**
Initiative type	Networks (N)
Period active	• Permanent
Frequency	• 1997
Scale	• National, Regional
Indicative budget	• Not publically disclosed
Client / organisational partners	• Researchers, professionals, teachers, professionals, public and private institutions and companies operating in the fields of acquisition, management and representation of spatial and environmental data
Implementing partners	• Same as above
Targeted geography	• National, Regional
Target user group	• Researchers, professionals, teachers, professionals, public and private institutions and companies operating in the fields of acquisition, management and representation of spatial and environmental data
Website address / contact details	• http://www.asita.it/ • Contact: http://www.asita.it/contatti/
Reference Documents	• http://www.asita.it/
Description	In order of foundation, the four ASITA founding members are: - SIFET - Italian Society of Surveying and Photogrammetry, representative for Italy of ISPRS (International Society for Photogrammetry and Remote Sensing) - AIC - Italian Association of Cartography representative for Italy ICA (International Association of Cartography) - AIT - Italian Association of Remote Sensing, since 1996 Associate Member of ISPRS - AM / FM / GIS Italy - Automated Mapping / Facilities Management / Geographic Information Systems / Italy, representative for Italy to EUROGI (European Umbrella for Geographic Information) The above-mentioned associations are no profit organisation, and they have more than 2,700 members in Italy, distributed in research (University, CNR, ENEA), in productive, private and public companies, public administrations (Ministries, Regions, Provinces, Municipalities) and services provider
Impact potential	• N4
Actual impact	• N2-3
Areas for improvement	
Best practice & scaling opportunity	

Reference number	IT.39
Initiative name	**Sistema Nazionale Protezione dell'Ambiente (SNPA)**
Initiative type	Networks (N)
Period active	• Permanent
Frequency	• Since 2008
Scale	• National, Regional
Indicative budget	• Not publically disclosed
Client / organisational partners	• Network known as National System for Environmental Protection, which is made up of 21 Territorial Environmental Protection Agencies (ARPA / APPA) and ISPRA
Implementing partners	• Same as above
Targeted geography	• National, Regional
Target user group	• Network known as National System for Environmental Protection, which is made up of 21 Territorial Environmental Protection Agencies (ARPA / APPA) and ISPRA
Website address / contact details	• http://www.isprambiente.gov.it • Contact: http://www.isprambiente.gov.it/it/servizi-del-sito/contatti
Reference Documents	• http://www.isprambiente.gov.it • http://admin.isprambiente.it/files/snpa/ProgrammaTriennale20142016SNPA.pdf
Description	• Was involved in The Copernicus National Workshop was held on 27 June 2014 in Rome, with all the subjects operating in the inter-ministerial coordination and as a result of the inter-ministerial meeting of 15 May 2014, which aimed at sharing information about the ongoing and planned activities carried out in the 3 Copernicus discussion forums (Copernicus Committee, Members Forum and Security Council). The event was meant to draw the national and Pan-European framework on the development and the implementation of the European Earth Observation program Copernicus and related services, with a particular focus on the users' needs, both intermediate and final, institutional and private. The aim was also to encourage a domestic demand for the services offered by the Program
Impact potential	• N4
Actual impact	• N2-3
Areas for improvement	• Greater focus on the Copernicus programme opportunities
Best practice & scaling opportunity	• Very strong consolidated national federate system

Reference number	IT.40
Initiative name	**AIAD - Federazione Aziende Italiane per l'Aerospazio, la Difesa e la Sicurezza – Italian Federated Enterprises for Aerospace, Defence and Security**
Initiative type	Network (N), Contact Point (C), Promotional activities (P)
Period active	• Since 1947
Frequency	• Periodical meeting
Scale	• National
Indicative budget	• Not available
Client / organisational partners	• Institutional • Italian
Implementing partners	• The Network
Targeted geography	• Fixed: national, regional, local
Target user group	• User Type: Industry and SME intermediate/end-user, • Copernicus Service: CSS and CGS
Website address / contact details	• http://www.aiad.it • Contact: aiad@aiad.it
Reference Documents	• http://www.aiad.it/it/aiad.wp
Description	• To date it has not focused on Copernicus as a network • To date it has not organized promotional activities on Copernicus Programme
Impact potential	• P2-3 N2-3 – C2-3
Actual impact	• P1-2 N1-2 – C1-2
Areas for improvement	• Being the Contact Point for several initiatives and the Industrial representative in the Copernicus National User Forum, it is possible to: - improve Information activities toward the Regional Institutional level (Institution & Research) about EU assets to better address national developments policies - foster communication toward local level SME to boost peripheral developments - contribute to the co-fund catalysis for the national space sector development • The network could focus more on the Copernicus Programme
Best practice & scaling opportunity	• Periodical meetings and thematic events • Good interaction with central Institution

Reference number	IT.41
Initiative name	**LTER Italy - Long-Term Ecosystem Research**
Initiative type	Network (N), Contact Point (C), Promotional activities (P)
Period active	• Since 1990
Frequency	• Periodical meeting
Scale	• National - http://www.lteritalia.it/it/partners
Indicative budget	• Not available
Client / organisational partners	• Research • Italian
Implementing partners	• The System itself
Targeted geography	• Fixed: national, regional, local
Target user group	• User Type: Researchers and Institutional intermediate/end-user dealing with ecological services • Copernicus Service: CMEMS, LAND, C3S
Website address / contact details	• http://www.lteritalia.it • Contact: http://www.lteritalia.it/it/contatto
Reference Documents	• http://www.lteritalia.it/sites/default/files/upload/download/LaReteItalianaLTER_ebook.pdf
Description	• The main objectives are to identify drivers of ecosystem change across European environmental and economic gradients and explore relations between these drivers, responses and developmental challenges under the framework of a common research agenda, and referring to harmonised parameters and methods; to develop criteria for LTER • To date it has not focused on Copernicus as a network • To date it has not organised promotional activities on Copernicus Programme
Impact potential	• N/P/C 2-3
Actual impact	• N/P/C 1
Areas for improvement	• Communication with governmental Bodies, National and Regional Institution could be improved. Best interaction with SME • The network could focus more on the Copernicus Programme
Best practice & scaling opportunity	• Periodical meetings and thematic events reaching a wide community (events are listed here http://www.lteritalia.it/en/eventi?order=field_event_when&sort=asc)

Reference number	IT.42
Initiative name	**ANCI – National Association of Italian Municipality**
Initiative type	Network (N), Contact Point (C)
Period active	• Since 1901
Frequency	• Periodical meeting
Scale	• National
Indicative budget	• Not available
Client / organisational partners	• Local administration • Italian national administration • EU bodies
Implementing partners	• Municipality
Targeted geography	• Fixed: local level
Target user group	• User Type: Institutional end-user
Website address / contact details	• http://www.anci.it/ • Contact: http://www.anci.it/index.cfm?layout=contattaci • President: Piero Fassino
Reference Documents	• http://www.anci.it/index.cfm?layout=sezione&IdSez=2553
Description	• Promotes studies and research on issues that affect municipalities and metropolitan cities, steering its own capacity to anticipate trends, changes and new critical situations in the public sector, facilitates initiatives to disseminate knowledge of institutions, to improve civic education and to encourage the participation of citizens in municipal life and encourages and co-ordinates the activities of ANCI members in the fields of international relations and co-operation • To date it has not focused on Copernicus as a network or Contact Point
Impact potential	• N/C 2-3
Actual impact	• N/C 1
Areas for improvement	• Raising awareness about Copernicus potential in the field of Urban and territorial planning and management. • Interaction with SME to exploit Copernicus downstream potential at local/peripheral level • The network should be directed to the Copernicus Programme; the same applies as Contact Point
Best practice & scaling opportunity	• ANCI with its network representing over 90% of the Italian population

Reference number	IT.R.43
Initiative name	**Satellite Applications for business events - L'altimetria nell'Infrastruttura dati Territoriali (IDT) (The elevation in the Spatial Data Infrastructure (SDI)) - Meeting of European students on spatial technologies (University of Padova)**
Initiative type	Events (E)
Period active	• Since 2015
Frequency	• Yearly (TBD)
Scale	• 100 participants
Indicative budget	• Not disclosed
Client / organisational partners	• CISAS Padova, ASI, Municipality of Padova, Veneto Region, University of Padova, Space Generation Advisory Group
Implementing partners	• CISAS Padova, ASI, Municipality of Padova, Veneto Region, University of Padova, Space Generation Advisory Group
Targeted geography	• Veneto, Northern Italy
Target user group	• Local and Regional authorities, Downstream Industry end users, Downstream Industry providers
Website address / contact details	http://ssasymposium.org/ http://cisas.unipd.it/_oldcisas/Mars_esplora.htm
Reference Documents	
Description	Satellite Applications for business events – 1st Symposium On Space Education Activities: The 1st Symposium on Space Educational Activities aims to provide a comprehensive overview of space-related activities conducted by university student teams and young professional teams from different countries. Presentations will focus on various classes of experiment platforms such as CubeSats (e.g. QB50 and the Fly your Thesis! programme), sounding rockets and balloons (e.g. REXUS/BEXUS programme), drop towers (e.g. Drop your Thesis! programme), centrifuges (e.g. Spin your Thesis! programme), etc. Meeting of European students on spatial technologies (University of Padova) with the participation of Samantha Cristoforetti talking to the students of her experience during the stay in the IIS
Impact potential	• E5
Actual impact	• E5
Areas for improvement	
Best practice & scaling opportunity	

Reference number	IT.44
Initiative name	**AMFM GIS Italia**
Initiative type	Network (N)
Period active	• Since 1990
Frequency	• Permanent
Scale	• National
Indicative budget	• Not disclosed
Client / organisational partners	• ASITA (Federation of Scientific Associations for Territorial and Environmental Information) • EUROGI (European Umbrella Organisation for Geographic Information) • GISIG (Geographical Information Systems International Group) • LABSITA (Laboratory for Environmental and Geographic Information Systems)
Implementing partners	• Same as above
Targeted geography	• National level
Target user group	• Government agencies, private companies and the world of academia and research
Website address / contact details	http://www.amfm.it/
Reference Documents	

Description	• Goal: creation of open and extensible software interfaces for Geographic Information and Geographic Information Systems.
	• Has 6 working groups:
	  • 3D GIS
	  • Cadastre
	  • GIS and Technological Networks
	  • Security and Defense
	  • European Union
	  • Standard

Impact potential	• N5
Actual impact	• N5
Areas for improvement	
Best practice & scaling opportunity	• Strong focus on GIS

5.18 Latvia

Reference number	LV.01
Initiative name	**Study "Space Downstream Services in Latvia"**
Initiative type	Promotional activities (P)
Period active	• 2013
Frequency	• One-off
Scale	• N/A
Indicative budget	• N/A
Client / organisational partners	• Ministry of Education and Science of the Republic of Latvia • (www.izm.gov.lv)
Implementing partners	• Report by Invent Baltics Ltd (Consultancy) • http://www.invent.ee/en
Targeted geography	• National (focused on Latvia)
Target user group	• Addresses intermediate/end-user but also public/private user • Addresses Copernicus Services in general, across industry sectors
Website address / contact details	http://www.vatp.lv/sites/default/files/latvian_report_-_downstream_services_-_final.pdf Contact details: Silver Toomla, Invent Baltics Ltd Email: silver.toomla@invent.ee Tel.: +3725171781
Reference Documents	
Description	In the context of updating its space strategy (Latvian Space Technology Development Strategy 2013-2018) the Latvian ministry of Education and Science commissioned a study on the SPACE DOWNSTREAM SERVICES IN LATVIA. In order to address the most acute shortcomings in the space downstream segment and to make best use of existing and emerging opportunities related to two European flagship programmes – Copernicus (formerly GMES1) and Galileo – Invent Baltics Ltd was selected to conduct a background analysis with an objective to: • map the space downstream services currently used/provided by the public sector in Latvia; • assess the potential future usage of space downstream services in the public sector in Latvia; • identify potential benefits from Copernicus and Galileo to Latvia; • identify factors hindering/fostering the take-up of space-related services in Latvian public sector. The study/report had a special focus on the supply and demand side in Latvia that is linked to European Copernicus/Galileo downstream sector.
Impact potential	• P3
Actual impact	• P3
Areas for improvement	
Best practice & scaling opportunity	

Reference number	LV.02
Initiative name	**Website: "Copernicus* user training – materials and informative events"**
Initiative type	User feedback, training & education (U)
Period active	• 2012-2015 until current (Information prepared within "Space Technologies and Services Cluster Development 2012-2015" project. The project No. KAP-2.3.2.3.0/12/01/015, Contract No. L-KAP-12-0006,
Frequency	• 2012 – still active
Scale	• No information
Indicative budget	• No information
Client / organisational partners	• European Commission/User-Uptake
Implementing partners	• Foundation "Ventspils High Technology Park" (VHTP)
Targeted geography	• National (in English so also accessible for non-Latvian User)
Target user group	• General
Website address / contact details	http://www.vatp.lv/en/copernicus-user-training-materials-and-informative-events
Reference Documents	
Description	For raising awareness of and preparing Copernicus satellite service users, website with study as well information on training events.
Impact potential	• U4
Actual impact	• U4
Areas for improvement	
Best practice & scaling opportunity	• Provide a repository that enables EU-funded User Uptake material to remain available in local language after the organisation of national UU event.

Reference number	LV.03
Initiative name	**Involvement in the MyOcean network**
Initiative type	User feedback, training & education (U)
Period active	• 2009-2011
Frequency	• N/A
Scale	• N/A
Indicative budget	• 13 523 LVL, 5 119 LVL and 5 257 LVL
Client / organisational partners	• European Commission
Implementing partners	• University of Latvia
Targeted geography	• National Latvia
Target user group	• University of Latvia (UL) is a regional intermediate user of marine core services (MCS) aimed at collective provision of user requirement definitions (URD) and user assessment reports (UAR); • The Marine Core service as such directly is aimed at intermediate users. The Latvian representative in the MyOcean consortium stated that the access to the core services will facilitate the development of now-cast and forecast products and appearance of such products in the formats suitable for public administration and society. To achieve it, University of Latvia works on development of such tailored downstream products with Latvian Naval Forces, Latvian Air Force and other military end-users. Eventually, it will lead to improved safety, better marine spatial planning, enhanced forecasts, decision support tools, better accessibility of information.
Website address / contact details	Website: www.myocean.eu Uldis Bethers, Faculty of Physics and Mathematics at University of Latvia (email: uldis.bethers@lu.lv)
Reference Documents	
Description	The University of Latvia was funded by European Commission respectively, to implement the project MyOcean (development and pre-operational validation of upgraded Copernicus Marine Core Services and capabilities).
Impact potential	• U3-4
Actual impact	• U3-4
Areas for improvement	
Best practice & scaling opportunity	

5.19 Lithuania

Reference number	LT.01
Initiative name	**Space Event @ Vilnius Innovation Forum 2015**
Initiative type	Event (E)
Period active	• Since 2013 • Last edition in 3-4 September 2015
Frequency	• The Vilnius Innovation Forum takes place every two years
Scale	• International / 500 participants
Indicative budget	• N/A
Client / organisational partners	• Organizers: Minister of Economy of the Republic of Lithuania, Agency for Science, Innovation and Technology in Lithuania, EU-Structural Assistance
Implementing partners	• Agency for Science, Innovation and Technology (MITA)
Targeted geography	• International
Target user group	• Various, delegates interested in innovation topics
Website address / contact details	http://innovationdrift.com/
Reference Documents	http://innovationdrift.com/programme/
Description	Two-day event with more than 40 presenters discussed the future of business and technology. The high-level meeting in the Baltics aimed at bringing together entrepreneurs, business and public policy decision makers, scientists and researchers to discuss the state of innovation in Europe and beyond. The sessions focused on future business and start-ups, intellectual property, drones, space economy, bio economics, arts and other creative industries. A special full-day session was dedicated to space economy. Apart from topics such as the GNSS opportunity, a talk was held by Simon Jutz of ESA on Copernicus.
Impact potential	• E2-3
Actual impact	• E2-3
Areas for improvement	
Best practice & scaling opportunity	• Space as a topic on innovation conferences creating cross-fertilisation with other industries, similarly space applications was a thematic at the Lift Conference in Switzerland

5.20 Luxembourg

Reference number	LU.01
Initiative name	**Luxembourg Earth Observation Day**
Initiative type	Events (E), Promotional activity (P)
Period active	• 1st: 19 Nov. 2008 • 2nd: 23 October 2009, Castle of Bourglinster • 3rd: 16 March 2012
Frequency	• A repetitive event on irregular basis.
Scale	• 1st: Not available • 2nd: Not available • 3rd: around 80 scientists and manufacturers
Indicative budget	• Not available, funded by the National Research Fund
Client / organisational partners	• Environment and Agro-biotechnologies department from the CRP Gabriel Lippmann
Implementing partners	• Same as above
Targeted geography	• The event is organised locally in Luxembourg, but dedicated to 'Grande Région' regions from Luxembourg, Belgium and France
Target user group	• User categories: public and private sector, scientists and manufacturers (intermediate/end-user, public/private) • general EO
Website address / contact details	http://www.fnr.lu/en/news-events/events/2nd-luxembourg-earth-observation-day
Reference Documents	Only programme for 2nd meeting is available: http://www.forestclim.eu/index.php?id=21&no_cache=1&tx_ttnews[tt_news]=39 Example of participant presentation/poster: http://www.eurosense.com/documents/news-archive/eo_day.xml?lang=en-gb
Description	• The event was a one-day regional conference which intended to increase the awareness among users and service providers (…) about the potential that space technologies offer in the domain of environmental monitoring and management. • The conference intended to increase the awareness among users and service providers within the 'Grande Région' of the potential that space technologies offer in the domain of environmental monitoring. Private companies in the 'Grande Région' were also given the opportunity to present their activities in related fields. Every year new topics related to remote sensing are selected by the international scientific committee.
Impact potential	• E4, P4
Actual impact	• E3, P3
Areas for improvement	• The initiative seems not to be continued after 2012 and its sustainability is unclear • Archival events websites and materials are not available • Copernicus direct link could be emphasized
Best practice & scaling opportunity	• Idea applicable in other regions (similar to GIS days) and is a good opportunity to bring the EO/Copernicus community and users to inform about the latest developments and products

Reference number	LU.02
Initiative name	**Luxembourg Space Cluster**
Initiative type	Networks (N)
Period active	• Start date not available
Frequency	• On-going
Scale	• The membership is open to all companies, public research organisations and other entities established in Luxembourg that are involved in space technologies. But the list of members has not been found.
Indicative budget	• Not available, funded by the National Research Fund
Client / organisational partners	• Luxinnovation G.I.E, the National Agency for Innovation and Research Address: 5, avenue des Hauts Fourneaux L-4362 Esch-sur-Alzette Phone: +352 43 62 63 - 1 Fax: +352 43 81 20
Implementing partners	• Same as above
Targeted geography	• Luxembourg
Target user group	• User categories: public and private sector, scientists and manufacturers. Membership of the cluster is open to companies, public research organisations and other entities established in Luxembourg that are involved in space technologies. • Not specific Copernicus theme: general EO
Website address / contact details	http://www.spacecluster.lu/
Reference Documents	N/A
Description	The Luxembourg Space Cluster brings together renowned and highly specialised companies and public research organisations in order to develop specific technology topics as well as collaborative RDI projects. The Luxembourg Space Cluster focuses on the following thematic areas: Space telecommunications, Global Navigation Satellite System and Location based Applications, Earth Observation, Maritime security and safety, Space related technologies. The cluster's objectives are: • Boost the development of the space sector in Luxembourg • Increase and encourage the uptake of new technologies • Promote the technological capabilities of Luxembourg companies and public research organisations, thereby enhancing their national and international visibility • Facilitate collaboration between public and private sector research at national and international level • Identify new market opportunities
Impact potential	• N3
Actual impact	• N3
Areas for improvement	• Copernicus programme and users could be more emphasized. The link with users in general is unclear, it seems to be more a business network.
Best practice & scaling opportunity	• The local network of space stakeholders makes the initiatives more visible and such networks with the focus on Copernicus could be active in all countries.

Reference number	LU.03
Initiative name	**Ministry of Economy – Space Affairs for the Copernicus Programme**
Initiative type	Contact Point (C)
Period active	• Start date not available
Frequency	• On-going
Scale	• N/A
Indicative budget	• N/A
Client / organisational partners	• Ministry of the Economy Directorate of ICT and Space Affairs +352 24 78 66 43 marc.serres@eco.etat.lu
Implementing partners	• Same as above
Targeted geography	• Luxembourg
Target user group	• User categories: public and private sector • Not specific Copernicus theme: general space, including EO
Website address / contact details	http://www.gouvernement.lu/3313559/minist-economie
Reference Documents	http://www.clusters.lu/content/download/20337/187491/version/1/file/focus-9.pdf
Description	Ministry of Economy – Space Affairs for the Copernicus Programme has the official mandate for coordination of the space programmes on the national level. It supports Luxembourg participation in the ESA and EC programmes and represents the country in the international networks. As such, the Ministry of Economy also acts as the contact point for the Copernicus programme.
Impact potential	• C4
Actual impact	• C2
Areas for improvement	• The Ministry of Economy is more an administrative/international relations contact point. It does not have the necessary resources to act as a contact point for Copernicus users
Best practice & scaling opportunity	• The national/regional contact point is very important to be known and visible for the local users

Reference number	LU.04
Initiative name	**LuxLAUNCH Special national support measure**
Initiative type	Funding Instruments (F)
Period active	• 2005-2014
Frequency	• Annual competition, 9 editions so far, last one in 2014
Scale	• N/A
Indicative budget	• Up to €100,000 per study, not clear how many are financed annually
Client / organisational partners	• Luxinnovation • National Agency for Innovation and Research Patricia CONTI, Phone : +352 43 62 63 855 patricia.conti@luxinnovation.lu
Implementing partners	• Same as above
Targeted geography	• Luxembourg
Target user group	• User categories: private sector • Not specific Copernicus theme: general space, including Copernicus
Website address / contact details	http://www.innovation.public.lu/en/financer/competitivite/esa/luxlaunch/index.html
Reference Documents	http://www.innovation.public.lu/en/financer/competitivite/esa/luxlaunch/index.html
Description	The Luxembourg government's LuxLAUNCH programme offers up to a maximum €100,000 to finance the preparatory studies needed by local industrial and scientific organisations planning to enter the space market. Preference is given to the fields of satellite telecommunications, satellite navigation and Earth Observation, and studies must be of a duration of no more than six months. A call for ideas is announced every year and the submissions are evaluated by an expert panel. It is worthwhile to note that this initiative is not meant to finance R&D projects.
Impact potential	• F5
Actual impact	• F3
Areas for improvement	• The budget of the call is not very high. Copernicus projects for user uptake could be more emphasized
Best practice & scaling opportunity	• The national funds for feasibility studies including Earth Observation projects are very effective in national user uptake

5.21 Malta

Reference number	MT.01
Initiative name	**Satellite Solutions for Smarter Islands**
Initiative type	Event (E)
Period active	• 2015
Frequency	• One-off event • Last occurrence: 12 November 2015
Scale	• One-day event with approximately 100 participants
Indicative budget	• Not publically disclosed
Client / organisational partners	• Malta Council of Science and Technology (MCST) • Eurisy • Public • National / European
Implementing partners	• Malta Council of Science and Technology (MCST) • Eurisy • Public • National / European
Targeted geography	• European / National
Target user group	• Thematic: Smart Cities • Copernicus service: all • User categories: National /MS Institutions and Bodies, Regional and Local Public Authorities, Downstream Value-Added Service Providers, Downstream Industry End Users.
Website address / contact details	• http://www.eurisy.org/event-satellite-solutions-for-smarter-islands/about
Reference Documents	• http://www.eurisy.org/event-satellite-solutions-for-smarter-islands/programme-outline
Description	• One-day conference focusing on the socio-economic and environmental benefits that satellite applications can deliver for island economies • Keynote Copernicus speeches by European institutional representatives (e.g. EC, ESA) • Thematic sessions on 'Smart Government', 'Satellite Opportunities for SMEs' and 'Data Access & Funding Opportunities' • Launch of the Malta App Challenge (see MT.2) • Exhibition stand and networking lunch
Impact potential	• E4
Actual impact	• E4
Areas for improvement	
Best practice & scaling opportunity	• Dedicated session for Copernicus data access & application development

Reference number	MT.02
Initiative name	**Malta App Challenge**
Initiative type	Start-up initiatives (S)
Period active	• 2015-2016
Frequency	• One-off event • Last occurrence: 12 November 2015 (launch) – July 2016
Scale	• 6-8 months start-up competition ; number of participants TBD
Indicative budget	• Awarded prize money: 1 x EUR 15.000 (MCST/MEPA Environment Challenge Award) • Awarded grants: 2 x EUR 15.000 (MCST/MITA StartAPP 2.0 Challenge Grants)
Client / organisational partners	• Malta Council for Science and Technology (MCST) • Malta Environment and Planning Authority (MEPA) • Malta Information and Technology Agency (MITA) • Public • National
Implementing partners	• Same as above
Targeted geography	• National
Target user group	• Thematic: Geospatial / Environment • Copernicus service: all • User categories: National /MS Institutions and Bodies, Regional and Local Public Authorities, Downstream Value-Added Service Providers, Downstream Industry End Users
Website address / contact details	• http://www.malta-app-challenge.com/ • space.mcst@gov.mt • innovationhub.mita@gov.mt
Reference Documents	• http://www.malta-app-challenge.com/ • App Challenge Starter Pack – User Manual: https://drive.google.com/file/d/0B_XWK9TG9xY2dFROaElsMk1Penc/view • App Challenge – Demo Video: https://www.youtube.com/watch?time_continue=129&v=Az4JcDFa3tk
Description	• App Challenge organised by public agencies to raise awareness about the potential of exploiting available satellite-based datasets and GNSS signals • Starter Pack to introduce available geospatial datasets (including Copernicus) • Exists of two *strands*: 1. MEPA/MCST Environment Challenge: awards prize to a creative and relevant prototype of a solution to MEPA's needs and challenges. 2. MITA/MCST StartAPP 2.0 Challenge: awards grants for two proofs-of-concept outlining two innovative applications that have the potential to fulfil a market need
Impact potential	• S5
Actual impact	• S4-S5
Areas for improvement	• Increased promotion through established start-up fora and events
Best practice & scaling opportunity	• Potentially interesting format to stimulate Copernicus user uptake in start-up scene – follow-up outcome of current edition in terms of participants and prototypes developed

Reference number	MT.03
Initiative name	**Earth Observation (EO) Data Training Day**
Initiative type	User feedback, training & education (U)
Period active	• 2016
Frequency	• One-off event • Occurrence: 12 January, 2016
Scale	• One-day workshop • Number of participants TBD
Indicative budget	• Not publically disclosed
Client / organisational partners	• Malta Information and Technology Agency (MITA) • European Space Agency (ESA) • Public • National / European
Implementing partners	• Malta Information and Technology Agency (MITA) • European Space Agency (ESA) • Public • National / European
Targeted geography	• National
Target user group	• General (Earth Observation) • Copernicus service: all • User categories: Research and Academic Organisations, Downstream Value-Added Service Providers, Downstream Industry End Users
Website address / contact details	• space.mcst@gov.mt
Reference Documents	• https://mitainnovationhub.gov.mt/en/Documents/calls/startAPP2.0-FAQs.pdf
Description	• One-day training workshop on using the European Space Agency (ESA) Toolbox for EO data • Offered to participants in the Malta App Challenge, but also open to outside participants
Impact potential	• U4
Actual impact	• U4
Areas for improvement	
Best practice & scaling opportunity	• Dedicated Copernicus/EO data access and usage training for start-ups as scalable model for similar hackathon or app development competitions

Reference number	MT.04
Initiative name	**Malta GeoPortal**
Initiative type	Data Access (D)
Period active	• 2014-present
Frequency	• Permanent
Scale	• Portal with over 75 available geospatial datasets
Indicative budget	• Not publically disclosed
Client / organisational partners	• Malta Information and Technology Agency (MITA) • Public • National
Implementing partners	• Malta Information and Technology Agency (MITA) • Public • National
Targeted geography	• National
Target user group	• General • Copernicus service: all • User categories: National /MS Institutions and Bodies, Regional and Local Public Authorities, Research and Academic Organisations, Downstream Value-Added Service Providers, Downstream Industry End Users.
Website address / contact details	• https://msdi.data.gov.mt/geonetwork/srv/eng/catalog.search#/home • inspire.mita@gov.mt
Reference Documents	• Datasets from the Malta GeoPortal – User Manual: https://drive.google.com/file/d/0B_XWK9TG9xY2dFROaElsMk1Penc/view
Description	• Portal aimed at sharing environmental-related geospatial datasets with the general public, industry, public services and public sector organisations • Datasets are made available by various public entities, offering data covering a broad range of domains such as Land Use, Marine Environment, Economic Statistics and Societal Statistics • All datasets are available through WMS, which is readable through an appropriate viewer; Web Feature Services (WFS) are also available for the majority of the datasets
Impact potential	• D5
Actual impact	• D4
Areas for improvement	• Incorporation of (redirection) to Copernicus datasets
Best practice & scaling opportunity	• Easy-to-use approach for web portal with geodata which provides an interdisciplinary approach through the integration of a broad range of socio-economic statistics

Reference number	MT.05
Initiative name	**Training Course - Synthetic Aperture Radar and Earth Observation Techniques**
Initiative type	User feedback, training & education (U)
Period active	• 2014
Frequency	• One-off event • Last occurrence: 10-14 November, 2014
Scale	• One-week training course • Approximately 25 participants / day
Indicative budget	• Not publically disclosed
Client / organisational partners	• Malta Council for Science and Technology (MCST) • European Space Agency (ESA) • Public • National / European
Implementing partners	• Malta Council for Science and Technology (MCST) • European Space Agency (ESA) • Public • National / European
Targeted geography	• National / European
Target user group	• Thematic: SAR • Copernicus service: all • User categories: National /MS Institutions and Bodies, Regional and Local Public Authorities, Research and Academic Organisations, Downstream Value-Added Service Providers, Downstream Industry End Users
Website address / contact details	• http://www.mcst.gov.mt/all/about-us/events/synthetic-aperture-radar-and-earth-observation-techniques-training-villa-bighi
Reference Documents	• Programme: https://earth.esa.int/documents/10174/1743079/SAR_Course_Final_Programme
Description	• Introductory training on Synthetic Aperture Radar (SAR) theory, with presentations and exercises on various thematic areas (e.g. forestry, agriculture, marine, archaeology, integration of SAR with GNSS and GIS)
Impact potential	• U4
Actual impact	• U3
Areas for improvement	• Integration of relevant Copernicus services / Sentinels in technical training
Best practice & scaling opportunity	

Reference number	MT.06
Initiative name	**Location: Exploiting the Benefits**
Initiative type	Event (E)
Period active	• 2008
Frequency	• One-off event • Last occurrence: 5 December 2008
Scale	• One-day conference with approximately 100 participants
Indicative budget	• Not publically disclosed
Client / organisational partners	• Malta Association of Geographic Information (MAGI) • Malta Institution of Surveyors (MIoS) • Royal Institution of Chartered Surveyors (RICS Malta) • Public • National
Implementing partners	• Malta Association of Geographic Information (MAGI) • Malta Institution of Surveyors (MIoS) • Royal Institution of Chartered Surveyors (RICS Malta) • Public • National
Targeted geography	• National
Target user group	• Thematic: Surveying & GIS • Copernicus service: all • User categories: National /MS Institutions and Bodies, Regional and Local Public Authorities, Research and Academic Organisations, Downstream Value-Added Service Providers, Downstream Industry End Users
Website address / contact details	• http://www.rics.org/be/tag/malta/
Reference Documents	• Event report: http://www.clge.eu/documents/reports/michelle_camilleri_report_december_2008.pdf
Description	• One-day event to bring together the local surveying and geo-community in an environment for networking, knowledge sharing and collaboration • Presentations by industry, government and academia, with attached industry exhibition
Impact potential	• E4
Actual impact	• E3
Areas for improvement	• No presentations dedicated to GMES/Copernicus
Best practice & scaling opportunity	• GIS event with broad range of applications domains could be interesting to effectively increase Copernicus awareness in GIS community

5.22 The Netherlands

Reference number	NL.01
Initiative name	**Earth Observation Science & Society Symposium (EO3S)**
Initiative type	Event (E)
Period active	• 2015
Frequency	• One-off event • Last occurrence: 1 October, 2015
Scale	• One-day event,
Indicative budget	• Not publically disclosed
Client / organisational partners	• Netherlands Space Office (NSO) • Netherlands Organisation for Scientific Research (NWO) • Public • National
Implementing partners	• Netherlands Space Office (NSO) • Netherlands Organisation for Scientific Research (NWO) • Public • National
Targeted geography	• National
Target user group	• General: Earth Observation • Copernicus service: all • User categories: Research and Academic Organisations, National /MS Institutions and Bodies, Regional and Local Public Authorities, Downstream Value-Added Service Providers, Downstream Industry End Users
Website address / contact details	http://www.spaceoffice.nl/nl/Agenda/1722/Earth-Observation-Science-Society-Symposium-EO3S.html
Reference Documents	Programme (2015): http://www.spaceoffice.nl/blobs/agenda%20items/EO3S%20-%201st%20announcement.pdf
Description	• Symposium bringing together EO scientists and user community (industry, government, academia) to address to need of EO data and the growing application possibilities • Aimed at gathering input for setting up a user-driven national EO research agenda for the coming years • Includes plenary sessions, science sessions, workshops and panel discussion
Impact potential	• E4-E5
Actual impact	• E4
Areas for improvement	Could be organised on a regular basis
Best practice & scaling opportunity	• Conference bringing together industry, scientific and public institutions • Thematic topics based on societal needs

Reference number	NL.02
Initiative name	**GMES in-situ Workshop**
Initiative type	User feedback, training & education (U)
Period active	• 2012
Frequency	• One-off event • Last occurrence: 18 June, 2012
Scale	
Indicative budget	• Not publically disclosed
Client / organisational partners	• Netherlands Space Office (NSO) • Geonovum • Dutch Ministry of Economic Affairs, Agriculture and Innovation (ELenI) • Planbureau voor de Leefomgeving (PBL) • European Environment Agency (EEA) • Public • National / European
Implementing partners	• Same as above
Targeted geography	• National
Target user group	• Thematic: GMES/Copernicus in-site data • Copernicus service: all • User categories: Research and Academic Organisations, National /MS Institutions and Bodies, Regional and Local Public Authorities, Downstream Value-Added Service Providers, Downstream Industry End Users
Website address / contact details	http://www.spaceoffice.nl/nl/Satelliettoepassingen/Agenda/Archief-2012/1423/GMES-in-situ-data-workshop.html
Reference Documents	Programme (NL): http://www.spaceoffice.nl/blobs/agenda%20items/GMES%20in-situ%20workshop%2018jun2012/Agenda%20GMES%20in-situ%20workshop%2018%20juni.doc.pdf
Description	• One-off workshop to provide an introduction to GMES/Copernicus for potential users and to exchange information on the GMES/Copernicus in-situ component • Interactive workshop to secure sustainable access to in-situ data for GMES/Copernicus services • Sessions on GMES/Copernicus products and services, and national capabilities • Dedicated parallel session on separate service areas (Land, Marine, Atmosphere, Emergency & Security)
Impact potential	• U5
Actual impact	• U4
Areas for improvement	• Could be transformed into regular event
Best practice & scaling opportunity	• Similar workshop could be used for Sentinel(s)

Reference number	NL.03
Initiative name	**Aardobservatie op de Kaart: Samen voor Veiligheid die Rendeert**
Initiative type	Event (E)
Period active	• 2015
Frequency	• One-off event • Occurrence: 17 November, 2015
Scale	• One-day conference
Indicative budget	• Not publically disclosed
Client / organisational partners	• Netherlands Space Office (NSO) • Innovation Quarter • Netherlands Organisation for Applied Scientific Research (TNO) • The Hague Centre for Strategic Studies • Public / Private • National
Implementing partners	• Netherlands Space Office (NSO) • Innovation Quarter • Netherlands Organisation for Applied Scientific Research (TNO) • The Hague Centre for Strategic Studies • Public / Private • National
Targeted geography	• National
Target user group	• Thematic: Geo-information • Copernicus service: Security, Emergency Management • User categories: Research and Academic Organisations, National /MS Institutions and Bodies, Regional and Local Public Authorities, Downstream Value-Added Service Providers, Downstream Industry End Users
Website address / contact details	• http://www.hcss.nl/events/aardobservatie-op-de-kaart-samen-voor-veiligheid-die-rendeert/297/
Reference Documents	• http://www.hcss.nl/events/aardobservatie-op-de-kaart-samen-voor-veiligheid-die-rendeert/297/
Description	• One-off conference aimed at stimulating the commercial development of the Dutch Earth Observation community • Thematic focus on use of EO for infrastructure management and security • Dedicated *meet & greet* business development session
Impact potential	• E4-E5
Actual impact	• E4
Areas for improvement	• Could be organised on a regular basis
Best practice & scaling opportunity	

Reference number	NL.04
Initiative name	**GeoBusiness Nederland (GBN)**
Initiative type	Network (N)
Period active	2007-present
Frequency	• Permanent
Scale	• Over 100 member companies
Indicative budget	• Not publically disclosed
Client / organisational partners	• Private • National
Implementing partners	• Private • National
Targeted geography	• National
Target user group	• Thematic: Geo-information • Copernicus service: all • User categories: Downstream Value-Added Service Providers, Downstream Industry End Users
Website address / contact details	• http://geobusiness.nl/ • info@geobusiness.nl, Tel: +31 (0)85-3032614
Reference Documents	• http://geobusiness.nl/
Description	• Business association for Dutch companies active in the geo-information business • Member companies can participate in Special Interests Groups (SIGs) and thematic Commissions organised by GBN
Impact potential	• N4
Actual impact	• N3
Areas for improvement	• More emphasis on Copernicus
Best practice & scaling opportunity	• Thematic Special Interest Group around EO could be potential mechanism to reach Dutch GIS/EO community

Reference number	NL.05
Initiative name	**GeoBuzz**
Initiative type	Event (E)
Period active	2014-present
Frequency	• Repetitive (annual) • Last occurrence: 24-25 November, 2015 • Next occurrence: 22-23 November, 2016
Scale	• Two-day event
Indicative budget	Not publically disclosed
Client / organisational partners	• GeoBusiness Nederland (GBN) • Geo-Informatie Nederland (GIN) • Sense BV • CMedia • Public / Private • National
Implementing partners	• GeoBusiness Nederland (GBN) • Geo-Informatie Nederland (GIN) • Sense BV • CMedia • Public / Private • National
Targeted geography	• National
Target user group	• Thematic: Geo-information • Copernicus service: all • User categories: Research and Academic Organisations, National /MS Institutions and Bodies, Regional and Local Public Authorities, Downstream Value-Added Service Providers, Downstream Industry End Users
Website address / contact details	• http://geobuzz.nl/
Reference Documents	• http://geobuzz.nl/
Description	• Two-day conference with workshops, thematic speaking sessions, panel discussions • Exhibition for geo-information organisations and industry
Impact potential	• E4
Actual impact	• E3
Areas for improvement	• More emphasis on Copernicus/dedicated information session
Best practice & scaling opportunity	

Reference number	NL.06
Initiative name	**Satellietdataportaal (Satellite Data Portal)**
Initiative type	Data access (D)
Period active	• 2012-present
Frequency	• Permanent
Scale	
Indicative budget	• Not publically disclosed
Client / organisational partners	• Netherlands Space Office (NSO) • Public • National
Implementing partners	• Netherlands Space Office (NSO) • Public • National
Targeted geography	• National
Target user group	• General (Earth Observation) • Copernicus service: all • User categories: Research and Academic Organisations, National /MS Institutions and Bodies, Regional and Local Public Authorities, Downstream Value-Added Service Providers, Downstream Industry End Users
Website address / contact details	http://www.spaceoffice.nl/nl/Satellietdataportaal/ portaal@spaceoffice.nl, Tel: +31 (0)88-602 45 00
Reference Documents	http://www.spaceoffice.nl/nl/Satellietdataportaal/ http://www.spaceoffice.nl/nl/Nieuws/1386/NSO-opent-portaal-voor-gratis-satellietdata.html
Description	• Online portal providing the user community with access to multiple sources of EO data • Offers access to different EO data categories: raw data, processed (GIS Ready) data, Sentinel Data Hub, and free external data sources • Extensive context and information about Copernicus, as well as link to Sentinel Data Hub manual and ESA Sentinel Toolbox • Portal opening was accompanied by formal opening & awareness raising event, attracting over 250 representatives from different downstream sectors
Impact potential	• D5
Actual impact	• D4-D5
Areas for improvement	• Additional awareness raising to increase user communities reached
Best practice & scaling opportunity	• User-friendly data portal with links to user manual and toolboxes • Focus on country-relevant data, with links to other free external data sources

Reference number	NL.07
Initiative name	**ESA Business Incubation Centre (BIC) Noordwijk**
Initiative type	Start-up initiatives (S)
Period active	• Since 2004
Frequency	• 4 TEBs per year
Scale	• 11 EO-related start-ups since 2004
Indicative budget	• Incentive of max. EUR 50.000 + special loan of max. EUR 50.000 / project
Client / organisational partners	• European Space Agency (ESA) • Public • European
Implementing partners	• SBIC Noordwijk B.V. • Private • National
Targeted geography	• Everyone of adult age with citizenship in Europe or ESA member states
Target user group	• General (Space) • Copernicus service: all • User categories: Research and Academic Organisations, Downstream Value-Added Service Providers, Downstream Industry End Users
Website address / contact details	• http://www.esa-bic.nl/ • Martijn Seijger, m.seijger@esa-bic.nl, Tel:+31 (0)71 2020 307
Reference Documents	• http://www.esa-bic.nl/
Description	• Together with its first-class partners, ESA BIC Noordwijk is the place for entrepreneurs from research centres, universities, space, and non-space business seeking to realise their innovative business ideas and transfer technologies from space to other areas of the economy. • ESA's Business Incubation Centre in Noordwijk is supporting for more than 10 years technology transfer from space to other economies. Over 90 start-ups have been selected and supported to launch ideas, create new products and make successful companies. Space technologies are improving everything from medical devices and software tools to the food you eat and can support a broad range of industries. • Offers financial, technical and business support for a period up to two years
Impact potential	• S5
Actual impact	• S5
Areas for improvement	• Increased technical support for EO-related start-ups; data access • Dedicated Copernicus oriented instruments/compartments
Best practice & scaling opportunity	

5.23 Norway

Reference number	NO.01 (Norway is not part of EU-28 NUTS)
Initiative name	**Copernicus Competition on Innovative Applications (Copernicus Konkurranse)**
Initiative type	Start-up initiatives (S), Promotional activities (P), Funding instruments (F)
Period active	• Announcement of the competition: 10 September 2015 • Deadline for contributions: 1 December 2015.
Frequency	• One-off
Scale	• Not available
Indicative budget	• The total prize to be won: 55 000 €, funded by Norwegian Space Centre • Organisational budget not available
Client / organisational partners	• Norwegian Space Centre • Abelia
Implementing partners	• Same as above
Targeted geography	• Norway
Target user group	• Intermediate users, private: companies, entrepreneurs, start-ups
Website address / contact details	Anders Moldestad - Seniorrådgiver, jordobservasjon - Norsk Romsenter – tel. 22 51 18 09
Reference Documents	Information about the contest (in Norwegian): http://www.romsenter.no/Aktuelt/Siste-nytt/Konkurranse-Hvordan-bruke-Copernicus-data http://www.romsenter.no/nor/Fagomraader/Jordobservasjon/Copernicus-konkurranse
Description	Contest was announced to stimulate creative thinking in the use of satellite data from Copernicus for services with commercial potential. Contest is addressed to any Norwegian having ideas on the use Sentinel data. There are 2 topics: 1st – Best commercial Copernicus product idea 2nd - New functionality in services with satellite data
Impact potential	• S5, P5, F3
Actual impact	• Initiative in progress
Areas for improvement	• As it comes to funding instrument, the budget could be increased to have better impact.
Best practice & scaling opportunity	• A very good idea to stimulate the local entrepreneurs to use Copernicus data and promote it among new potential intermediate users (e.g. start-ups).

Reference number	NO.02 (Norway is not part of EU-28 NUTS)
Initiative name	**Preparations for Sentinel 2 in Europe Workshop**
Initiative type	Events (E)
Period active	• 25-26 November 2014
Frequency	• One-off
Scale	• 43 participants, mainly from Norway (26) • 11 countries • Number of participants was limited by organiser (max 40)
Indicative budget	• Not available
Client / organisational partners	• EuroSDR • Norway Digital • Norwegian Space Centre
Implementing partners	• Same as above
Targeted geography	• Norway and other European countries: mainly ESA member states
Target user group	• User categories: professionals from the EO sector • Specific industry thematic: optical satellite systems • Specific Copernicus Service
Website address / contact details	http://www.eurosdr.net/workshops/preparations-sentinel-2-europe Chair: Jon Arne Trollvik
Reference Documents	http://kartverket.no/globalassets/geonorge/eurosdr-workshop-final-programme-20141110.pdf http://www.eurosdr.net/sites/default/files/images/inline/summary_ws_sentinel.pdf
Description	The main objective is to initiate contact and collaboration among national agencies (or project groups) in Europe responsible for preparing or providing support and services to national users of satellite images, with special focus on Sentinel-2 and Landsat.
Impact potential	• E5
Actual impact	• E4
Areas for improvement	• Number of participants could be increased for better representation of other European countries.
Best practice & scaling opportunity	• In Norway, a working group within Norway Digital has conducted a survey to identify preparations that are needed to support operational services based on data from Sentinel-2. The report is available on their website. • The workshop analyzed the user requirements and status-quo in represented countries at the workshop. These kind of focused events have the best results for the participants and conclusions can be implemented later on by the representatives in regional communities.

Reference number	NO.03 (Norway is not part of EU-28 NUTS)
Initiative name	**Geomatikkdagene - Norwegian National Conference for Geomatics Community (Geomatics Week)**
Initiative type	Events (E), User feedback, training & education (U)
Period active	• 12-14 March 2013 • 1-3 April 2014 • 17-19 March 2015 • 8-10 March 2016
Frequency	• Annual conference with additional workshops, next one on 08-10 March 2016
Scale	• 260 participants in 2014
Indicative budget	• Not available
Client / organisational partners	• GeoForum Organisasjon for Geomatikk
Implementing partners	• Same as above
Targeted geography	• Norway
Target user group	• User categories: public and private sector, researchers. Various Norwegian institutions connected to geomatics, including EO. • Specific industry thematic: general geomatic
Website address / contact details	http://www.geoforum.no/ 2015 and 2016 Contact Name Sverre Røed-Bottenvann, GeoForum Contact Email sverre@geoforum.no
Reference Documents	http://wpstatic.idium.no/www.geoforum.no/2015/01/Invitasjon-Geomatikkdagene-2015_26.02.15.pdf
Description	Norway National Conference for Geomatic Community (part of Geomatics Week) is a well-established event for all the specialists from the GEO community in Norway. It takes place in Lillehamer, North of Oslo. The event consists of official conference with presentation of papers and R&D achievements, as well as practical workshops. Earth Observation is one of many topics discussed during the event.
Impact potential	• E3, U3
Actual impact	• E3, U3
Areas for improvement	• EO is only one of many topics discussed during the event and Copernicus coverage at the event could be strengthened, e.g. by organizing a dedicated workshop. • The event is dedicated mainly to intermediate users and researchers.
Best practice & scaling opportunity	• It is a well-established event with stable funding and proper organizer, gives good perspectives for conference continuation. • For the Copernicus user uptake such events are the best opportunity to use already well-structured and well-known events to leverage the results and minimalize the effort of organisation.

Reference number	NO.04 (Norway is not part of EU-28 NUTS)
Initiative name	**GeoKlar - a National Preparedness Conference, Oslo 2015**
Initiative type	Events (E)
Period active	• Since 2014 - 10th December 2014 - 24th November 2015
Frequency	• Annual event
Scale	• National, one day event
Indicative budget	• Not available
Client / organisational partners	• GeoForum Organisasjon for Geomatikk
Implementing partners	• Same as above
Targeted geography	• Norway
Target user group	• User categories: public and private sector, researchers. Various Norwegian institutions connected somehow to geomatik, including EO systems. • Specific industry thematic: general geomatic • Copernicus Emergency Management Service (potentially)
Website address / contact details	http://www.geoforum.no/foredrag-fra-geoklar/ Phone: 32 12:31 66 E-mail: marianne@geoforum.no
Reference Documents	Documents available at the webpage (in Norwegian): http://www.geoforum.no/foredrag-fra-geoklar/
Description	GeoForum and Mapping Authority organized an emergency conference on the basis of geographic data. Maps and geodata is an important information basis for national emergency and preparedness organisations, and GEO products of land and sea are crucial to any emergency planning and management. The conference highlights which data are available today, and show how a common map data can create better interaction between participants in an emergency situation. Copernicus coverage during the event is still very limited.
Impact potential	• E3
Actual impact	• E3
Areas for improvement	• Copernicus coverage at the event could be strengthened, especially the Copernicus Emergency Management Service.
Best practice & scaling opportunity	• It is a well-established event with stable funding and proper organizer gives good perspectives for conference continuation. • Such thematic events constitute excellent opportunities to support Copernicus user uptake in regional communities.

Reference number	NO.05 (Norway is not part of EU-28 NUTS)
Initiative name	**GI NORDEN**
Initiative type	Networks (N)
Period active	• Founded in 1989
Frequency	• Still active
Scale	• 5 organisations representing interests of 5 Nordic countries
Indicative budget	• Not available
Client / organisational partners	• GeoForum (Norway) • Geoforum Denmark (Denmark) • LISA (Iceland) • ProGIS (Finland) • ULI Geoforum (Sweden)
Implementing partners	• Same as above
Targeted geography	• Nordic countries of Europe
Target user group	• GIS community in the Nordic countries (private/public, intermediate users)
Website address / contact details	http://ginorden.org/
Reference Documents	History, members details, statutes and events are at the website: http://ginorden.org/
Description	GI Norden is a Nordic network within geographic information (GI) and geographic information Science (GIS). The Network works for increased use of GI for social benefit, and shall contribute to the utilisation of competence and technology within the field. The network board, consisting of one representative from each member association, including one network coordinator elected among the network board members, handles issues and tasks for GI Norden. The national GI associations appoint the national network representatives. The network engaged in organisation of regional events.
Impact potential	• N3
Actual impact	• N3
Areas for improvement	• More attention could be paid to the role of EO data in Geographic Information Systems. Copernicus coverage in the network is limited and could be strengthened.
Best practice & scaling opportunity	• These kind of regional networks could be used as the best platform to discuss regional user requirements and promote Copernicus user uptake through it. Most often the countries associated in regional networks have similar user communities and needs.

Reference number	NO.06 (Norway is not part of EU-28 NUTS)
Initiative name	**Nordic Course in Cartography**
Initiative type	User feedback, training & education (U)
Period active	• 31 August – 3 September 2009 • 25-28 August 2014
Frequency	• Repetitive, but irregular
Scale	• In 2009 in Stavanger 43 participants. • In 2014 in Bergen about 30 participants
Indicative budget	• Not available
Client / organisational partners	• GeoForum • Norwegian Mapping and Cadastre Authority
Implementing partners	• Same as above
Targeted geography	• Nordic region (GI Norden Network countries), most participants from Norway
Target user group	• Intermediate users: students
Website address / contact details	http://ginorden.org/events/nordic-summer-school/nordic-summer-school-2009 http://ginorden.org/events/nordic-course-in-cartography Contact Email geoforum@geoforum.no Contact Phone + 47 32 12 31 66 GeoForum webpage dedicated to the course is not available.
Reference Documents	
Description	During this course the following topics were took on: • "open systems – open data", • "future/innovation and mapping trends", • "time and map". The course consisted on lectures, exercises, demonstrations and excursions. An ambition was to relate themes to the participants' actual work tasks.
Impact potential	• U2
Actual impact	• U2
Areas for improvement	• EO and Copernicus data were not the main topic, but in the future GeoForum could organise events with greater emphasis on EO.
Best practice & scaling opportunity	• The established GEO trainings could be used to promote Copernicus data.

Reference number	NO.07 (Norway is not part of EU-28 NUTS)
Initiative name	**Norwegian Space Centre (Norsk Romsenter)**
Initiative type	Contact Point (C)
Period active	• Established in 1987
Frequency	• Still active
Scale	• 39 employees • Operates for Norwegian citizens
Indicative budget	• Not availbale (In 2014, the total budget for NSC was about € 94 million)
Client / organisational partners	• Norwegian Ministry of Trade, Industry and Fisheries
Implementing partners	• Same as above
Targeted geography	• Norway
Target user group	• User categories: to all whom may concern • Specific industry thematic: general
Website address / contact details	• http://www.romsenter.no/eng • Contact Details: Arne-Einar Herland, Head of Earth Observation at the Norwegian Space Centre, email: einar-arne.herland@spacecentre.no
Reference Documents	Available at the website in Norwegian: http://www.romsenter.no/
Description	The Norwegian Space Centre (NSC) is a government agency under the Ministry of Trade, Industry and Fisheries. The NSC was established in 1987, when Norway became a member of the European Space Agency (ESA). The NSC is responsible for organizing Norwegian space activities, particularly with respect to ESA and the EU, and for coordinating national space activities. Focus areas: Industry, Earth Observation, Satellite Communications, and Satellite Navigation. It is an official coordinator of the Copernicus initiatives in Norway and users can contact NSC to get more information about it.
Impact potential	• C5
Actual impact	• C4
Areas for improvement	• There is no information about Copernicus for the potential users directly in the website (at least not found in English).
Best practice & scaling opportunity	• All the contact persons with contact details are clearly presented on the website.

5.24 Poland

Reference number	PL.01
Initiative name	**Space Start-up Weekend Gdansk**
Initiative type	Start-up initiatives (S)
Period active	• 2-4 October 2015
Frequency	• One-off event in Poland but other Space Start-up Weekend organized in Bremen. It's always organized locally.
Scale	• Number of participants: 100
Indicative budget	• Not available, from private sponsors, estimated at 25.000 euro
Client / organisational partners	• Sponsors/organisational partners: Gdańsk Science and Technology Park/Pomeranian Special Economic Zone, Olivia Business Centre, Black Pearls Ventures, B2B Networking, CloudEO, KOGNITIS, Blue Dot Solutions, Gdańsk Tourist Organisation, Atena • Their organisation type: private (majority) and public • Nationality: Polish
Implementing partners	• A group of volunteers, mainly from the company Blue Dot Solutions
Targeted geography	• International, but most of the participants were Polish
Target user group	• User categories: intermediate, private, (entrepreneurs) • Specific industry thematic: all space • Specific Copernicus Service: no
Website address / contact details	• http://startupweekendspace.co/
Reference Documents	
Description	The Space Start-up Weekend is an event to create space start-ups /applications in 60 hours. The interdisciplinary teams are created that are supported by experts and entrepreneurs and turn their ideas into viable businesses. Startup Weekend Gdansk was dedicated to space applications, including Earth Observation and at the end of the event the judges were selecting the best ideas after the 10 minutes 'pitch'- presentations. The prizes include support for the best idea by professionals.
Impact potential	• S4
Actual impact	• S3
Areas for improvement	• Copernicus data were not addressed directly at the event and it was not used in any of the top three winning ideas. An extra special prize for EO applications could be funded.
Best practice & scaling opportunity	• The start-up events have a very high potential to target young, dynamic entrepreneurs. The events have a wide PR and outreach not only in space community. By organizing such events on a regular basis in different geographic hot-spots, the impact could be very high.

Reference number	PL.02
Initiative name	**International Conference "Copernicus - the road to economic development", Warsaw 2015**
Initiative type	Events (E), Promotional activities (P)
Period active	• 3 February 2015
Frequency	• One-off
Scale	• Number of participants: 260
Indicative budget	• 25 k€, public
Client / organisational partners	• Organisational partners: Ministry of Science and Higher Education • Their organisation type: public • Nationality: Polish
Implementing partners	• The same as above
Targeted geography	• International, but the Polish Copernicus strategy was discussed
Target user group	• User categories: intermediate/end-users, public and private • Specific industry thematic: all • Specific Copernicus Service: general
Website address / contact details	http://www.nauka.gov.pl/en/polish-science-news/copernicus-the-road-to-economic-development-conference.html
Reference Documents	
Description	The confernece was organized with participation of high-ranking representatives of the European Commission, European Space Agency, EUMETSAT and other European institution and space sector. The main task of the conference was to emphasise the importance of Copernicus programme for Poland. The conference was also an opportunity to present the capabilities of the Polish space sector to participate in the programme as well as to establish and foster contacts with the representatives from leading space institutions from Europe.
Impact potential	• E5, P5
Actual impact	• E4, P4
Areas for improvement	• The event was the first event of its type and could be organized regularly to discuss not only the political issues and Polish potential and strategy, but also the user requirements and opinions on Copernicus services.
Best practice & scaling opportunity	• Such event organized in each country could be a good opportunity to understand the needs of requirements of the local market and users towards Copernicus.

Reference number	PL.03
Initiative name	**Space Days**
Initiative type	Events (E), Promotional activities (P)
Period active	• Since 2007
Frequency	• Annual event, since 2007 (with a break between 2012 and 2014), taking place in spring time
Scale	• Number of participants: 1000
Indicative budget	• Not available, from private sponsors, estimated at 10.000 euro
Client / organisational partners	• Sponsors/organisational partners: Space Research Centre of the Polish Academy of Sciences • Their organisation type: public • Nationality: Polish
Implementing partners	• The same as above
Targeted geography	• National Polish event, taking place in Warsaw and with smaller events in other cities in Poland
Target user group	• User categories: intermediate/end-users, private - representatives of the Polish and European space industry, public administration, satellite science sector, and above general public. • Specific industry thematic: all • Specific Copernicus Service: general
Website address / contact details	http://bit.ly/1OGu0MY
Reference Documents	
Description	The Space Days is a series of various events with the aim to familiarize and popularize the knowledge of the satellite technologies, the benefits of their use, and space activities in general. The initiative provides also a platform for annual meetings of communities involved in space activities in Poland - representatives of business, science and public administration. They serve as a forum to discuss the future direction of space activities in Poland. The initiative consists of two parts: 1. An interactive exhibition about space technologies, including Earth Observation applications. 2. A conference about space applications and their role in the economy. By using various forms of presentations such as conferences, discussions, workshops, outside demonstrations, exhibitions, the organizers try to use them to create a platform for mutual understanding, exchange experience, and present potential future directions for the space industry. The event always brings to the audience topics related to Earth Observation/Copernicus applications.
Impact potential	• E4, P4
Actual impact	• E3, P3
Areas for improvement	• The event could have a stronger marketing to attract new people to the field and maintain the contact with the participants. There is no dedicated website for the event (or not found) and the materials cannot be downloaded by interested people.
Best practice & scaling opportunity	• The event is a local version of the European Space Expo and European Space Solutions Conference and could be organized in each country on a regular basis to promote EO applications and discuss user requirements.

Reference number	PL.04
Initiative name	**Communication Platform for Earth Observation community http://eopower.cbk.waw.pl/**
Initiative type	Events (E), Promotional activities (P)
Period active	• Since 2014
Frequency	• On-going
Scale	• Website publicly available, statistics about visitors not available
Indicative budget	• Not available, funded FP7 EOPOWER project, estimated at 4.000 euro
Client / organisational partners	• Organisational partners: Space Research Centre of the Polish Academy of Sciences • Their organisation type: public • Nationality: Polish
Implementing partners	• The same as above
Targeted geography	• International, portal available in Polish and English
Target user group	• User categories: intermediate/end-users, public/private, EO community • Specific industry thematic: all • Specific Copernicus Service: general
Website address / contact details	http://eopower.cbk.waw.pl/
Reference Documents	
Description	The portal developed in the frames of FP7 EOPOWER project (Earth Observation for Economic Empowerment). The main aims of it were to: - Share success stories of practical examples using EO data in different countries - Inform the community about the EO events - Share experience and good practice among the EO community members
Impact potential	• E4, P4
Actual impact	• E2, P1
Areas for improvement	• The website seems not to be updated since its creation. All the key information is available only after login by the member, so there is very little information publicly available. The initiative seems not to have funds to maintain it after the completion of the EOPOWER project.
Best practice & scaling opportunity	• Good implemented portals with friendly user interface and gathered information in one place can have positive promotional impact and can be platform for online discussions.

Reference number	PL.05
Initiative name	**Science Picnic and Festival of Science**
Initiative type	Promotional activities (P)
Period active	• Since 1997, last time in May 2015
Frequency	• Annual, each time takes place in May
Scale	• Number of participants: 20.000
Indicative budget	• Not available
Client / organisational partners	• Sponsors/organisational partners: Polish Radio and the Copernicus Science Centre, Earth Observation part - Space Research Centre of the Polish Academy of Sciences • Their organisation type: public • Nationality: Polish
Implementing partners	• The same as above
Targeted geography	• Poland, Warsaw
Target user group	• User categories: end-users, general public • Specific industry thematic: all • Specific Copernicus Service: general
Website address / contact details	http://www.pikniknaukowy.pl/
Reference Documents	
Description	Festival of Science and Science Picnic are the two most popular events in Poland popularizing science to the big audience. The Science Picnic of Polish Radio and the Copernicus Science Centre is Europe's largest outdoor event dedicated to science attracting crowds of visitors – more than 100,000 in the course of a single day. It's an outdoor event that takes place in Warsaw every May/June. Festival of Science is an event with the idea of "open days" at research institutes at the weekend. This is when the scientists prepare lectures, presentations and workshops for the public. Space Research Centre of the Polish Academy of Sciences contributes with the part about space and Earth Observation applications, in particular: - Introducing the topics of Earth Observation applications in the programme of the events. - Reaching the big audience of people, who have low awareness about the EO topics.
Impact potential	• P3
Actual impact	• P3
Areas for improvement	• Copernicus section could have a better visibility at this kind of big events, having e.g. a separate stand to inform the public about the Copernicus programme and data. It is more an initiative to make potential end users aware that they might use Copernicus data in daily applications.
Best practice & scaling opportunity	• Copernicus could be part of all the key European science festivals for the general public (similar audience as European Space Expo).

Reference number	PL.06
Initiative name	**EO trainings and workshops from Geonetcab FP7 project for EO professionals**
Initiative type	User feedback, training & education (U)
Period active	• November 2009 – October 2012
Frequency	• 6-10 September 2010 ESA Radar Remote Sensing Course 2010 (Warsaw) • 3-4 June 2011 KlimSat Workshop 2011 (Kraków)
Scale	• Number of participants: 60
Indicative budget	• Not available, financed by FP7 Geonetcab project
Client / organisational partners	• Sponsors/organisational partners: Space Research Centre of the Polish Academy of Sciences, Earth Observation Group • Their organisation type: public • Nationality: Polish
Implementing partners	• Same as above
Targeted geography	• Poland, with some international participants
Target user group	• User categories: intermediate users, private and public • Specific industry thematic: all • Specific Copernicus Service: general
Website address / contact details	• https://earth.esa.int/web/guest/training-packages/-/article/esa-polish-academy-of-science-dlr-radar-remote-sensing-course-warsaw • Not available for KlimSat workshop
Reference Documents	• https://earth.esa.int/web/guest/training-packages/-/article/esa-polish-academy-of-science-dlr-radar-remote-sensing-course-warsaw • https://picasaweb.google.com/116379047388762232843/KlimSat2011DrugieOgolnopolskieWarsztatyKlimatologiiSatelitarnej
Description	ESA Radar Remote Sensing Course 2010 was a practical workshop dedicated to researchers and young professional in order to increase technical skills regarding processing of remote sensing data. The workshop was organized for the Polish stakeholders mainly and financed by FP7 project, all the teachers came from ESA. Main topics: 1. ESA Earth Observation missions and data access • SAR principles – fundamentals of radar remote sensing and radar processing (theory and computer practical sessions); Polarimetric SAR (theory and practical sessions); Introduction to Radar Interferometry (theory) 2. Specific applications of SAR (theory and practical sessions) • Applications to forestry, agriculture, biomass; Applications to emergency mapping and disaster monitoring - example of flood monitoring KlimSat 2011 workshop was organized to train students, young professionals, scientists and all interested in the satellite climatology, how to use and analyse the satellite data. The main topic of the training was the snow cover in Poland, which is connected with creation of the snow cover web service by the Earth Observation Group.
Impact potential	• U4
Actual impact	• U4
Areas for improvement	• The training in English might be limiting for some stakeholders. The funding of the trainings was coming from the FP7 project which is not sustainable in long run.
Best practice & scaling opportunity	• A good example for practical workshop with the hand-on experience with EO data, with the approach 'teach the teachers'.

Reference number	PL.07
Initiative name	**Satellite support of the EU Carpathex 2011**
Initiative type	User feedback, training & education (U)
Period active	• 12-16 September 2011, Nowa Dęba
Frequency	• One-off event related to organisation of European Football Championships EURO2012. The cooperation between civil services, firemen and researchers was continued afterwards in other EO-oriented projects
Scale	• Number of participants: 1000
Indicative budget	• Not available, funded by different sources including FP7 Geonetcab project
Client / organisational partners	• Organisational partners: • The Polish State Fire Service • Space Research Centre of the Polish Academy of Sciences, Earth Observation Group • FP7 Geonetcab project • Their organisation type: public • Nationality: Polish
Implementing partners	• Space Research Centre of the Polish Academy of Sciences • European Union Satellie Centre • DLR
Targeted geography	• Poland, Czech Republic, Slovakia, Ukraine
Target user group	• User categories: end-users, public • Specific industry thematic: civil protection, crisis management • Specific Copernicus Service: Emergency Management Service
Website address / contact details	http://pro-manchurian3.rssing.com/browser.php?indx=3383399&item=5 http://kosmicznapolska.pl/aktualnosci/325-08-01-12-satelity-pomogly-strazakom-euro.html http://www.eucarpathex2011.pl/ (website not available any more) Contact Person: Jakub Ryzenko, Space Research Centre PAS – Head of Crisis Information Centre, E-mail: ryzenko@onet.pl
Reference Documents	https://picasaweb.google.com/116379047388762232843/EUCarpathex2011 http://zoz.cbk.waw.pl/images/stories/publikacje/pozaziemskie_wsparcie_pp.pdf
Description	EU CARPATHEX was a full scale exercise for civil services, firemen and crisis management community which aimed at improving the response of European Civil Protection Mechanisms to chemical, biological, radiological and nuclear (CBRN) threats during EURO2012. For that purpose, major 20 emergency situations were simulated in the province Podkarpackie of Poland and over 1000 people participated. In support of this exercise, EO products were produced for the scenarios dealing with forest fire and flooding to introduce and show added-value of the EO products for the users in their daily activities. SRC-based Crisis Information Centre prepared series of EO products that helped the commanders with management of the actions. The team of SRC was also in the headquarters for the whole time of the exercises played 36 hours non-stop. The objective of this initiative was to integrate the possibilities of EO applications in the practical work of the civil protection service in Poland and test their capabilities in the real life situations. The tasks of SRC - Crisis Information Centre team was to support the work in the headquarters through: • Use of existing digital data and satellite imagery to provide rapid response to the crisis situation (through data visualization, interpretation and extensive analysis), • Presentation and analysis of satellite data obtained during exercise (successful test activation of SAFER, the project responsible for the implementation of the pre-operational version of the Copernicus/GMES Emergency Response Service),

	• Mapping current information on the maps generated during the actions, • Generation of additional maps and analysis independently and in analytical centre in Warsaw (including data transmission). For the needs of the event SAFER project was activated and the whole team of satellite support consisted of about 20 people from SRC, EUSC and DLR. The generated products included: maps of the roads availability, maps of potential landing sites for helicopters, simulation analysis of flooding risk areas, time- availability maps, maps of the availability of water points. The cooperation between research community and practitioners was very successful. At the beginning the specialists in the headquarters were using new data and tools with mistrust but they got used to them very quickly. At the end of the event, the prepared EO products and analysis were used naturally and as one of the main analytical source of information supporting decision making. The SRC- Crisis Management Team was integrated in the operational tasks of the crisis management practitioners.
Impact potential	• U5
Actual impact	• U5
Areas for improvement	• The lessons learnt from the exercise could be easier accessible to possible users (hard to find online and the exercise website does not exist anymore).
Best practice & scaling opportunity	• A great example of a practical user-uptake initiative, where the users have their first-hand experience with the products and can validate their usefulness in their daily operations. The demonstrations are the best practices for the real user experience.

Reference number	PL.08
Initiative name	**EO trainings and workshops from Geonetcab FP7 project for policy makers**
Initiative type	User feedback, training & education (U)
Period active	2012
Frequency	Two events in frame of the FP7 Geonetcab project: • 16-18 May 2012 International workshop "Earth Observation - support in crisis situations", Warsaw • 10-12 October 2012 Workshop "Geoinformation in National Parks – remote sensing applications in environmental protection", Zakopane
Scale	• Number of participants: 230 in two workshops
Indicative budget	• Not available, financed by FP7 Geonetcab project
Client / organisational partners	• Sponsors/Organisational partners: Space Research Centre of the Polish Academy of Sciences, Earth Observation Group, Secure World Foundation, The Main School of Fire Service • Their organisation type: public • Nationality: Polish and American
Implementing partners	• Space Research Centre of the Polish Academy of Sciences, Earth Observation Group
Targeted geography	• International, but most of the participants were Polish
Target user group	• User categories: intermediate/end-users, public/private - The event brought together crisis management specialists, Polish administration and other end users with the participation of international NGOs. • Specific industry thematic: crisis management, national parks • Specific Copernicus Service: Emergency Management, Land Monitoring
Website address / contact details	• http://swfound.org/events/2012/workshop-on-use-of-space-applications-in-humanitarian-operations • http://zoz.cbk.waw.pl/index.php/pl/o-nas/dzialalnosc/10-obserwacje-ziemi-w-parkach-narodowych
Reference Documents	• http://swfound.org/media/97221/space_for_humanitarian_operations-report.pdf • https://picasaweb.google.com/116379047388762232843/InternationalWorkshopEarthObservationsSupportInCrisisSituations • http://zoz.cbk.waw.pl/index.php/pl/o-nas/dzialalnosc/10-obserwacje-ziemi-w-parkach-narodowych
Description	**International workshop "Earth Observation - support in crisis situations"** The 3-day workshop was devoted to applications of satellite technologies in crisis management and humanitarian aid, with the special focus on Earth Observation data. The topic was chosen parallel to the interest of flood management, as it is a main problem in Poland as it comes to natural disasters. The workshop for the Polish end users "Satellite observations – support in crisis situations" was organized along with the international event "Workshop on Use of Space Applications in Humanitarian Operations". Apart from presentations and discussions, the participants took part in a simulation game "Alice in Wonderland" with use of satellite data concerning the flood presented in the Adaptive Layers for Information and Collaboration in Emergency system (ALICE). Day one was devoted to presentation of the practical possibilities and limitations of remote sensing, explaining the GMES and GEO programmes (along with Geonetcab project), showing the applications of Earth Observation in Poland, as well as sources of data and increase of competences in this area. Day two was an interactive, all day long simulation game "Alice in Wonderland", when the participants were fighting with the catastrophic floods in the teams for different tasks and levels of decisions.

	Workshop "Geoinformation in National Parks – remote sensing applications in environmental protection" Objectives: - To train the specialists from the national parks about Earth Observation techniques and remote sensing methods of analysis of natural resources and environment. - Networking with the national parks officials and specialists. Activities: The Earth Observation Group was leading theoretical and practical trainings about remote sensing and object classification that can be used in monitoring and inventory of environment. The practical workshop was provided with the use of eCognition software (demonstration version) and prepared satellite images.
Impact potential	• U5
Actual impact	• U4
Areas for improvement	• More materials, presentations and practical exercises could be uploaded on-line for the other people that could not participate in person. The trainings were funded from the FP7 project, so there was no sustainable continuation of the initiative.
Best practice & scaling opportunity	• A great example of a practical user-uptake initiative, where the users have their first-hand experience with the products and can validate their usefulness in their daily operations.

Reference number	PL.09
Initiative name	**Satellite support of POLEX Demonstration 2013 International Search and Rescue Exercise**
Initiative type	User feedback, training & education (U)
Period active	• 22-25 May 2013, Żagań
Frequency	• One of series demonstrations organized by The Polish State Fire Service
Scale	• 1000 participants
Indicative budget	• Not available, national funds
Client / organisational partners	• Sponsors/organisational partners: • The Polish State Fire Service • Crisis Information Centre, Space Research Centre of the Polish Academy of Sciences • Their organisation type: public • Nationality: Polish
Implementing partners	• The same as above
Targeted geography	• Poland, with international participants
Target user group	• User categories: intermediate/end-users, private: emergency services and crisis management centres, border services, policy makers and government officials • Specific industry thematic: crisis management • Specific Copernicus Service: Emergency Management Service
Website address / contact details	http://www.kmpsp.poznan.pl/2013-05-30/cwiczenia-polex-2013
Reference Documents	http://www.kmpsp.poznan.pl/2013-05-30/cwiczenia-polex-2013
Description	The Earth Observation products were supporting operational activities during the big scale exercise that simulated search and rescue scenarios in case of earthquake. The satellite technologies were one of the other GIS solutions tested during the exercise. The initiative was a continuation of cooperation between R&D community and potential Copernicus users after successful EU Carpathex 2011 demonstration.
Impact potential	• U5
Actual impact	• U4
Areas for improvement	• The lessons learnt from the exercise could be easier accessible to possible users (hard to find online and the exercise website does not exist anymore). • The organizers underline that there should be more focus on integration of satellite technologies with IT solution before the exercise as well as that the users before the demonstration could have 'training before the training' to introduce them to the EO products in advance.
Best practice & scaling opportunity	• A great example of a practical user-uptake initiative, where the users have their first-hand experience with the products and can validate their usefulness in their daily operations. The demonstrations are the best practices for the real user experience. As different users have different needs and environment they work in, this example is showing the capabilities of Copernicus products scaled to the operational procedures of the certain users.

Reference number	PL.10
Initiative name	**Satellite support of PIONEX Demonstration 2014**
Initiative type	User feedback, training & education (U)
Period active	• 24-25 April 2014, Pionki, Poland
Frequency	• One-off in Poland, one of series from FP7 PRACTICE project
Scale	• 500 participants
Indicative budget	• Not available, funded by FP7 PRACTICE project
Client / organisational partners	• Sponsors/organisational partners: • FP7 PRACTICE project • The State Fire Service • Astri Polska • Their organisation type: public and private • Nationality: Polish
Implementing partners	• The same as above
Targeted geography	• Poland, with international participants
Target user group	• User categories: intermediate/end-users, public and private: emergency services and crisis management centres, first responders, providers of technological solutions, policy makers and government officials • Specific industry thematic: crisis management • Specific Copernicus Service: Emergency Management Service
Website address / contact details	• http://www.practice-fp7-security.eu/cms,article,79,2nd-stakeholder-workshop-24-25-april-2014-pionki-poland.html
Reference Documents	• http://www.practice-fp7-security.eu/uploads/132_1.pdf
Description	The workshop was a two-day event combining participation in the PRACTICE Full Scale Field Exercise and the game session with the use of the PRACTICE Toolbox. This game session focused on integrated response to CBRN threats. The PRACTICE toolbox included the EO based data, created mostly for situational awareness.
Impact potential	• U4
Actual impact	• U3
Areas for improvement	• The lessons learnt from the exercise could be easier accessible to possible users (hard to find online and the exercise website does not exist anymore). • EO products were part of a bigger toolkit and Copernicus benefits could have been strengthened • The organizers underline that there should be more focus on integration of satellite technologies with IT solution before the exercise as well as that the users before the demonstration could have 'training before the training' to introduce them to the EO products in advance.
Best practice & scaling opportunity	• A good example of a practical user-uptake initiative, where the users have their first-hand experience with the products and can validate their usefulness in their daily operations. The demonstrations are the best practices for the real user experience. As different users have different needs and environment they work in, this example is showing the capabilities of Copernicus products scaled to the operational procedures of the certain users.

Reference number	PL.11
Initiative name	**Satellite support of EDEN Demonstration 2015**
Initiative type	User feedback, training & education (U)
Period active	• 06 May 2015
Frequency	• One-off in Poland, one of series from EDEN FP7 project
Scale	• 300 participants in the demonstration
Indicative budget	• Not available, funded by FP7 project EDEN
Client / organisational partners	• Sponsors/organisational partners: • FP7 project EDEN • Astri Polska • CBK PAN • Their organisation type: private and public • Nationality: Polish
Implementing partners	• The same as above
Targeted geography	• Poland, with international participants
Target user group	• User categories: intermediate/end-users, private • Specific industry thematic: all • Specific Copernicus Service: general
Website address / contact details	https://eden-security-fp7.eu/eden,id,120.htm
Reference Documents	
Description	The objective of the demonstration was to validate the EDEN project tools in real life scenarios for crisis management. The tools included GIS and EO products, mostly reference maps for situational awareness and damage assessment. Two scenarios were simulated during demonstration: - Terrorist attack (car filled with explosives and radiological materials on fire, smaller bombs around) - Chemicals and X-ray leakage in the city centre
Impact potential	• U4
Actual impact	• U3
Areas for improvement	• The lessons learnt from the exercise could be easier accessible to possible users (hard to find online and the exercise website does not exist anymore). • EO products were part of a bigger toolkit and Copernicus benefits could have been strengthened
Best practice & scaling opportunity	• A good example of a practical user-uptake initiative, where the users have their first-hand experience with the products and can validate their usefulness in their daily operations. The demonstrations are the best practices for the real user experience. As different users have different needs and environment they work in, this example is showing the capabilities of Copernicus products scaled to the operational procedures of the certain users.

Reference number	PL.12
Initiative name	**Snow Cover Portal for Europe http://zoz.cbk.waw.pl/snieg/en/**
Initiative type	User feedback, training & education (U), Promotional activities (P)
Period active	• Since 2010
Frequency	• On-going
Scale	• Website publicly available, statistics about visitors not available
Indicative budget	• Not available, from FP7 Geonetcab and EOPOWER projects
Client / organisational partners	• Organisational partners: Space Research Centre of the Polish Academy of Sciences, Earth Observation Group, • Their organisation type: public • Nationality: Polish
Implementing partners	• The same as above
Targeted geography	• International, website available in English and Polish, data available for Czech Republic, Poland, France, Finland, Greece, Italy, the Netherlands, Serbia, Switzerland, Turkey, Ukraine, the Balkans
Target user group	• User categories: intermediate/end-users, private, public: researchers, policy makers, common people • Specific industry thematic: all • Specific Copernicus Service: Climate Change, Atmosphere Monitoring
Website address / contact details	http://zoz.cbk.waw.pl/snieg/en/
Reference Documents	
Description	The objective of creation of the Snow Portal was to disseminate and promote the EO data for the daily applications, not only for common people and decision makers, but also researchers that can use the published models in their work. The data used in the portal come from Earth Observation satellites. The portal presents the data that can answer the questions - how much snow is in Europe, or in my country? Where is the snow? Is current winter typical? The snow cover map for Europe and plots of snow cover extenthelp to answer those questions. Presented analysis are based on satellite observations, provided by NOAA Interactive Multisensor Snow and Ice Mapping System (IMS). They are daily updated and report snow cover conditions during current winter season (from July to June). On this website can be also found a historical data for past winters and a climatological averages. Based on them one can independently assess how much current winter differs from a typical one.
Impact potential	• U5, P5
Actual impact	• U4, P4
Areas for improvement	• The data from Sentinels could be included in the analysis in the future.
Best practice & scaling opportunity	• The Snow Portal is a very good example of a user-friendly portal to present EO data in a practical way and for a daily topic, interesting for common people. It can be used also by policy makers from the snowy regions.

Reference number	PL.13
Initiative name	**GIS Day**
Initiative type	User feedback, training & education (U), Promotional activities (P)
Period active	• Since 2012, Last one in November 2014, next one in November 2016 (globally from 1999)
Frequency	• Annual event
Scale	• Number of participants:
Indicative budget	• Not available
Client / organisational partners	• Organisational partners: University of Warsaw • Sponsors: Many private sponsors, such as Esri, Geomax, Intergraph, Helion SA, Microsoft • Their organisation type: private and public • Nationality: Polish
Implementing partners	• University of Warsaw
Targeted geography	• Poland, in different main academic cities
Target user group	• User categories: intermediate users, students • Specific industry thematic: all • Specific Copernicus Service: general
Website address / contact details	http://www.gisday.waw.pl
Reference Documents	
Description	GIS Day is an international initiative implemented locally and provides an international forum for users of geographic information systems (GIS) technology to demonstrate real-world applications that are making a difference in our society. Company Esri is the main organizer of the initiative. GIS Day a good initiative for people to learn about geography and the uses of GIS. In Poland it is an event organized at the universities mainly for students and it consists of lectures and practical workshops. Remote sensing and EO are
Impact potential	• U3, P3
Actual impact	• U2, P2
Areas for improvement	• Earth Observation and Copernicus are many from the GIS-related topics during the event. The event could also bring together the EO community and users more, not only students.
Best practice & scaling opportunity	• Scaling opportunity relies on the use of Copernicus promotion in well-established events with long history that brings together the GIS community.

Reference number	PL.14
Initiative name	**ESA's Geospatial Services for environmental management in Poland http://geoserwisy.pl/**
Initiative type	User feedback, training & education (U), Promotional activities (P)
Period active	• Since 2013
Frequency	• On-going
Scale	• By the end of December 2015 more than 5000 users visited geoserwisy.pl website . About 30% of all users return on the website.
Indicative budget	• Not available, from ESA funds
Client / organisational partners	• Organisational partners: • UNEP/GRID-Warsaw Centre, National Foundation for Environmental Protection (Poland) • The Institute of Geodesy and Cartography (Poland) • Astrium Geo-Information Services (Austria) • Sponsors: ESA • Their organisation type: public • Nationality: Polish and Austrian
Implementing partners	• UNEP/GRID-Warsaw Centre, National Foundation for Environmental Protection (Poland) • The Institute of Geodesy and Cartography (Poland) • Astrium Geo-Information Services (Austria) • Contact to coordinator: Elżbieta Wołoszyńska-Wiśniewska, elzbieta.woloszynska@gridw.pl, tel.: 22 840 66 64 int. 116
Targeted geography	• Poland
Target user group	• Thematic: environmental management, spatial planning (regional level), education, nature- and environment protection agencies; • Copernicus service: land monitoring • User categories: public/self-government and administration (officials and experts), staff of educational facilities, research and academic organisations, downstream value-added service providers, downstream industry end users
Website address / contact details	http://geoserwisy.pl/
Reference Documents	
Description	Web page "geoserwisy.pl" created by UNEP/GRID-Warsaw Centre was introduced to broad community to promote the efficient use of COPERNICUS (GMES) programme and related activities among Polish authorities, especially in the field of environmental management, spatial planning and emergency management. It acts as an online information centre for satellite remote sensing and Copernicus in particular. It also includes map application (geoportal), which provide an access to selected Copernicus services combined with spatial data resources provided accordingly to the INSPIRE Directive by the national and regional spatial data infrastructures.
Impact potential	• U5, P5
Actual impact	• U4, P4
Areas for improvement	• More wider dissemination among public authorities – broader information campaign • Integration of the website with social media accounts • Additional sections dedicated for different target groups as students, educators, local communities, etc. • Wider cooperation with experts to publish new articles • Webinar section on the website to promote 'case studies' of the Copernicus data use.

Best practice & scaling opportunity	• The portal, its e-learning platform and initiatives organized around them are a very good example to gather the EO news and practical information in one source for the defined target group in the local language. It can be used by policy makers and fills one of the gap in Copernicus user-uptake - lack of competences in public administration.

Reference number	PL.15
Initiative name	**Open learning courses on Copernicus services**
Initiative type	User feedback, training & education
Period active	• Since 2014
Frequency	• Continuous activity
Scale	• By now about 120 participants have registered to attend the course. About 20% of participants have successfully passed all tests (threshold 70%) and received electronic certificates. The course is still available on the platform and open for new participants.
Indicative budget	• N/A
Client / organisational partners	• UNEP/GRID-Warsaw Centre (UN Environment Programme / Global Resource Information Database); IGiK (Institute of Geodesy and Cartography)
Implementing partners	• UNEP/GRID-Warsaw Centre (UN Environment Programme / Global Resource Information Database); IGiK (Institute of Geodesy and Cartography), ESA (European Space Agency)
Targeted geography	• Poland
Target user group	• Thematic: environmental management, spatial planning (regional level), education, nature- and environment protection agencies; • Copernicus service: land monitoring • User categories: public/self-government and administration (officials and experts), staff of educational facilities, research and academic organisations, downstream value-added service providers, downstream industry end users
Website address / contact details	http://e-platforma.gridw.pl/index.php
Reference Documents	• N/A
Description	Open e-learning course consists of 8 e-lessons, covering wide range of the topics (introduction to satellite remote sensing, sources of satellite data, software enabling RS data analyses, introduction to Copernicus services and detailed description of selected information products, good practices on Copernicus services use.
Impact potential	• U5
Actual impact	• U4
Areas for improvement	• More wider dissemination among public authorities; • Continuous update of the courses; • Increasing number of courses including face-to-face courses; • More practical lessons considering use of Copernicus data and showing how to process them in GIS desktop software; • Additional modules dedicated for defined groups, i.e. spatial planners, environmental managers, etc.
Best practice & scaling opportunity	

Reference number	PL.16
Initiative name	**National R&D Funds** - The National Centre for Research and Development - Programme Climate Change, including Arctic Regions, - National Science Centre Funds, - Polish-Norwegian Research Programme - Polish Agency for Enterprise Development - Innovation Programme for Start-Ups - Polish Space Agency Competitions for satellite applications
Initiative type	Funding instruments (F)
Period active	• N/A
Frequency	• Regular calls
Scale	• Open to all Polish participants
Indicative budget	• Summary not available
Client / organisational partners	• Sponsors/organisational partners: The National Centre for Research and Development, National Science Centre Funds, Polish-Norwegian Research Programme, Polish Agency for Enterprise Development • Their organisation type: public • Nationality: Polish
Implementing partners	• The same as above
Targeted geography	• Poland
Target user group	• User categories: intermediate/end-users, public • Specific industry thematic: all • Specific Copernicus Service: general
Website address / contact details	
Reference Documents	
Description	The Polish national R&D funds that can be used for EO/Copernicus applications are related to the national and bilateral funding for environmental projects, innovation programmes and funds for start-ups. However, in the general R&D calls there are no calls specifically dedicated Copernicus topics. The dedicated calls for satellite applications (not only for Copernicus) have been organized since recently by the Polish Space Agency, that has been just created and is expecting to increase the budget for satellite applications.
Impact potential	• F4
Actual impact	• F3
Areas for improvement	• Earth Observation/Copernicus could be included in the thematic national calls directly, in line with the national space strategy.
Best practice & scaling opportunity	• Using the local national funds can be more sustainable for the local stakeholders than only international funds, such as FP7, H2020, where the competition is much stronger.

Reference number	PL.17
Initiative name	**Ministry of Science & Higher Education in Poland with Coordination Committee for Copernicus Programme**
Initiative type	Contact Point (C)
Period active	• Since 2013, On-going
Frequency	• Regular, the Coordination Committee meets under the Inter-Ministerial Team for Space Policy in Poland every one-two weeks. The meetings recently have been less frequent.
Scale	• 1 person at Ministry of Science & Higher Education, 18 for the Coordination Committee
Indicative budget	• Not available
Client / organisational partners	• Ministry of Science & Higher Education in Poland
Implementing partners	• Same as above
Targeted geography	• Poland
Target user group	• User categories: intermediate and end-users, private and public • Specific industry thematic: all • Specific Copernicus Service: general
Website address / contact details	http://www.nauka.gov.pl/ciala-doradcze/ Contact details: Beata Mikołajek-Zielińska, Chief Expert, Department of Innovations and Development, beata.mikolajek-zielinska@nauka.gov.pl, tel. +48 22 529 22 57
Reference Documents	
Description	The Coordination Committee for Copernicus Programme operates on the basis of the Minister of Science and Higher Education appointment as of 29 May 2013. Its tasks include: • Preparation of expertise on the implementation of the programme in Poland; • Opinion on the participation of Polish scientific institutions and entrepreneurs operating in the space sector in the construction of the satellite component of the programme and the implementation of this component in Poland; • Preparing proposals on mechanisms Polish allow users to access data and services provided and stimulate the development of the downstream sector; • Support the participation of Polish scientific institutions in research consortia preparing new solutions under the programme. • Promotion of Polish scientific institutions and entrepreneurs in connection with their participation in competitions related to the programme announced by the European Union and the European Space Agency; Solutions to put forward proposal for the creation of the Polish Forum of the programme - a platform for exchange of information and consultation; • Providing professional support to the representatives of the Ministry of Science and Higher Education in the councils and the European Space Agency teams in matters relating to Polish participation in the compulsory and optional programmes associated with the programme; • Develop a promotional strategy for a programme of Copernicus, indicating the benefits of participation in the programme.
Impact potential	• C5
Actual impact	• C3
Areas for improvement	• The concrete contact points are hard to find for the potential users and it is the contact point is more for administrative/coordination activities, not for technical issues.
Best practice & scaling	

opportunity	
Reference number	PL.18
Initiative name	**EO Innovation Platform Testbed Poland**
Initiative type	Data access
Period active	• ITT July 2015, project start in January 2016 , duration : 2 years
Frequency	• Continuous
Scale	• N/A
Indicative budget	• 1,9 M€ over 2 years for industrial contract
Client / organisational partners	• ESA initiative
Implementing partners	• Potential bidders : ATM, TPNETS, Cloudsigma, Kylos, Cloudeo
Targeted geography	• EU
Target user group	• Exploitation plate-form provider, downstream value added service provider, academic or commercial data or service provider
Website address / contact details	• N/A
Reference Documents	
Description	• A testbed populated with European, Third Party Missions and National data to define services (e.g. hosted processing, accounting, IPR safeguarding, etc.) required to host exploitation platforms • An infrastructure testbed for Big Data Technology evolution activities, e.g. for new data representation (4D raster) needed for data mining, advanced data visualisation, etc. • An infrastructure testbed for data exploitation projects requiring high processing power and heterogeneous data access • An algorithm testbed to accelerate progress on data extraction in Europe This initiative is fully compatible with the proposed European Earth Observation Ground Segment evolution strategy coordinated by ESA and with stakeholders (e.g. Member States, European Commission, industry, users) This testbed is highly relevant to possible complementary initiatives such as the implementation of a national Sentinel Collaborative Ground Segment. This testbed implementation will provide valuable experience and allow consolidating the relevant know-how of national industry, in view of future procurements in the area of Ground Segment, EO data exploitation, Big Data technologies.
Impact potential	• D5
Actual impact	• TBD
Areas for improvement	• To ensure interoperability capabilities
Best practice & scaling opportunity	

Reference number	PL.R.19
Initiative name	**RCO/ Contact point for Copernicus**
Initiative type	Contact point
Period active	• Start date: August 2014
Frequency	• Continuous activity
Scale	• 955 unique users/visitors of Copernicus and Copernicus-related services at the connected Geoserwisy.pl thematic portal.
Indicative budget	• N/A
Client / organisational partners	• Ministry of Development (public / Polish state government) • ESA (public, international) • Office of the Marshall of the Mazowieckie Voivodeship (public / regional self-government authorities) • Copernicus Science Centre (educational facility)
Implementing partners	• UNEP/GRID-Warsaw Centre
Targeted geography	• Mazovia region, also offering assistance on the national scale
Target user group	• Thematic: environmental management, spatial planning (regional level), education, nature- and environment protection agencies; • Copernicus service: land monitoring • User categories: public/self-government and administration (officials and experts), staff of educational facilities
Website address / contact details	http://gridw.pl/en/ and http://geoserwisy.pl
Reference Documents	N/A
Description	Regional Contact Office (RCO) in the Mazovia Region, initiative of the establishment supported by the Marshal of the Mazowieckie Voivodeship. Main goals of the Mazovia RCO: • Promotion of the use of satellite technology and geoinformation in support of sustainable economic development of the Region, particularly monitoring of human impacts (positive and negative) on the environment • Cooperation with the Region's cities - to promote the use of space technology in monitoring of urban development, with particular focus on elements having a direct relation with the climate change mitigation • Support the Region's needs, particularly in the area of natural resources monitoring, renewable energy, and spatial planning • Dissemination of information regarding access to satellite images • Capacity building and networking of institutions active in the space sector with potential beneficiaries of the space applications • Space education in schools, combined with field activities (measurments, reporting, analysis)
Impact potential	• C3-C4
Actual impact	• C2-C3
Areas for improvement	• Support the Smart Cities idea via promotion of satellite applications in public participation, transport, health to be a more competitive and efficient in its everyday management. • Promoting satellite applications on a broader scale and making them more accessible to a wider range of end users.
Best practice & scaling opportunity	• Geoserwisy.pl thematic portal developed and available to end users, with potential to broaden the range of end users and applications.

5.25 Portugal

Reference number	PT.R.01
Initiative name	**DORIS_Net workshops/seminars**
Initiative type	Promotional activities (P)
Period active	• 2011 – 2013
Frequency	• One-off events
Scale	• 2-3 workshops/seminars a year in São Miguel, Terceira and Faial; one-off event in Madeira; two events in Lisbon: attendance level per event ca. 100 people
Indicative budget	• N/A
Client / organisational partners	• Secretaria Regional do Turismo e Transportes – Direção Regional das Obras Públicas, Tecnologia e Comunicações
Implementing partners	• N/A
Targeted geography	• Azores, Madeira and Portugal
Target user group	• Thematic: general • Copernicus service: general • Regional and local Public authorities, Downstream Industry End users, Research and Academic organisations
Website address / contact details	http://www.ideia.azores.gov.pt/Paginas/inicio.aspx
Reference Documents	http://cordis.europa.eu/result/rcn/57196_en.html
Description	In the framework of the DORIS_Net project, the Regional Contact Office of Azores prepared and organized a range of activities over the period of 2 years envisaging different target audiences at various locations and time (Presentation of GMES and DORIS_Net and benefits of RCOs; Links between GMES and INSPIRE; Introduction to GIS and GMES; GMES land; Links between CORINE Land Cover (CLC) and GIS; Use of CLC products; GMES products and endusers).
Impact potential	• P4
Actual impact	• P3
Areas for improvement	• Specific focus on EO applications
Best practice & scaling opportunity	

Reference number	PT.R.02
Initiative name	**What can Sentinels Do for Regions? The use of sentinel data for supporting land and marine spatial planning and management.**
Initiative type	Promotional activities (P)
Period active	• 2015
Frequency	• 2nd event in a series of 3 (Azores, Lombardy, Bavaria respectively)
Scale	• Attended by approximately 100 people
Indicative budget	• N/A
Client / organisational partners	• Secretaria Regional do Mar, Ciência e Tecnologia – Direção Regional da Ciência e Tecnologia / Fundo Regional para a Ciência e Tecnologia
Implementing partners	• ESA • NEREUS • Free Hanseatic City of Bremen
Targeted geography	• Azores
Target user group	• Thematic: general • Copernicus service: general • Regional and local Public authorities, Downstream Industry End users, Research and Academic organisations, Downstream value-added service providers
Website address / contact details	http://www.azores.gov.pt/Gra/CTacores/conteudos/eventos/2015/Agosto/EVENTOS_DRCT_ESA-NEREUS_28-09-2015.htm?lang=pt&area=ct
Reference Documents	
Description	The main goal of this workshop was to gather recognized experts of academy, public administration (at regional and local levels), NGOs and private companies in the fields of Earth Observation applied to Ecosystem-Based Management (EBM), Land Planning (LP), Integrated Coastal Zone Management (ICZM) and Marine Spatial Planning (MSP). The workshop was planned to catalyse and facilitate the emergence of local / regional / inter-regional projects exploiting Sentinel data.
Impact potential	• P5
Actual impact	• P5
Areas for improvement	• Follow-up activities
Best practice & scaling opportunity	

Reference number	PT.R.03
Initiative name	**RCO - Azores**
Initiative type	Contact point (C)
Period active	• Since 2011
Frequency	• Continuous
Scale	• Organised ca. 10 events, with participation of over 1000 people; established collaborations with LRAs, Scientific Community and Downstream value-added service providers
Indicative budget	• N/A
Client / organisational partners	• NEREUS, ESA
Implementing partners	• University of the Azores
Targeted geography	• Azores
Target user group	• Thematic: general • Copernicus service: general • Research and Academic organisations, Downstream end users and service providers; Regional and local public authorities;
Website address / contact details	http://www.azores.gov.pt/Gra/CTacores/conteudos/livres/SITE-CeT-TECNOLOGIA-NEREUS.htm
Reference Documents	
Description	• The role of RCO is now being carried out by the Regional Directorate for Science and Technology (DRCT- Direção Regional da Ciência e Tecnologia) coordinated by the Regional Secretariat for Sea, Science and Technology.
Impact potential	• P5
Actual impact	• P4
Areas for improvement	• Technical expertise, long term funding
Best practice & scaling opportunity	

Reference number	PT.R.04
Initiative name	**ESA BIC Portugal**
Initiative type	Start-up initiative (S)
Period active	• Since 2014
Frequency	• 4 TEBs per year
Scale	• 2 EO-related start-ups since 2014
Indicative budget	• N/A
Client / organisational partners	• ESA
Implementing partners	• University of Coimbra's Instituto Pedro Nunes
Targeted geography	• Everyone of adult age with citizenship in Europe or ESA member states
Target user group	• Entrepreneurs
Website address / contact details	http://space.ipn.pt/
Reference Documents	
Description	Instituto Pedro Nunes (IPN) is responsible for the overall management of the ESA Business Incubation Centre in Portugal. IPN partners with multiple public and private organisations to ensure an excellent support to entrepreneurs. Incubation Offices ESA BIC Portugal offers entrepreneurs the possibility to locate their startup company in Coimbra, at Instituto Pedro Nunes, in Porto, at UPTEC, and in Cascais, at DNA Cascais. Benefits – incentive scheme, business support and technical support All incubatees will have access to 50.000 € to work on prototype, product or service development, IPR management and protection. They will also benefit from 80 hours of technical support and business incubation support.
Impact potential	• S5
Actual impact	• S3
Areas for improvement	• Dedicated instruments to foster development of Copernicus-based entrepreneurial ventures.
Best practice & scaling opportunity	• N/A

Reference number	PT.05
Initiative name	**GTOT – Grupo de Trabalho de Observação da Terra (Portuguese Working Group for Earth Observation)**
Initiative type	Network (N)
Period active	• 2014– present
Frequency	• Permanent
Scale	• European, National
Indicative budget	• Not publically disclosed
Client / organisational partners	• Private sector, university, local public administration entities
Implementing partners	• See above
Targeted geography	• National and regional
Target user group	• General: (Earth Observation) • User categories: Private sector, university, local public administration entities at national and regional scale • Copernicus Service: All
Website address / contact details	• http://www.copernicus.pt (website under constriction) • Contact: Mário Caetano: mario.caetano@dgterritorio.pt
Reference Documents	• See above
Description	• The GTOT – Grupo de Trabalho de Observação da Terra (Portuguese Working Group for Earth Observation) was established in 2014 to focus on information from Copernicus, including data from the upcoming Sentinel satellites, and to prepare a specific Action Plan to promote the use of EO data and derived information in Portugal • GTOT is a network set up at inter-ministerial level (it involves eight different Portuguese ministries and 21 public institutions) with the goal both of defining strategies for uptaking Copernicus services and of supporting the development of services in Earth Observation (land, marine, atmosphere, security and climate changes) • Excellent internal networking and awareness about Copernicus and other satellite related opportunities through an extended mailing list including more than 1000 contacts among private sector, university, local public administration entities
Impact potential	• N3-4
Actual impact	• N2
Areas for improvement	• Improve the awareness of the utility and importance of EO data, products and services in the framework of Copernicus Programme opportunities • Website (on construction)
Best practice & scaling opportunity	• Very good internal EO networking

Reference number	PT.06
Initiative name	**Copernicus web pages of the Directorate-General for Territory Development (DGT)**
Initiative type	Promotional activities (P)
Period active	• 2012– present
Frequency	• Permanent
Scale	• European, National
Indicative budget	• Not publically disclosed
Client / organisational partners	• Private sector, university, local public administration entities
Implementing partners	• See above
Targeted geography	• National and regional
Target user group	• General: (Earth Observation) • User categories: Private sector, university, local public administration entities at national and regional scale • Copernicus Service: All
Website address / contact details	• www.dgterritorio.pt/cartografia_e_geodesia/cartografia/detecao_remota/copernicus/ • Contact: Mário Caetano: mario.caetano@dgterritorio.pt
Reference Documents	• See above
Description	• Portuguese web site with information on Copernicus • The web site contains general information about the Copernicus Programme in terms of description, objectives, space, ground and service component; on that last part there are active links to the site copernicus.eu • DGT with DGPM, is the Portuguese representative in the Copernicus Committee
Impact potential	• P2-3
Actual impact	• P1
Areas for improvement	• The website needs to be improved and enhanced for a more effective action of promotional activities
Best practice & scaling opportunity	

Reference number	PT.07
Initiative name	**Portuguese Copernicus Training Activities**
Initiative type	User feedback, training & education (U)
Period active	• 2014-present
Frequency	• Permanent
Scale	• National
Indicative budget	• Not publically disclosed
Client / organisational partners	• Administration (e.g. service directors, technical managers), • Universities (professors, students) • Media
Implementing partners	• See above
Targeted geography	• National and regional
Target user group	• See client/organisational partners
Website address / contact details	• Website (on construction) • Contatc: Mário Caetano: mario.caetano@dgterritorio.pt
Reference Documents	• See above
Description	• Promoting workshops for: - Different levels of Public Administration (e.g. service directors, technical managers) - Universities (professors, students) - Media • Provide training materials (e.g. tutorials, presentation, videos)
Impact potential	• U2-3
Actual impact	• U1
Areas for improvement	• Website (on construction) • Lack of public information / awareness
Best practice & scaling opportunity	

Reference number	PT.08
Initiative name	**IPSentinel**
Initiative type	Data Access (D)
Period active	• The agreement with ESA was signed in November 2015. Operation expected for 2016
Frequency	• Permanent
Scale	• European, National
Indicative budget	• Not publically disclosed
Client / organisational partners	• Private sector, university, local public administration entities
Implementing partners	• See above
Targeted geography	• National and regional
Target user group	• See client/organisational partners
Website address / contact details	• Website on construction • Contact: Mário Caetano: mario.caetano@dgterritorio.pt
Reference Documents	• http://www.dgterritorio.pt/cartografia_e_geodesia/projetos_em_curso/ipsentinel/
Description	• The IPSentinel will be the Portuguese contribution to the Sentinel Collaborative Ground Segment and the privileged access point to Sentinel data and derivative products for the national community. It will be implemented by the Directorate-General for the Territory Development (DGT) and the Portuguese Institute for the Sea and the Atmosphere (IPMA) following an agreement signed with ESA and upon financial contribution from European Economic Area (EEA) grants • This infrastructure will be a privileged means of access to the data of the Sentinel satellites into Portuguese territory, and for the search and rescue area in the Atlantic under the responsibility of Portugal • It is expected the start of the operation from 2016 • The availability of images in a fast, free and systematic enable the creation of new products and services that certainly constitute very important tools in the management of the territory and its resources • The DGT and IPMA partners have highly specialized teams to implement this project. It will certainly be a challenging project, but largely rewarding the potential that this type of infrastructure can offer, with regard to products and services to the country
Impact potential	• D3-4
Actual impact	• D1-2 (for the moment)
Areas for improvement	• Website under construction
Best practice & scaling opportunity	

Reference number	PT.09
Initiative name	**Portuguese Space Office**
Initiative type	Contact Point (C)
Period active	• 1992- present
Frequency	• Permanent
Scale	• International, European, National and regional
Indicative budget	• Not publically disclosed
Client / organisational partners	• Private sector, university, local public administration entities at national and regional scale
Implementing partners	• See above
Targeted geography	• International, European, National and regional
Target user group	• General: (Earth Observation) • User categories: Private sector, university, local public administration entities at national and regional scale • Copernicus Service: All
Website address / contact details	• https://www.fct.pt/apoios/cooptrans/espaco/index.phtml.en • Contact: Luís Serina: luis.serina@fct.pt
Reference Documents	
Description	• The main mission of the Space Office is to fully explore the benefits of the Portuguese participation in European space programmes, including ESA space programmes
Impact potential	• C3-4
Actual impact	• C1-2
Areas for improvement	• Better exploitation of the existing best practices to showcase successful access and use of Copernicus data and products
Best practice & scaling opportunity	• Following the Portuguese participation on the Horizon 2020 "Space" programme, working in collaboration with the GPPQ • ESA's Earth Observation programmes, including the Copernicus (GMES) Programme

Reference number	PT.10
Initiative name	**GPPQ - Gabinete de Promoção do Programa Quadro de I&DT (Office for Promoting the Framework programme of Innovation, development and technology)**
Initiative type	Contact Point (C)
Period active	• 2007- present
Frequency	• Permanent
Scale	• International, European, National and regional
Indicative budget	• Not publically disclosed
Client / organisational partners	• Private sector, university, local public administration entities at national and regional scale
Implementing partners	• See above
Targeted geography	• International, European, National and regional
Target user group	• General: (Earth Observation) • User categories: Private sector, university, local public administration entities at national and regional scale • Copernicus Service: All
Website address / contact details	• http://www.gppq.fct.pt/h2020/ • Contact: João Romana: Joao.Romana@fct.pt
Reference Documents	• http://www.gppq.fct.pt/h2020/call.php?id=H2020-EO-2016&topic=EO-3-2016
Description	• Promotes the participation of Portuguese entities in H2020 • The mission of GPPQ is to bridge the gap between researchers and Portuguese companies and activities of the Framework Programme (FP) through mutual coordination of delegates to the Committees, the network of National Contact Points (NCP) and the representatives of the Technology Platforms European (ETP) and Joint Technology Initiatives (JTI). • The goal is always to improve the performance of national participants in European competitions and increase the financial return of the contribution of Portugal in the PQ while it promotes research and innovation excellence • A specific call on “Evolution of Copernicus Services” is active (see http://www.gppq.fct.pt/h2020/call.php?id=H2020-EO-2016&topic=EO-3-2016): 21,85 M€, candidature on project: form 09-11-2015 to 03-03-2016
Impact potential	• C2-3
Actual impact	• C1
Areas for improvement	• Improve the awareness of the utility and importance of EO data, products and services • Grater promotion of the use of Copernicus data, products and services
Best practice & scaling opportunity	• Very good internal networking • Following the Portuguese participation on the Horizon 2020 "Space" programme, working in collaboration with the Portuguese Space Office

Reference number	PT.11
Initiative name	**PROESPAÇO**
Initiative type	Network (N)
Period active	• 2003 – present
Frequency	• Permanent
Scale	• European, National
Indicative budget	• Not publically disclosed
Client / organisational partners	• Space industry
Implementing partners	• See above
Targeted geography	• European, National and regional
Target user group	• General: (Earth Observation) • User categories: Space industry • Copernicus Service: All
Website address / contact details	• http://www.proespaco.pt/eng/index.html • Contact: Antonio Neto da Silva (President): proespaco@mail.telepac.pt
Reference Documents	• http://webcache.googleusercontent.com/search?q=cache:wUWLEQvSxcEJ:een.ec.europa.eu/tools/services/EVE/Event/DownloadAttachment%3FattachmentID%3D5de81a2d-bd1a-48cc-b9db-274bae231e66+&cd=3&hl=it&ct=clnk&gl=it
Description	• It plays a key role in defining Portugal's national strategy for the space industry and prepares the sector's industrial development strategy • Presenting to the government the interests and achievements of the Portuguese Space Industry with a view to the formulation of a Portuguese space policy, with a focus on: - proposals for a Portuguese Space Programme and for the definition for a long-term Portuguese Space Policy - proposals for the definition of a Development Plan for the Portuguese Space Industry - creating a catalogue of the capabilities of the Portuguese space industry - preparing a joint pavilion for international fairs, business demonstrations and exhibitions - promoting regular meetings for members and making presentations to foreign space research delegations - organizing informative meetings and events and publishing communication and promotional materials - promoting the Portuguese space sector and joint promotional activities - cooperating with international organisations that have similar aims • Preliminary interaction with Copernicus Programme in the framework of the "Portugal Space Day 2015, 11 November 2015, Avenue de Cortenbergh 12, Brussels
Impact potential	• N2-3
Actual impact	• N1
Areas for improvement	• Improve the awareness of the utility and importance of EO data, products and services • Expand the use of Copernicus Programme opportunities
Best practice & scaling opportunity	• PROESPAÇO currently represents more than 95% of the business contracted to the Portuguese space industry and is the only organisation that represents their interests

Reference number	PT.12
Initiative name	**Earth Observation Network**
Initiative type	Network (N)
Period active	• 2012 – present
Frequency	• Permanent
Scale	• European, National
Indicative budget	• Not publically disclosed
Client / organisational partners	• Public administration, private sector, academia and research centres
Implementing partners	• See above
Targeted geography	• European, National and regional
Target user group	• General: (Earth Observation) • User categories: public administration, private sector, academia and research centers • Copernicus Service: All
Website address / contact details	• http://www.dgterritorio.pt/ • Contact: Mário Caetano: mario.caetano@dgterritorio.pt
Reference Documents	
Description	• Email database with 1002 members from public administration, private sector, academia and research centers • DGT sends regularly information on Copernicus (events, activities of Copernicus services, etc)
Impact potential	• N3-4
Actual impact	• N2-3
Areas for improvement	• Improve the awareness of the utility and importance of EO data, products and services • Expand the use of Copernicus Programme opportunities
Best practice & scaling opportunity	• The General Directorate of Land, also designated as DGT, is an integrated service center in the direct administration of the State, under the Ministry of Environment, with administrative autonomy

Reference number	PT.13
Initiative name	**National Conference of Cartography and Geodesy**
Initiative type	Events (E)
Period active	• 29/30 OCT 2015 (Academia Militar - Aquartelamento da Amadora)
Frequency	• Biannual conference
Scale	• National, regional
Indicative budget	• Not publically disclosed
Client / organisational partners	• National service providers or end users, for research or business purposes
Implementing partners	• See above
Targeted geography	• National, regional
Target user group	• User Type: National /MS Institutions and Bodies, Research and Academic Organisations • User categories: Public and private companies at national and regional scale • Copernicus Service: all
Website address / contact details	• Website from the last event: http://www.ordemengenheiros.pt/pt/agenda/viii-cncg-viii-conferencia-nacional-de-cartografia-e-geodesia/ • Contact: Ordem dos Engenheiros email: colegiogeografica@ordemdosengenheiros.pt
Reference Documents	• Website from the last event: http://www.ordemengenheiros.pt/pt/agenda/viii-cncg-viii-conferencia-nacional-de-cartografia-e-geodesia/
Description	• Biannual conference aiming the Cartography and Geodesy areas involving National Entities, Research and Academic Organisations, Data providers, etc. • Themes: Geodesy; Hydrography and Oceanography; Cartography; Earth Observation, Photogrammetry; Geospatial information: applications; Land Use Planning and Management; Industry and Services; Education and Training; Technical Standards; National and International projects • Public and private companies exhibition boots • The available information does not allow to understand how much space there was for Copernicus Programme, however in the User Awareness & Training Event there is a slight evidence of at least a couple of presentations about this Programme
Impact potential	• E2-3
Actual impact	• E1
Areas for improvement	• Improve the awareness of the utility and importance of EO data, products and services • Expand the focus on Copernicus Programme opportunities
Best practice & scaling opportunity	• Segment of attendees reached

Reference number	PT.14
Initiative name	**SOPHIA Project**
Initiative type	User feedback, training & education (U)
Period active	• 2015-2016
Frequency	• One-off
Scale	• National
Indicative budget	• Not publically disclosed
Client / organisational partners	• DGRM, Professional community
Implementing partners	• See above
Targeted geography	• National and regional
Target user group	• See client/organisational partners
Website address / contact details	• https://www.sophia-mar.pt/pt/ • Sandra Moutinho/ smoutinho@dgrm.mam.gov.pt
Reference Documents	• http://www.dgrm.mam.gov.pt/xportal/xmain?xpid=dgrm&actualmenu=1470807&selectedmenu=1641550&xpgid=genericPageV2&conteudoDetalhe_v2=1641651 • http://www.fc.ul.pt/pt/evento/29-06-2015/projeto-sophia
Description	• «SOPHIA - Knowledge for Marine Environment Management» is a non-profit project focused on the sustainable management of marine waters. • It provides free academic training to help the professional community dealing with the multiple issues concerning marine resources management. • Through collaborations with the Faculty of Sciences of the University of Lisbon and the School of Communication and Media Studies, the SOPHIA project aims to develop excellency on training related to national and international legislation applied to marine conservation, to the interpretation of satellite images related to the sea, to geographic information systems applied to marine sciences and to deep-sea and continental shelf ecosystems. • The project also aims to make this knowledge open access, and hence it has a strong science communication and public outreach online presence through its website (www.sophia-mar.pt), which presents itself as a multimedia knowledge platform
Impact potential	• U-3-4
Actual impact	• U1-2 (The SOPHIA Project is in progress)
Areas for improvement	• Identifying the potential involvement of Copernicus services in the project
Best practice & scaling opportunity	• Interesting national initiative

Reference number	PT.15
Initiative name	**CMEMS REGIONAL USER AND TRAINING WORKSHOP**
Initiative type	Events (E)
Period active	• 10/11 December 2015 (Lisbon)
Frequency	• One-off
Scale	• National, regional
Indicative budget	• Not publically disclosed
Client / organisational partners	• National service providers or end users, for research or business purposes
Implementing partners	• See above
Targeted geography	• National, regional
Target user group	• User Type: National /MS Institutions and Bodies, Research and Academic Organisations • User categories: public intermediate/end-user, institutions and authorities involved in the maritime management at national and regional scale • Copernicus Service: Maritime monitoring
Website address / contact details	• http://web.tecnico.ulisboa.pt/~andreia.amaral/EU%20Copernicus%20Marine_IBI_Workshop_2015/ • Contact: Ramiro Neves/ ramiro.neves@tecnico.ulisboa.pt
Reference Documents	
Description	• The workshop was open to current or potential future users of CMEMS who have a general interest in ocean products covering the IBI area (either as service providers or end users, for research or business purposes). It was divided into two parts: DAY 1 – USER WORKSHOP: CMEMS, WHAT BENEFITS FOR USERS. Presentation of the EU Copernicus Programme and of the Copernicus Marine Service activities: organisation, online catalogue, products in the IBI area, Service Desk support to users, User Uptake programme DAY 2 – TRAINING WORKSHOP: EXPERIENCE CMEMS IN YOUR OWN DOMAIN. Basic elements and methods of operational oceanography with regard to the CMEMS data & products in the Atlantic European South West Shelf Ocean, be Observation or Models products (how to access data? How to use data in domain of application? How to generate scripts...)
Impact potential	• E3-4
Actual impact	• E2-3
Areas for improvement	• Due to technical reasons, the expected livestreaming was not practicable
Best practice & scaling opportunity	• The workshop was aimed at current or potential future users of CMEMS with interest in the IBI area, either as service providers or end-users for research or business purposes

Reference number	PT.16
Initiative name	**MSFDsat, Measure of Marine Strategy Framework Directive**
Initiative type	Data Access (D)
Period active	• 2014- present
Frequency	• Permanent
Scale	• European, National
Indicative budget	• Not publically disclosed
Client / organisational partners	• Private sector, university, local public administration entities
Implementing partners	• See above
Targeted geography	• National and regional
Target user group	• See client/organisational partners
Website address / contact details	• Website not available • Contact: José Manuel Marques/ jmarques@dgrm.mam.gov.pt
Reference Documents	• http://www.dgrm.mam.gov.pt/xportal/xmain?xpid=dgrm&actualmenu=1470807&selectedmenu=1641550&xpgid=genericPageV2&conteudoDetalhe_v2=1641651
Description	• One example of satellite based information in the maritime domain, developing national measures and actions in the framework of European directives (e.g. the Marine Strategy Framework Directive - MSFD) • Measure of Marine Strategy Framework Directive (MSFD). MSFD is a lighthouse for marine environment management because: (1) is an environmental pillar of the EU's policy for the sea (2) it establishes a framework for Member States in order to take the necessary measures to obtain or maintain good environmental status in the marine environment (3) develop and implement Marine Strategies • The measure MSFDsat intends to apply satellite technology to the understanding of marine ecosystems and intends to: • (1) Map marine habitats by the characterization of: Hydro-geographic areas; Physical and chemical description of each habitat; Biodiversity (biomass of phytoplankton community; distribution; size classes) (2) Improve the tracking of marine pollution by the characterization of: Eutrophication; Spatial distribution and temporal evolution of Oil spills, Marine litter and Turgidities plumes; Risk areas for the occurrence of oil spills (3) Identify pressures on the marine environment caused by anthropogenic activities: Fishery; Navigation; Surveillance and maritime security (4) Select indicators for the characterization of the variation of the ecosystems, concerning the descriptors: D1: Biological diversity; D5: Eutrophication; D7: Alteration of hydrographical conditions; D8: Contaminants; D10: Marine litter
Impact potential	• D2-3
Actual impact	• D1
Areas for improvement	• Website not available
Best practice & scaling opportunity	

Reference number	PT.17
Initiative name	**Fish & Ships project**
Initiative type	Data Access (D)
Period active	• 2014 - present
Frequency	• Permanent
Scale	• European, National
Indicative budget	• Not publically disclosed
Client / organisational partners	• Private sector, university, local public administration entities
Implementing partners	• See above
Targeted geography	• National and regional
Target user group	• See client/organisational partners
Website address / contact details	• Website not available • Contact: José Manuel Marques/ jmarques@dgrm.mam.gov.pt
Reference Documents	• http://www.dgrm.mam.gov.pt/xportal/xmain?xpid=dgrm&actualmenu=1470807&selectedmenu=1641550&xpgid=genericPageV2&conteudoDetalhe_v2=1641651
Description	• The Marine Strategy Framework Directive - MSFD is a lighthouse for marine environment management because: (1) it is an environmental pillar of the EU's policy for the sea (2) it establishes a framework for Member States in order to take the necessary measures to obtain or maintain good environmental status in the marine environment (3) develop and implement Marine Strategies • PT is establishing a Monitoring Programme for continuous assessment of the environmental status of marine waters. This program includes Fish & Ships project, whose objective is to stablish a monitoring network for fishing activities and maritime traffic in Marine Protected Areas offshore, particularly seamounts Josephine and Gorringe, which will integrate the new AMP ocean Madeira-Tore. This network is based on a set of spatial analysis procedures in designated areas based on a pre-existing communication network (radio and radar). It aims to assess the density of fishing vessels operating in those areas, as well as the traffic density in order to rate the fishing effort and the major shipping routes used (shipping lanes). In addition, it has also the objective of monitoring fishing activities and maritime traffic in the EEZ of Madeira and the shipping activity in sensitive areas of the Azores subdivision
Impact potential	• D2-3
Actual impact	• D1
Areas for improvement	• Website not available
Best practice & scaling opportunity	

Reference number	PT.18
Initiative name	**Marsurv/ IMDatE**
Initiative type	Data Access (D)
Period active	• 2010- present
Frequency	• Permanent
Scale	• National, regional
Indicative budget	• Not publically disclosed
Client / organisational partners	• Local Competent Authority (LCA), authorized user, institutional users with an interest in maritime information
Implementing partners	• See above
Targeted geography	• National and regional
Target user group	• Thematic: maritime monitoring • Copernicus service: Maritime Monitoring • User categories: Local Competent Authority (LCA), authorized user, institutional users with an interest in maritime information
Website address / contact details	• https://portal.emsa.europa.eu/web/imdate • Contact: Jorge Caseiro/ jcaseiro@dgrm.mam.gov.pt
Reference Documents	• https://portal.emsa.europa.eu/web/imdate
Description	• The Integrated Maritime Data Environment (IMDatE) is a technical framework that collects and combines data from EMSA's maritime applications and other external sources to provide more comprehensive and configurable services to users • It also supports the relay of data between the maritime applications themselves, based on existing access rights • IMDatE supports and enhances the portfolio of services provided by the existing EMSA applications. The new functionalities provide more options for data visualisation, data analysis, a single sign-on process, new machine-to-machine interfaces and automated vessel behaviour monitoring • Verification also improves the quality of data across the systems, for example through the confirmation of vessel details across different vessel registries.
Impact potential	• D2-3
Actual impact	• D1
Areas for improvement	
Best practice & scaling opportunity	

Reference number	PT.19
Initiative name	**"EEA PT02 - Integrated Marine and Coastal Waters Management"**
Initiative type	Funding instruments (F)
Period active	• 2012 - present
Frequency	• Permanent
Scale	• European, National
Indicative budget	• Grants Programme PT02: EUR 19,2Mfrom the EEA Grants, accounting with a national co-financing of about EUR 3,4M
Client / organisational partners	• Private sector, university, local public administration entities
Implementing partners	• See above
Targeted geography	• National and regional
Target user group	• User Type: National /MS Institutions and Bodies, Research and Academic Organisations • User categories: Private sector, university, local public administration entities • Copernicus Service: Maritime monitoring
Website address / contact details	• http://www.dgpm.mam.gov.pt/Pages/eea_grants_wo_we_are.aspx • Contact: Fernando Marques/fernando.marques@dgpm.mam.gov.pt
Reference Documents	• http://www.dgpm.mam.gov.pt/Pages/eea_grants_wo_we_are.aspx
Description	• Call for proposals on Earth Observation services and associated modelling, forecasting and associated services financed from the EEA Grants Programme PT02 - Integrated Marine and Coastal Waters Management • In particular, was included a call for a project intended to meet the needs within the capability to store, archive and disseminate data from Sentinel (Copernicus) satellite observations
Impact potential	• F2-3
Actual impact	• F1
Areas for improvement	• More Copernicus-related initiatives
Best practice & scaling opportunity	

Reference number	PT.20
Initiative name	**DGPM**
Initiative type	Contact Point
Period active	• 2012- present
Frequency	• Permanent
Scale	• International, European, National and regional
Indicative budget	• Not publically disclosed
Client / organisational partners	• Private sector, university, local public administration entities at national and regional scale
Implementing partners	• See above
Targeted geography	• International, European, National and regional
Target user group	• General: (Earth Observation) • User categories: Private sector, university, local public administration entities at national and regional scale • Copernicus Service: Maritime monitoring
Website address / contact details	• http://www.dgpm.mam.gov.pt/Pages/default.aspx • Contact: Fernando Marques/fernando.marques@dgpm.mam.gov.pt
Reference Documents	• http://www.dgpm.mam.gov.pt/Documents/Portaria%20295_2012.pdf
Description	• Delegate to the Copernicus Committee
Impact potential	• C2-3
Actual impact	• C1
Areas for improvement	• Improve the awareness of the utility and importance of EO data, products and services • Grater promotion of the use of Copernicus data, products and services and of the Copernicus Programme opportunities
Best practice & scaling opportunity	• Consolidated contact point

5.26 Romania

Reference number	RO.01
Initiative name	**ROSA – Romanian Space Agency**
Initiative type	Contact point (C)
Period active	• 1995 - present
Frequency	• Permanent
Scale	• International, European, National
Indicative budget	• Not publically disclosed
Client / organisational partners	• ESA and Romanian institutions requiring remote sensed based services • ESA – European Space Agency as third European contributing country to the overall ROSA budget
Implementing partners	• Consortia of public and private entities
Targeted geography	• International, European, National
Target user group	• General: (Earth Observation) • User categories: National /MS Institutions and Bodies, Regional and Local Public Authorities, Downstream Value-Added Service Providers, Downstream Industry end users, Research and Academic Organisations • Copernicus Services: All
Website address / contact details	• http://www.rosa.ro/indez.php/en/ • Contact: http://www2.rosa.ro/index.php/en/
Reference Documents	
Description	• National public entity under the Romanian Government • Reference centre for the Civil Protection Service providing satellite based applications, products and services • National Point of Contact vs ESA. It is the Romanian reference for the Copernicus Space Component • The East European Copernicus Conference is an excellent event to spread knowledge and updates on Copernicus • Member of the Copernicus Committee
Impact potential	• C5
Actual impact	• C4-5
Areas for improvement	• More promotion in civil society
Best practice & scaling opportunity	• Has a long experience in the participation to the Copernicus program and, more in general, is very active in space related activities

Reference number	RO.02
Initiative name	**East-European Copernicus Conference**
Initiative type	Event (E)
Period active	• Since October 2012
Frequency	• Once a year. Last Occurrence: 1-2 October 2015 (4th edition)
Scale	• 2-days conference • Five Session/Round Table
Indicative budget	• Not publically disclosed
Client / organisational partners	• Public and Private Organisation, European and National participants
Implementing partners	• European Space Agency, European Commission, Eurisy, DLR, European Environment Agency, National Institute for Optoelectronics, C-S Romania, Bulgarian Academy of Sciences, Terrasigna, Romania Moldova Technical University, UN Office Vienna European GNSS Agency, JRC, TeamNet, Romania
Targeted geography	• International, European, National, regional, local
Target user group	• General (Earth Observation) • User categories: Intermediate, end-user, public, private, space industries, academic participants • Copernicus Services: All
Website address / contact details	• http://www.rosa.ro/ • Contact: copernicus@rosa.ro
Reference Documents	• http://www.rosa.ro/images/Documente/Agende/2015_08_Conferinta_Copernicus/Copernicus_Bucharest_2015_Draft.pdf • http://www.rosa.ro/images/phocagallery/EVENIMENTE/2015/2015_04_conferinta_copernicus/BucharestConclusions.pdf
Description	• The 2015 edition of the Copernicus conference, was dedicated to the Eastern European Copernicus users and service providers • As in the previous editions, the 2015 conference has invited the participants to exchange views on further exploitation of the big Earth Observation data resources made available by the Copernicus space and services components managed by ESA and the European Commission respectively • It was hosted by the Romanian Parliament, Chamber of Deputies • Outstanding speakers have emphasized the significant impact of releasing an impressive amount of data and information in support of climate change resilience, humanitarian aid and implementation of major European policy for environment and security
Impact potential	• E4-5
Actual impact	• E3-4
Areas for improvement	• The main objective should be to encourage the relevant actors in the region to initiate and develop collaborative actions, facilitating the implementation of national and European environment and civil security policy goals
Best practice & scaling opportunity	• The conference is a reference event for the Earth Observation community in Eastern Europe and demonstrates the excellent progress made by Copernicus towards providing reliable data benefitting environment and security

Reference number	RO.03
Initiative name	**STAR Programme (Space Technology and Advanced Research)**
Initiative type	Funding instruments (F)
Period active	• 1992 - present
Frequency	• Permanent
Scale	• 130 entities, 50 of them being organized site visits and interviews
Indicative budget	• Not publically disclosed
Client / organisational partners	• Institutes, research centres, industrial companies, SMEs, Public Organisation
Implementing partners	• European Space Agency • ROSA
Targeted geography	• National, regional, local
Target user group	• General (Earth Observation) • User categories: Intermediate, end-user, public, private, space industries, academic participants • Copernicus Services: All
Website address / contact details	• http://star.rosa.ro/ • Contact: star@rosa.ro
Reference Documents	• http://star.rosa.ro/
Description	• Programme of Research, Development and Innovation STAR (Space Technology and Advanced Research) for the period 2012-2019, approved by Law no. 262/2011
Impact potential	• F3-4
Actual impact	• F1-2
Areas for improvement	• Improve the awareness of the utility and importance of EO data, products and services in the framework of Copernicus Programme opportunities • Improve of industrial and scientific presence in Copernicus
Best practice & scaling opportunity	• ROSA manages an important funding instrument which is the STAR Programme (Space Technology and Advanced Research) • Agreement between ROSA and the European Space Agency

Reference number	RO.04
Initiative name	**ESERO Romania, European Space Education Resource Office - Romania**
Initiative type	User feedback, training & education (U)
Period active	• 2014 - present
Frequency	• Permanent
Scale	• National, Regional, Local
Indicative budget	• Not publically disclosed
Client / organisational partners	• Institutes, Research canters, teacher and students
Implementing partners	• ESA
Targeted geography	• National, Regional, Local
Target user group	• General (Earth Observation) • User Categories: Institutes, Research canters, teacher and students • Copernicus services: All
Website address / contact details	• http://esero.ro/ • Contact: virgiliu.pop@rosa.ro
Reference Documents	• http://esero.ro/
Description	• The key aim of ESERO Romania is to increase STEM literacy in Romania by using space as an appealing context to make the teaching and learning of Science, Technology, Engineering and Math (STEM) subjects more attractive and accessible • In Romania, the Office intends to bridge the gap between the prize-winning elites and the scientifically illiterate mass through the training of teachers, the raising awareness of space activities and the dissemination of materials, making full use of ESA's literature and logistical support in this process • The Romanian ESERO is also serving as the main interface between ESA Education and the Romanian educational community • Support primary and secondary education in Europe, uses space as a context for creative and generous in content teaching and learning of STEM. Its objective is to improve students' knowledge and skills in these subjects from primary and encourage them to choose a career future in STEM
Impact potential	• U3
Actual impact	• U1-2
Areas for improvement	• Improve the awareness of the utility and importance of EO data, products and services in the framework of Copernicus Programme opportunities
Best practice & scaling opportunity	• Good training & education context

Reference number	RO.05
Initiative name	**COMPETITION EXO-RO**
Initiative type	User feedback, training & education (U)
Period active	• 2015
Frequency	• One-off event
Scale	• Not Publically disclosed
Indicative budget	• Not Publically disclosed
Client / organisational partners	• Public
Implementing partners	• Romanian Space Agency, Public Sector
Targeted geography	• National, Regional, local
Target user group	• General (Earth Observation) • User categories: Academic participants • Copernicus services: All
Website address / contact details	• http://www.rosa.ro/index.php/en/educatie/competitia-exo-ro • Contact: rosa-hq@rosa.ro
Reference Documents	• http://www.rosa.ro/index.php/en/educatie/competitia-exo-ro
Description	• National competition Rovere Exo-EN for high school students, organized by the Romanian Space Agency (ROSA) in synergy with ESERO Romania - the European Resources for Education Space, in order to interest young people in space sector and increase quality education through skills training for young people • By participating in this competition, student teams have the opportunity to take part in all phases of a project typical of robotics, from target selection, design and integration of components to testing the system in the end. As a result of this process, participants learn in practice and get familiar with the methodology of scientific research, their own concepts will deepen and strengthen knowledge of technology and programming; they learn the importance of coordination and teamwork and, not finally, improve their communication skills
Impact potential	• U3
Actual impact	• U1-2
Areas for improvement	• Improve the awareness of the utility and importance of EO data, products and services in the framework of Copernicus Programme opportunities
Best practice & scaling opportunity	• Good training & education context

Reference number	RO.06
Initiative name	**National Strategy of research, Development and Innovation 2014-2020**
Initiative type	Funding instruments (F)
Period active	• 2014-2020
Frequency	• Permanent until 2020
Scale	• 11 partners and 142 associate partners
Indicative budget	• Not publically disclosed
Client / organisational partners	• Public policies related sectors (fiscal, educational, etc.), National Companies
Implementing partners	• Romanian Space Agency, Public Sector
Targeted geography	• Public policies related sectors (fiscal, educational, etc.), National Companies
Target user group	• General: competitiveness & innovation • User Categories: National/MS Institutions and Bodies, Research and Academic Organisations, National Companies • Copernicus services: All
Website address / contact details	• http://www.rosa.ro/index.php/en/space-strategy/politica-spatiala/466-strategia-nationala-de-cercetare-dezvoltare-si-inovare-2014-2020 • Contact: rosa-hq@rosa.ro
Reference Documents	• http://www.rosa.ro/index.php/en/space-strategy/politica-spatiala/466-strategia-nationala-de-cercetare-dezvoltare-si-inovare-2014-2020
Description	• Main objectives: - to increase economic competitiveness through innovation and increase the role of science in society - to create an enabling environment for private sector initiative - to support for smart specialization - the concentration of a significant part of RDI activities on societal issues - to transform the R&D into a factor of economic growth - to help research organisations performing become regional operators and global levels
Impact potential	• F2-3
Actual impact	• F1
Areas for improvement	• Higher focus on Copernicus Programme opportunities
Best practice & scaling opportunity	• Very interesting funding instrument

Reference number	RO.07
Initiative name	**The Space Subcommittee. Parliament of Romania**
Initiative type	Contact Point (C)
Period active	• 2012 - Present
Frequency	• Permanent
Scale	• Team of 11 members
Indicative budget	• Not publically disclosed
Client / organisational partners	• Public, space sector
Implementing partners	• Romanian Space Agency, Public Sector
Targeted geography	• National
Target user group	• General: Earth Observation • User Categories: National/MS Institutions and Bodies, Research and Academic Organisations • Copernicus services: All
Website address / contact details	• http://www.rosa.ro/index.php/en/space-strategy/politica-spatiala/80-subcomisia-spatiu-parlamentul-romaniei/136-the-space-subcommittee-parliament-of-romania • Contact: webmaster@cdep.ro
Reference Documents	• http://www.rosa.ro/index.php/en/space-strategy/politica-spatiala/80-subcomisia-spatiu-parlamentul-romaniei/136-the-space-subcommittee-parliament-of-romania
Description	• The objective of the Space Subcommittee is to harmonize the space national legislation with the European one • The role of the Subcommittee is to represent the Romanian Parliament in the space group of the European Parliament, attending meetings and conferences in this field
Impact potential	• C2-3
Actual impact	• C1-2
Areas for improvement	• Improve the awareness of the utility and importance of EO data, products and services • Grater promotion of the use of Copernicus data, products and services
Best practice & scaling opportunity	• Objectives and role of the Space Subcommittee

Reference number	RO.08
Initiative name	**Ministry of National Education - ANCS**
Initiative type	Contact Point (C)
Period active	• 2012 - Present
Frequency	• Permanent
Scale	• 1 Coordinator
Indicative budget	• Not Publically disclosed
Client / organisational partners	• Public, Space sector
Implementing partners	• Romanian Space Agency, Public Sector
Targeted geography	• National
Target user group	• General: Earth Observation • User Categories: National/MS Institutions and Bodies, Research and Academic Organisations • Copernicus services: All
Website address / contact details	• http://www.rosa.ro/index.php/en/space-strategy/politica-spatiala/81-ancs/137-ministry-of-national-education-ancswebmaster@cdep.ro • Contacts: rosa-hq@rosa.ro
Reference Documents	• http://www.rosa.ro/index.php/en/space-strategy/politica-spatiala/81-ancs/137-ministry-of-national-education-ancswebmaster@cdep.ro
Description	• The Ministry of Education, as the state authority for research, technological development and innovation, has the following responsibilities in the scientific research, technological development and innovation domains: - to define strategic objectives - to define, apply, monitor and evaluate policies needed to achieve these objectives - to provide planning activities according to the set objectives - to define the normative and methodological, functional, operational and financial requirements for the implementation of policies - to ensure communication with other public authorities to achieve consistency of government policies - to ensure communication with other civil society structures and citizens - to define, fund, apply, monitor and evaluate programs to achieve the objectives - to foster international partnership development
Impact potential	• C2-3
Actual impact	• C1-2
Areas for improvement	• Improve the awareness of the utility and importance of EO data, products and services • Grater promotion of the use of Copernicus data, products and services
Best practice & scaling opportunity	• It very active in research, technological development and innovation

Reference number	RO.09
Initiative name	**ROMANIAN SPACE WEEK**
Initiative type	Promotional activities (P)
Period active	• May 2012
Frequency	• Once a year • Last occurrence: 27-29 May 2015 (4th edition)
Scale	• 2-day conference • 5 sessions
Indicative budget	• Not publically disclosed
Client / organisational partners	• Researchers, engineers and technicians, policy makers, space technology, application providers and users
Implementing partners	• Romanian Space Agency
Targeted geography	• National, Regional and local
Target user group	• General: Earth Observation • User Categories: Intermediate, end-user, public, private, space industries, academic participants • Copernicus services: All
Website address / contact details	• http://events.rosa-rc.ro/indico/internalPage.py?pageId=1&confId=41 • Contact: events@rosa.ro
Reference Documents	• http://www.rosa.ro/images/Documente/Agende/2015_04_RSW2015/RSW-2015-DraftAgenda.pdf
Description	• The conference was organised in Bucharest, in the form of a joint event planned by ROSA, ESA, the EC and Eurisy • Its main objective was to highlight the various Copernicus Programme opportunities • The conference involved both the Romanian public and private sector interested in Earth Observation in general and in Copernicus in particular • It demonstrated the important benefits of the Copernicus services • The conference created appeal to users, service providers and decision makers
Impact potential	P4-5
Actual impact	P4-5
Areas for improvement	
Best practice & scaling opportunity	

5.27 Slovakia

Reference number	SK.01
Initiative name	**enviro-I-forum**
Initiative type	Events (E)
Period active	• From 2005 • Last one 16 -17 June 2015 in Banska Bystrica
Frequency	• Annual 2-day event, till 2014 in Zwolen and in 2015 in Banska Bystrica
Scale	• Estimated for 100 people
Indicative budget	• Not available, funded from different sources and the 2015 edition among other sources by FP7 project EOPOWER
Client / organisational partners	• Slovenska Agentura Zivotneho Prostredia • Technical University in Zwolen • Univerzita Mateja Bela v Banskiej Bystrici • Managing partner: SEVITECH • Other partners are various, depending of the year, both private and public, such as: SAGI, G-BASE, ZOO Bojnice, SGS Holding a.s. LYNX, Atos, HP, BitStudio
Implementing partners	• Same as above
Targeted geography	• Slovak Republic
Target user group	• User categories: public and private, environmental stakeholders • Specific industry thematic: general
Website address / contact details	http://enviroiforum.sazp.sk/ http://historiaenviroiforum.sazp.sk/2005 Miroslava Petríková Slovak Environmental Agency and departmental centers of environmental data and information services - DATACENTRUM Tel .: 048/437 41 36 e-mail: miroslava.petrikova@sazp.sk
Reference Documents	http://enviroiforum.sazp.sk/
Description	The event is not directly targeting Copernicus, but it is included among other related topics. The general topics include: - International activities (SEIS, SENSE, INSPIRE, Copernicus, GEOSS) - National Infrastructure for Spatial Information - Use of ICTs in the implementation of environmental legislation - Computerisation of public administration - Availability of environmental information - GIS and Spatial Planning - Geoinformation technologies and applications of GIS in environmental protection and landscaping - Selected projects realized from European funds
Impact potential	• E3
Actual impact	• E3
Areas for improvement	• Strengthen Copernicus coverage at the event.
Best practice & scaling opportunity	• Stable funding by the Slovakian Government and sponsors gives good perspectives for conference continuation.

Reference number	SK.02
Initiative name	**EO Environmental trainings and workshops from EOPOWER FP7 project**
Initiative type	User feedback, training & education (U)
Period active	June 2013 to May 2015
Frequency	Trainings activities coming from FP7 EOPOWER project included • August 2014 – EOPOWER workshop for National Park Nizke Tatry • Cooperation between national stakeholders (Nature and Landscape Conservation Agency of Slovakia and National Park NizkeTatry) in the EO activities for the Slovak market together with Czech coordinators
Scale	• Number of participants: not available
Indicative budget	• N/A, funded by FP7 project EOPOWER
Client / organisational partners	• Organizers: - Charles University in Prague - National Park Nizke Tatry - Nature and Landscape Conservation Agency of Slovakia • Organisation type: public • Nationality: Slovak and Czech
Implementing partners	• Same as above
Targeted geography	• Slovak Republic
Target user group	• User categories: intermediate/end-users, public: institutions for nature protection, national parks • Specific industry thematic: environmental monitoring, forests • General EO thematic
Website address / contact details	http://www.eopower.eu/sites/default/files/D7.10.pdf
Reference Documents	Not available
Description	During the summer seminar (August 2014), the employees of the National Park Nizke Tatry got acquainted with the EO technologies on a practical level. In the National Park, joint activities focused on the application of EO in the management of the forest vegetation. Employees of the NP found this information useful in the decision making process on how to remove or eliminate the impacts of the disturbances (bark-beetle and wind calamities).
Impact potential	• E5
Actual impact	• E3 (actual impact is hard to measure, as very limited information is available)
Areas for improvement	• The trainings did not have sustainable funding and finished after completion of FP7 project and it was coordinated by the Czech partners. • The trainings do not have their separate websites and practical materials that could be downloaded by other interested users, are not available online (or not found).
Best practice & scaling opportunity	

Reference number	SK.03
Initiative name	**Copernicus National Working Group**
Initiative type	Network (N), Contact Point (C)
Period active	• Established in 2014
Frequency	• The working group meets when needed, usually twice a year
Scale	• N/A
Indicative budget	• N/A
Client / organisational partners	• Ministry of the Environment of the Slovak Republic (MoE SR)
Implementing partners	Copernicus National Working Group consists of the representatives of the following organisations: • Slovak Environment Agency (SEA) • Ministry of Education, science, research and sport of the Slovak Republic (MESSS SR) • Ministry of Environment of the Slovak Republic (MOE SR) • Ministry of Interior of the Slovak Republic (MI SR) • Slovak Hydrometoerological Institute (SHMI)
Targeted geography	• Slovak Republic
Target user group	• User categories: intermediate, public • Specific industry thematic: general
Website address / contact details	No website of the Copernicus National Working Group available yet (but it is under preparation). The contact details are: 1) Peter Pastorek from the Slovak Environment Agency (SEA): peter.pastorek@sazp.sk, http://www.sazp.sk/public/index/index.php?lang=en , Tajovského 28, 975 90 Banská Bystrica 2) Martin Benko from Slovak Hydrometheorological Institute: martin.benko@shmu.sk
Reference Documents	
Description	The Copernicus National Working Group was created in 2014 to connect different Slovakian stakeholders, coordination of activities of government and public organisation regarding Copernicus Programme, as well as dissemination of information on Copernicus programme for public. There have been public presentations of the Copernicus programme on several conferences. The agenda of Copernicus programme and communication with European Space Agency is coordinated by MESSS SR. The working group was established under MOE SR. And Slovak representatives in Copernicus Committee and Copernicus User Forum are from SEA and SHMI.
Impact potential	• C4
Actual impact	• C2
Areas for improvement	• No contact details are publicly available for Copernicus users, as well as for other stakeholders. • The network meets on irregular basis. • The working group has not yet participated in activities supporting Copernicus User Uptake.
Best practice & scaling opportunity	

5.28 Slovenia

Reference number	SI.01
Initiative name	**Information Society 2015 – session: "Space technologies for smart cities"**
Initiative type	Events (E), User feedback, training and education (U)
Period active	• 2015
Frequency	• One-off
Scale	• 15 days of conferences
Indicative budget	• N/A
Client / organisational partners	• Jožef Stefan Institute, public, national
Implementing partners	• Department of Intelligent Systems Jožef Stefan Institute, public, national
Targeted geography	• Global
Target user group	• ICT (which includes the space workshop) • Copernicus services: all • User categories: - Downstream Industry End Users - Participants to EU Research Projects - Space - Participants to EU Research Projects - Non Space
Website address / contact details	http://is.ijs.si/index.html
Reference Documents	http://is.ijs.si/proceedings.html http://www.space.si/en/2015/space-technologies-for-smart-cities/ http://is.ijs.si/schedule/IS2015__Urnik_PMiS.pdf
Description	Information Society 2015 provides an international forum for scientists, academicians and professionals to present their respective research findings in the various fields of information society. The main goal is to open interdisciplinary debates in the global community of information society in order to explore current and future research trends, government policies, and business opportunities.
Impact potential	• E3, U3
Actual impact	• E1, U2
Areas for improvement	• Session dedicated to spaceborne data exploitation for societal benefit with a focus on EO data
Best practice & scaling opportunity	• N/A

Reference number	SI.02
Initiative name	**"Presentation of space technologies and programmes", panel of experts of Space Technologies**
Initiative type	Events (E)
Period active	• 2013
Frequency	• One-off
Scale	• One day event
Indicative budget	• N/A
Client / organisational partners	• Slovenian Environment Agency (SEA), public, national • Slovenian Centre of Excellence for Space Sciences and Technologies "Space-SI" (CE Space-SI), private, national
Implementing partners	• Slovenian Environment Agency (SEA), public, national • Slovenian Centre of Excellence for Space Sciences and Technologies Space-SI (CE Space-SI), private, national
Targeted geography	• EU
Target user group	• General • Copernicus services: all • User categories: EU Institutions and Bodies, National /MS Institutions and Bodies, Regional and Local Public Authorities
Website address / contact details	http://www.space.si/en/2013/panel-of-experts-of-space-technologies
Reference Documents	http://www.space.si/en/2013/panel-of-experts-of-space-technologies http://europski-fondovi.eu/sites/default/files/dokumenti/Programme%20Copernicus%20(prezentacija%20projekta).pdf
Description	Panel of experts from several EU organisations (NEREUS, EURISY, EC) and National actors (Ministry of Education, Science and Sport, University of Ljubljana). Participants discussed recent achievements of space technologies (ST) in Slovenia together with the possibilities and current implementation of ST in meteorology and environmental monitoring. In addition, some space and environmental EU programmes were discussed as an opportunity for collaboration of Slovenian research institutions and development organisations.
Impact potential	• E4
Actual impact	• E3
Areas for improvement	• Additional focus on Copernicus data availability and related cooperation opportunities
Best practice & scaling opportunity	• N/A

Reference number	SI.03
Initiative name	**GMES and GEO initiatives**
Initiative type	User feedback, training and education (U)
Period active	• May 2011
Frequency	• One-off
Scale	• One-day event
Indicative budget	• N/A
Client / organisational partners	• EIONET, public, international • Slovenian Environment Agency (SEA), public, national
Implementing partners	• Slovenian Environment Agency (SEA), public, national
Targeted geography	• Slovenia
Target user group	• General • Copernicus services: all • User categories: EU institutions and bodies, National /MS institutions and bodies, Regional and Local Public Authorities
Website address / contact details	http://nfp-si.eionet.europa.eu:8980/Public/irc/eionet-circle/javna/library?l=/gmes
Reference Documents	http://nfp-si.eionet.europa.eu:8980/Public/irc/eionet-circle/javna/library?l=/gmes
Description	Presentation of projects related to Global Monitoring for Environment and Security (GMES) initiative, and to the observation of the Earth's surface (GEO). Representatives of institutions and organisations whose activities are connected with the mission of the two international programmes presented their experiences and provided information and guidelines for the effective use of satellite observation data and tools to this end.
Impact potential	• U5
Actual impact	• U4
Areas for improvement	• Ensure continuity
Best practice & scaling opportunity	• Stimulate initiatives such as a National User Forum involving national public authorities, with a strong focus on Copernicus and GEO

Reference number	SI.04
Initiative name	**20th EIONET Workshop on Air Quality Assessment and Management**
Initiative type	User feedback, training and education (U)
Period active	• Last occurrence 09/2015
Frequency	• Repetitive, this is the 20th edition
Scale	• One-day event
Indicative budget	• N/A
Client / organisational partners	• EIONET, public, international • Slovenian Environment Agency (SEA), public, national
Implementing partners	• EIONET, public, international • Slovenian Environment Agency (SEA), public, national
Targeted geography	• European
Target user group	• Air quality (atmosphere) • Copernicus services: Atmosphere Monitoring • User categories: International organisations and bodies, National /MS institutions and bodies, Regional and Local Public Authorities
Website address / contact details	http://acm.eionet.europa.eu/docs/meetings/151005_eionet_aq_ws/meeting151005.html
Reference Documents	http://eionet2.irceline.be/nfp/library/2.-themes/air-quality-air-pollution/meetings/2015-eea-eionet-air-quality-meeting-05-06-10-2015-slovenia/
Description	Routine workshops aimed to share with the stakeholders the latest developments in the EU air quality package, air quality assessment work, key data (flow) activities and technical issues to be addressed; reports from relevant organisations, networking and projects-related activities
Impact potential	• U4
Actual impact	• U4
Areas for improvement	• N/A
Best practice & scaling opportunity	• Availability of the material on line

Reference number	SI.05
Initiative name	**Collection, processing and application of data on environment and spatial planning: GEO, GMES and national activities in Slovenia**
Initiative type	User feedback, training and education (U)
Period active	• February 2012
Frequency	• One off
Scale	• 68 participants including 17 invited speakers • One day event
Indicative budget	• N/A
Client / organisational partners	• University of Ljubljana, Faculty of Civil and Geodetic Engineering (Slovenian partner on OBSERVE), public, national • Jožef Stefan Institute (Slovenian partner on BalkanGEOnet and Slovenian partner on EGIDA), public, national • Slovenian Centre of Excellence for Space Sciences and Technologies - SPACE-SI, private, national
Implementing partners	• University of Ljubljana, Faculty of Civil and Geodetic Engineering (Slovenian partner on OBSERVE), public, national • Jožef Stefan Institute (Slovenian partner on BalkanGEOnet and Slovenian partner on EGIDA), public, national • Slovenian Centre of Excellence for Space Sciences and Technologies - SPACE-SI, private, national
Targeted geography	• EU, focus on Slovenian Stakeholder
Target user group	• Generic • Copernicus services: All • User categories: International organisations and bodies, National /MS institutions and bodies, Regional and Local Public Authorities
Website address / contact details	http://www.observe-fp7.eu/index.php?option=com_content&view=article&id=160:february-12-2012-workshop-for-slovenian-stakeholders-qgeo-gmes-and-national-activities-in-sloveniaq&catid=56:news1&Itemid=242
Reference Documents	http://www.observe-fp7.eu/images/stories/slovenianworkshop/programme-geo_workshop-slovenian.pdf
Description	The objective was to inform the audience on the latest developments on international and Slovenian Earth Observation activities. Participants had the opportunity to discuss perspectives and share experiences and best practices in an open debate.
Impact potential	• U4
Actual impact	• U4
Areas for improvement	• N/A
Best practice & scaling opportunity	• One dedicated day on EO/Copernicus data (i.e. collection, processing, usage, real applications etc)

Reference number	SI.06
Initiative name	**Slovenian networking meeting in the frame of BalkanGeoNet**
Initiative type	User feedback, training and education (U)
Period active	• 2011
Frequency	• 5 times in the year
Scale	• One day event
Indicative budget	• N/A
Client / organisational partners	• Jozef Stefan Institute, public, national
Implementing partners	• Jozef Stefan Institute, public, national
Targeted geography	• Balkan region
Target user group	• Generic • Copernicus services: All • User categories: International organisations and bodies, National /MS institutions and bodies, Regional and Local Public Authorities, Research and academic organisations
Website address / contact details	http://www.balkangeo.net/index.php?option=com_content&view=article&id=46&Itemid=1
Reference Documents	http://www.balkangeo.net/index.php?option=com_content&view=article&id=192&Itemid=1 http://www.balkangeo.net/index.php?option=com_content&view=article&id=193&Itemid=1 http://www.balkangeo.net/index.php?option=com_content&view=article&id=194&Itemid=1 http://www.balkangeo.net/index.php?option=com_content&view=article&id=196&Itemid=1 http://www.balkangeo.net/index.php?option=com_content&view=article&id=197&Itemid=1
Description	In the context of the project BalkanGeoNet, which aims at including the Balkan countries into GEO and foster the use of spaceborne data, several national meetings were held in order to share updates, visions, and current limits with the community.
Impact potential	• U4
Actual impact	• U3
Areas for improvement	• Give more emphasis to the Copernicus programme
Best practice & scaling opportunity	• Share best practise in the extra-EU context (Balkans)

Reference number	SI.07
Initiative name	**Slovenian Centre of Excellence for Space Sciences and Technologies - Space SI**
Initiative type	Network (N)
Period active	• Since 2010
Frequency	• N/A
Scale	• N/A
Indicative budget	• N/A
Client / organisational partners	• 46 researchers and engineers who work at the Centre come from five research public national institutions: - Faculty of Natural Sciences and Engineering, University of Ljubljana - Faculty of Electrical Engineering, University of Ljubljana, - Faculty of Mathematics and Physics, University of Ljubljana, - Scientific Research Centre of the Slovenian Academy of Sciences and Arts, - The Jožef Stefan Institute; • 6 high-tech companies: - DEWESoft, private, international - Sinergise, private, international - TIC – LENS, private national - Impol, private, international - Iskra TELA; private, national • and an End User: - Maribor Insurance Company (private, international).
Implementing partners	• N/A
Targeted geography	• Slovenia
Target user group	• Generic • Copernicus services: All • User categories: All
Website address / contact details	http://www.space.si/en/
Reference Documents	http://www.space.si/wp-content/uploads/2015/11/brosura-CDZ_web_201511.pdf
Description	Network of several actors involved in supporting the Remote Sensing industry and users, reducing technological gaps, facilitating the Slovenian integration into international research in science and technologies thanks to strategic EU partners.
Impact potential	• N4
Actual impact	• N3
Areas for improvement	• Development of in-house expertise and know-how, sustainable funding
Best practice & scaling opportunity	• N/A

Reference number	SI.08
Initiative name	**GEOPEDIA platform**
Initiative type	Data access
Period active	• N/A
Frequency	• Continuous
Scale	• N/A
Indicative budget	• Funded by the Government of Slovenia through an ESA Contract under the PECS (Plan for European Cooperating States).
Client / organisational partners	• Sinergise Limited is a global company with offices and subsidiaries: Ljubljana (Slovenia), Brno (Czech Republic), Chisinau (Moldova) in Bečej (Serbia)
Implementing partners	• Sinergise laboratory for geographical information systems, Ltd. (Slovenia); Laboratory for Geographical Information Systems s.r.l. (Moldovia); CleverMaps, a.s. (Czech Republic); CleverFarm d.o.o. (Serbia)
Targeted geography	• Mainly Eastern countries but recently clients from Central and Western Europe and Africa
Target user group	• Public institutions & governmental institutions such as the Ministry of Agriculture, Forestry and Food, Ministry of the Environment and Spatial Planning as well as other administration bodies (field of agriculture, real estate…) • Academic and private end users (GIS tools, farm management system, GIS platform for data access and geo product processing, etc.)
Website address / contact details	• http://www.sinergise.com • http://www.geopedia.world • T: +386 (1) 320-61-50 E: info@sinergise.com CEO: Grega Milčinski
Reference Documents	http://portal.geopedia.world/sites/default/files/pictures/sentinel_data_hub_leaflet_web.pdf
Description	Sinergise is a GIS company building large turn-key information systems primarily in the fields of agriculture and real-estate administration. They also focus on advanced applications for distributed GIS editing. They developed and now provide GEOPEDIA, a web based application for searching, viewing, editing a large set of geographical data with added value services available for many different clients. In the frame of Copernicus programme and Sentinel 2 satellite launch, with the support of ESA, they are working on implementation of new functions in the GEOPEDIA platform, in order to propose: automated archiving process for sentinel data; rolling archive of multi-spectral data for sentinel data; full resolution preview over the web; time-lapse functionality; time-series statistical analysis tools for an area or point of choice; script-based on-the-fly definition of new products; reprojected WMS services for the integration into 3rd party tools; APIs for advanced feature integration In a near future, the platform should be able to offer some additional tools and service like : land use classification; change detection; crop mask and crop state; drought and flood identification
Impact potential	• D5
Actual impact	• Not known yet
Areas for improvement	• Automatic processing service (NDVI, crop mask, crop type) to be validated with in-situ data • Cloud Hardware infrastructure scaling
Best practice & scaling opportunity	• Full resolution preview over the web

Reference number	SI.09
Initiative name	**OTS – Sodobne tehnologije in storitve (OTS – Advanced Technologies and Services)**
Initiative type	Events (E), Promotional activities (P), User feedback, training & education (U)
Period active	• Since 1996
Frequency	• Annual; 2 days in first half of June
Scale	• About 25 speakers and 200 - 250 visitors from Slovenia annually. The event is held in one lecture room within two days.
Indicative budget	• Variable, but up to €50 000. The organiser possesses its own conference room, infrastructure and personnel for the conference implementation.
Client / organisational partners	• University of Maribor – Faculty of Electrical Engineering and Computer Science (UM FERI)
Implementing partners	• UM FERI
Targeted geography	• Slovenia
Target user group	• Downstream Industry End Users, National/MS Institutions and Bodies, Regional and Local Public Authorities, Research and Academic Organisations
Website address / contact details	http://www.ots.si/; Marjan Heričko, UM FERI, tel.: +386 2 220 7295, marjan.hericko@um.si and Domen Mongus, UM FERI, tel.: +386 2 220 7408, domen.mongus@um.si
Reference Documents	In addition to OTS conference, we are also organizing several other events. Here are first links to the OTS conference and our faculty (the venue of the event): http://www.ots.si/; http://feri.um.si/
Description	• Annual gathering of all relevant ICT professionals in Slovenia. • Primary objective: enhance adoptions and use of newly available technologies and services across the ICT sector. • The main components of the conference include one or two invited talks, up to 6 sections, each addressing specific topic and approximately 4 workshops (depending on the actual year), dedicated to promote particular new technologies to the end-users (i.e. ICT professionals from public and private sector). These workshops usually include actual practical work, where participants are invited to make an actual product.
Impact potential	E4
Actual impact	E1-E2
Areas for improvement	• It is worth to mention that there is no annual event dedicated to EO in Slovenia at present time. However, the interest in satellite applications and remote sensing in general is rapidly increasing. We believe that the proposed OTS conference, with its tradition and wide acceptance in the ICT and other relevant communities, is a good starting point for building-up such an event. In this context, we propose to first organize a section within the OTS conference for EO satellite application, and a dedicated workshop for training and educating attendees on how to access and use Copernicus data and services. We believe that such side-events will be positively accepted and will eventually allow us to develop separate annual event, especially targeting applications of EO. According to the current growth of interest, this shall presumably be achieved within the next three years.
Best practice & scaling opportunity	• Good experience with organising conferences and other events. • Experience in organizing the ESA RADAR remote sensing course: http://www.trisat.um.si/sl/esaradar/

5.29 Spain

Reference number	ES.R.01
Initiative name	**ESA BIC Barcelona**
Initiative type	Start-up initiative
Period active	• Since 2014
Frequency	• 4 TEBs per year
Scale	• No EO-related start-ups so far
Indicative budget	• N/A
Client / organisational partners	• ESA
Implementing partners	• Barcelona Activa
Targeted geography	• Everyone of adult age with citizenship in Europe or ESA member states
Target user group	• Entrepreneurs
Website address / contact details	http://www.esa.int/Our_Activities/Space_Engineering_Technology/Business_Incubation/ESA_Business_Incubation_Centres10
Reference Documents	
Description	The ESA Business Incubation Centre Barcelona (ESA BIC Barcelona) opened in 2014. It is managed by Barcelona Activa and supported locally by renowned public administrations and institutions, namely Area Metropolitana de Barcelona, Diputació de Barcelona, Consell Comarcal del Baix Llobregat, Universitat Politècnica de Catalunya – Parc UPC and Caixa Capital Risc. Located in Barcelona, Spain, this incubator offers start up support and technical expertise for the creation of innovative companies. Barcelona Activa is Barcelona City Council's Local Development Agency and an international benchmark for supporting entrepreneurship, innovation, professional improvement and job creation based on its 27 years of operations with extensive experience in business incubation.
Impact potential	• S5
Actual impact	• S2
Areas for improvement	• Dedicated instruments to foster development of EO-based entrepreneurial ventures.
Best practice & scaling opportunity	• N/A

Reference number	ES.R.02
Initiative name	**ESA BIC Madrid**
Initiative type	Start-up initiative
Period active	• Since 2015
Frequency	• 4 TEBs per year
Scale	• No EO-related start-ups so far
Indicative budget	• N/A
Client / organisational partners	• ESA
Implementing partners	• Fundación madri+d
Targeted geography	• Everyone of adult age with citizenship in Europe or ESA member states
Target user group	• Entrepreneurs
Website address / contact details	http://www.esa.int/Our_Activities/Space_Engineering_Technology/Business_Incubation/ESA_Business_Incubation_Centres14
Reference Documents	
Description	The ESA Business Incubation Centre (BIC) Madrid Region opens in 2015 and is managed by Fundación madri+d (Madrimasd Knowledge Foundation) and supported by the Regional Government of Madrid. The programme is 50% co-financed by ESA and by the Regional Ministry of Economical Affairs, Employment and Treasury. ESA funding has been guaranteed through the Spanish Delegation at the ESA, consisting of the Ministry of Industry, Energy and Tourism through its General Secretariat of Industry and Small and Medium Enterprises, and the Center for Development Industrial technology (CDTI) ESA BIC Madrid Region proposes a strong support structure with different partners and the selected companies hosted at ESA BIC Madrid Region will have access to : • personalized assistance offered by the referent support structure, i.e. professional business guidance • training and services provided by Fundación madri+d • the opportunity to be supported by business appointments in other regions • strong technical support of the partner institutions • customized support for finding national and international financial and engineering partners • support in investment readiness and financing search
Impact potential	• S5
Actual impact	• S2
Areas for improvement	• Dedicated instruments to foster development of EO-based entrepreneurial ventures.
Best practice & scaling opportunity	• N/A

Reference number	ES.03
Initiative name	**Instituto Geografico Nacional (IGN)**
Initiative type	Contact Point (C)
Period active	• Since 12 September 1870
Frequency	• Permanent
Scale	• National and EU level
Indicative budget	• Not publically disclosed
Client / organisational partners	• Public entities such as Ministry of Environment, Transport, Construction • Public initiatives: CartoCiudad (collaborative project of Transport Network data production and web publishing using spatial data services at a national level), PNOA/PNT (National plan for the observation of the territory); SIOSE (Information system for Land Occupation), Risk information services; IDEE (Spanish Spatial Data Infrastructure) • Regional authorities • Research institutes
Implementing partners	• Public institution
Targeted geography	• National, regional, local • EU level: ESA, EUMETSAT, EEA
Target user group	• General Earth Observation • Copernicus services: all, with focus on Land • User Categories: National/MS Institutions and Bodies, Regional and Local Public authorities, downstream value-added service provided, Downstream industry End users, Research and Academic Organisation.
Website address / contact details	• http://www.ign.es/ign/main/index.do
Reference Documents	• http://www.ign.es/resources/actividades/memoria/Memoria_IGN_2014.pdf, in particular pag 54 (addressing production and improvement of the official geographic information) and pag 74 (scope and role of IGN within Copernicus)
Description	• At national level, IGN is a reference to public, private and research entities for the management of the geographic information. It also represents an extensive EO portal with technical content and links to external information sources. As a further function, IGN is the promoter of the National Copernicus User Forum • Together with Ministerio de Agricultura, Alimentación y Medio Ambiente, IGN is the National delegate to the Copernicus User Forum, acting as Thematic Point of Contact for the Copernicus Land Service. It is also the National delegate to the Copernicus Committee • IGN patronizes the framework of data called National Plan of Air Orthophotography (PNOA), whose data are currently used as part of the ancillary datasets in Copernicus. requirements and addressing developments
Impact potential	• C5
Actual impact	• C4
Areas for improvement	• Creating more opportunities for the Copernicus stakeholders to meet. Involve regional and local authorities
Best practice & scaling opportunity	• Promoter of the National Copernicus User forum, which is of high potential, although it should be better exploited, for example by increasing the number of meetings over the year • PNOT as a potential target for promotion and training activities on the access and use of Copernicus data

Reference number	ES.04
Initiative name	**Ministerio de Agricultura, Alimentacion y Medio Ambiente (magrama)**
Initiative type	Contact Point (C)
Period active	• Since 1981
Frequency	• Permanent
Scale	• EU: National delegate to the Copernicus User Forum • National: promoter of the National Copernicus User Forum
Indicative budget	• Not publically disclosed
Client / organisational partners	• Public initiatives: CartoCiudad (collaborative project of Transport Network data production and web publishing using spatial data services at a national level),Risk information services; IDEE (Spanish Spatial Data Infrastructure)
Implementing partners	• Public and Private
Targeted geography	• National, regional, local, international, ESA, EEA
Target user group	• General • Copernicus services: all • User Categories: National/MS Institutions and Bodies, Regional and Local Public authorities, downstream value-added service provided, Downstream industry End users, Research and Academic Organisation.
Website address / contact details	• http://www.magrama.gob.es/es/ • Elisa Rivera • Carmen Muzquiz • Rafael Andrés David
Reference Documents	• http://www.magrama.gob.es/es/calidad-y-evaluacion-ambiental/temas/agencia-europea-medio-ambiente-informacion-ambiental/herramientas-e-infraestructuras/ (endorsement of Copernicus within the institutional scope of magrama) • http://www.magrama.gob.es/es/calidad-y-evaluacion-ambiental/temas/agencia-europea-medio-ambiente-informacion-ambiental/eionet/ (endorsement of EIONET within the institutional scope of magrama)
Description	• National delegate to the Copernicus User Forum • Promoter of the National Copernicus User Forum • Areas of interest and competencies, with potential to provide requirements, address evolution and being extensive user of Copernicus: • Water Project, Climate Change, Cattle raising, Biodiversity Project, Quality & environmental assessment, Coastal & Marine environment, Fishing , Rural development, Feeding
Impact potential	• C5
Actual impact	• C3/C4
Areas for improvement	• Involve regional and local authorities
Best practice & scaling opportunity	

Reference number	ES.05
Initiative name	**National Civil Protection General Directorate**
Initiative type	Contact Point (C)
Period active	• Since 2005
Frequency	• Permanent
Scale	• Extensive EO portal with technical content and links to external information sources.
Indicative budget	• Not publically disclosed
Client / organisational partners	• Internal affair ministry • Public • Private
Implementing partners	• Most competences in civil protection (except for nuclear issues) are transferred to the autonomous communities and municipalities, which have their own structure for the protection of citizens and goods. The communities and municipalities are responsible for integrated civil protection planning including risk assessment plans and for operational units. • When necessary, private sector means, volunteers, NGOs and Red Cross are mobilised
Targeted geography	• National, regional, local • At EU level: thematic Point of Contact for the Copernicus Emergency Services
Target user group	• Copernicus services: emergency • User Categories: National/MS Institutions and Bodies, Regional and Local Public authorities
Website address / contact details	• http://www.proteccioncivil.es/web/dgpcye/home
Reference Documents	• http://www.proteccioncivil.es/web/dgpcye/union-europea (participation in the EU activities involving civil Protection, such as the Civil Protection mechanism)
Description	• Civil Protection is a public service aimed at preventing situations of serious collective risk or disasters, protect people and property when these situations occur and contribute to the rehabilitation and reconstruction of the affected areas. • Thematic Point of Contact for the Copernicus Emergency Services • Authorized User in the Copernicus EMS. With 10 activations triggered since 2012 (6 in 2015), Spain is in the first 5 MS activating countries. All activations are related to natural disasters (Fire, Flood), with positive feedback.
Impact potential	• C5
Actual impact	• C4
Areas for improvement	• There's potential to involve much more the local communities in the Copernicus Emergency domain (i.e. facilitating the access to the service)
Best practice & scaling opportunity	• EMS activations can be used to showcase the benefits of the service to a wider user community

Reference number	ES.06
Initiative name	**CDTI (Centre for the Development of Industrial Technology)**
Initiative type	Contact Point (C)
Period active	• Since 1997
Frequency	• Permanent
Scale	• National and International Level
Indicative budget	• Not publically disclosed
Client / organisational partners	• Ministry of Economy and Competitiveness • Public entities • Private entities
Implementing partners	• Several cooperation agreements in place between CDTI and EU/national entities. • Agreements with Regional Agencies and Autonomous Communities
Targeted geography	• National: in charge for the National Strategy for Space Development implemented by the Ministry of Economic Development (MISE) • EU: Thematic Point of Contact for the Copernicus Collaborative Ground Segment
Target user group	• National/MS Institutions and Bodies, Regional and Local Public authorities, downstream value-added service provided, Downstream industry End users, Research and Academic Organisation.
Website address / contact details	• Emilio Vez • Cristina Gariido
Reference Documents	• https://www.cdti.es/index.asp?MP=15&MS=191&MN=3 (establishing the CDTI as reference to ESA funding/programs) • http://www.horizon2020.es/cdti-nueva-guia-horizon-2020/ (guide to the participation to H2020 funding program)

Description	• It is the thematic Point of Contact for the Copernicus Collaborative Ground Segment and develops the National strategy for space development implemented by the ministry of Economic Development (MISE)
	• It is the entity that channels the funding and support applications for national and international R&D projects of Spanish companies, including H2020
	• Particularly interesting in the Copernicus uptake perspective are the agreements in place with Regional Agencies and Autonomous Communities to:
	  • Facilitate the transfer of technologies developed in the Public Research Centres and the Technology and Innovation Centres of the Autonomous Communities for their industrial exploitation.
	  • Stimulate the presentation of innovative technological proposals to the existing public funding programmes, both within the Autonomous Communities and nationally, by the companies of the Autonomous Communities.
	  • Facilitate the participation of the companies of the Autonomous Communities in the international programmes managed by the CDTI.

Impact potential	• C5
Actual impact	• C4
Areas for improvement	• Accelerating and consolidating the overall strategy for the national Collaborative Ground Segment
Best practice & scaling opportunity	• As National Contact Points for H2020 the CDTI offers services for all types of organisations interested in participating in the calls. This service might enlarge the scope to Copernicus offering for support to introduce start up and private companies in the downstream market

Reference number	ES.07
Initiative name	**CIRCABC: Copernicus**
Initiative type	Network (N): through CIRCABC, which is a collaborative platform managed by the European commission
Period active	• Since 2013
Frequency	• Permanent
Scale	• National
Indicative budget	• Not publically disclosed
Client / organisational partners	• Ministry of Agriculture, Food and Environment • Public entities • Private entities
Implementing partners	• Public and Private
Targeted geography	• National
Target user group	• Industries and public institutions or authorities with links and/or interest in Copernicus activities.
Website address / contact details	https://circa.administracionelectronica.gob.es group Copernicus
Reference Documents	• N/A
Description	• Archive for all available Copernicus services data; delegation agreements, grants and tenders; presentations etc. • Archive for Users' forum workshops presentations • Discussion forum for activities • List of members • Users forum for sharing documentation of national Copernicus activities
Impact potential	• N5
Actual impact	• N4
Areas for improvement	• Promote the use and participation • Upload to the documentation section all the Copernicus related data as it comes out
Best practice & scaling opportunity	• The User forum is promoting cooperation and information between potential users and/or participants in Copernicus program

Reference number	ES.08
Initiative name	**AEMET**
Initiative type	Contact Point (C)
Period active	• Since 1858 (ex- Instituto Nacional de Meteorologia)
Frequency	• Permanent
Scale	• 1 central headquarter, 17 regional offices, 40 Meteorological offices in the airports, 1 atmospheric observatory, 26 Meteorological offices in the air bases, 38 meteorological observatories.
Indicative budget	• 121,998 million euros (total budget for 2016) • No indications about the budget assigned to Copernicus
Client / organisational partners	• Ministry of Agriculture, food and environment • Public entities • Private entities
Implementing partners	• Public and Private
Targeted geography	• National, regional, local, international, ESA, EEA
Target user group	• General (see Description) • User Categories: National/MS Institutions and Bodies, Regional and Local Public authorities, downstream value-added service provided, Downstream industry End users, Research and Academic Organisation.
Website address / contact details	http://www.aemet.es/es/portada
Reference Documents	http://www.aemet.es/documentos/es/datos_abiertos/AEMET_Plan_RISP.pdf
Description	• Thematic Point of Contact for the Copernicus Climate Change and Atmosphere Services • Representative to the GEO network • Aeronautic meteorology • Maritime meteorology • Mountain weather and snow research
Impact potential	• C5
Actual impact	• C2
Areas for improvement	• Atmosphere domain is definitely one of the less developed in Spain
Best practice & scaling opportunity	

Reference number	ES.09
Initiative name	**Puerto del Estado**
Initiative type	Contact Point (C)
Period active	• Since November 1992
Frequency	• Permanent
Scale	• 46 Ports
Indicative budget	• 140,3 M€ (budget 2016)
Client / organisational partners	• Ministry of Public works • Public • Private
Implementing partners	• Public and Private
Targeted geography	• National, regional, local, • EU level: thematic Point of Contact for the Copernicus Marine Services. Partner in MyOean and MyOcean 2. Currently in the CMEMS network,
Target user group	• User Categories: National/MS Institutions and Bodies, Regional and Local Public authorities, downstream value-added service provided, Downstream industry End users, Research and Academic Organisation.
Website address / contact details	• http://www.puertos.es/
Reference Documents	• http://www.puertos.es/es-es/proyectos/Paginas/MyOCEAN-2.aspx (MyOcean2 description page)
Description	• Spain is the European Union country with the longest coastline (8,000 km). Its geographical location, being closest to the axis of one of the world's major maritime routes, also strengthens its position as a strategic area in international shipping and a logistics platform in southern Europe. • In charge for the IBI Monitoring and Forecasting Centre (IBI-MFC) CMEMS sub system structure, responsible of generating operationally daily ocean prediction for the IBI-ROOS area, covering the whole European Atlantic facade and providing service from the Canary Islands to Ireland • Focal point in Spain, working to strengthen the network of CMEMS users
Impact potential	• C5
Actual impact	• C4
Areas for improvement	• Networking the potential users in Spain
Best practice & scaling opportunity	• Strong involvement in Copernicus Marine domain being partner in the main initiatives over the year

Reference number	ES.10
Initiative name	**Spanish Remote Sensing Association (AET)**
Initiative type	Network (N)
Period active	• 1988 – present • Active since 1986 as Grupo de Trabajo en Teledetección (Remote Sensing Working Group)
Frequency	• Permanent
Scale	• National, Regional
Indicative budget	• Not publically disclosed
Client / organisational partners	• Scientific and private AETnational members
Implementing partners	• See above
Targeted geography	• National and regional
Target user group	• General: (Earth Observation) • User categories: Private sector, university, local public administration entities at national and regional scale • Copernicus Service: All
Website address / contact details	• http://www.aet.org.es/ • Contact: http://www.aet.org.es/?q=contacto
Reference Documents	• http://www.aet.org.es/
Description	• Scientific and Industrial Association • AET support the spread of issues and practices of remote sensing through the organisation of conferences, congresses, workshops, training courses and similar cultural events and by publishing newsletters, journals, monographs
Impact potential	• N3-4
Actual impact	• N2
Areas for improvement	• Greater involvement on the Copernicus Programme opportunities
Best practice & scaling opportunity	• Excellent national EO network • Link http://www.copernicus.eu/ in the main website page

Reference number	ES.11
Initiative name	**National Network on Big Data in Earth Observation**
Initiative type	Network (N)
Period active	• Since 2005 (referring to BCS)
Frequency	• Permanent
Scale	• National, Regional
Indicative budget	• Not publically disclosed
Client / organisational partners	• Private sector, university, local public administration entities
Implementing partners	• See above
Targeted geography	• National and regional
Target user group	• General: (Earth Observation) • User categories: Private sector, university, local public administration entities at national and regional scale • Copernicus Service: All
Website address / contact details	• https://www.bsc.es/ • Contact: bigdata-cienciastierra-bounces@bsc.es
Reference Documents	• http://www.copernicus.eu/sites/default/files/library/ESA_EO_Big_Data_R_and_D_Past_ • Present_Future_Activities_0.pdf
Description	• Synergies and collaborations on Big Data for Earth Observation • National Network on Big Data in Earth Observation • Organize a biannual Congress where latest developments and applications are presented and discussed
Impact potential	• N2-3
Actual impact	• N1
Areas for improvement	• Greater involvement on the Copernicus Programme opportunities • Lack of public information • Focus on the impact of Big Data on the 6 thematic Copernicus Core Services operations concept
Best practice & scaling opportunity	• Good national network

Reference number	ES.12
Initiative name	**Working Group on Remote Sensing of the Madrid Professional Association of Industrial Engineers**
Initiative type	Network (N)
Period active	• Since 1950 (referring to Colegio Oficial de Ingenieros Industriales de Madrid, COIIM, Official Industrial Engineers College of Madrid)
Frequency	• Permanent
Scale	• National, Regional
Indicative budget	• Not publically disclosed
Client / organisational partners	• Industrial Engineers members of COIIM
Implementing partners	• See above
Targeted geography	• National and regional
Target user group	• General: (Earth Observation) • User categories: Industrial Engineers members of COIIM • Copernicus Service: All
Website address / contact details	• http://www.coiim.es/default.aspx • Contact: ssii@coiim.es
Reference Documents	
Description	• Promotion of Remote Sensing applications • COIIM Department of Technology mission is the promotion of technological innovation and the provision of services Information Technology (ICT), including remote sensing applications
Impact potential	• N2-3
Actual impact	• N1
Areas for improvement	• Greater involvement on EO data, products and services and on Copernicus Programme opportunities • Lack of public information
Best practice & scaling opportunity	• Good national and regional network

Reference number	ES.13
Initiative name	**Aerospace Cluster of the Madrid Region**
Initiative type	Network (N)
Period active	• Since 2006
Frequency	• Permanent
Scale	• International, European, National and regional
Indicative budget	• Not publically disclosed
Client / organisational partners	• More than 50 highly innovative and technological partners: large companies (20%), SMEs (46%), University and Research Centres (31%) and Public Administration (3%)
Implementing partners	• See above
Targeted geography	• International, European, National and regional
Target user group	• General: (Earth Observation) • User categories: Large companies, SMEs, University and Research Centres and Public Administration • Copernicus Service: All
Website address / contact details	• http://www.madridaerospace.es/ • Contact: http://www.madridaerospace.es/en/contact
Reference Documents	• http://www.madridaerospace.es/
Description	• Foster innovation and technological development of the aerospace sector in the region of Madrid • Partner of the European Aerospace Cluster Partnership (EACP), representative of Madrid Regional Government at NEREUS, member of Enterprise Europe Network (EEN) through Madrid Network, member of SME4SPACE and honorary member of SPACE • Participating in Copernicus Programme, European Programme for the establishment of a European capacity for Earth Observation • Help aerospace companies get involved in European projects • Liaison with universities and research & technology centres • Institutional contact facilitator
Impact potential	• N4-5
Actual impact	• N3-4
Areas for improvement	• Bring Copernicus applications into focus
Best practice & scaling opportunity	• Natural liaison of innovative companies • Member of the most important European networks • Madrid Region represents 62% of aeronautics and 95% of space Spanish sector

Reference number	ES.14
Initiative name	**Spanish Association of Defence, Aeronautics, Security and Space Technology Companies (TEDAE)**
Initiative type	Network (N)
Period active	• Since 2009
Frequency	• Permanent
Scale	• International, European, National and regional
Indicative budget	• Not publically disclosed
Client / organisational partners	• Private technological industries (about 70 associates in Spain)
Implementing partners	• See above
Targeted geography	• International, European, National and regional
Target user group	• General: (Earth Observation) • User categories: Private technological industries • Copernicus Service: All
Website address / contact details	• http://tedae.org/ • Contact: http://tedae.org/es/contacto
Reference Documents	• http://tedae.org/
Description	• Space Sector Industry no profit association • TEDAE assumes the international and national representation and promotion of the interests of its Associates • In February 2015 TEDAE promoted the Copernicus Masters Award Program, a competition for the promotion of innovative solutions based on Earth Observation data with a focus on Copernicus Programme. The winner was "From space to earth earthly innovative service stability for the exploration industry", a project developed by Dr. Andrew Sowter and Dr. Paul Batia, from University of Nottingham (UK). This project received a contribute of € 25,000.
Impact potential	• N3-4
Actual impact	• N2-3
Areas for improvement	• Improve the awareness of the utility and importance of EO data, products and services • Grater promotion of the use of Copernicus data, products and services
Best practice & scaling opportunity	• Excellent national network

Reference number	ES.15
Initiative name	**Living Labs on space applications**
Initiative type	Network (N)
Period active	• Since 2005
Frequency	• Permanent
Scale	• European, National
Indicative budget	• Not publically disclosed
Client / organisational partners	• Regional entities situated along the Pyrenees
Implementing partners	• See above
Targeted geography	• European, National and regional
Target user group	• General: (Earth Observation) • User categories: Regional entities situated along the Pyrenees • Copernicus Service: All
Website address / contact details	• http://ec.europa.eu/regional_policy/it/policy/cooperation/european-territorial/egtc/
Reference Documents	• http://cor.europa.eu/en/activities/governance/documents/f880eb25-d799-4be0-ad51-b123d8d56792.pdf
Description	• Agreement signed between the Spanish region of the Basque Country, Portugal and the French regions of Aquitaine and Midi-Pyrénées • In 2005 a consortium was created within the working community (without Andorra) to confer legal personality to this cooperation (as provided for by the Bayonne Treaty between Spain and France), being able to manage its own projects and funds before the EU and Member States and running parallel to this working community • They see that perhaps the EGTC could be more interesting, but for political reasons it might be a bit difficult to implement. On the other hand, one of the main advantages advertised by the experts about the instrument EGTC is the possibility of managing European programmes. But in fact, the Consortium has been named the managing authority of Interreg IIIA
Impact potential	• N2-3
Actual impact	• N1
Areas for improvement	• Greater involvement on EO data, products and services and on Copernicus Programme opportunities • Lack of public information
Best practice & scaling opportunity	

Reference number	ES.16
Initiative name	**National Congress on Remote Sensing (IESM 2015)**
Initiative type	Events (E)
Period active	• 21-23 October 2015 (Seville – Spain)
Frequency	• One-off
Scale	• International
Indicative budget	• Not publically disclosed
Client / organisational partners	• Researchers and professionals from all industrial engineering disciplines
Implementing partners	• See above
Targeted geography	• International
Target user group	• General: (Earth Observation) • User categories: Public administration, private sector, academia and research centres • Copernicus Service: All
Website address / contact details	• http://congreso2015aet.com/ • Contact: contact@iesm15.org
Reference Documents	• http://www.univ-valenciennes.fr/evenements/iesm2015
Description	• Bi-annual Congress organized by the Spanish Remote Sensing Association • 14 sessions • 2 special sessions focusing on different research interests chaired by both scientists and industrials • 1 student competition (sponsored scholarships)
Impact potential	• E2-3
Actual impact	• E1
Areas for improvement	• Improve the awareness of the utility and importance of EO data, products and services • Grater promotion of the use of Copernicus data, products and services • Proceedings not available
Best practice & scaling opportunity	

Reference number	ES.17
Initiative name	**Infoday Horizon 2020 Space**
Initiative type	Promotional activities (P)
Period active	• 2014-2020
Frequency	• Permanent
Scale	• 753 Participants
Indicative budget	• 70 Billion€ (budget 2014-2020)
Client / organisational partners	• SATCEN • Ministry of Public works • Public • Private
Implementing partners	• Public and Private
Targeted geography	• National, regional, local, • EU level: thematic Point of Contact for the Copernicus Services
Target user group	• User Categories: National/MS Institutions and Bodies, Regional and Local Public authorities, downstream value-added service provided, Downstream industry End users, Research and Academic Organisation.
Website address / contact details	• http://www.spaceinfoday.eu/
Reference Documents	•
Description	• Two major international events provided first-hand information on the content of the coming calls and bring interested actors together for matchmaking. • Both events were organised by the European Commission and COSMOS2020, the network of National Contact Points (NCP) for Space.
Impact potential	• P4
Actual impact	• P3
Areas for improvement	• Promoting national participation into R&D
Best practice & scaling opportunity	

Reference number	ES.18
Initiative name	**Polytechnic University of Madrid - Master on Satellite Technology**
Initiative type	User feedback, training & education (U)
Period active	• Since 2010
Frequency	• Permanent
Scale	• 60 ECTS credits divided into three Formative Modules plus one final Master Project module
Indicative budget	• No indications about the budget assigned
Client / organisational partners	• ESA • INTA • Ministry of Public works • Public • Private
Implementing partners	• Public and Private
Targeted geography	• International, National, regional, local, • EU level: thematic Point of Contact for the Copernicus Services
Target user group	• User Categories: National/MS Institutions and Bodies, Regional and Local Public authorities, downstream value-added service provided, Downstream industry End users, Research and Academic Organisation.
Website address / contact details	• http://www.upm.es/satellite-tech/
Reference Documents	
Description	• The Satellite-Tech Master Program of the Technical University of Madrid, Spain, is an international Master's Degree designed to develop students into competent and interdisciplinary engineers prepared for future engineering roles in space related industries, government agencies and business management. • It has a strong emphasis on both theoretical and applied aspects, including practical hands-on lab sessions held at the most important space centres and companies involved in the master.
Impact potential	• U5
Actual impact	• U4
Areas for improvement	• From the Copernicus point of view, it should include a more interactive a state-of-the-art method of presenting the features and benefits
Best practice & scaling opportunity	

Reference number	ES.19
Initiative name	**Autonomous University of Barcelona - Master on Geographic Information Systems and Remote Sensing**
Initiative type	User feedback, training & education (U)
Period active	• Since 1999
Frequency	• Permanent
Scale	• 4 modules of mandatory subjects and 2 modules of elective advanced subjects
Indicative budget	• Not publically disclosed
Client / organisational partners	• Public • Private
Implementing partners	• Public and Private
Targeted geography	• National, International
Target user group	• Industries and public institutions or authorities with links and/or interest in Copernicus activities. User Categories: National/MS Institutions and Bodies, Regional and Local Public authorities, downstream value-added service provided, Downstream industry End users, Research and Academic Organisation.
Website address / contact details	• http://www.uab.cat/web/studying/official-master-s-degrees/general-information-1096480962610.html?param1=1345664654736 • master@creaf.uab.cat
Reference Documents	
Description	• The aim of this programme is to provide sound scientific training in techniques for observing the Earth and for generating and analysing information in order to be able to study a given territory and manage its resources using GIS. • The Master has a scientific and technical orientation and focuses on the acquisition of an in-depth knowledge of the content of the course and establishing a sound base from which the student can continue his or her studies. • To achieve this, the Master will provide the student with knowledge, tools and experiences that facilitate the development of professional skills necessary for employment in the current context and the development of his scientific career through a PhD programmaster@creaf.uab.cat
Impact potential	• U4
Actual impact	• U3
Areas for improvement	• Better promotion for students, further opportunities of hands-on experience
Best practice & scaling opportunity	

Reference number	ES.20
Initiative name	**University of Alcala - On-line Course on Cartography, Geographic Information Systems and Remote Sensing**
Initiative type	User feedback, training & education (U)
Period active	• Since 2015
Frequency	• Permanent
Scale	• 15 credits (5 subjects) to obtain the Diploma Training Basics Cartography, GIS and Remote Sensing.
Indicative budget	• Not publically disclosed
Client / organisational partners	• Public • Private
Implementing partners	• Public and Private
Targeted geography	• National
Target user group	• Industries and public institutions or authorities with links and/or interest in Copernicus activities. User Categories: National/MS Institutions and Bodies, Regional and Local Public authorities, downstream value-added service provided, Downstream industry End users, Research and Academic Organisation.
Website address / contact details	• https://geogra.uah.es/cursovirtual/ • juanj.garciaabad@uah.es
Reference Documents	
Description	• The Geographic Information Technologies (GIT) form a broad set of technologies designed and intended to manage, handle and process spatial data, now being used in a large number and variety of professional fields. • For operation as coach of these tools in the strictly professional field as well as to undertake postgraduate studies involving its use, a basic training is not provided consistently across all degree courses related to the territory is required and the environment. • To acquire the basic knowledge, (basic and necessary) on the foundations of TIG and for handling user level, where appropriate, will allow to continue with postgraduate studies in this area.
Impact potential	• U4
Actual impact	• U3
Areas for improvement	• As this is the first year, there are certain aspects that need to be further developed and/or improved; clarify the applicability on Copernicus
Best practice & scaling opportunity	

Reference number	ES.21
Initiative name	**Research Park of the Autonomous University of Barcelona - Prize on New Ideas Generation - new applications of space technology**
Initiative type	Funding instruments (F)
Period active	• Since 2007
Frequency	• Permanent
Scale	• European, National and Regional
Indicative budget	• Not publically disclosed
Client / organisational partners	• Public • Private
Implementing partners	• Public and Private
Targeted geography	• National, International
Target user group	• Industries and public institutions or authorities with links and/or interest in Copernicus activities. User Categories: National/MS Institutions and Bodies, Regional and Local Public authorities, downstream value-added service provided, Downstream industry End users, Research and Academic Organisation.
Website address / contact details	• http://parc.uab.cat/ • parc.recerca@uab.cat
Reference Documents	• http://www.uab.cat/web/services/r-d-collaborative-projects/tecnio-centers
Description	• Business models for ideas on new space applications • The UAB Research Park (PRUAB) created by Autonomous University of Barcelona (UAB), the Higher Council for Scientific Research (CSIC) and the Institute of Research and Technology (IRTA). • The Research Park provides services to UAB's research departments, as well as centres and institutes located on the Bellaterra campus. • All of them carry out their activities around six core themes: Biotechnology and Biomedicine; Food Technology and Animal Health; Materials Science and Energy (nanotechnology and microelectronics), Information Technology and Communications; Social Sciences and Humanities; and Environment and Climate Change. • Its mission is to promote and enhance the technology and knowledge transfer activities of its members, encourage entrepreneurship through the creation of new businesses based on research and generally facilitate interaction between research, business and society.
Impact potential	• F5
Actual impact	• F3
Areas for improvement	• Opportunity to multiply and propagate the use of satellite technologies into the six core themes
Best practice & scaling opportunity	

Reference number	ES.22
Initiative name	**National Institute of Aerospace Technology (INTA) - Ground Segment of Sentinel 1 and Sentinel 2**
Initiative type	Data access (D)
Period active	• Since 1997
Frequency	• Permanent
Scale	• European, National and Regional
Indicative budget	• Not publically disclosed
Client / organisational partners	• Public • Private
Implementing partners	• ESA • INTA • Government of Canaries • CICYT • Public and Private
Targeted geography	• National, International
Target user group	• Industries and public institutions or authorities with links and/or interest in Copernicus activities. User Categories: National/MS Institutions and Bodies, Regional and Local Public authorities, downstream value-added service provided, Downstream industry End users, Research and Academic Organisation.
Website address / contact details	• http://www.crepad.rcanaria.es/es/index.html
Reference Documents	• http://www.crepad.rcanaria.es/en/npoc/index01-en.html
Description	• Acquisition, processing, archiving and distribution of EO data • Satellite images can be used to study the ocean primary production, the water quality, environmental parameters control, desertification, forest fires, oil spills control, cartographic and meteorological applications. • The scientific community in Spain has been making use of this technology for years; nevertheless, the demand for satellite data does not correspond with the wide range of applications provided by the currently operating space systems. • The reasons for this can be summarized in two points: • The lack of a reference centre offering information about the space systems and the way to access to them. • The complexity involving the processing of satellite digital data to generate added-value products that can be used by the end users
Impact potential	• D5
Actual impact	• D5
Areas for improvement	
Best practice & scaling opportunity	

5.30 Sweden

Reference number	SE.01
Initiative name	**Fjärranalysdagarna 2015 (Remote Sensing Days)**
Initiative type	Events (E) and User, Training and Education (U)
Period active	• Since 2009
Frequency	• Every 2 years
Scale	• Last edition: 150 participants • 2 days
Indicative budget	• N/A
Client / organisational partners	• Remote Sensing Days 2015 is organised cooperatively by: - Armed Forces, public national - Marine and Water Authority, public, national - Land Survey, public, national - Swedish Civil Contingencies, public, national - Environmental Protection Agency, public, national - Space Board, public, national - Statistics Sweden, public, national - Board of Forestry, public, national - SLU, public, national - SMHI, public, national
Implementing partners	• N/A
Targeted geography	• Swedish community (due sessions mainly in Swedish)
Target user group	• General • Copernicus services: all • User categories: National /MS institutions and bodies, Regional and Local Public Authorities, Research and Academic organisations, Downstream Value-Added service providers, Downstream industry End Users
Website address / contact details	http://www.snsb.se/sv/Mediebank/Fjarranalysanvandare/Aktiviteter/Fjarranalysdagarna-2015/
Reference Documents	PPT available: http://www.snsb.se/sv/Mediebank/Fjarranalysanvandare/Aktiviteter/Fjarranalysdagarna-2015/Presentationer/
Description	• The 2-Days conference is aimed at researchers, consultants, companies, city councils and government departments willing to meet and to exchange information and ideas about the remote sensing area in Sweden. The seminary represents a seedbed for new forms of cooperation and projects.
Impact potential	• U5, E5
Actual impact	• U3, E3
Areas for improvement	• The focus of the conference on Copernicus can be improved
Best practice & scaling opportunity	• Wider participation from EU-actors, Commission, ESA, service operators and national actors • Focus on concrete examples and applications of Copernicus • Hands-on experience for conference participants, labs and service booths • Time for users and providers to meet and discuss

Reference number	SE.02
Initiative name	**Skola**
Initiative type	Promotional activities (P)
Period active	• N/A
Frequency	• N/A
Scale	• N/A
Indicative budget	• N/A
Client / organisational partners	• Swedish Space Board, public, national
Implementing partners	• Swedish Space Board, public, national
Targeted geography	• Sweden
Target user group	• General • Copernicus services: all • User categories: General Public
Website address / contact details	http://www.snsb.se/sv/Mediebank/Utbildning/
Reference Documents	http://www.snsb.se/sv/Mediebank/Utbildning/
Description	• Promotional material on the website, organisation of ad hoc event/camp
Impact potential	• P4
Actual impact	• P2
Areas for improvement	• More material available on line, maybe organised in thematic areas
Best practice & scaling opportunity	

Reference number	SE.03
Initiative name	**Cosmo Skymed seminar**
Initiative type	Events (E)
Period active	• 2009
Frequency	• One-off
Scale	• Half day
Indicative budget	• N/A
Client / organisational partners	• Swedish Space Board, public, national • Italian Space Agency, public, national
Implementing partners	• Swedish Space Board, public, national • Italian Space Agency, public, national
Targeted geography	• Sweden and Italy
Target user group	• General • Copernicus services: all • User categories: National /MS institutions and bodies, Regional and Local Public Authorities
Website address / contact details	http://www.snsb.se/sv/Mediebank/Fjarranalysanvandare/Aktiviteter/Seminarium-om-Cosmo-Skymed/
Reference Documents	http://www.snsb.se/Global/invitation%20Cosmo%20sem.pdf
Description	Half a day workshop for exchanging knowledge and views between Italy and Sweden High Level representatives on Cosmo Skymed. Brainstorming on Swedish interest on Cosmo-Skymed applications
Impact potential	• E4
Actual impact	• E2
Areas for improvement	• No mention of Copernicus
Best practice & scaling opportunity	

Reference number	SE.04
Initiative name	**National User Forum**
Initiative type	Network (N)
Period active	• Since 2011
Frequency	• Ad hoc meeting
Scale	• N/A
Indicative budget	• N/A
Client / organisational partners	• 13 governmental bodies on voluntary basis (as an example Marine and Water Authority, Land Survey, Environmental Protection Agency, Board of Forestry, SLU, SMHI.) Public national users
Implementing partners	• 13 governmental bodies on voluntary basis (to name a few: Marine and Water Authority, Land Survey, Environmental Protection Agency, Board of Forestry, SLU, SMHI.) Public national users
Targeted geography	• Sweden
Target user group	• General • Copernicus services: all • User categories: National /MS institutions and bodies, Regional and Local Public Authorities, EU institutions and bodies, Copernicus Entrusted Entities, International organisations and bodies
Website address / contact details	No website
Reference Documents	No website
Description	National coordination: User forum is on voluntary basis. Still early stage of development. Few participants to date.
Impact potential	• N4
Actual impact	• N2
Areas for improvement	• Local and regional authorities are far from be on-board. Research and academia, relatively low. Industry: rather low for the moment, more involved on the National Space Agency. A boost in communication channel and techniques is needed. • Need for an effective structure. Lack of a coordinating agency taking care of public sector and others
Best practice & scaling opportunity	

Reference number	SE.05
Initiative name	**Forum för skogliga laserdata i praktiken (Forum on Forestry laser data in practice)**
Initiative type	User feedback, training and education (U)
Period active	• 2015
Frequency	• N/A
Scale	• 2 days event taking place in two different cities
Indicative budget	• N/A
Client / organisational partners	• Skogsstyrelsen (forest agency), public, national
Implementing partners	• Skogsstyrelsen (forest agency), public, national
Targeted geography	• Sweden
Target user group	• Forestry • Copernicus services: Land Monitoring • User categories: National /MS institutions and bodies, Regional and Local Public Authorities
Website address / contact details	http://www.skogsstyrelsen.se/Aga-och-bruka/Skogsbruk/Karttjanster/Laserskanning/Forum-for-skogliga-laserdata-i-praktiken/
Reference Documents	http://www.skogsstyrelsen.se/Global/aga-och-bruka/Skogsbruk/Karttjanster/Inbjudan_Forum_skogliga_laserdata_2-3_nov_2015.pdf
Description	One day event with a dedicated session of user feedback and training
Impact potential	• U4
Actual impact	• U4
Areas for improvement	
Best practice & scaling opportunity	

Reference number	SE.06
Initiative name	**Forest data portal**
Initiative type	Data access (D)
Period active	• N/A
Frequency	• Active online portal always accessible
Scale	• N/A
Indicative budget	• N/A
Client / organisational partners	• Skogsstyrelsen (forest agency), public, national
Implementing partners	• Skogsstyrelsen (forest agency), public, national
Targeted geography	• Sweden
Target user group	• Forestry • Copernicus services: Land Monitoring • User categories: National /MS institutions and bodies, Regional and Local Public Authorities
Website address / contact details	http://www.skogsstyrelsen.se/Aga-och-bruka/Skogsbruk/Karttjanster/Skogsdataportalen1/
Reference Documents	http://www.skogsstyrelsen.se/Aga-och-bruka/Skogsbruk/Karttjanster/Skogsdataportalen1/
Description	• Data Portal to access forestry relevant data. Materials available in the form of guidelines
Impact potential	• N/A
Actual impact	• N/A
Areas for improvement	• Link to Copernicus data sets
Best practice & scaling opportunity	

Reference number	SE.07
Initiative name	**SNS (Nordic Forest Research) - meeting in Forest Inventory and Forest Planning**
Initiative type	User feedback, training & education (U)
Period active	• 2011
Frequency	• One-off
Scale	• 3 days event
Indicative budget	• N/A
Client / organisational partners	• Swedish University of Agricultural Sciences, Department of Forest Resource Management, public, national
Implementing partners	• Swedish University of Agricultural Sciences, Department of Forest Resource Management, public, national
Targeted geography	• European
Target user group	• Forestry • Copernicus services: Land Monitoring • User categories: National /MS institutions and bodies, Regional and Local Public Authorities
Website address / contact details	http://www.slu.se/en/departments/forest-resource-management/sections/forest-remote-sensing/sns-meeting-2011/
Reference Documents	http://www.slu.se/en/departments/forest-resource-management/sections/forest-remote-sensing/sns-meeting-2011/ http://www.slu.se/sv/institutioner/skoglig-resurshushallning/omraden/skoglig-fjarranalys/welcome-to-sns-meeting-in-lycksele-2011/programme/
Description	The meeting aimed at bringing together research scientists and practitioners from the Nordic countries and the Baltic states, with the goal of sharing experience on: - forest inventory issues - national forest inventories and similar activities - remote sensing - forest planning and consequence analysis
Impact potential	• U4
Actual impact	• U4
Areas for improvement	
Best practice & scaling opportunity	

Reference number	SE.08
Initiative name	**Undergraduate and Master's Studies**
Initiative type	User feedback, training & education (U)
Period active	• N/A
Frequency	• N/A
Scale	• 5 subjects
Indicative budget	• N/A
Client / organisational partners	• Swedish University of Agricultural Sciences, Department of Forest Resource Management, public, national
Implementing partners	• Swedish University of Agricultural Sciences, Department of Forest Resource Management, public, national
Targeted geography	• European
Target user group	• Forestry • Copernicus services: Land Monitoring • User categories: Research and academia
Website address / contact details	http://www.slu.se/en/departments/forest-resource-management/sections/forest-remote-sensing/sns-meeting-2011/
Reference Documents	http://www.slu.se/en/departments/forest-resource-management/sections/forest-remote-sensing/sns-meeting-2011/ http://www.slu.se/sv/institutioner/skoglig-resurshushallning/omraden/skoglig-fjarranalys/welcome-to-sns-meeting-in-lycksele-2011/programme/
Description	The Department conducts bachelor's and master's education primarily within SLU's Master of forestry programme. The courses cover: Remote sensing and Geographical Information Technology (GIT), Forest inventory, Forest planning, Forest Mathematical Statistics and Organisation and leadership.
Impact potential	• U4
Actual impact	• U4
Areas for improvement	
Best practice & scaling opportunity	• Specific focus on GIS and Forestry

Reference number	SE.09
Initiative name	**HYPE Open Source Community (OSC)**
Initiative type	User feedback, training & education (U)
Period active	• Since 2011
Frequency	• Continuous
Scale	• 4 representatives from 3 country as reference group
Indicative budget	• N/A
Client / organisational partners	• SMHI
Implementing partners	• SMHI
Targeted geography	• European
Target user group	• Hydro • Copernicus services: Marine Environment Monitoring • User categories: Research and academia
Website address / contact details	http://www.slu.se/en/departments/forest-resource-management/sections/forest-remote-sensing/sns-meeting-2011/
Reference Documents	http://www.slu.se/en/departments/forest-resource-management/sections/forest-remote-sensing/sns-meeting-2011/ http://www.slu.se/sv/institutioner/skoglig-resurshushallning/omraden/skoglig-fjarranalys/welcome-to-sns-meeting-in-lycksele-2011/programme/
Description	HYPE OSC is an open source initiative under the GNU Lesser General Public License taken by SMHI to strengthen international collaboration in hydrological modelling and hydrological data production. The main aim is to provide a platform for international cooperation, networking, knowledge exchange and collective source code development.
Impact potential	• U4
Actual impact	• U4
Areas for improvement	
Best practice & scaling opportunity	• International platform for exchange ideas, best practices, and bottlenecks.

Reference number	SE.10
Initiative name	**Harmful Algal Blooms and Climate Change – Scientific Symposium**
Initiative type	User feedback, training & education (U)
Period active	• 2015
Frequency	• One-off
Scale	• 4 days event
Indicative budget	• N/A
Client / organisational partners	Support sponsors: • North Pacific Marine Science Organisation, public, national • Swedish Research Council, public, national • Global Ecology and Oceanography of Harmful Algal Blooms, public, international Local sponsors and host: • Swedish Meteorological and Hydrological Institute, public, national • University of Göteborg, public, national Symposium endorsements by: • Scientific Committee on Oceanic Research, public, international • Intergovernmental Oceanographic Commission of UNESCO, public, international • International Council for the Exploration of the Sea, public, international
Implementing partners	• Same as above
Targeted geography	• Global
Target user group	• Hydro, Marine, Climate • Copernicus services: Marine Environment Monitoring, Climate Change Monitoring • User categories: Research and academia
Website address / contact details	http://pices.int/meetings/international_symposia/2015/2015-HAB/scope.aspx
Reference Documents	http://pices.int/meetings/international_symposia/2015/2015-HAB/scope.aspx
Description	Symposium Objectives: • Bring together algal physiologists, ecologists, oceanographers, modellers and climate change specialists to develop a consensus on the priority research directions for future HAB/CC funding. • Develop "proactive" research strategies that build rigorous, testable hypotheses to guide scientists, managers and the public on what environmental and HAB changes are projected. • Design funding-realistic observing infrastructures (combining research studies, detection schemes, observing systems) to capture the critical datasets needed to assess HAB patterns in relation to measurable indicators of climate change.
Impact potential	• U4
Actual impact	• U4
Areas for improvement	
Best practice & scaling opportunity	• International platform for exchanging ideas, best practices, and bottleneck issues.

Reference number	SE.11
Initiative name	**An outlook to the future Baltic Sea: how can we reach the targets of the Baltic Sea Action Plan?**
Initiative type	Events (E)
Period active	• 2011
Frequency	• One-off
Scale	• 1 day event
Indicative budget	• N/A
Client / organisational partners	• Baltic Nest Institute, public, international • SMHI, public, national • ECO Support, public, national • RECOCA (project), public, international
Implementing partners	• Baltic Nest Institute, public, international • SMHI, public, national • ECO Support, public, national • RECOCA (project), public, international
Targeted geography	• Global
Target user group	• Hydro, Marine, Climate • Copernicus services: Marine Environment Monitoring, Climate Change Monitoring • User categories: Research and academia
Website address / contact details	http://www.smhi.se/en/research/conference-on-targets-of-the-baltic-sea-1.18487
Reference Documents	http://www.smhi.se/en/research/conference-on-targets-of-the-baltic-sea-1.18487 http://www.smhi.se/polopoly_fs/1.18481!/inbjudan_2011_10_20.pdf
Description	Scientific conference on best practises in the Baltic area. Scientists and stakeholders discussed and evaluated the recent developments and insights and identify areas of uncertainties and needs of further investigation
Impact potential	• E4
Actual impact	• E4
Areas for improvement	
Best practice & scaling opportunity	

Reference number	SE.12
Initiative name	**7th Study Conference on BALTEX**
Initiative type	Events (E)
Period active	• 2013
Frequency	• One-off
Scale	• 5 days event
Indicative budget	• N/A
Client / organisational partners	Baltic Earth project (public international) • Baltic Earth Science Steering Group (BESSG) • Baltic Earth Working Groups • International Baltic Earth Secretariat • Baltic Earth Senior Advisory Board
Implementing partners	• Same as above
Targeted geography	• Global
Target user group	• Hydro, Marine, Climate • Copernicus services: Marine Environment Monitoring, Climate Change Monitoring • User categories: Research and academia, National /MS institutions and bodies, Regional and Local Public Authorities
Website address / contact details	http://www.baltic-earth.eu/events/oland2013/index.html
Reference Documents	http://www.baltic-earth.eu/events/oland2013/material/BALTEX2013_Programme_PosterList.pdf
Description	Scientific conference covering energy and water, climate variability, improved tools for water management, biogeochemical cycles in the Baltic Sea
Impact potential	• E4
Actual impact	• E2
Areas for improvement	• No particular focus on EO/Copernicus
Best practice & scaling opportunity	

Reference number	SE.13
Initiative name	**Impact of climate change on the marine environment with special focus on the role of changing extremes**
Initiative type	User feedback, training & education (U)
Period active	• 2015
Frequency	• One-off
Scale	• 7 days event
Indicative budget	• N/A
Client / organisational partners	Baltic Earth project (public international) • Baltic Earth Science Steering Group (BESSG) • Baltic Earth Working Groups • International Baltic Earth Secretariat • Baltic Earth Senior Advisory Board
Implementing partners	• Same as above
Targeted geography	• Global
Target user group	• Hydro, Marine, Climate • Copernicus services: Marine Environment Monitoring, Climate Change Monitoring • User categories: Research and academia, National /MS institutions and bodies, Regional and Local Public Authorities
Website address / contact details	http://www.baltic-earth.eu/asko2015/index.html
Reference Documents	http://www.baltic-earth.eu/asko2015/index.html
Description	Scientific conference focused on the impact of climate change on the marine environment, in particular on Baltic Sea hydrodynamics and biogeochemistry
Impact potential	• U4
Actual impact	• U2
Areas for improvement	• No particular focus on EO/Copernicus
Best practice & scaling opportunity	

Reference number	SE.14
Initiative name	**21st Century Challenges in Regional Climate Modelling**
Initiative type	User feedback, training & education (U)
Period active	• 2014
Frequency	• One-off
Scale	• 4 days event
Indicative budget	• N/A
Client / organisational partners	Baltic Earth project (public international) • Baltic Earth Science Steering Group (BESSG) • Baltic Earth Working Groups • International Baltic Earth Secretariat • Baltic Earth Senior Advisory Board
Implementing partners	• Same as above
Targeted geography	• Global
Target user group	• Hydro, Marine, Climate • Copernicus services: Marine Environment Monitoring, Climate Change Monitoring • User categories: Research and academia, National /MS institutions and bodies, Regional and Local Public Authorities
Website address / contact details	http://www.baltic-earth.eu/events/RCM2014/index.html
Reference Documents	http://www.baltic-earth.eu/events/RCM2014/index.html
Description	The aim of the Workshop is to review the overall and specific developments and progress in regional climate modelling over the last five years, to discuss pertinent open issues and challenges, and to provide input for new developments on the field.
Impact potential	• U4
Actual impact	• U2
Areas for improvement	• No particular focus on EO/Copernicus
Best practice & scaling opportunity	

5.31 Switzerland

Reference number	CH.01
Initiative name	**Swiss Startup Day**
Initiative type	Start-up initiatives (S)
Period active	• Since 2003
Frequency	• Every year
Scale	• 600 participants • 700 1-to-1 meetings • full day conference
Indicative budget	• N/A
Client / organisational partners	• CTI Invest, Private, Swiss
Implementing partners	• CTI Invest, Private, Swiss
Targeted geography	• Global
Target user group	• General • Copernicus services: all • User categories: Downstream Value-Added service providers, Downstream Industry End Users
Website address / contact details	http://www.ap-swiss.ch/portfolio/swiss-startup-day/
Reference Documents	http://www.swiss-startup-day.ch/
Description	The Swiss Startup Day, former "CEO day", is an event organised by CTI invest, the leading financial platform for swiss high tech start-ups. During the event start-ups, investors, supporters and representatives of industrial companies gather together to evaluate start-ups in the field of: ICT, Cleantech, Biotech, Medtech, Micro-Nanotech, and Services. The event includes pitching battles among participant start-ups and meetings with possible investors. 6 finalists are elected and their companies are then nurtured and coached at a later stage.
Impact potential	• S3 – start up day for every domain, representatives of AP Swiss attended the event
Actual impact	• S1
Areas for improvement	• Inclusion of dedicated session on exploitation of Copernicus data/information services
Best practice & scaling opportunity	

Reference number	CH.02
Initiative name	**Global Entrepreneurship Week 2015**
Initiative type	Start-up initiatives (S)
Period active	• November 2015
Frequency	• One-off
Scale	• Half day
Indicative budget	• N/A
Client / organisational partners	• EPFL innovation Park, Private, Swiss • Swiss Space Centre, Public, Swiss • AP-Swiss, Private, Swiss
Implementing partners	• EPFL innovation Park, Private, Swiss • Swiss Space Centre, Public, Swiss • AP-Swiss, Private, Swiss
Targeted geography	• Switzerland
Target user group	• General • Copernicus services: all • User categories: Downstream Value-Added service providers, Downstream Industry End Users
Website address / contact details	http://space.epfl.ch/page-126294-en.html
Reference Documents	http://epfl-innovationpark.ch/wp-content/uploads/Program-Space-event-final-version1.pdf http://www.ap-swiss.ch/portfolio/global_entrepr_week/
Description	The Global Entrepreneurship Week 2015 aims at an audience interested in top-notch technologies, developed for space missions, that are used for various terrestrial applications such as health care, energy, security, sport, entertainment, daily life activities, etc. Participants had the opportunity to get to know and become part of the majority of start-ups boosted by ESA to transform space technologies into profitable businesses. The event represents also an occasion to become more familiar with grants and support offered by the Swiss Space Office to gain access to ESA's network and to the world of innovation in space.
Impact potential	• S4
Actual impact	• S3
Areas for improvement	• Bigger focus on EO/Copernicus
Best practice & scaling opportunity	

Reference number	CH.03
Initiative name	**Space Summer Camps 2015**
Initiative type	Promotional activities (for students of all ages and academia) (P)
Period active	• 2015
Frequency	• One-off
Scale	• 8 days camp
Indicative budget	• N/A
Client / organisational partners	• Swiss Space Center, Public, Swiss
Implementing partners	• Swiss Space Center, Public, Swiss
Targeted geography	• Switzerland
Target user group	• General • Copernicus services: all • User categories: General Public (all)
Website address / contact details	• http://space.epfl.ch/page-118727-en.html
Reference Documents	• http://space.epfl.ch/page-118727-en.html
Description	• The Swiss Space Center has the goal of supporting institutions, academia and industry to access space missions and related applications, and promote interaction between those stakeholders. The Summer Camp is an educational and awareness raising initiative going in this direction by providing participants with: lectures on various subjects related to space exploration, scientific workshops, cultural programmes, meeting with experts coming from the field of space science and technology, and tour of Swiss space facilities.
Impact potential	• P2
Actual impact	• P3
Areas for improvement	• More content / hands on session / showcases related to Copernicus
Best practice & scaling opportunity	

Reference number	CH.04
Initiative name	**Space Prize powered by Inmarsat and AP-Swiss**
Initiative type	Start-up initiatives (S)
Period active	• Since 2012
Frequency	• Annually
Scale	• One-day event in 7 different cities
Indicative budget	• N/A
Client / organisational partners	• Seedstars World, Private, Swiss • AP-Swiss, Private, Swiss • Inmarsat, Private, UK
Implementing partners	• Seedstars World, Private, Swiss • AP-Swiss, Private, Swiss • Inmarsat, Private, UK
Targeted geography	• Global
Target user group	• General • Copernicus services: all • User categories: Downstream Value-Added service providers, Downstream Industry End Users
Website address / contact details	http://www.seedstarsworld.com/
Reference Documents	http://www.ap-swiss.ch/portfolio/seedstars/
Description	Seedstars World, a global start-up competition for emerging markets and fast-growing start-ups scenes, looks for the best locally-grown start-ups all over the world and the winners are invited to Switzerland to compete for one of the three equity investments of 500k Dollars each. In addition to the investment prizes, Seedstars World has launched several partnerships, one of which is with Inmarsat, the leading provider of mobile satellite communications services and AP-Swiss, the Ambassador Platform of ESA, the European Space Agency, and the Swiss Space Office. During its world tour, Seedstars World seeks to source the most innovative start-ups «powered by satellites». During the final event, the best start-up leveraging these technologies will be awarded the Space Prize, which this year was a USD 50K.
Impact potential	• S2
Actual impact	• S1
Areas for improvement	• No mention of EO products/data. Focus on Satellite Communications.
Best practice & scaling opportunity	

Reference number	CH.05
Initiative name	**Space Projects: An opportunity for cutting-edge research and advanced technology development**
Initiative type	Events (E)
Period active	• 2005
Frequency	• One-off
Scale	• Half day
Indicative budget	• N/A
Client / organisational partners	• EPFL, Public, Swiss • Swiss Space Center, Public, Swiss
Implementing partners	• EPFL, Public, Swiss • Swiss Space Center, Public, Swiss
Targeted geography	• Switzerland
Target user group	• General • Copernicus service: all • User categories: National /MS Institutions and Bodies, Regional and Local Public Authorities, Research and Academic Organisations, Downstream Value-Added Service Providers, Downstream Industry End Users
Website address / contact details	http://space.epfl.ch/page-39480-en.html
Reference Documents	http://space.epfl.ch/page-39480-en.html
Description	The event provides an overview of the Swiss Space Centre, followed by presentations of the main ESA and EU space programmes. In addition, the Swiss Space Center partner industries, RUAG Space and Contraves Space, introduce themselves and their current projects. The closing part involves B2B meetings.
Impact potential	• E4
Actual impact	• E3
Areas for improvement	
Best practice & scaling opportunity	

Reference number	CH.06
Initiative name	**MDP call for proposals 2014**
Initiative type	Funding instrument (F)
Period active	• 2014
Frequency	• Took place 3 times
Scale	• N/A
Indicative budget	• 250k CHF for each initiative (10 activities will be selected)
Client / organisational partners	• Swiss Space Office, Public, Swiss • Swiss Confederation (SERI/SSO), Public, Swiss
Implementing partners	• Swiss Space Centre, Public, Swiss
Targeted geography	• Switzerland
Target user group	• General • Copernicus services: all • User categories: Research and Academic Organisations, Downstream Value-Added Service Providers, Downstream Industry End Users, Participants to EU Research Projects- Space, Participants to EU Research Projects- Non Space
Website address / contact details	http://space.epfl.ch/mdp2014
Reference Documents	http://space.epfl.ch/mdp2014
Description	• The main objectives of this Call for proposals are to foster and promote Swiss technological and scientific competences that have a clear potential for space products and services/applications. More particularly, this Call for proposals aims: - To foster the development of innovative ideas and new products related to the space sector; - To promote the collaboration between Swiss industrial and academic partners to obtain a more stable and better structured Swiss space landscape; - To better position Swiss industry with regard to future European and worldwide activities so as to be ready to submit competitive bids when the respective calls are published; - To increase the technological maturity of ideas developed by academia and to promote competitive Space products thanks to partnerships with industry.
Impact potential	• F3
Actual impact	• F2
Areas for improvement	• One specific target could be exploitation of EO/Copernicus
Best practice & scaling opportunity	

Reference number	CH.07
Initiative name	**Space Entrepreneurship - How is space conquered today?**
Initiative type	Events (E)
Period active	• 2015
Frequency	• One-off
Scale	• Half day
Indicative budget	• N/A
Client / organisational partners	• Université de Genève - Uni Mail, Genève; Public, Switzerland • ITU, Private, Swiss • Swiss Space Office, Public, Swiss
Implementing partners	• Université de Genève - Uni Mail, Genève; Public, Switzerland • ITU, Private, Swiss • Swiss Space Office, Public, Swiss
Targeted geography	• Global
Target user group	• General • Copernicus services: all • User categories: Downstream Value-Added Service Providers, Downstream Industry End Users, Research and Academic Organisations
Website address / contact details	https://www.eventbrite.com/e/space-entrepreneurship-how-is-space-conquered-today-tickets-18952715081?invite=&err=29&referrer=&discount=&affiliate=&eventpassword
Reference Documents	https://www.eventbrite.com/e/space-entrepreneurship-how-is-space-conquered-today-tickets-18952715081?invite=&err=29&referrer=&discount=&affiliate=&eventpassword
Description	This seminar investigates why is space entrepreneurship so present and famous today after years of "status quo". Eminent speakers from the Swiss Space Center, private space companies, and space start-ups discuss the topic by focusing on future innovation on management practices of space entrepreneurs.
Impact potential	• E2
Actual impact	• E1
Areas for improvement	• More structured event with sessions dedicated to the area of EO
Best practice & scaling opportunity	

Reference number	CH.08
Initiative name	**GEO Water Quality Summit**
Initiative type	User feedback, training and education (U)
Period active	• 2015
Frequency	• One-off
Scale	• 52 participants • 18 Countries
Indicative budget	• N/A
Client / organisational partners	• GEO, Public, International
Implementing partners	• GEO, Public, International
Targeted geography	• Global
Target user group	• Water • Copernicus service: Marine Environmental Monitoring • User categories: International Organisations and Bodies, National /MS Institutions and Bodies, Regional and Local Public Authorities, Research and Academic Organisations, Downstream Value-Added Service Providers, Downstream Industry End Users
Website address / contact details	http://www.earthobservations.org/articles_news.php?id=75
Reference Documents	http://www.earthobservations.org/articles_news.php?id=75
Description	The Summit is open to all members of the water quality community including water management, regulatory and operational agencies, research institutions and agencies, NGOs and the private sector. This is an exciting opportunity for you to help chart the future of Earth Observation-based global water quality monitoring and forecasting systems. The Summit Goal is to define specific requirements of the water quality observing system components and develop a plan to implement an integrated, global end-to-end water quality monitoring and forecasting service.
Impact potential	• U4
Actual impact	• U3
Areas for improvement	• The EO world is well represented, while the Copernicus data (feeding GEO) are not mentioned.
Best practice & scaling opportunity	

Reference number	CH.09
Initiative name	**From Earth Observation to Telecoms - New capacities in space for improved services and applications**
Initiative type	Events (E)
Period active	• 2015
Frequency	• One-off
Scale	• One day
Indicative budget	• N/A
Client / organisational partners	• GRSS IEEE, private/public, international • AP-Swiss, private, Swiss • Inmarsat, private, UK • ESA, public, European • AESS IEEE, public, international
Implementing partners	• GRSS IEEE, private/public, international • AP-Swiss, private, Swiss • Inmarsat, private, UK • ESA, public, European • AESS IEEE, public, international
Targeted geography	• Switzerland
Target user group	• General • Copernicus services: All • User categories: Downstream Value-Added Service Providers, Downstream Industry End Users
Website address / contact details	http://sageo.org.za/wp-content/uploads/2013/04/AP_Swiss_workshop.pdf
Reference Documents	http://sageo.org.za/wp-content/uploads/2013/04/AP_Swiss_workshop.pdf
Description	• The purpose of the workshop is to bring together colleagues from the Earth Observation and Telecommunications community in South Africa to discuss opportunities for the development of commercial services and applications based on satellite technologies. • The workshop aims to - Review the new capacities in space for improved services and applications, - Discuss the role of the European Space Agency and AP-Swiss as Space Business Incubators, - Discover the projects of Inmarsat to become the application development and delivery platform for a wide range of new uses and - To give the local community the opportunity to showcase their space business initiatives and explore potential funding opportunities.
Impact potential	• E4
Actual impact	• E4
Areas for improvement	• Investigate business opportunities stemming from the Copernicus programme
Best practice & scaling opportunity	• Extra EU dimensions

Reference number	CH.10
Initiative name	**Swiss IB Geographers Meeting 2015**
Initiative type	User feedback, training & education (U)
Period active	• Since 2011
Frequency	• Every year
Scale	• One day
Indicative budget	• N/A
Client / organisational partners	• International School of Geneva, public, international
Implementing partners	• Hosted by International School of Geneva, public, international
Targeted geography	• EU
Target user group	• General • Copernicus services: All • User categories: Research and Academic Organisations, University Student
Website address / contact details	http://workshop.geographyalltheway.com/swiss-ib-geography-network/2015-meeting
Reference Documents	http://workshop.geographyalltheway.com/swiss-ib-geography-network/2015-meeting
Description	The event focuses on GIS case studies (presented during the first part of the event) and on trends and issues in Geography Extended Essays and includes break sessions aimed at sharing ideas on GIS, ICT, and EO data. The final part of the event gives room to downstream studies.
Impact potential	• U2
Actual impact	• U2
Areas for improvement	• No direct mentioning of Copernicus
Best practice & scaling opportunity	• At university level, engagement with young generations

Reference number	CH.11
Initiative name	**6th Workshop on Hyperspectral Image and Signal Processing: Evolution in Remote Sensing**
Initiative type	User feedback, training and education (U)
Period active	• Since 2009
Frequency	• Every year
Scale	• N/A
Indicative budget	• N/A
Client / organisational partners	• GRSS IEEE, private/public, International • UCLA, public, USA
Implementing partners	• GRSS IEEE, private/public, International • UCLA, public, USA
Targeted geography	• Global
Target user group	• General • Copernicus services: All • User categories: International Organisations and Bodies, National /MS Institutions and Bodies, Regional and Local Public Authorities, Research and Academic Organisations, Downstream Value-Added Service Providers, Downstream Industry End Users
Website address / contact details	http://www.ieee-whispers.com/index.php/past-editions/2014-lausanne-switzerland
Reference Documents	http://www.ieee-whispers.com/index.php/past-editions/2014-lausanne-switzerland
Description	Rather research oriented (submission of paper), exchange of most updated findings in the research across the several domains such as: • Spectrometers and hyperspectral sensors: design and calibration • Physical modelling, physical analysis • Noise estimation and reduction • Dimension reduction • Unmixing, source separation, endmember extraction • Segmentation, classification and detection • High performance computing and compression. The downstream use of those findings was also explored.
Impact potential	• U4
Actual impact	• U2
Areas for improvement	• No direct mentioning of Copernicus as for instance input data in the research paper
Best practice & scaling opportunity	

Reference number	CH.12
Initiative name	**Swiss Space Center**
Initiative type	Network (N)
Period active	• Since 2003
Frequency	• N/A
Scale	• 32 participants
Indicative budget	• N/A
Client / organisational partners	• Swiss Space Center, Public, Swiss
Implementing partners	• Swiss Space Center, Public, Swiss
Targeted geography	• Switzerland
Target user group	• General • Copernicus services: All • User categories: International Organisations and Bodies, National /MS Institutions and Bodies, Regional and Local Public Authorities, Research and Academic Organisations, Downstream Value-Added Service Providers, Downstream Industry End Users
Website address / contact details	http://space.epfl.ch/cms/lang/en/pid/39460
Reference Documents	http://space.epfl.ch/cms/lang/en/pid/39460
Description	The Swiss Space Center shall support institutions, academia and industry to access space missions and related applications and promote interaction between these stakeholders. The main objectives are: • To network Swiss research institutions and industries on national and international levels in order to establish focused areas of excellence internationally recognized for both space R&D and applications; • To facilitate access to and implementation of space projects for Swiss research institutions and industries; • To provide education and training; • To promote public awareness of space.
Impact potential	• N5
Actual impact	• N3
Areas for improvement	• The involvement of Swiss Space Center in the Copernicus programme is still marginal
Best practice & scaling opportunity	

Reference number	CH.13
Initiative name	**National Point of Contact (NPOC) for Satellite Images**
Initiative type	Data Access (D)
Period active	• Since 2001
Frequency	• N/A
Scale	• N/A
Indicative budget	• N/A
Client / organisational partners	• Swiss State Secretariat for Education and Research, public, Swiss – initiator
Implementing partners	Joint venture between: • Remote Sensing Laboratory (RLS), public, Swiss • Univ. of Zurich, public, Swiss • Federal Office of Topography (swisstopo), public, Swiss
Targeted geography	• Switzerland
Target user group	• General • Copernicus services: All • User categories: All
Website address / contact details	http://www.npoc.ch/internet/npoc/en/home.html
Reference Documents	http://www.npoc.ch/internet/npoc/en/home.html
Description	• Public service initiated by the Swiss State Secretariat for Education and Research in order to foster the use of Earth Observation by sharing knowledge of technology and methods with potential and current users. • The goals are to create a scientific advisory to potential EO data users (RSL), to foster research and development of new products (RSL), to distribute satellite imagery (swisstopo), to provide of technical support (swisstopo) and to maintenance of the national archive (swisstopo). • The application areas are atmosphere, land, water and emergency and security. • Two services are provided: products (optical satellite image data distribution, processing, support and consulting) and consulting (development of remote sensing solutions)
Impact potential	• D4
Actual impact	• D3
Areas for improvement	• More prominent promotion of Copernicus
Best practice & scaling opportunity	

Reference number	CH.14
Initiative name	**Société Suisse de Photogrammétrie et de Télédétection** Swiss Network of Geospatial Imaging Experts (SGPBF)
Initiative type	Network (N)
Period active	• Since 1928
Frequency	• N/A
Scale	• N/A
Indicative budget	• N/A
Client / organisational partners	• Société Suisse de Photogrammétrie et de Télédétection, public, Swiss
Implementing partners	• Société Suisse de Photogrammétrie et de Télédétection, public, Swiss
Targeted geography	• Switzerland
Target user group	• General • Copernicus services: All • User categories: All
Website address / contact details	https://www.sgpf.ch/fr
Reference Documents	https://www.sgpf.ch/fr
Description	Network of unites professional experts in the fields of remote sensing and photogrammetry. It is member of the International Society for Photogrammetry and Remote Sensing
Impact potential	• N4
Actual impact	• N3
Areas for improvement	• It could be used as one of means for fostering the uptake of Copernicus, considered the relevance of the network in the county
Best practice & scaling opportunity	

Reference number	CH.15
Initiative name	**Swiss Earth Observation Service Providers Society**
Initiative type	Network (N)
Period active	• Since 2013
Frequency	• N/A
Scale	• N/A
Indicative budget	• N/A
Client / organisational partners	4 members: • Ernst Basler + Partner, private Swiss • Gamma Remote Sensing, private, Swiss • MFB-Geoconsulting, private, Swiss • Sarmap, private, Swiss
Implementing partners	• Same as above
Targeted geography	• Switzerland
Target user group	• General • Copernicus services: All • User categories: All
Website address / contact details	http://www.erdbeobachtung.ch/
Reference Documents	http://www.erdbeobachtung.ch/
Description	The society represents a community of small and medium-sized Swiss companies interested in Earth Observation, GIS, software and data products. In addition, the society represents the private industrial dimension of EO/GIS in Switzerland
Impact potential	• N4
Actual impact	• N3
Areas for improvement	• It could be used as a mean to foster the uptake of Copernicus, considered the relevance of the network in the country
Best practice & scaling opportunity	

Reference number	CH.16
Initiative name	**SOGI**
Initiative type	Network (N)
Period active	• Since 2001
Frequency	• Permanent
Scale	• National Level
Indicative budget	• N/A
Client / organisational partners	• Geosuisse • SGK (Swiss Society for Cartography) • …
Implementing partners	• Same as above
Targeted geography	• National level
Target user group	• Unions, Networks, Companies, Universities
Website address / contact details	http://www.sogi.ch/index.php?id=209&L=4
Reference Documents	
Description	The SOGI promotes and supports: - the experience and cooperation of the members in the Department of Geoinformation and especially their application, - the interdisciplinary exchange of information on the use of modern information technologies especially in construction and operation of geographic information systems, - the information about the importance, usefulness and proper application of geographic information, - the dissemination and use of geographic information in Switzerland, - the use of powerful computer science tools and procedures in the management, retrieval and distribution of geographic information, - the application of norms and standards for the development and implementation of Geomatikanwendungen, for the exchange of geographic information and the cooperation of the systems employed for this purpose, - the training of data producers and data users of geographic information.
Impact potential	• N5
Actual impact	• N4
Areas for improvement	• No specific Copernicus/EO orientation
Best practice & scaling opportunity	

5.32 United Kingdom

Reference Number	GB.01
Initiative name	**Satellite Applications Catapult-Copernicus**
Initiative type	Data access (D), Network (N), Funding Instruments (F)
Period active	• Since 2014
Frequency	• Regular roadshows; specialist workshops devoted to EO end user applications.
Scale	• Regional roadshows to support the growth of SME's in the Space sector, with a single point of access, comprising improved access to finance, business management tools, skills training, and mentoring. For Copernicus, a key part of the Catapult's activity is to energise the market for satellite data and services by engaging potential developers and users, and helping them understand the opportunities to stimulate demand. Typically 3 per annum, 50 participants per roadshow.
Indicative budget	• £10M pa. 25% Copernicus related.
Client / organisational partners	• UKSA • Innovate UK
Implementing partners	• Space Industry • Research Councils • Industry End Users especially SMEs • Universities
Targeted geography	• UK wide
Target user group	• Thematic: general; Copernicus services: general • Research and Academic Organisations; Downstream Value-Added Service Providers; Downstream Industry End Users; Regional and local Public Authorities
Website address / contact details	https://sa.catapult.org.uk/
Reference Documents	Space Innovation Growth Strategy 2014-2020. Space Growth Action Plan. https://www.gov.uk/government/publications/**space-growth**-action-plan Annual Report 2013-2014
Description	The Satellite Applications Catapult was established in 2013 as an independent innovation and technology company, created to foster growth across the economy through the exploitation of space capabilities. The vision is to support industry and the science base across the UK to accelerate the growth of satellite applications to contribute to capturing a 10% share of the £400bn global space market predicted by 2030. The Satellite Applications Catapult works with businesses, researchers and end-users to develop new satellite-based products, services and applications, translating ideas from concept to market. Promoting the application of Copernicus data and services to end users in the private and public sectors over a wide range of sector applications accounts for around 25% of the Catapult's user uptake activities.
Impact potential	• S4, F4, E5, P4, U3, N4, D5, C3
Actual impact	• S2, F4, E4, P4, U3, N2, D5, C3
Areas for improvement	• UK-centric. Low success rate in proposals, especially H2020
Best practice & scaling opportunity	• Catapult aims to provide an integrated approach to Copernicus uptake through its combination of data access facilities, end user services, regional networking and fostering of industry-academic collaborations. Scaling from current levels is predicated on wider commercial uptake of EO and GIS in non-space industry sectors and scaling EO applications

	to meet the needs of key public sector users in Government Departments across the board. E.g. environment, agriculture, fishing, maritime, energy & climate change, transport, local government and communities, local authorities and devolved regions. Transferability of the emerging best practice more widely across the EU Member States is targeted as a longer term objective but attempts to launch collaborative H2020 projects have so far yielded little success.

Reference number	GB.02
Initiative name	**Supporting Space Start-Ups; Business Incubator Call 2015-16**
Initiative type	Start-up initiative (S)
Period active	• 2015-16
Frequency	• New scheme
Scale	• English Regions and Devolved Administrations (Wales, Scotland, Northern Ireland)
Indicative budget	• £300K
Client / organisational partners	• UKSA
Implementing partners	• Regional Business Incubators across the UK • Local Enterprise Partnerships • Local Universities
Targeted geography	• All UK
Target user group	• Thematic: general; Copernicus services: general • Research and Academic Organisations; Downstream Industry End Users; Regional and local Public Authorities
Website address / contact details	UK Space Agency https://www.gov.uk/government/publications/supporting-space-startups-business-incubator-call-2015-16
Reference Documents	Space Innovation Growth Strategy 2014-2020. Space Growth Action Plan. https://www.gov.uk/government/publications/space-growth-action-plan
Description	The UK's Space Growth Action Plan 2014 highlighted the need to grow space in the regions by providing a supportive business environment to assist entrepreneurs to grow and develop small companies. Generally, business incubators in the UK have very limited focus on space. This funding initiative is to extend the network of business incubators supporting space companies across the UK and deliver an effective national capacity for space company incubation and shared best practice.
Impact potential	• S4. P3 • F4, C2.
Actual impact	• S3 • F3, P2, C1.
Areas for improvement	• Need for Local Enterprise Partnerships to recognise regional growth potential of space start-up SMEs. Need for more Copernicus awareness raising
Best practice & scaling opportunity	• Highly dependent on ensuring buy-in by Local Enterprise Partnerships. This scheme offers a break-through in engaging regional incubators with the space sector.

Reference number	GB.03
Initiative name	**Space for Smarter Government**
Initiative type	Funding instruments (F), User feedback, training & education (U), Events (E)
Period active	• Since March 2014
Frequency	• Yearly competitions for case studies and demonstration projects with the aim of delivering sustainable operational services to the UK's public sector.
Scale	• Event: March 2015 - Making efficiencies using satellites: A discovery day for Local Authorities showcased how satellites can help local and regional governments • SSGP ran two competitions in 2014, which led to 13 case studies being selected and funded - eight in Copernicus related topics. Of these case studies three have been selected to continue into demonstration projects running from November 2015 to March 2016. • A second competition looking to develop case studies was launched in June 2015 using InnovateUK's Small Business Research Initiative (SBRI) framework. The 10 winners are to be announced on the SSGP website in December 2015, eight of which are making use of imagery from Copernicus. • SSGP is actively supporting the UK cross-government Working Group on Earth Observation, collaborated with the Department for Environment, Food and Rural Affairs on the creation of an EO Roadmap, and have delivered training to Government Office for Science, Scottish & Northern Irish government on the benefits of Copernicus, in particular its EMS.
Indicative budget	• £1.5m 2015-16 (£1m 2014-15)
Client / organisational partners	• UK Space Agency • Satellite Applications Catapult • InnovateUK Small Business Research Initiative (SBRI)
Implementing partners	• SSGP projects undertaken by Research Organisations, Universities or Industry.
Targeted geography	• UK wide
Target user group	• National institutional bodies (Government and its affiliated organisations); Regional and Local and Authorities, Devolved Administrations
Website address / contact details	www.spaceforsmartergovernment.uk/ Contact: ssgp@sa.catapult.org.uk
Reference Documents	Event Briefing Document Discovery Day for Local Authorities - http://www.spaceforsmartergovernment.uk/workspace/assets/files/sbri-space-for-smarter-governm-559e7942ebbc7.pdf EO Discovery Day - http://www.spaceforsmartergovernment.uk/eo-discovery-day/
Description	The Space for Smarter Government Programme (SSGP) is a strategic Programme, working at the heart of the UK's public sector to drive the uptake of space products, data and services. Established in 2014, it is led by the UK Space Agency and delivered in collaboration with the Satellite Applications Catapult. The Programme's ambition is to help the public sector realise the potential of space as an enabling technology, innovate and ultimately embed services which make them more efficient and contribute to smarter decisions.
Impact potential	• E3; F4; S4; P4; C4; U4.
Actual impact	• E3; F4; S3; P3; C2/3; U3.
Areas for improvement	• Too early to judge impact of SBRI/SSGP Competitions on longer term Copernicus by government departments and other public bodies.
Best practice & scaling opportunity	• Good uptake of businesses and research organisations in the competition.

Reference number	GB.04
Initiative name	**National Centre for Earth Observation**
Initiative type	Data Access (D), Contact Point (C), Network (N)
Period active	• Since ~2010 in current configuration
Frequency	• Continuous
Scale	• National and Regional. UK • The National Centre for Earth Observation (NCEO) is a distributed NERC centre of over 80 scientists from UK Universities and research organisations.
Indicative budget	• N/A
Client / organisational partners	• NCEO Executive Team • Natural Environment Research Council • University of Leicester (NCEO Host)
Implementing partners	• Natural Environment Research Council • University of Leicester (NCEO Host)
Targeted geography	• UK. Regional, Global
Target user group	• Research and Academic Organisations;
Website address / contact details	www.nceo.ac.uk Director. Professor John Remedios. University of Leicester.
Reference Documents	Securing the benefits of space applications for Defra. http://www.nceo.ac.uk/documents/1%20Boyd.pdf
Description	The National Centre for Earth Observation (NCEO) is a distributed NERC centre of over 80 scientists from UK Universities and research organisations. The NERC strategy, "The Business of the Environment", identifies a unique capability of EO to study environmental change on scales from global to local. NCEO provides innovative approaches to scientific investigations of the global and regional Earth System, meeting the related needs of society through long-term core science and translation of EO knowledge and environmental data for support of government and business. One of the primary objectives at the NCEO is to develop tools and techniques that make EO data useful to other scientists and to other government and commercial users. NCEO acts as focus for UK research access to EO data and missions, and works closely with the UK Space Agency, and the European Space Agency.
Impact potential	• N4, D4. C5, U4, F3.
Actual impact	• N4, D4, C5, U4, F3.
Areas for improvement	
Best practice & scaling opportunity	• Model of good practice but highly specific to UK funding mechanisms.

Reference number	GB.05
Initiative name	**Satellite Applications Catapult Regional Centres of Excellence**
Initiative type	Networks (N), Contact point (C)
Period active	• First cycle; 2014-2017
Frequency	• Second cycle 2016-2019.
Scale	• Regional CoEs supported at level of 2/3 FTE. Each CoE runs its own events programme and each CoE has its own primary areas of interest. Annual conference of CoEs ensures cross fertilisation and sharing of best practice. Recent participants 20-50. Annual conference 70-80. • Over the first 18 months, the Centres: - integrated over 50 companies into the Catapult network - Hosted more than 40 space and satellite market facing events - Initiated 21 collaborative projects with businesses. Approximately 30% of these are in the EO sector.
Indicative budget	• £600K pa representing 50% SAC funding and leveraging 50% institutional co-funding.
Client / organisational partners	• Satellite Applications Catapult
Implementing partners	• East Midlands: Universities of Leicester & Nottingham and British Geological Survey. • North East: led by Business Durham economic development company, with partners from BE Group; Local Enterprise Partnerships and several universities; • Scottish: University of Strathclyde, with partners in the UK Astronomy Technology Centre; Offshore Renewable Energy Catapult, Scottish Enterprise, Energy Technology Partnership and Future Cities Catapult.
Targeted geography	• Regional, (East Midlands, North East England, Scotland to date; 3 more in 2016)
Target user group	• Thematic: Generic Space applications. • User categories: Regional and local Public authorities, Downstream Industry end users, Research and Academic organisations, Downstream value-added service providers
Website address / contact details	http://www.sacatapultcoe.org/ https://sa.catapult.org.uk/centres-of-excellence
Reference Documents	Satellite Applications Centre of Excellence Leaflet link. Leaflet
Description	The Satellite Applications Catapult has created three Centres of Excellence in 2014. Each Centre plays an important regional role, facilitating and brokering a growing number of new connections between academic organisations and businesses, through events, business development workshops, and one-to-one business and technical support sessions. The Centres act as local ambassadors and representatives for the Catapult, aligning business needs with solutions and enabling the development of applications and solutions. Copernicus activities represent about 30% of current initiatives.
Impact potential	• S3, N4, E4, P3; C4: F3
Actual impact	• S3, N4, E3, P3; C3; F1
Areas for improvement	• Under-resourced and geographically limited. Need more engagement of local and regional enterprise partnerships.
Best practice & scaling opportunity	• Network will be strengthened and widened geographically by addition of further CoEs in 2016 and beyond.

Reference number	GB.06
Initiative name	**Satellite Application Small Business Support Programme**
Initiative type	Start-up initiative (S)
Period active	• N/A
Frequency	• N/A
Scale	• 13 staff, 4 in the area of small business finance and mentoring. General space applications expertise with 1 or 2 Copernicus specialists.
Indicative budget	• N/A
Client / organisational partners	• Satellite Applications Catapult
Implementing partners	• Satellite Applications Catapult
Targeted geography	• National, UK
Target user group	• Thematic: general; Copernicus services: general • Downstream Value-Added Service Providers; Downstream Industry End Users;
Website address / contact details	https://sa.catapult.org.uk/documents/10625/53676/Business+Support+Data+Sheet https://sa.catapult.org.uk/business-support
Reference Documents	
Description	Offers business support options for early stage and growth for SME and larger companies. Main application in the Copernicus area concerns satellite applications involving big data. As a case study, The SETsquared Partnership is an enterprise collaboration between five leading research-intensive universities: Bath, Bristol, Exeter, Southampton and Surrey. The SAC Small Business Unit is mentoring and supporting satellite applications uptake with members of the SET squared partnership.
Impact potential	• F2, S2, N2
Actual impact	• F1, S2, N2
Areas for improvement	• More Copernicus awareness raising
Best practice & scaling opportunity	

Reference number	GB.07
Initiative name	**Earth Observation Knowledge Exchange Fellowships**
Initiative type	User feedback, training & education (U)
Period active	• 3 year fellowship appointments
Frequency	• Application Calls Annually
Scale	• Currently there are 41 active KE fellows. Typically 14-15 new KE Fellowships are awarded annually. 5 KE Fellows are active in Copernicus thematic areas. Others may involve Copernicus incidentally in wider research areas.
Indicative budget	• £250K pa in dedicated Copernicus areas.
Client / organisational partners	• NERC • Satellite Applications Catapult (co-funding one fellowship).
Implementing partners	• Copernicus related KE Fellows hosted in University of Leicester (4), and University of Strathclyde (1).
Targeted geography	• Thematic focus, not geographical.
Target user group	• Thematic: marine, agriculture, • Copernicus services: Marine, Atmosphere • Research and Academic Organisations; Downstream Value-Added Service Providers; Downstream Industry End Users;
Website address / contact details	http://www.nerc.ac.uk/funding/available/schemes/kefellows/
Reference Documents	http://www.nerc.ac.uk/funding/available/schemes/kefellows/kefellowscall/kefellow-info/
Description	NERC currently supports 5 KE Fellowships in Copernicus thematic end user areas: marine, ocean science, agriculture and on-shore, aerosol science and air quality. KE Fellowship roles include: developing partnerships with business, data development, round table meetings with KTN, NGOs and Government Departments, Workshops, Technologies commercialisation or facilitating knowledge exchange between research and business. KE Fellows coordinate disseminate and share through the NERC Knowledge Exchange Network, which meets once or twice a year.
Impact potential	• U4, N4, S4
Actual impact	• U4, N4, S4
Areas for improvement	• Increase percentage of KE Fellowships in Copernicus areas
Best practice & scaling opportunity	• Scaling is proportional to funding

Reference number	GB.08
Initiative name	**Knowledge Transfer Network for Satellite Applications**
Initiative type	Contact Point (C), Network (N)
Period active	• Since 2014 in present format
Frequency	• Events with an EO theme. e.g DEFRA EO working group
Scale	• 3 space specialist responsible for Space topics within the national Knowledge Transfer Network. Dissemination to 1800 network contacts. Supports Defra EO working group.
Indicative budget	• N/A
Client / organisational partners	• InnovateUK • Satellite Applications Catapult.
Implementing partners	• KTN networks. Coordination with Satellite Applications Catapult
Targeted geography	• National
Target user group	• Research and Academic Organisations; Downstream Value-Added Service Providers; Downstream Industry End Users; Regional and local Public Authorities
Website address / contact details	https://connect.innovateuk.org/web/space
Reference Documents	National Space Technology Strategy 2014. http://tinyurl.com/nsts2014 UK Space Directory
Description	Innovate UK is the UK's innovation agency which funds, supports and connects innovative businesses through a mix of people and programmes to accelerate sustainable economic growth. The KTN provides wide ranging information and connectivity service to industry, universities and research organisations across many areas of science and technology. In space, the focus until recently has been on the needs and interest of the upstream space industry. More recently KTN has begun supporting more downstream space activities through webinars (e.g Satellites for Agri-Food; Dec 4 2015), support for space-related funding calls, facilitating collaborations, supporting the space special interest group (SSIG) and EO-related dissemination actions.
Impact potential	• E2, U2. C3
Actual impact	• E1, U1, C2
Areas for improvement	• KTN involvement in the downstream space sector, especially EO, appears marginal at present
Best practice & scaling opportunity	

Reference number	GB.09
Initiative name	**Satellites for Everyone: The Big Picture**
Initiative type	Promotional activities (P)
Period active	• Since 2014
Frequency	• N/A
Scale	• N/A
Indicative budget	• N/A
Client / organisational partners	• Satellite Applications Catapult
Implementing partners	• N/A
Targeted geography	• National
Target user group	• Regional and Local Public Authorities
Website address / contact details	info@satellites4everyone.co.uk
Reference Documents	Brochure: Satellites: The Big Picture
Description	Introductory information service through brochure distribution, presence at events and dissemination through social media. EO included as one of the themes. Targeted at: General public, conference and exhibition attendees, non-specialist businesses, press and media.
Impact potential	• P1-2
Actual impact	• P 1-2
Areas for improvement	
Best practice & scaling opportunity	

Reference number	GB.10
Initiative name	**Space EO Foresight: EO21. ICT for EO Alliance**
Initiative type	Promotional activities (P)
Period active	• 2015
Frequency	• One-off
Scale	• Ongoing community engagement through interviews with key actors and industry representatives, aimed primarily at non-EO stakeholders from 17 ICT companies (primarily cloud computing providers).
Indicative budget	• Not known
Client / organisational partners	• ESA • Satellite Applications Catapult
Implementing partners	• ICT Companies • Amazon Web Services; ATOS; Cloud EO; CGI; Cloud Sigma; CS Systèmes d'Information; Datacentred; Google; IBM; Interoute; Microsoft; Orange; RHEA/SixSq; SAP; SCISYS; T-Systems
Targeted geography	• Europe/ESA/National
Target user group	• EU Institutions and Bodies, Copernicus Entrusted Entitites; International Organisations and Bodies; National / MS Institutions and Bodies;
Website address / contact details	www.eo21.org/publications/background-research/
Reference Documents	EO21 Foresight Indicator of Trends Report. Nov 2015. Catapult/ESA
Description	Satellite Applications Catapult-led Foresight Mapping & Report. Ongoing community engagement through a series of interviews with key actors and industry representatives, aimed primarily at non-EO stakeholders (primarily cloud computing providers), to gain further insight into what can be done to support the evolution of the European EO sector. The Foresight Report highlights the impact of the key drivers of change on the EO value chain, through the identification of future scenarios. The report will feed into the next road-mapping stage of the EO21 study, including identifying opportunities, challenges, and strategic options.
Impact potential	• N4; C2; P3; E4; D4
Actual impact	• N4; C2; P2; E4; D2
Areas for improvement	• EO services need extensive ICT systems to support delivery of EO services to non-EO-savvy end users
Best practice & scaling opportunity	• CEMS facilities at Catapult

Reference number	GB.11
Initiative name	**UK Collaborative Ground Segment**
Initiative type	Data access (D)
Period active	• Agreement with ESA signed in 2014
Frequency	• Continuous
Scale	• N/A
Indicative budget	• N/A
Client / organisational partners	• UK space agency
Implementing partners	• Catapult satellite applications, National Centre for Earth Observation (NCEO), Centre for Environmental Data Archival (CEDA), Climate, environment & monitoring from space (CEMS), Airbus DS Geo-intelligence.
Targeted geography	• National
Target user group	• Institutions and Bodies • scientist & researchers community • Public Authorities • spatial industry actors • commercial service providers
Website address / contact details	https://sa.catapult.org.uk http://www.ceda.ac.uk Victoria.Bennett@stfc.ac.uk Richard.Hilton@sa.catapult.org.uk
Reference Documents	
Description	Who does what : • Airbus DS Geo-intelligence (Farnborough) operates the Processing and Archiving facilities for Sentinel 1 and Sentinel 2. • Satellite Applications Catapult is responsible for managing and disseminating the data to UK commercial users. • STFC-CEDA is responsible for managing and disseminating the data to UK academic users. Satellite Applications Catapult provides access to Earth Observation and related data, as well as tools that can be used to extract useful information from that data and collaborate effectively with the Catapult and others in the Space sector. By improving overall access, Catapult enables more widespread and faster development of applications and delivery of services. Ambitions: • Supporting the development of an EO Data Exploitation Platform – the Data Hub – • Exploiting the new type of EO data access opportunities afforded by the developing UK collaborative ground segment network, and inter-agency agreements. • Developing a synthetic aperture radar (SAR) Application Development platform to stimulate the uptake and use of SAR data in preparation for the UK NovaSAR missions and to take advantage of the increasing availability of SAR data through public and private European constellations (Sentinels, Cosmo-Skymed, TerraSAR). STFC-CEDA • User management, access control, helpdesk and data download services through CEDA • Continuous transfer via Airbus-Catapult Collaborative GS route (S1, S2) and direct from ESA Collaborative Hub (CollHub)

	• Recent data (O)6-12 months stored on-line • Older data stored near-line • Self-service access for data download or local processing on JASMIN-CEM for science projects JASMIN-CEM : big data infrastructure for data storage and computing (17 Petabytes & 4,000 cores, of which a fraction will be allocated to Sentinel data, processing and analysis)
Impact potential	• D5
Actual impact	• D3-D4
Areas for improvement	• Need for awareness raising
Best practice & scaling opportunity	

Reference number	GB.R.12
Initiative name	**G-STEP University business-engagement programmes involving Copernicus**
Initiative type	Start-up activities (S); Contact point (C)
Period active	• Since 2009
Frequency	• ERDF funding 2009-2012 • Renewed 2013-2015
Scale	• G-STEP resource. Project Director at Professorial level (5%) plus part-time support from 3 other professorial-level EO specialists. 3-4 staff. • Engagement with 100+ companies to explore Copernicus potential with their businesses. • 70+ active engagement activities • 10 academic-industry collaborative projects • Business Meets Space Events. Average 2/year @ ~150 participants each.
Indicative budget	• 950K Euro 2013-2015. 54% ERDF, 46% University of Leicester.
Client / organisational partners	• University of Leicester • ERDF East Midlands
Implementing partners	• University of Leicester • ERDF East Midlands
Targeted geography	• East Midlands Region
Target user group	• Regional and local public authorities; Research and Academic organisations, Downstream value-added service providers; Downstream industry end users;
Website address / contact details	https://www2.le.ac.uk/projects/g-step
Reference Documents	University Publication. G-STEP Satellite Data to Business Data. Smith & Archibald. G-STEP Final Report. Sept 2015.
Description	Over the period 2009-2015, G-STEP established core competences to assist the uptake of Copernicus data and services by regional businesses and organisations both for product development and the utilisation of services to enhance business performance. G-STEP was the first space-enabled service accelerator initiative in any UK region/administration and its translation into a Satellite Applications Catapult Regional Centre of Excellence retains the East Midlands in a pole position to attract national and EU funding for R&D and innovation to support regional competitiveness. Start-up activities. SME engagement. Joint feasibility studies and start up projects through academic business partnerships. Applications of Copernicus data and services in priority business sectors identified in Regional Development Plans. E.g. Transport, Air Quality, where applicable academic based expertise could be identified.
Impact potential	• C4. S4. When G-STEP was launched, awareness of GMES/Copernicus as a potential end-user service in the wider business community and with local authorities was essentially zero. G-STEP model has been effective for initial engagement and establishing potential for knowledge transfer of Copernicus capability to different end user applications in local businesses and with local and regional authorities.
Actual impact	• C4-5. S4. Success rate of converting initial engagement through to active project collaborations is estimated at around 12-14% of initial engagements. Gross added value to regional businesses estimated at 1.8M euro over 6 years.
Areas for improvement	• Intermittent funding from ERDF and the University has impeded sustained development and growth. Focus of the activities in a single region, mandated by ERDF funding allocations, limits scope for growth.

Best practice & scaling opportunity	• G-STEP model adopted as the East Midlands Satellite Catapult Centre of Excellence but co-funding is still required. G-STEP Best Practice offers a viable model for growing engagement and uptake of Copernicus user applications in regions with low levels of awareness. A good example of application of EU Structural funds to support regional uptake.

Reference number	GB.R.13
Initiative name	**G-STEP support for start-up and early-maturity regional SMEs**
Initiative type	Start-up activities (S)
Period active	• 2012-2015
Frequency	• One-offs
Scale	• 4 successful SME impact studies in 3 years.
Indicative budget	• Incorporated in G-STEP budget
Client / organisational partners	• University of Leicester • Target SMEs
Implementing partners	• University of Leicester. ERDF
Targeted geography	• East Midlands Region
Target user group	• Downstream value-added service providers; Downstream industry end users;
Website address / contact details	http://www.geospatial-insight.com/
Reference Documents	University Publication. G-STEP Satellite Data to Business Data. Smith & Archibald. G-STEP Final Report. Sept 2015. All other documents are confidential.
Description	Incubation through G-STEP (University of Leicester) supporting start-ups. Note: Regional incubator facilities are available in East Midlands but University-led clustering activities provide more hands-on impact. Providing start-up SMEs with access to university expertise in geo-spatial data sets and processing. Urban tree cover distributions, agricultural land use, disaster impact imagery, geological surveys.
Impact potential	• S3-S4. Wide EO knowledge base exists in the region's universities.
Actual impact	• S2-S3
Areas for improvement	• Better support needed from University Business Development and Local Enterprise Partnership. East Midlands Universities are not well equipped to support start up and spin out from successful initial joint actions. Regional funding sources for start-ups and SME growth are generic not specific to space applications. Links between space sector and regional support mechanisms remain poor.
Best practice & scaling opportunity	• Fostering of Links between Copernicus expert groups, regional development agencies and funding sources suitable for start-up/incubator activities.

Reference number	GB.R.14
Initiative name	**Copernicus Promotion through Targeted Publications**
Initiative type	Promotional activities (P), Network (N)
Period active	• 2010-2015
Frequency	• Approximately one/year
Scale	• Over 60 contributions from 18 member states and over 40 regional entities. • First print run 6000. Re-print 6000.
Indicative budget	• 9K euro 2010 (NEREUS); 65K euro 2012 (ESA)
Client / organisational partners	• ESA • NEREUS
Implementing partners	• Editorial Board. G-STEP, ESA, NEREUS plus other RCO members
Targeted geography	• Regions in all 28 member states. Uptake: contributions from 40 regional entities from 18 MS.
Target user group	• Regional and local public authorities; Research and Academic organisations, Downstream value-added service providers; Downstream industry end users;
Website address / contact details	http://www.nereus-regions.eu/sites/all/documents/wgdocs/eo-gmes/25%20uses%20of%20GMES%20in%20the%20NEREUS%20regions.pdf http://esamultimedia.esa.int/multimedia/publications/NEREUS/
Reference Documents	The Growing Use of GMES Across Europe's Regions. 2012 25 Uses of GMES in the NEREUS Regions. 2010.
Description	Both publications are collections of case studies of regional applications of Copernicus. Both have been extensively used as promotional material at infoday and workshop events.
Impact potential	• P4. Uptake: contributions from 40 regional entities from 18 MS.
Actual impact	• P2-3. Minimal measureable impact at regional political level despite widespread promotion among active regions. Slightly more success in the UK, using the publications to engage with Government events at Ministerial level.
Areas for improvement	• Reconsider whether this format is suitable for broadcast promotion of Copernicus.
Best practice & scaling opportunity	• Reconsider whether this format is suitable for broad cast promotion of Copernicus.

Reference number	GB.R.15
Initiative name	**East Midlands Satellite Applications Centre of Excellence**
Initiative type	Contact point (C), Events (E), Network (N)
Period active	• Since April 2014
Frequency	• Continuous
Scale	• Sat Apps Catapult Regional Centres of Excellence building to become a UK network of Satellite Applications CoEs. 3 RCoEs in 2014; 3 more to be appointed in 2016. • The East Midlands CoE: Minimum 6 events per year, from 15 to 80 participants each. In Year 2, engaged with over 45 businesses from April to September 2015, including 25 SMEs of which 17 are non-space related sector. Initiated 7 collaborative projects between academia and industry.
Indicative budget	• 280K euro annually over 3 years. 45-55% focused on Copernicus actions.
Client / organisational partners	• Satellite Applications Catapult
Implementing partners	• University of Leicester, University of Nottingham, British Geological Survey
Targeted geography	• East Midlands, Midlands
Target user group	• Regional and local public authorities; Research and Academic organisations, Downstream value-added service providers; Downstream industry end users;
Website address / contact details	https://www2.le.ac.uk/departments/chemistry/facilities/embrace http://www.sacatapultcoe.org/embrace/
Reference Documents	http://www.sacatapultcoe.org/embrace/ Contract agreement
Description	Regional Centre of Excellence in Satellite Applications : partnering with business; market sector-led brokering, focussed on developing demonstrator projects using satellite data and technologies in identified market sectors (transport; urban sustainability; healthcare; agriculture, forestry & natural resources; geo-hazards; climate and environmental services); Linking regional R&D capability and infrastructure to the Harwell based Satellite Applications Catapult. Organising events, dissemination and raising awareness activities, SME engagements, building collaborative partnerships. Bringing together technical EO expertise from University of Leicester, University of Nottingham and British Geological Survey.
Impact potential	• C5; E5; N4 • An established centre with technical EO expertise; Dedicated EO events; Cross-regional network
Actual impact	• C5; E3; N3
Areas for improvement	• Events such as “Space technology solutions for Urban Transport” can be more EO focussed. The network of Regional centres currently includes 3 Centres of Excellence. A call for more centres is open. With more centres across the country, cross-regional activities will be more active.
Best practice & scaling opportunity	• Good model for business engagement and initiating collaboration projects. A possibility for cross-regional networks to grow into a dedicated EO and Copernicus networking activity.

Reference number	GB.R.16
Initiative name	**Funding provision for Copernicus related projects**
Initiative type	Funding instruments (F)
Period active	• 2011-2015
Frequency	• 2-3 proposals pa.
Scale	• 8 FP7/H2020 proposals. Success rate 50%. • I ESA IAP project. Approved. 2012-15. • 2 UKSA Space for Smart Government Proposals. Success Rate 100%. • Small grants from other bodies.
Indicative budget	• 4.1M Euro grant awards 2009-2014.
Client / organisational partners	• InnovateUK • UK Space Agency. Space for Smart Government • ESA IAPP • ERDF-funded Innovation Network. • EU FP7 and H2020.
Implementing partners	• Most projects are collaborations with industry and local authority partners.
Targeted geography	• National or European level applications but exploiting regional strategic priorities for economic growth
Target user group	• Regional and local public authorities; Research and Academic organisations, Downstream value-added service providers; Downstream industry end users;
Website address / contact details	
Reference Documents	THE ISSUE Final Report. http://cordis.europa.eu/project/rcn/101329_en.html
Description	Under the umbrella of the RCO, G-STEP and now EMBRACE, the team has established a core area in Copernicus applications in urban planning, traffic and transport, air quality and environmental impacts through a range of projects with industry partners, local authorities and government departments.
Impact potential	• F4
Actual impact	• F4
Areas for improvement	• Need to strengthen consortia by engaging with strong industry lead partners.
Best practice & scaling opportunity	• Regional focus is too restrictive. Air quality has become an issue of high political importance for public bodies and citizens across industrial Europe and is a focus for East Midlands expertise in future Copernicus user uptake actions, nationally and jointly in multi member state programmes.

Reference number	GB.R.17
Initiative name	**Inter-regional networks**
Initiative type	Networks (N)
Period active	• 2010-2015; 2014 - present
Frequency	• Continuous
Scale	• DORIS-NET RCO network 2010-2012. 6. NEREUS Regions. Network growth to 12 by 2015 • THE ISSUE 2012-2014. Core partners 4 NEREUS RCO regions & 8 Associate partners in non-NEREUS regions. 6 regional workshops in 3 years average participation 60-70. • Sat Apps Catapult Regional Centres of Excellence (RCE) building to become a UK network of Satellite Applications CoEs. 3 RCoEs in 2014; 3 more to be appointed in 2016.
Indicative budget	• DORIS-NET. ~ 1M euro 2010-2012. • THE ISSUE. 2.8 M euro • SAC RCOEs, £200K pa/per RCE
Client / organisational partners	• FP7- DORIS-NET. • FP7. THE ISSUE. • SAC COEs. InnovateUK.
Implementing partners	• DORIS-NET RCOs. 6 core partners in 2010 growing to 12 by 2015. • THE ISSUE. 5 core partners from RCOs. 8 Associate partners. • SAC COEs. East Midlands the only RCO in the network.
Targeted geography	• Pan – European and UK. East Midlands a catalyst for network growth.
Target user group	• Regional and local public authorities; Research and Academic organisations, Downstream value-added service providers; Downstream industry end users;
Website address / contact details	http://cordis.europa.eu/result/rcn/57196_en.html http://cordis.europa.eu/project/rcn/101329_en.html https://sa.catapult.org.uk/centres-of-excellence
Reference Documents	Reports at CORDIS website (see above); Contractual documentation with the Satellite Applications Catapult
Description	THE ISSUE set out to coordinate engagement and user uptake of satellite applications (including EO) regions in member states. Satellite Applications Catapult Centres of Excellence networking events and space for business conferences, such as Collaborate to Innovate in North-East (annual, since last year), where local businesses present how they use of satellite applications to representatives from other regions and Copernicus data and opportunities are promoted.
Impact potential	• N4. Networking through these projects has been the source of fruitful inter-regional collaborations and successful joint projects which East Midlands, as a small region could not have achieved alone.
Actual impact	• N4 From these three initiatives alone the network of regions with shared interest in satellite applications has risen from 5 (2009) to 26 (2015) counting only those projects in which East Midlands has been involved in. Other RCOs report other examples of inter-regional networking.
Areas for improvement	• Increasing organisations like RCOs or RCoEs more widely across all the MS
Best practice & scaling opportunity	• Initially NEREUS RCOs tended to support events in their own regions but increasingly inter-regional events engaging with other regions within the RCO's MS have been occurring.

Reference number	GB.18
Initiative name	**ESA BIC Harwell**
Initiative type	Start-up initiative (S)
Period active	• Since 2011
Frequency	• 4 TEBs per year
Scale	• 9 EO-related start-ups since 2009
Indicative budget	• N/A
Client / organisational partners	• ESA
Implementing partners	• STFC Innovations Limited
Targeted geography	• Everyone of adult age with citizenship in Europe or ESA member states
Target user group	• Entrepreneurs
Website address / contact details	http://www.esa-bic.org.uk/default.aspx
Reference Documents	
Description	For any start-up, spin-out or entrepreneur, coming up with a great idea is just the first step. Turning it quickly and effectively into a winning commercial offering can be an even bigger challenge. The European Space Agency Business Incubation Centre Harwell (ESA BIC Harwell) helps to meet this challenge, enabling to leverage the funding, support, skills and facilities one needs to transform space technology and systems into a successful, vibrant, non-space related business.
Impact potential	• S5
Actual impact	• S5
Areas for improvement	• Increased technical support for EO-related start-ups; data access; dedicated Copernicus-related instruments
Best practice & scaling opportunity	• N/A

Reference number	GB.R.19
Initiative name	**Isle of Man aerospace cluster**
Initiative type	Network (N)
Period active	• N/A
Frequency	• Permanent
Scale	• European
Indicative budget	• Not disclosed
Client / organisational partners	• Department of Economic Development, • Isle of Man Chamber of Commerce, • Assystem, • Triumph Actuation Systems, • Manx Engineers, • RLC Ronaldsway • Swagelok
Implementing partners	• Same as above
Targeted geography	• National and European level
Target user group	• Customers of Aerospace field
Website address / contact details	http://www.aerospace.co.im/
Reference Documents	
Description	• The Isle of Man Aerospace Cluster (IOMAC) is a collaboration of 22 companies offering cost-effective, joined-up solutions for its global blue-chip client base. As part of the North West Aerospace Alliance one of the most active aerospace clusters in Europe, the Cluster is part of one of the most influential "aerospace hotspots" in the UK.
Impact potential	• N5
Actual impact	• N4
Areas for improvement	• More focus on Copernicus / EO
Best practice & scaling opportunity	

5.33 Cross-border initiatives

Reference number	EU.01
Initiative name	**How to make INSPIRE useful**
Initiative type	User training, feedback and education (U)
Period active	• 2015
Frequency	• One off
Scale	• 2 hours webinar
Indicative budget	• N/A
Client / organisational partners	• EuroGeographics, public, EU
Implementing partners	• EuroGeographics, public, EU
Targeted geography	• EU
Target user group	• General • Copernicus service: All • User categories: National /MS Institutions and Bodies, Regional and Local Public Authorities
Website address / contact details	http://www.eurogeographics.org/event/buisiness-interoperability-ken-webinar
Reference Documents	http://www.eurogeographics.org/event/buisiness-interoperability-ken-webinar
Description	Webinar on the use of INSPIRE directive as part of the national e-government/infrastructure.
Impact potential	• U3
Actual impact	• U3
Areas for improvement	
Best practice & scaling opportunity	

Reference number	EU.02
Initiative name	**UN-GGIM: Europe**
Initiative type	Network (N)
Period active	• From Oct.2014 – onward
Frequency	• N/A
Scale	• 48 EU UN Member States
Indicative budget	• N/A
Client / organisational partners	• UN-GGIM (Global Geospatial Information Management)
Implementing partners	• UN-GGIM (Global Geospatial Information Management)
Targeted geography	• Europe, International
Target user group	• General • Copernicus service: All • User categories: National /MS Institutions and Bodies, Regional and Local Public Authorities, International Organisations and Bodies
Website address / contact details	http://www.un-ggim-europe.org/
Reference Documents	http://www.un-ggim-europe.org/ http://un-ggim-europe.org/sites/default/files/UN-GGIM-Europe%20FactSheet201503.pdf minutes of first executive committee: http://un-ggim-europe.org/sites/default/files/UN-GGIM-Europe%20ExCom%20Minutes%2001-14%20v.1_1.pdf
Description	UN-GGIM Europe is one of the regional entities of the global UN-GGIM initiative. UN-GGIM: Europe has as objective to identify European issues relevant to geospatial information management and recommend necessary actions on them.
Impact potential	• N2
Actual impact	• TBD
Areas for improvement	
Best practice & scaling opportunity	• The network does not target any specific satellite application, but it is a good platform for international collaboration, exchange of best practise as well contributing to an effective management and availability of geospatial information in Europe.

Reference number	EU.03
Initiative name	**EARSeL – European Association of Remote Sensing Laboratories**
Initiative type	Network (N)
Period active	• Founded in 1977
Frequency	• Continuous
Scale	• Member laboratories from 30 countries, 15 Special Interest Groups
Indicative budget	• N/A
Client / organisational partners	• EARSeL
Implementing partners	• EARSeL • Each Special Interest Group Workshop has local national partners
Targeted geography	• Europe, International
Target user group	• Remote Sensing and all its related topics • Copernicus service: all • User categories: International Organisations and Bodies, Research and Academic Organisations, Industry End Users, Industry Value-Added Service Providers
Website address / contact details	• www.earsel.org • EARSeL Secretariat Mrs. Heide Bierbrauer Fax: +49 251 13307 33 E-mail: secretariat@earsel.org
Reference Documents	http://www.earsel.org/Monographs/Brochure-2011.pdf
Description	This scientific network of European remote sensing institutes brings together users from academia and industry. Its topics and the themes covered by its Special Interest Groups exactly match the different services as offered by Copernicus. The network holds an annual symposium (2016 in Bonn) and a series of dedicated workshops addressing each service/special interest in particular all across Europe, such as: • Workshop on Remote Sensing of the Coastal Zone • Forest Fire SIG Workshop • Land Use & Land Cover Workshop Its principal activities are to: • stimulate and promote education and training related to remote sensing and EO • initiate and co-ordinate application-oriented research • form a bridge between technology and applications of interest to a wide user community • assist the sponsoring agencies in the development of new sensors and systems and in any technical matters of relevance • carry out joint projects using remote sensing for research, monitoring and education
Impact potential	• N5
Actual impact	• N4
Areas for improvement	• Conduct more promotion and outreach at other events for this network and increase involvement in events on EU and Regional level, foster Copernicus-specific activities
Best practice & scaling opportunity	• Provides a rich network of experts for all relevant agencies in Europe • Promotes co-operation between remote sensing experts and environmental managers and decision-makers

Reference number	EU.04
Initiative name	**Switch ON Project**
Initiative type	Data Access (D)
Period active	• 2015
Frequency	• Continuous
Scale	• 15 partners
Indicative budget	• N/A
Client / organisational partners	• Coordinator of the project: Swedish Meteorological and Hydrological Institute (SMHI), public, Swedish
Implementing partners	• Coordinator of the project: Swedish Meteorological and Hydrological Institute (SMHI), public, Swedish
Targeted geography	• Europe
Target user group	• Water (inland water) • Copernicus service: Land Monitoring, Emergency Management • User categories: National /MS Institutions and Bodies, Regional and Local Public Authorities, International Organisations and Bodies
Website address / contact details	http://www.water-switch-on.eu/
Reference Documents	http://www.water-switch-on.eu/
Description	SWITCH-ON is a project using Open Data as a vehicle for innovations, with the aim to use water resources in a sustainable way for a safe society and to advance hydrological sciences.
Impact potential	
Actual impact	
Areas for improvement	
Best practice & scaling opportunity	

Reference number	EU.05
Initiative name	**European Space Solutions**
Initiative type	Events (E)
Period active	• From 2010 (?)
Frequency	• Third edition 2014 (every second year roughly)
Scale	• 3 days event • 850 participants • 5 complimentary workshops and side events • 2 live demonstrations
Indicative budget	• N/A
Client / organisational partners	• European Commission, public, international • GSA, public, international
Implementing partners	• European Commission, public, international • GSA, public, international
Targeted geography	• Europe
Target user group	• General • Copernicus service: All • User categories: EU Institutions and Bodies • Copernicus Entrusted Entities: International Organisations and Bodies, National /MS Institutions and Bodies, Regional and Local Public Authorities, International Organisations and Bodies, Downstream Value-Added Service Providers, Downstream Industry End Users
Website address / contact details	http://www.european-space-solutions.eu/
Reference Documents	http://www.european-space-solutions.eu/ http://www.european-space-solutions.eu/index.php?anzeige=download14.html
Description	3-day conference bringing together business and the public-sector with users and developers of space-based solutions. 4 dedicated user lead session. Network possibility. Demos of real application
Impact potential	• E5
Actual impact	• E4
Areas for improvement	• Attract participants beyond “usual suspects”, more demos, less talk.
Best practice & scaling opportunity	• Although the event does not target EO application only, it is very well structure in order to give right visibility at SatNav and EO. Dedicated thematic sessions are also organise. Well established event at EU level. Good international platform. Landmark event.

Reference number	EU.06
Initiative name	**ESA living planet**
Initiative type	User feedback, Training and Education (U)
Period active	• From 2013 – onward
Frequency	• Every 3 years – last edition in 2013
Scale	• 5 days event – 2700 abstract submitted for the 2016 edition
Indicative budget	• N/A
Client / organisational partners	• ESA, public, international
Implementing partners	• ESA, public, international • Each edition has local partners depending on the location
Targeted geography	• Global
Target user group	• General • Copernicus service: All • User categories: EU Institutions and Bodies • Copernicus Entrusted Entities: International Organisations and Bodies, National /MS Institutions and Bodies, Copernicus Entrusted Entities, Research and Academic Organisations
Website address / contact details	http://lps16.esa.int/index.php
Reference Documents	http://lps16.esa.int/index.php
Description	Main event for the scientific EO community in Europe. To present the progress and plans for the implementation of ESA Earth Observation strategy and the relevance of ESA's EO Programme to societal challenges, science and economy. To provide an international forum to scientists, researchers and users to present and share state of the art results based on ESA's Earth Observation and third-party mission data. (Atmosphere, Oceanography, Cryosphere, Land, Hazard, Climate and Meteorology, Solid Earth/Geodesy, NEO, Methodologies and products, Open Science 2.0)
Impact potential	• U5
Actual impact	• U5
Areas for improvement	
Best practice & scaling opportunity	• Research community very well represented, excellent platform for sharing latest development in the research context concerning the different areas of interest

Reference number	EU.07
Initiative name	**European Civil Protection Forum**
Initiative type	Events (E)
Period active	• From 2005 – onward
Frequency	• 5th edition 2015, every two years
Scale	• 850 participants
Indicative budget	• N/A
Client / organisational partners	• European Commission, (Humanitarian Aid and Civil Protection department), public, international
Implementing partners	• European Commission, (Humanitarian Aid and Civil Protection department), public, international
Targeted geography	• Europe
Target user group	• Civil Protection (emergency) • Copernicus service: Emergency Managements • User categories: EU Institutions and Bodies, Copernicus Entrusted Entities, International Organisations and Bodies, National /MS Institutions and Bodies, Copernicus Entrusted Entities, Research and Academic Organisations
Website address / contact details	http://ec.europa.eu/echo/partnerships/civil-protection-partners/civil-protection-forum_en
Reference Documents	http://ec.europa.eu/echo/files/civil_protection/civil/prote/pdfdocs/cpforum2015/ECPF_2015_programme_en.pdf#view=fit
Description	Main fora the Civil Protection community, networking session, high level speakers, highly political
Impact potential	• E5
Actual impact	• E3
Areas for improvement	• More prominent Copernicus presence, focus on success stories, use users testimonies
Best practice & scaling opportunity	

Reference number	EU.08
Initiative name	**European Space Expo**
Initiative type	Promotional activities (P)
Period active	• Since 2012
Frequency	• Repetitive • Last occurrence: Lux October 2015
Scale	• From 2012, ESE welcomed more than 900k visitors over 30 editions. Each edition should have a least 30k visitors.
Indicative budget	• In average 250k EUR
Client / organisational partners	• EC / DG GROW • Public • EU
Implementing partners	• Creaset (sub contracted FDC which sub contracted STP) • Private • Creaset and STP: Belgium, FDC: French
Targeted geography	• Rotating (try to be at least once in each MS) • All EU
Target user group	• International Organisation and Bodies / National& MS Institutions and bodies / Regional and Local Public Authorities / Research and Academic Organisation / Downstream Value/Added Service Providers / Downstream Industry End Users • General on benefit of EU Space flagship programme, incl. Copernicus
Website address / contact details	http://ec.europa.eu/growth/sectors/space/expo/index_en.htm
Reference Documents	N/A
Description	A travelling exhibition organised by EC to raise awareness of the EU space programme amongst the general public. It showcases the Space-based services and applications made possible by the EU flagship Space programmes EGNOS, Galileo and Copernicus. It is a platform that can be used to organised side events, results variable from country to country.
Impact potential	• E4
Actual impact	• E3
Areas for improvement	• The concept is highly interesting and successful, more people could benefit from a lighter version of the travelling exhibition since the ESE would visit more cities, thanks to a reduced time in building and dismounting. • Systematically use as venue for UU side-events, organise user-specific activities
Best practice & scaling opportunity	

Reference number	EU.09
Initiative name	**EMS National Focal Point Workshop**
Initiative type	User workshop, training & education (U)
Period active	• Since 2011
Frequency	• Repetitive • Last occurrence 6/7 May 2015
Scale	• 27 MS
Indicative budget	• Variable (ceiling XX reference GIO UU SC1), EC
Client / organisational partners	• DG ENTR / ECHO / JRC • Public
Implementing partners	• Depends on the initiative
Targeted geography	• EU CPM 32
Target user group	• Thematic: EMS • Copernicus service: EMS Mapping • User categories: National / MS Institutions and bodies
Website address / contact details	Of the last edition http://ec.europa.eu/echo/partnerships/civil-protection-partners/civil-protection-forum_en
Reference Documents	NA
Description	Meetings of EMS Mapping National Focal Point. Provides a mix of user feedback on the service, user requirements for service evolution, convey information about service capabilities and the evolution over time. Eg GIO EMS and Copernicus EMS
Impact potential	• U5
Actual impact	• U4
Areas for improvement	• Sometimes not well advertised to the community, no regularity
Best practice & scaling opportunity	

Reference number	EU.10
Initiative name	**European regions Research and Innovation Network**
Initiative type	Network (N)
Period active	• From 2001 – onward
Frequency	• Continuous
Scale	• More than 120 regional stakeholders organisation
Indicative budget	• N/A
Client / organisational partners	• http://www.errin.eu/members
Implementing partners	• http://www.errin.eu/members
Targeted geography	• Europe
Target user group	• Research and innovation • Copernicus service: All • User categories: National /MS Institutions and Bodies, Regional and Local Public Authorities
Website address / contact details	http://www.errin.eu/about-us
Reference Documents	http://www.errin.eu/content/working-groups
Description	Umbrella association for organisation working in research and innovation domain. The mission is to enhance regional competitiveness.
Impact potential	• N3
Actual impact	• N3
Areas for improvement	• Not specifically related to Copernicus, but research and innovation in general. Leverage on thematic working groups for areas where Copernicus is applicable
Best practice & scaling opportunity	• Good leverage to reach the regional research and innovation initiatives, office, helping to ensure cutting hedge evolutions.

Reference number	EU.11
Initiative name	**COSMO+**
Initiative type	User training, feedback and education (U)
Period active	• 2009 – onward
Frequency	• Regularly
Scale	• European
Indicative budget	• N/A
Client / organisational partners	• European Commission
Implementing partners	• Coordinator: DLR
Targeted geography	• Europe, International
Target user group	• General • Copernicus service: All • User categories: National /MS Institutions and Bodies, Regional and Local Public Authorities
Website address / contact details	http://ncp-space.net/
Reference Documents	http://ncp-space.net/ http://ncp-space.net/wp-content/uploads/2014/11/HOR2020_Leaflet_A4_02_a.pdf
Description	Network of National Contact Point focus for Space aiming at fostering collaboration in the space sector. • EVENT: Organisation of b2b events for industry in order to stimulate the creation of the consortium in the view of the R&D calls. • NEWSLETTER: News page to inform the Space community • HELPDESK: Provide Helpdesk and an online brochure on how to access the R&D space programme. • COSMOS+ Website
Impact potential	• U3
Actual impact	• U3
Areas for improvement	
Best practice & scaling opportunity	

Reference number	EU.12
Initiative name	**H2020 – EO-2-1016**
Initiative type	Funding instruments (F)
Period active	• 2015 – 2016 (application period)
Frequency	• One-off
Scale	• N/A
Indicative budget	• 3,000,000
Client / organisational partners	• European Commission, public, EU
Implementing partners	• REA – Research Executive Agency, public, EU
Targeted geography	• European
Target user group	• General • Copernicus service: All • User categories: National /MS Institutions and Bodies, Regional and Local Public Authorities
Website address / contact details	https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2235-eo-2-2016.html
Reference Documents	https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2235-eo-2-2016.html
Description	The objective is to launch demand-driven innovation actions by public authorities aiming at customising Copernicus information as part of the solution (i.e. possibly alongside other space or non-space data sources) for their needs. Transnational collaboration has a key role to play in this context, as it can facilitate knowledge transfer and optimisation of resources for public authorities. It also fosters service providers who can benefit from a strengthened digital single market. Application products are expected to adopt open standards for data documentation, data models and services. The choice of Copernicus service and associated downstream EO-based services left to the proposer. Expected Impact: The establishment of buyer groups for Earth Observation services; Copernicus-enabled national, regional or local applications in support of public authorities; Fostering the emergence of similar EO-based actions in smart specialisation strategies; Establish sustainable supply chains for delivery of downstream EO-based services to public authorities.
Impact potential	• F5
Actual impact	• F5
Areas for improvement	• Topic could be repeated every year
Best practice & scaling opportunity	• Funding Instrument direct targeting the Copernicus downstream/application development

Reference number	EU.13
Initiative name	**European Data Portal**
Initiative type	Data Access (D)
Period active	• N/A
Frequency	• Continuous
Scale	• N/A
Indicative budget	• N/A
Client / organisational partners	• European Union, public, EU
Implementing partners	• European Union, public, EU
Targeted geography	• EU
Target user group	• General • Copernicus service: All • User categories: All
Website address / contact details	http://www.europeandataportal.eu/en
Reference Documents	http://www.europeandataportal.eu/en
Description	The European Data Portal harvests the metadata of Public Sector Information available on public data portals across European countries. Information regarding the provision of data and the benefits of re-using data is also included.
Impact potential	• D4
Actual impact	• D3
Areas for improvement	• No mention of Copernicus. Link to Copernicus data/info portal(s) could be implemented
Best practice & scaling opportunity	• Not specific on Copernicus/EU data but good portal for data dissemination, discovery, meta data etc.

Reference number	EU.14
Initiative name	**23rd European Biomass Conference and Exhibition 2015**
Initiative type	Event (E), User training, feedback and education (U)
Period active	• Since 1980
Frequency	• 2015 (yearly, but different location)
Scale	• 1394 participants from 76 countries
Indicative budget	• N/A
Client / organisational partners	• Eta Florence
Implementing partners	• Eta Florence
Targeted geography	• Global
Target user group	• Organisations
Website address / contact details	http://www.eubce.com/previous-event.html biomass.conference@etaflorence.it
Reference Documents	N/A
Description	The European Biomass Conference and Exhibition (EUBCE) is a world class annual event which, since 1980, is held at different venues throughout Europe. The EUBCE covers the entire value chain of biomass to conduct business, network, and to present and discuss the latest developments and innovations, the vision is to educate the biomass community and to accelerate growth. The EUBCE will host a dynamic international Exhibition for companies and research labs to showcase their latest products and bringing scientists, technologists and key players together with leading Biomass industries and organisations.
Impact potential	• N5,E5
Actual impact	• N5,E5
Areas for improvement	
Best practice & scaling opportunity	

Reference number	EU.15
Initiative name	**Nordic/European Forum for Geography and Statistics Conference**
Initiative type	Event (E), User training, feedback and education (U)
Period active	• Since 1998
Frequency	• Yearly
Scale	• European
Indicative budget	• Not available
Client / organisational partners	• EFSG + local partners
Implementing partners	• Same as above
Targeted geography	• Europe
Target user group	• Geography and statistics experts
Website address / contact details	efgs2015@statistik.gv.at http://www.efgs.info/workshops
Reference Documents	
Description	The European Forum for Geography and Statistics (EFGS) held the 8th Conference on the integration of geography and statistics from 10-12 November 2015 in Vienna, Austria. This conference was hosted by Statistics Austria with the support from Eurostat and in co-operation with the Austrian Federal Office of Metrology and Surveying (BEV). The motto of the conference was “Building Bridges” and stands for the important bridge between Statistical Institutes and Mapping Authorities.
Impact potential	• E3
Actual impact	• E3
Areas for improvement	
Best practice & scaling opportunity	

Reference number	EU.16
Initiative name	**3rd Advanced Course on Radar Polarimetry**
Initiative type	User feedback, training, and education (U)
Period active	• Since 2013
Frequency	• Yearly
Scale	• 5 day course • Ca. 150 participants
Indicative budget	• N/A
Client / organisational partners	• ESA
Implementing partners	• ESA • RSAC c/o ESA • University of Rennes 1 • Serco c/o ESA
Targeted geography	• EU • Canada • International
Target user group	• Thematic: NA • Copernicus service: all • User categories: Research and Academic Organisations, Downstream Value-Added Service Providers, Downstream Industry End Users.
Website address / contact details	http://seom.esa.int/polarimetrycourse2015/
Reference Documents	http://seom.esa.int/polarimetrycourse2015/page_programme.php http://seom.esa.int/polarimetrycourse2015/files/3Pol2015_Programme_Material.pdf
Description	As part of the Scientific Exploitation of Operational Missions (SEOM) programme element, the European Space Agency (ESA) is organising the 3rd Advanced Course on Radar Polarimetry devoted to train the next generation of Earth Observation (EO) scientists to exploit dual and fully polarimetric data for science and applications development. The main objectives of the course are to: • Train the next generation of European and Canadian Principal Investigators (PIs); • Explain theoretical principles, processing algorithms, data products and their use in applications; • Introduce available tools and methods for the exploitation of dual polarization and fully polarimetric data; • Provide first-hand and up-to-date information on the state of the art in Radar Polarimetry and Polarimetric SAR Interferometry.
Impact potential	• U4
Actual impact	• U3
Areas for improvement	• Better promotion, specific Sentinel 1 information session
Best practice & scaling opportunity	

Reference number	EU.17
Initiative name	**ESA POLinSAR 2015 - 1st BIOMASS Science Workshop**
Initiative type	Events (E)
Period active	• Since 2008
Frequency	• Yearly
Scale	• 5-day workshop • Number of participants: 100
Indicative budget	• N/A
Client / organisational partners	• ESA
Implementing partners	• ESA • CESBIO • University of Sheffield
Targeted geography	• Representatives from • National • European • International
Target user group	• Thematic: NA • Copernicus service: all • User categories: Research and Academic Organisations, Downstream Value-Added Service Providers, Downstream Industry End Users.
Website address / contact details	http://seom.esa.int/polinsar-biomass2015/index.php
Reference Documents	http://seom.esa.int/polinsar-biomass2015/page_programme_overview.php http://seom.esa.int/polinsar-biomass2015/page_Presentations.php
Description	The European Space Agency is jointly organising the 7th International Workshop on Science and Applications of SAR Polarimetry and Polarimetric Interferometry, POLinSAR 2015, and the 1st BIOMASS Science workshop from 27-30 January 2015
Impact potential	• E4
Actual impact	• E5
Areas for improvement	• Specific Sentinel 1 information session
Best practice & scaling opportunity	

Reference number	EU.18
Initiative name	**Mapping Water Bodies from Space - MWBS 2015**
Initiative type	Events (E)
Period active	• Since 2015
Frequency	• N/A
Scale	• 2-day conference • Number of participants: 130
Indicative budget	• N/A
Client / organisational partners	• ESA
Implementing partners	• ESA • Serco
Targeted geography	• National • European • International
Target user group	• Thematic: Water Management • Copernicus service: Land Monitoring • User categories: International Organisations and Bodies, National/MS Institutions and Bodies, Research and Academic Organisations, Downstream Value-Added Service Providers, Downstream Industry End Users.
Website address / contact details	http://due.esrin.esa.int/mwbs2015/index.php
Reference Documents	http://due.esrin.esa.int/mwbs2015/index.php http://due.esrin.esa.int/mwbs2015/page_final_programme.php
Description	The European Space Agency is organising, in the context of the Data User Element (DUE) programme, a conference on Mapping Water Bodies from Space - MWBS 2015. The purpose of this conference is to provide scientists and data users with the opportunity to present first-hand and up-to-date results from their on-going research and application development activities by using data from past and current Satellites. The Conference will be held at ESA – ESRIN (Frascati - Italy) the 18 and 19 of March 2015. The outcome of this conference will help to further shape the next generation of R&D activities in the frame of ESA Earth Observation Programme.
Impact potential	• E5
Actual impact	• E5
Areas for improvement	
Best practice & scaling opportunity	

Reference number	EU.19
Initiative name	**Fringe 2015 Workshop**
Initiative type	Events (E)
Period active	• Since 2006
Frequency	• Yearly
Scale	• 5-day workshop • Number of participants: ca. 350 (almost 350 abstracts received)
Indicative budget	• N/A
Client / organisational partners	• ESA
Implementing partners	• ESA • Scientific Committee
Targeted geography	• International
Target user group	• Thematic: NA • Copernicus service: all • User categories: International Organisations and Bodies, National/MS Institutions and Bodies, Research and Academic Organisations, Downstream Value-Added Service Providers, Downstream Industry End Users.
Website address / contact details	http://seom.esa.int/fringe2015/index.php
Reference Documents	http://seom.esa.int/fringe2015/page_programme_overview.php
Description	The European Space Agency, in the context of the Scientific Exploitation of Operational Missions (SEOM) element, is organising the 9th International Workshop Fringe 2015 Advances in the Science and Applications of SAR Interferometry and Sentinel-1 InSAR Workshop. The event will be hosted in ESA-ESRIN in Frascati, Italy between 23 and 27 March 2015. The workshop is open to scientists, Sentinel-1 data users, students, representatives from national, European and international space agencies, and value adding industries. The official language of the workshop is English. No participation fees will be charged. Participants are expected to finance their own travel and accommodation expenses.
Impact potential	• E5
Actual impact	• E5
Areas for improvement	
Best practice & scaling opportunity	

Reference number	EU.20
Initiative name	**Sentinel-3 For Science Workshop**
Initiative type	User feedback, training, and education (U)
Period active	• N/A
Frequency	• Yearly (each year dedicated to a different Sentinel satellite)
Scale	• 4-day workshop • Number of participants: 400-500
Indicative budget	• N/A
Client / organisational partners	• ESA
Implementing partners	• ESA
Targeted geography	• No restrictions specified
Target user group	• Thematic: all • Copernicus service: all • User categories: International Organisations and Bodies, National/MS Institutions and Bodies, Research and Academic Organisations, Downstream Value-Added Service Providers, Downstream Industry End Users.
Website address / contact details	http://seom.esa.int/S3forScience2015/index.php
Reference Documents	http://seom.esa.int/S3forScience2015/files/S3_for_science_programme_150527.pdf http://seom.esa.int/S3forScience2015/files/S34SCI_programme_overview.pdf
Description	The European Space Agency, in the context of the Scientific Exploitation of Operational Missions (SEOM) element, organised an event dedicated to prepare for scientific exploitation of the Sentinel-3 mission, entitled "Sentinel-3 for Science Workshop", which was held in Venice -Lido Palazzo del Casinò, Italy, from 02 – 05 June 2015. The main objectives of the workshop were: • Gather and foster the future Sentinel-3 scientific community • Review and assess the progress according to the recommendations voiced at previous workshops and symposia. • "Provide a forum for ESA PIs and scientists to present first results exploiting Sentinel-3 type data using previous ESA (ERS, Envisat, CryoSat, Proba-V) and Third Party Missions (e.g. Modis, AVHRR, etc.)" • Present the Sentinel-3 mission status, algorithms and products • Provide a forum for international exchange on ocean, atmosphere, land, inland water and cryosphere applications. • Present large scale international initiatives to support the R&D activities relevant to Sentinel-3 and promote synergy with other Sentinels, as well as other missions. • Provide a forum for scientists to formulate community recommendations. • Consult scientists to prepare Exploitation Elements supporting science activities for Sentinel-3
Impact potential	• U5
Actual impact	• U5
Areas for improvement	
Best practice & scaling opportunity	

Reference number	EU.21
Initiative name	**GLOBAL SPACE INNOVATION CONFERENCE (GLIC 2015)**
Initiative type	Events (E)
Period active	• Since 2010
Frequency	• Once every 1-2 years ("thematic 'Global Series'")
Scale	• 3-day conference • Max. 350 participants
Indicative budget	• N/A
Client / organisational partners	• ESA
Implementing partners	• ESA • IAF • DLR • Bavarian Ministry of Economic Affairs and Media, Energy and Technology
Targeted geography	• Europe, International
Target user group	• Thematic: all • Copernicus service: all • User categories: International Organisations and Bodies, National/MS Institutions and Bodies, Research and Academic Organisations, Downstream Value-Added Service Providers, Downstream Industry End Users.
Website address / contact details	http://www.iafastro.org/events/global-series-conferences/glic-2015/
Reference Documents	http://www.iafastro.org/events/global-series-conferences/glic-2015/programme/ http://www.iafastro.org/wp-content/uploads/2015/06/GLIC_at_a_glance_2015_06_01.pdf
Description	The conference is the latest in the IAF's highly successful thematic "Global Series", which began with the Global Lunar Conference (GLUC) in 2010 (Beijing, China), followed by the Global Exploration Conference (GLEX) in 2012 (Washington, US), and the Global Space Applications Conference (GLAC) in 2014 (Paris, France). The primary goal of the Global Space Innovation Conference (GLIC 2015) is to provide to governments, space agencies, industries and entrepreneurs a high-level forum for exchange of experiences in innovation management and technology transfer. GLIC 2015 will be an exclusive networking event that highlights, investigates and discusses the key factors that enable successful space industry innovation and technology transfer to entrepreneurs. The conference will feature prominent individuals from the international space field as speakers and panelists discussing the major influencing dimensions of entrepreneurship and new venture creation.
Impact potential	• E4
Actual impact	• E3
Areas for improvement	• Better promotion and planning, Speific Copernicus Information Session
Best practice & scaling opportunity	

Reference number	EU.22
Initiative name	**ATMOS 2015**
Initiative type	User feedback, training, and education (U)
Period active	• N/A
Frequency	• N/A
Scale	• 5-day conference • Number of part. 400 - 450
Indicative budget	• N/A
Client / organisational partners	• ESA • Royal Netherlands Meteorological Institute • University of Crete
Implementing partners	• As above
Targeted geography	• No restrictions specified
Target user group	• Thematic: all • Copernicus service: Atmosphere Monitoring • User categories: International Organisations and Bodies, National/MS Institutions and Bodies, Research and Academic Organisations, Downstream Value-Added Service Providers, Downstream Industry End Users.
Website address / contact details	http://seom.esa.int/atmos2015/
Reference Documents	http://seom.esa.int/atmos2015/files/ATMOS-ProgrammeFinal.pdf
Description	The European Space Agency is organizing, in the context of the Scientific Exploitation of Operational Missions (SEOM) element, a conference on the topical theme atmosphere. The purpose of this conference is to provide a forum for scientists to present results from their ongoing research using data from past and current atmospheric instruments like ERS-2, Envisat, Metop and ESA Third Party Missions. Furthermore this conference is dedicated to prepare for the scientific exploitation of the Sentinel-5 Precursor mission. The Conference is meant to: • Provide a forum to present scientific results from the exploitation of space-borne atmospheric missions (e.g. GOME, SCIAMACHY, MIPAS, GOMOS, OMI, IASI, OSIRIS, ACE, GOSAT, AATSR) and application projects (e.g. Climate Change Initiative, Copernicus) • Review and assess the progress according to the recommendations voiced at the ESA 2012 Atmospheric Science Conference • Gather and foster the future Sentinel-5P scientific community • Present the Sentinel-5P mission status, algorithms and products • Present large scale international initiatives to support the R&D activities relevant to Sentinel-5P and promote synergy with other Sentinels, as well as other missions • Provide a forum for scientists to formulate community recommendations • Consult scientists to prepare Exploitation Elements supporting science activities for Sentinel-5P
Impact potential	• U5
Actual impact	• U5
Areas for improvement	
Best practice & scaling opportunity	

Reference number	EU.23
Initiative name	**Third Space for Hydrology Workshop - "Surface Water Storage and Runoff: Modeling, In-Situ data and Remote Sensing"**
Initiative type	User feedback, training, and education (U)
Period active	• Since 2003
Frequency	• N/A (3nd event since 2003)
Scale	• 3-day event • Number of part.: 50
Indicative budget	• N/A
Client / organisational partners	• ESA
Implementing partners	• ESA/ESRIN • LEGOS • CNES • University of Bristol • Tech. Univ. of Denmark • WMO • OIEau - IOWater • IAHS • Federal Institute of Hydrology, Germany • WMO
Targeted geography	• No restrictions specified
Target user group	• Thematic: all • Copernicus service: all • User categories: International Organisations and Bodies, National/MS Institutions and Bodies, Research and Academic Organisations, Downstream Value-Added Service Providers, Downstream Industry End Users.
Website address / contact details	http://www.hydrospace2015.org/
Reference Documents	http://www.hydrospace2015.org/
Description	The next generation of higher resolution radar altimetry instruments exploiting new techniques such as along-track Delay-Doppler (SAR) and interferometry (SWOT) will permit a breakthrough in the monitoring of surface hydrological parameters. With more than two decades of exploitation of Radar Altimetry missions (ERS-1/2, Topex/Poseidon, ENvisat, Jason-1/2, CryoSat, AltiKa,) the development and validation of river and lake level measurements has matured and will be further supported by the next generation of sensors (Jason-3, Sentinel-3A, IceSat2 (launch=2016) , Sentinel-3B, Sentinel-6/Jason-CS, SWOT), for which the community is getting prepared, along with the systematic of use of optical and radar imagers data for volume variation and river width..
Impact potential	• U4
Actual impact	• U4
Areas for improvement	
Best practice & scaling opportunity	

Reference number	EU.24
Initiative name	**Thematic Workshop: Land and Marine planning and management using Sentinel data. Small Oceanic Island as a Model**
Initiative type	Events (E)
Period active	• 2015
Frequency	• N/A (first of three thematic workshops in 2015)
Scale	• 1-day workshop • Around 90 participants expected
Indicative budget	• N/A
Client / organisational partners	• ESA
Implementing partners	• NEREUS Regions • ESA • Edificio LREC, Ponta Delgada
Targeted geography	• No restrictions specified
Target user group	• Thematic: all • Copernicus service: all • User categories: National/MS Institutions and Bodies, Regional and Local Public Authorities, Research and Academic Organisations, Downstream Value-Added Service Providers, Downstream Industry End Users.
Website address / contact details	http://www.nereus-regions.eu/events-and-news
Reference Documents	http://www.nereus-regions.eu/sites/all/documents/EVENTS2015/SGSW/Azores.png
Description	European local and regional authorities (LRAs) are responsible for territorial management and environmental policy implementation. Information gained by COPERNICUS Sentinel satellites can provide an effective support in this respect. However, this opportunity is not always fully known or readily exploited. A series of thematic workshops will animate the dialogue between end-users (mainly LRAs) and the supply side, with the objective of gaining more information about the factors that are behind a slow Copernicus uptake and potential roadblocks.
Impact potential	• E4
Actual impact	• E4
Areas for improvement	
Best practice & scaling opportunity	

Reference number	EU.25
Initiative name	**Sentinel-5 Precursor Validation Team (S5PVT) Workshop**
Initiative type	User feedback, training, and education (U)
Period active	• 2015
Frequency	• N/A
Scale	• 3-day workshop
Indicative budget	• N/A
Client / organisational partners	• ESA
Implementing partners	• ESA/ESTEC • ESA/ESRIN
Targeted geography	• No restrictions specified
Target user group	• Thematic: all • Copernicus service: all • User categories: International Organisations and Bodies, National/MS Institutions and Bodies, Research and Academic Organisations, Downstream Value-Added Service Providers, Downstream Industry End Users.
Website address / contact details	http://congrexprojects.com/2015-events/15m16/introduction
Reference Documents	http://congrexprojects.com/2015-events/15m16/programme
Description	In the frame of the Copernicus programme, ESA is currently implementing the Sentinel-5 Precursor (S5P). The workshop aims at consolidating Calibration/Validation (Cal/Val) activities prior to launch in 2016 building on and extending the S5P Validation team (S5PVT) that has been established through a dedicated Sentinel-5 Precursor Validation Team call in 2014.
Impact potential	• U4
Actual impact	• U4
Areas for improvement	
Best practice & scaling opportunity	

Reference number	EU.26
Initiative name	**4th ESA Advanced Training On Ocean Remote Sensing**
Initiative type	User feedback, training, and education (U)
Period active	• Since 2012
Frequency	• Yearly
Scale	• 5-day event • Number of participants limited to 50 students
Indicative budget	• N/A
Client / organisational partners	• ESA
Implementing partners	• ESA • IFREMER
Targeted geography	• International
Target user group	• Thematic: all • Copernicus service: Marine Monitoring • User categories: International Organisations and Bodies, National/MS Institutions and Bodies, Research and Academic Organisations, Downstream Value-Added Service Providers, Downstream Industry End Users.
Website address / contact details	http://seom.esa.int/oceantrainingcourse2015/
Reference Documents	http://seom.esa.int/oceantrainingcourse2015/files/OTC15-programme-august21.pdf
Description	As part of the Scientific Exploitation of Operational Missions (SEOM) programme element, the European Space Agency (ESA) is organising an advanced Ocean Remote Sensing Training Course, devoted to train the next generation of Earth Observation (EO) scientists to exploit data from ESA and operational EO Missions for science and applications development. The Training Course is co-sponsored by the French Research Institute for Exploitation of the Sea - IFREMER; Brest (France) from 7-11 September 2015.
Impact potential	• U5
Actual impact	• U5
Areas for improvement	Specific Copernicus Information Session
Best practice & scaling opportunity	

Reference number	EU.27
Initiative name	**6th ESA Advanced Training Course on Land Remote Sensing**
Initiative type	User feedback, training, and education(U)
Period active	• Since 2010
Frequency	• Yearly
Scale	• 5-day event • Number of part: 90
Indicative budget	• N/A
Client / organisational partners	• ESA
Implementing partners	• ESA • RSAC c/o ESA • Serco S.p.A. support ESA • UASMV • ROSA
Targeted geography	• Primarily from Europe & Canada • International
Target user group	• Thematic: all • Copernicus service: Land Monitoring • User categories: International Organisations and Bodies, National/MS Institutions and Bodies, Research and Academic Organisations, Downstream Value-Added Service Providers, Downstream Industry End Users.
Website address / contact details	http://seom.esa.int/landtraining2015/
Reference Documents	http://seom.esa.int/landtraining2015/files/Programme_ESA_LTC_2015_upd.pdf
Description	As part of the Scientific Exploitation of Operational Missions (SEOM) programme element, the European Space Agency (ESA) organises each year an advanced Land Training Course devoted to train the next generation of Earth Observation (EO) scientists to exploit data from ESA and operational EO Missions (e.g. Sentinels) for science and applications development.
Impact potential	• U5
Actual impact	• U5
Areas for improvement	
Best practice & scaling opportunity	

Reference number	EU.28
Initiative name	**Earth Observation Open Science 2.0**
Initiative type	Events (E)
Period active	• 2015
Frequency	• N/A
Scale	• 3-day conference • Number of part. 150-200
Indicative budget	• N/A
Client / organisational partners	• ESA
Implementing partners	• ESA
Targeted geography	• No restrictions specified
Target user group	• Thematic: all • Copernicus service: all • User categories: International Organisations and Bodies, National/MS Institutions and Bodies, Research and Academic Organisations, Downstream Value-Added Service Providers, Downstream Industry End Users.
Website address / contact details	http://www.eoscience20.org/
Reference Documents	http://www.eoscience20.org/ http://congrexprojects.com/docs/default-source/15c12_library/here.pdf?sfvrsn=0
Description	The European Space Agency (ESA) is preparing an innovative Earth Observation (EO) scientific exploitation programme – referred as Earth Observation Open Science 2.0 - to maximize the scientific benefits of Earth Observation (EO) data by capitalizing on the digital revolution. In this context, ESA is organizing a community consultation meeting in ESRIN (Frascati, Italy) on 12-14 Oct 2015 to explore to the new challenges and opportunities for EO research created by the rapid advances in Information and Communications Technologies (ICT). This includes open tools and software, data-intensive science, virtual research environment, citizen science and crowdsourcing, advanced visualization, e-learning and education of the new generation of Data scientists. The conference will present precursor activities in EO Open Science and Innovation and develop a Roadmap preparing for future ESA scientific exploitation activities. The conference will be followed by a Hackathon on 15-16 Oct in ESRIN for interested developers.
Impact potential	• E4
Actual impact	• E4
Areas for improvement	
Best practice & scaling opportunity	

Reference number	EU.29
Initiative name	**Earth Observation for Water Cycle Science 2015**
Initiative type	Events (E)
Period active	• 2015
Frequency	• N/A
Scale	• 4-day conference • Number of part: 300
Indicative budget	• N/A
Client / organisational partners	• ESA
Implementing partners	• ESA • GEWEX • NASA JPL, USA • Michael Rast (ESA) • ETH Zurich, Switzerland
Targeted geography	• No restrictions specified
Target user group	• Thematic: Water • Copernicus service: Water Management • User categories: International Organisations and Bodies, National/MS Institutions and Bodies, Research and Academic Organisations
Website address / contact details	http://www.eo4water2015.info/
Reference Documents	http://www.eo4water2015.info/ http://www.eo4water2015.info/
Description	The purpose of this topical conference is to review our knowledge on the water cycle science at different scales in space and time; to advocate for the development of robust satellite geo-information data products to characterise and model the water cycle from global to basin scales; and to foster the improvement of models and data assimilation systems to support local, regional and global water cycle predictions, climate change impacts and development of mitigation strategies in water resources management.
Impact potential	• E4
Actual impact	• E4
Areas for improvement	
Best practice & scaling opportunity	

Reference number	EU.30
Initiative name	**Hackathon supporting the Sentinel Application Platform (SNAP)**
Initiative type	Start-up Initiative, User feedback, training and education (U)
Period active	• Since 2015
Frequency	• Yearly
Scale	• 2-day Hackathon • Number of part. 10-20
Indicative budget	• N/A
Client / organisational partners	• ESA
Implementing partners	• ESA
Targeted geography	• No restrictions specified
Target user group	• Thematic: all • Copernicus service: all • User categories, Research and Academic Organisations, Downstream Value-Added Service Providers
Website address / contact details	http://congrexprojects.com/15c12/hackathon
Reference Documents	http://congrexprojects.com/docs/default-source/15c12_library/agenda-for-eo-science-2-0-hackathon-event.pdf?sfvrsn=0 http://congrexprojects.com/docs/default-source/15c12_library/click-here-to-download-the-final-programme.pdf?sfvrsn=0
Description	In the framework of the EO Open Science 2.0 conference, ESA is organising the first Hackathon event bringing together volunteered programmers with the developers of the Sentinel Application Platform (SNAP) to intensify understanding of SNAP and to jointly develop a software using and/or extending SNAP. The SNAP Hackathon will take place on 15 Oct (9:00-19:00) and 16 Oct (9:00-14:00) in ESRIN (Frascati) just after the EO Science 2.0 conference.
Impact potential	• S4, U4
Actual impact	• S3, U3
Areas for improvement	• Better promotion of the event
Best practice & scaling opportunity	

Reference number	EU.31
Initiative name	**Mapping Urban Areas from Space – MUAS 2015**
Initiative type	Events (E)
Period active	• 2015
Frequency	• N/A
Scale	• 2-day conference • Ca. 200 -250 expected
Indicative budget	• N/A
Client / organisational partners	• ESA
Implementing partners	• ESA • Serco
Targeted geography	• No restrictions specified
Target user group	• Thematic: all • Copernicus service: Land Management • User categories: International Organisations and Bodies, National/MS Institutions and Bodies, Research and Academic Organisations, Downstream Value-Added Service Providers, Downstream Industry End Users.
Website address / contact details	http://due.esrin.esa.int/muas2015/
Reference Documents	http://due.esrin.esa.int/muas2015/files/MUAS2015Final_programme.pdf
Description	The European Space Agency is organising, in the context of the Data User Element (DUE) of the Earth Observation Envelope Programme (EOEP), a conference on Mapping Urban Areas from Space – MUAS 2015. The purpose of this conference is to provide scientists and data users with the opportunity to present first-hand and up-to-date results from their on-going research and application development activities by using data from past and current Satellites. The Conference will be held at ESA – ESRIN (Frascati - Italy) the 04 and 05 November 2015. The outcome of this conference will help to further shape the next generation of R&D activities in the frame of ESA Earth Observation Programmes.
Impact potential	• E4
Actual impact	• E4
Areas for improvement	
Best practice & scaling opportunity	

Reference number	EU.32
Initiative name	**Advances In Remote Sensing For Cultural Heritage: From Site Detection, To Documentation And Risk Monitoring**
Initiative type	Events (E)
Period active	• Since 2008
Frequency	• N/A (5th workshop)
Scale	• 2-day workshop
Indicative budget	• N/A
Client / organisational partners	• ESA
Implementing partners	• ESA • CNR • CNR IMAA • RSAC c/o ESA • University of Leicester • Chance
Targeted geography	• No restrictions specified
Target user group	• Thematic: all • Copernicus service: Land Management • User categories: International Organisations and Bodies, National/MS Institutions and Bodies, Research and Academic Organisations
Website address / contact details	http://congrexprojects.com/2015-events/15m38/introduction
Reference Documents	http://congrexprojects.com/docs/default-source/13c09_docs/click-here-to-download-the-programme-.pdf?sfvrsn=0 http://congrexprojects.com/2015-events/15m38/training
Description	Remote-sensing is emerging as a key tool for both archaeology and the development and management of cultural heritage. For countries with fledgling sites and monuments records, it provides the only cost-effective means for locating and defining archaeological sites and landscapes. Remote-sensing, particularly its usefulness in providing regular and repeated imagery of less accessible areas, is also of unparalleled importance for monitoring the effects of climate change, urban and rural development, looting and conflict. Further to this, the data produced is providing an exciting opportunity to examine past human-environment dynamics. The EARSel (European Association of Remote Sensing Laboratories) workshop is organised by ESA and CNR (Department of Earth and Environment) and builds on previous workshops in 2008, 2011, 2012 and 2013. It will bring together experts in remote-sensing, archaeologists and cultural heritage specialists to address the key strategic issues of knowledge improvement and the sustainable management of cultural resources.
Impact potential	• E3
Actual impact	• E2
Areas for improvement	• Specific Copernicus Information Session
Best practice & scaling opportunity	

Reference number	EU.33
Initiative name	**Monitoring Climate from Space**
Initiative type	User feedback, training, and education (U)
Period active	• N/A
Frequency	• N/A
Scale	• 5-week online course
Indicative budget	• N/A
Client / organisational partners	• ESA
Implementing partners	• ESA • King's College London • University College London • British Antarctic Survey • University of Leeds
Targeted geography	• Not specified
Target user group	• Thematic: all • Copernicus service: Climate Change • User categories: International Organisations and Bodies, National/MS Institutions and Bodies, Research and Academic Organisations
Website address / contact details	https://www.futurelearn.com/courses/climate-from-space?utm_campaign=Share+Links&utm_medium=futurelearn-run_details&utm_source=email
Reference Documents	N/A
Description	As the crucial COP21 Paris Climate Summit approaches, detailed evidence about the process and impact of climate change is needed more than ever. Satellite Earth Observation technology provides a powerful and compelling insight into climate change which can help to underpin climate policy, scientific research and public engagement. But how does this technology work, and how can it achieve the essential detail and comprehensive worldwide view that we need?
Impact potential	• U4
Actual impact	• U4
Areas for improvement	
Best practice & scaling opportunity	

Reference number	EU.34
Initiative name	**GRSG 2015 Conference**
Initiative type	Events (E)
Period active	• Since 1989 (26th annual conference)
Frequency	• Yearly
Scale	• 3-day conference
Indicative budget	• N/A
Client / organisational partners	• ESA
Implementing partners	• ESA • GRSG
Targeted geography	• Not specified
Target user group	• Geology (GRSG members only)
Website address / contact details	https://earth.esa.int/web/guest/workshops/grsg2015
Reference Documents	https://earth.esa.int/documents/10174/1856506/GRSG_2015_preliminary_programme
Description	The conference theme will focus on a wide range of remote sensing applications, tools, latest developments and sensors with a particular focus on addressing the challenges faced in the following areas: • Mineral Exploration and Mining • Oil & Gas • Big Data and Thematic Exploitation Platforms • Planetary science & comparative geomorphology • Geohazards • Geological applications (geological mapping, lithological classification, tectonics, seismology) • Geomorphology • Terrain, Bathymetry and Elevation models • Classification, multi-temporal analysis and modelling • New sensors: Sentinel applications, technological developments, analytical methods & algorithms • Hyperspectral & Multispectral • Radar / InSAR
Impact potential	• E4
Actual impact	• E4
Areas for improvement	Improve visibility of Copernicus (only mentioned once in the programme)
Best practice & scaling opportunity	

Reference number	EU.35
Initiative name	**Copernicus Masters**
Initiative type	Network (N), Events (E)
Period active	• Since 2011
Frequency	• Yearly
Scale	• Since 2011: • > 1,600 registrations • > 700 completed ideas
Indicative budget	• 300.000 € (awards available in 2015)
Client / organisational partners	• ESA
Implementing partners	• Anwendungszentrum GmbH Oberpfaffenhofen
Targeted geography	• Worldwide
Target user group	• Thematic: all • Copernicus service: all • User categories: International Organisations and Bodies, National/MS Institutions and Bodies, Research and Academic Organisations, Downstream Value-Added Service Providers, Downstream Industry End Users.
Website address / contact details	www.copernicus-masters.com
Reference Documents	N/A
Description	The tremendous amounts of data produced by the European Earth Observation programme Copernicus and its Sentinel satellites hugely benefit science and public authorities and open the door to countless products and applications in a wide array of business sectors. In 2015, the competition has once again demonstrated the huge potential Earth Observation holds for the creation of innovative products and services. This year's 208 submitted entries, which represent a 22% increase over the previous year, offer an exciting glimpse into the future of Copernicus services along the entire value chain. In this year's edition, prizes worth EUR 300,000 have been awarded in topic-specific challenges sponsored by a number of world-class partners, including: the European Space Agency (ESA), the German Aerospace Center (DLR), T-Systems International GmbH, Satellite Applications Catapult Ltd., Greece's National Cadastre and Mapping Agency (NCMA), CloudEO AG, and European Space Imaging GmbH. In addition, the new University Challenge specifically addressed students and research assistants around the world. Experts from the realms of research and industry were asked to select the winner of each challenge. The overall winner - the 2015 Copernicus Master - received (along with their challenge prize) EUR 20,000 in cash and a satellite data package worth a further EUR 60,000, which is being provided with the financial support of the European Commission.
Impact potential	• N5
Actual impact	• N5
Areas for improvement	• Further development through an integration of new challenges, dedicated to public end user needs e.g. smart cities (dedicated to solutions for municipalities/city administrations)
Best practice & scaling opportunity	• Creating awareness for the European Copernicus programme • Fostering product development and entrepreneurship in Europe • Supporting the creation of new ventures being supported in the eleven ESA Business Incubation Centres (BICs)

Reference number	EU.36
Initiative name	**Space App Camp initiated by ESA**
Initiative type	Events (E), Starts-up Initiatives (S)
Period active	• Since 2012
Frequency	• At least once a year
Scale	• Since 2012: • > 727 registrations • > 300 participants
Indicative budget	• N/A
Client / organisational partners	• ESA
Implementing partners	• Anwendungszentrum GmbH Oberpfaffenhofen
Targeted geography	• Participation in the App Camp was open to any app developer of adult age with citizenship in Europe or ESA member states
Target user group	• Thematic: all • Copernicus service: all • User categories: all
Website address / contact details	www.app-camp.eu
Reference Documents	N/A
Description	The aim of the Space App Camp is to create awareness for the possibilities offered by Copernicus to enrich mobile app development and to scale up usage of Copernicus data on smartphones. The event shall aim at putting forth Copernicus apps which are (almost) ready for the market. The developer camp targets innovative app developers with proven experience in app development. Experience with the integration of Copernicus / geo-information data is explicitly not required.
Impact potential	• E5, S5
Actual impact	• E3, S3
Areas for improvement	• The organisation of app developer camps in different European countries addressing different user driven challenges (e.g. smart cities)
Best practice & scaling opportunity	• Creating awareness for the possibilities offered by Copernicus to enrich mobile app development and to put forth Copernicus apps which are (almost) ready for the market. • Addressing new target groups

Reference number	EU.R.37
Initiative name	**SPACE4Regions and other events**
Initiative type	Events, Network
Period active	• 2014 – 2015
Frequency	• N/A
Scale	• Events over 2 years, with participation of over 300 people
Indicative budget	• N/A
Client / organisational partners	• N/A
Implementing partners	• N/A
Targeted geography	• Inter-regional; Basilicata, Lombardia, Bremen, Attica (Greece), etc.
Target user group	• Thematic: general • Copernicus service: general • Regional and local authorities, Research and academic organisations, Downstream industry end users; Participants to EU research projects
Website address / contact details	Brussels: http://www.nereus-regions.eu/OPEN_DAYS_2014 (over 100 participants) Rome: www.geoforall.it/quyc Athens: 1st Workshop Interregional Cooperationa in Space (news page at Planetek.it) Augsburg: http://www.gsa.europa.eu/news/gsa-talks-space-policy-bavaria Bari: http://www.asi.it/en/news/interregional-cooperation-in-space Azores: http://www.azores.gov.pt/Gra/CTacores/conteudos/eventos/2015/Agosto/EVENTOS_DRCT_ESA-NEREUS_28-09-2015.htm?lang=pt&area=ct Milan: A Trip from Mountains to valleys (145 participants) Munich: Programme Rome: http://www.nereus-regions.eu/EIP_Space_Rome http://italia2014.eu/en/events/09/19/space-solutions-to-eu-societal-challenges/ Brussels: http://cor.europa.eu/en/events/Pages/space-4-growth.aspx
Reference Documents	From Mountains to Valleys (participant list) Agenda Space Policy / Industry Dialogue, Augsburg http://www.nereus-regions.eu/esaworkshops (programme and presentations) See also links in the section above
Description	« SPACE4REGIONS: Satellite solutions as a driver for innovation and growth, 7/10/2014, **Brussels**; http://www.nereus-regions.eu/OPEN_DAYS_2014 **Outcome**: representatives from ESA, EU institutions, regional and local authorities, from academia and the business sector, discussed the fundamental role of satellite solutions as a driver for innovation and growth". More than 100 participants. "V Incontro del Distretto Virtuale su Reti e Centri di competenze spaziali », ASI, **Roma**, 3/12/2014 https://distvir.asi.it/alfresco/d/d/workspace/SpacesStore/bc910b9a-88d8-4465-abe6-271a49dfe167/%20TemplateSeminario%203%20dicembre%202014%20V%20Edition.html **Outcome:** 1st workshop Interregional Cooperation in Space", DTA-siCluster inititive, 2-3 Apr 2015, **Athens**; On April 2nd, the Hellenic Space Technologies and Applications Cluster (si-Cluster), and the Apulian Aerospace Cluster (DTA) have jointly organised a networking event "Interregional Cooperation in Space" aimed to highlight the successful cooperation between the two clusters, at Space Expo.

	NEREUS Space Applications Workshop, 22-23 April 2015, **Bremen** ; http://www.copernicus.eu/events/regional-workshop-space-applications-bremen-location **Outcome:** Promotion of Puglia expertise in the field of space application. The DTA and the Bremen cluster signed a cooperation agreement at this event. Space policy/Industry Dialogue, joint Event Nereus- Bavaria, **Augsburg**, 24 July 2015 http://www.nereus-regions.eu/spacepolicyindustry **Outcome:** debate on the developments in space policy such as the outcomes of the past ESA-Ministerial in December 2014, their implications and impact for the space community as well as central topics for space and space applications. Around 60 participants from both the space industry and the political sphere. 2nd workshop "Interregional Cooperation in Space", 22-23/09/2015, DTA-siCluster inititive, **Bari**; Event programme – http://www.esa.int/ita/ESA_in_your_country/Italy/A_Bari_il_workshop_Interregional_Cooperation_in_Space/(print) http://eomag.eu/articles/3062/interregional-cooperation-in-space-2nd-joint-workshop-apulian-and-attica-clusters **Outcome:** steps forward for cooperation between the 2 clusters; identifying areas of cooperation in the field of EO not only at regional level, but also national and European. 130 participants NEREUS-ESA workshops: http://www.nereus-regions.eu/esaworkshops The use of sentinel data for supporting land and marine spatial planning and management, 28-29 Sept 2015, **Azores**; A Trip from Mountains to Valleys : Copernicus Satellites as "sentinels" of environmental and economic changes, 20 Oct 2015, **Milano**; What Copernicus can do for Regions, "Natural Resource Management Using Copernicus Services", Bavaria, 12 Nov. 2015, **Munich** ; **Outcome:** The debate focused on relevant space solutions for specific regional needs. Three hosting regions, each in collaboration with partner regions of NEREUS, give LRAs the floor to address a broad range of regional needs, applications and roadblocks "Space solutions to EU societal challenges", 19 Sept, 2014 **Roma**; http://www.nereus-regions.eu/EIP_Space_Rome **Outcome:** a networking platform on how better exploit space technology and applications for growth and innovation "SPACE4Growth and Jobs", 28/05/2015, Committee of Regions, **Brussels** http://www.nereus-regions.eu/node/316 http://www.nereus-regions.eu/SPACE4conferenceproceedings **Outcome:** Representatives of EC, CoR, Nereus, ESA, GSA, EP and regions discussed how work together to promote a better understanding of the potential space-based applications and to ensure that a greater number of administrations will benefit from the availability of Copernicus
Impact potential	• E3-E4
Actual impact	• E3-E4
Areas for improvement	
Best practice & scaling opportunity	

Reference number	EU.R.38
Initiative name	**Cluster cooperation**
Initiative type	Network (N)
Period active	• Since 2014
Frequency	• N/A
Scale	• Inter-regional
Indicative budget	• N/A
Client / organisational partners	• DTA
Implementing partners	• N/A
Targeted geography	• Inter-regional
Target user group	• Thematic: general • Copernicus service: general • Local and Regional Authorities
Website address / contact details	DTA secretariat segreteria@dtascarl.it
Reference Documents	http://eomag.eu/articles/2523/interregional-cooperation-in-aerospace-signed-among-greek-italian-and-french-clusters http://www.sme4space.org/index.php?option=com_content&view=article&id=44:networking-breakfast-qinterregional-cooperation-in-aerospaceq-&catid=4:events&Itemid=6
Description	DTA, Aerospace Valley and si-Cluster signed a letter of cooperation during the Toulouse Space Show, July 2014; DTA signed a letter of Cooperation with the cluster of Bremen, 22Aril, 2015, Bremen
Impact potential	• N4
Actual impact	• N3
Areas for improvement	• Increase the number of participating Regions
Best practice & scaling opportunity	

Reference number	EU.39
Initiative name	**Copernicus website**
Initiative type	Promotional activities (P)
Period active	• Since 2005 (as of 2011 under the EC management)
Frequency	• On-going
Scale	• Website statistics TBD
Indicative budget	• N/A
Client / organisational partners	• European Commission
Implementing partners	• FDC
Targeted geography	• Europe
Target user group	• Thematic: all • Copernicus service: all • User categories: all
Website address / contact details	http://copernicus.eu
Reference Documents	http://copernicus.eu
Description	Created more than 10 years ago under the FP5 project G-FOUR coordinated by FDC, the www.copernicus.eu website (which was then called www.gmes.info) has been continuously operated through successive projects and service contracts (FP6 GENACS, FP7 SWIFT, GMES GIO Lot 1 SC3, SC8 and SC9). Since several years, information dissemination through the web has also been completed by a proactive dissemination of information through a newsletter dedicated to the Copernicus programme. The aim of the web portal is sharing information about Copernicus programme and related activities in order to use this gained data and information to serve more efficiently both policy makers as well as public institutions, private sector and directly EU citizens. The website contains information about Copernicus related events, grants, trainings and other and is regularly updated.
Impact potential	• P5
Actual impact	• P4
Areas for improvement	• Practical information for potential Copernicus users could be added to the website, including technical guides through Copernicus data and local success stories. • Development of target sections e.g. Copernicus4SME, Copernicus4Academia, Copernicus4Regions
Best practice & scaling opportunity	• Contrary to some User Uptake activities that have been undertaken in the past and have suffered a lack of continuity and/or sustainability (e.g. Copernicus4Regions initiative paused since the end of the supporting FP7 projects), dissemination of information through the web has always benefited from a particular attention from the European Commission.

Reference number	EU.40
Initiative name	**European Geosciences Union**
Initiative type	Network (N)
Period active	• Since 2002 in its current form
Frequency	• Continuous
Scale	• over 12,500 members
Indicative budget	• Unknown
Client / organisational partners	• EGU (public)
Implementing partners	• EGU (public)
Targeted geography	• International/EU
Target user group	• Research and Academic Organisations, International Organisations and Bodies
Website address / contact details	http://www.egu.eu/ info@egu.eu
Reference Documents	http://www.egu.eu/publications/
Description	EGU, the European Geosciences Union, is Europe's premier geosciences union, dedicated to the pursuit of excellence in the geosciences and the planetary and space sciences for the benefit of humanity, worldwide. It was established in September 2002 as a merger of the European Geophysical Society (EGS) and the European Union of Geosciences (EUG), and has headquarters in Munich, Germany. It is a non-profit international union of scientists with over 12,500 members from all over the world. Membership is open to individuals who are professionally engaged in or associated with geosciences and planetary and space sciences and related studies, including students and retired seniors. The EGU has a current portfolio of 17 diverse scientific journals, which use an innovative open access format, and organises a number of topical meetings, and education and outreach activities. Its annual General Assembly is the largest and most prominent European geosciences event, attracting over 11,000 scientists from all over the world. The meeting's sessions cover a wide range of topics, including volcanology, planetary exploration, the Earth's internal structure and atmosphere, climate, as well as energy and resources.
Impact potential	• N5
Actual impact	• N4
Areas for improvement	• Increase visibility of Copernicus
Best practice & scaling opportunity	

Reference number	EU.41
Initiative name	**Horizon2020 Space Information Days**
Initiative type	Events (E)
Period active	• Since 2015
Frequency	• Two events so far (Warsaw and Brussels)
Scale	• ~750 participants combined
Indicative budget	• N/A
Client / organisational partners	• EC, public • COSMOS2020, public
Implementing partners	• As above
Targeted geography	• National, Europe
Target user group	• Research and Academic Organisations, National /MS Institutions and Bodies, Regional and Local Public Authorities, Downstream Industry End Users, Downstream Value-Added Service Providers
Website address / contact details	http://www.spaceinfoday.eu Marc Jochemich DLR - German Aerospace Center Tel.: +49 228 447-512 marc.jochemich@dlr.de
Reference Documents	N/A
Description	The events provided first-hand information about the contents of upcoming calls regarding space within the Horizon2020 framework and provided an opportunity for networking and matchmaking of the relevant entities.
Impact potential	• E4
Actual impact	• E3
Areas for improvement	• Make it a regular event series covering all EU/ESA member states
Best practice & scaling opportunity	

Reference number	EU.42
Initiative name	**PCP/PPI in Horizon2020 Project on Earth Observation**
Initiative type	Events (E)
Period active	• 2015
Frequency	• One time event
Scale	• 22 participating organisations
Indicative budget	• N/A
Client / organisational partners	• EARSC (European Association of Remote Sensing Companies), public • BHO Legal, private, German
Implementing partners	• As above
Targeted geography	• Europe
Target user group	• Research and Academic Organisations, National /MS Institutions and Bodies, Regional and Local Public Authorities, Downstream Industry End Users, Downstream Value-Added Service Providers
Website address / contact details	http://bit.ly/1lfdQxe
Reference Documents	earsc.org/file_download/288/Agenda+PCPPPI+in+Horizon2020+Projects+on+Earth+Observation.pdf
Description	The workshop provided guidance for companies of how to approach an upcoming call (EO-2-2016) of the H2020 framework. It focussed on the specifics of the PCP approach which is being utilized for that call.
Impact potential	• E5
Actual impact	• E4
Areas for improvement	• Make it a regular event series
Best practice & scaling opportunity	

Reference number	EU.43
Initiative name	**Webinar: Maximising the impact of H2020 projects**
Initiative type	Events (E)
Period active	• 2015
Frequency	• One-time event
Scale	• N/A
Indicative budget	• N/A
Client / organisational partners	• European IPR Helpdesk
Implementing partners	• As above
Targeted geography	• Europe
Target user group	• Research and Academic Organisations, National /MS Institutions and Bodies, Regional and Local Public Authorities, Downstream Industry End Users, Downstream Value-Added Service Providers
Website address / contact details	www.iprhelpdesk.eu/node/2625?pk_campaign=Newsletter397&pk_kwd=news1
Reference Documents	N/A
Description	The webinar gave an overview about the general exploitation of IP rights on H2020 projects. It led the participants through an analysis of the most common mistakes throughout the whole process of an H2020-project and provided some practical tips about how to avoid those.
Impact potential	• E3
Actual impact	• E2
Areas for improvement	• Offer specific Copernicus webinar sessions for using the advantage of increased geographical reach
Best practice & scaling opportunity	

Reference number	EU.44
Initiative name	**Copernicus Emergency Management User Guide**
Initiative type	User feedback, training & education (U)
Period active	• Version 2 is available since early 2015
Frequency	• Continuous availability
Scale	• N/A
Indicative budget	• N/A
Client / organisational partners	• European Commission
Implementing partners	• SpaceTec Partners
Targeted geography	• Europe, International
Target user group	• International Organisations and Bodies, EU Institutions and Bodies, National /MS Institutions and Bodies, Regional and Local Public Authorities, Downstream Industry End Users, Downstream Value-Added Service Providers
Website address / contact details	http://www.copernicus.eu/main/emergency-management-user-guide
Reference Documents	http://www.copernicus.eu/sites/default/files/documents/Emergency_user_guide/EMS%20User%20Guide%20v2%20-%20May%202015%20-%20High%20Level%20Brochure.pdf
Description	This dedicated user guide provides an extensive overview about the Copernicus Emergency Management Service. Moreover, it details the working mechanisms of the service and provides a detailed step-by-step procedure about technical and organisational working steps and methods to potential users.
Impact potential	• U5
Actual impact	• U4
Areas for improvement	
Best practice & scaling opportunity	• Fill in the gap of general information about Copernicus and information and the technical implementation for users. Could serve as a template for other Copernicus Services User Guides and Product Portfolios

Reference number	EU.R.45
Initiative name	**European Mobile & Mobility Industries Alliance**
Initiative type	Funding instrument
Period active	• End of 2011 until 2016
Frequency	• Three waves of calls: EMMIA 1(2011), EMMIA 2 (2012) and EMMIA 2013 (2013)
Scale	• European-wide participation
Indicative budget	• EMMIA 1 (ca. 5 Mio. EUR), EMMIA 2 (ca. 5 Mio. EUR), EMMIA 2013 (ca. 2,5 Mio. EUR)
Client / organisational partners	• Policy makers, clusters, consultants, finance institutions, service providers and SMEs dealing with or supporting space applications
Implementing partners	• Various
Targeted geography	• European member states and regions
Target user group	• National institutions and bodies; Regional and local public authorities; Research and Academic organisations, Downstream value-added service providers; Downstream industry end users;
Website address / contact details	www.mobilise-europe.eu, Contact: Coordinator of the EMMIA Policy Learning Platform: Mr. Jürgen Vogel, Co-ordinator International Programmes, Bavarian Cluster Aerospace, email: vogel@bavAIRia.net, www.bavAIRia.net
Reference Documents	Info on website of EMMIA initiative: www.mobilise-europe.eu, plus public reports of the initiative downloadable there, e.g. mobilise-europe "Pocket Guide"; final report "Policy Learning Platform"; etc.
Description	Cross-regional & national cooperation initiated by EC's DG GROW, partly funded by Competitiveness & Innovation Framework Programme of EU. Support of positioning/navigation (GNSS) applications and later combined applications of GNSS and Earth Observation in order to validate the investment in Europe's space infrastructures, but also to push and promote mobile services accessible via mobile platforms like mobile phones or tablet-pcs. Different types of activities were funded within EMMIA: policy networks of regions to support mobile services; concrete projects in tourism in rural areas, finance networks to support SMEs active in space applications via set-up of specific funds or channelling of EFRE, service provision networks for "young" SMEs via voucher schemes, and concrete networks for development of demonstrators in sectors like agriculture, environment and transport. Target group includes policy makers, clusters, consultants, finance institutions, service providers and SMEs dealing with or supporting space applications, customers of space applications like municipalities, public administrations, mass market consumers,
Impact potential	• F4
Actual impact	• F4
Areas for improvement	• Continuity of programme, exploitation/awareness of outputs
Best practice & scaling opportunity	

Reference number	EU.46
Initiative name	**Sentinel Scientific Data Hub**
Initiative type	Data access (D)
Period active	• Started from October 2014
Frequency	• Continuous
Scale	• 10 000 users registered on August 2015
Indicative budget	• N/A
Client / organisational partners	• ESA/ESRIN
Implementing partners	• ESA scihub developed by SERCO (Italy)
Targeted geography	• International
Target user group	• Free open access for all end users (private or academic) • Thematic: agriculture, land cover, emergency, • Copernicus service: all • User categories: National /MS Institutions and Bodies, Regional and Local Public Authorities, Downstream Value-Added Service Providers, Downstream Industry End Users.
Website address / contact details	https://scihub.copernicus.eu/
Reference Documents	https://scihub.esa.int/userguide/
Description	The Sentinel Data Hub is a web based system designed to provide EO data users with distributed mirror archives and bulk dissemination capabilities for the Sentinels products. The Sentinels Scientific Data Hub provides free and open access to a rolling repository of Sentinel-1 and Sentinel-2 user products. Sentinel products are provided for download via HTTP in the .ZIP archive file format. Click and download, shopping cart, batch download. A maximum of 2 concurrent downloads per user is allowed in order to ensure a download capacity for all users.
Impact potential	• D5
Actual impact	• D4
Areas for improvement	• To enhance the downloading capacity (currently restricted at 2 concurrent downloads per user)
Best practice & scaling opportunity	

Reference number	EU.47
Initiative name	**Copernicus Space Component Data Access / CSCDA**
Initiative type	Data access (D)
Period active	• Since 2014
Frequency	• Continuous
Scale	• N/A
Indicative budget	• The CSC-Data Access project is funded by the European Union and the European Space Agency as an integral part of the GMES/Copernicus Space Component Programme. The project has received funding from the European Community's Seventh Framework Programme FP7/2007-2013 and the Multiannual Financial Framework Programme (MFF).
Client / organisational partners	• The CSC Data Access project is managed by the European Space Agency as part of the Copernicus Space Component Programme
Implementing partners	• N/A
Targeted geography	• International
Target user group	• Copernicus Services • Institutions and Bodies of the EU • Academic Organisations • Participants to a research project financed under the Union research programmes • Public Authorities • International Organisations and NGOs
Website address / contact details	https://spacedata.copernicus.eu/web/cscda/about EOSupport@copernicus.esa.int
Reference Documents	https://spacedata.copernicus.eu/documents/12833/14545/DAP_Release_Phase_2 http://congrexprojects.com/custom/15M34/Ppt%20Copernicus%20only%20PDF/01%20Day-1/Session%202/CSCDA%20Workshop%20-%20CDS%20ops_RMalosti_Final_update2.pdf
Description	Users requiring access to data products from the Copernicus Space Component can utilise the Copernicus Space Component Data Access (CSCDA) system. The system's overall space capacity relies on several Earth Observation missions contributing to Copernicus, with new missions becoming available over time and others ending or being replaced. The Copernicus Space Component Data Access (CSCDA) provides comprehensive and coordinated access to all Copernicus space data, allowing the capacity: • To combine the different EO data providers and the various Copernicus Service Providers using coordinating functions; • To create synergy and sustainability across the various contributing missions; • To facilitate data access for Copernicus Services and aim at long-term data reliability beyond single missions. The CSCDA data and services are accessible in the form of DataSets, which are pre-defined collections of coherent mono and multi-mission products.
Impact potential	• D5
Actual impact	• D4
Areas for improvement	• User friendliness, usability by non specialists, data discovery features
Best practice & scaling opportunity	

Reference number	EU.48
Initiative name	**Copernicus Land Monitoring Services**
Initiative type	Data Access (D)
Period active	• Since end 2013
Frequency	• Continuous
Scale	• The user list contains 281 contacts from 38 countries plus the EC and relevant international organisations. All EU Member States are represented.
Indicative budget	• N/A
Client / organisational partners	• EEA and EC/JRC
Implementing partners	• VITO (Belgium) with HYGEOS (France), IPMA (Portugal), Météo France (France), ZAMG (Austria) and several sub-contractors: EOLAB (Spain), INRA (France), TU Wien (Austria), UCL (Belgium), U. Leicester (UK), CREAF (Spain)
Targeted geography	• Global
Target user group	All user types for: • Terrestrial and freshwater biodiversity • Land use and soil functions • Ecological status of freshwater bodies • Water quality and nutrient load
Website address / contact details	http://land.copernicus.eu/
Reference Documents	
Description	The Copernicus Land Monitoring Service provides geographical information on land cover/land use and on variables related to vegetation state and water cycle. It supports applications in a variety of domains, such as urban/rural management, forest management, water management and agriculture and consists of the following four main components: 1 - Global. The Global Land Service provides a series of bio-geophysical products on the status and evolution of the land surface at global scale at mid and low spatial resolution. The products are used to monitor the vegetation, the water cycle and the energy budget. 2 - Pan-European. The pan-European component provides information about the land cover and land use (LC/LU), land cover and land use changes and land cover characteristics. The latter includes information about imperviousness, forests, natural grasslands, wetlands, and permanent water bodies. 3 - Local. The local component focuses on different hotspots, i.e. areas that are prone to specific environmental challenges and problems. This includes detailed LC/LU information for the larger EU cities (Urban Atlas), riparian zones along European river networks and NATURA 2000 sites. It will also include maps of coastal areas. 4 - In-situ. All of the Copernicus services need access to in-situ data in order to ensure an efficient and effective use of Copernicus space-borne data. Next to data provided by participating countries, Earth Observation from space also yields pan-European reference datasets, such as a Digital Elevation Model.
Impact potential	• D5
Actual impact	• D3-D4

Areas for improvement	• Urban Atlas: inclusion of 3rd dimension • Riparian Zones: extension upstream • New version of Natura2000 monitoring sites • Permanent snow & ice cover • Improvement of detailed product specifications • Improvement of access to national in-situ data
Best practice & scaling opportunity	

Reference number	EU.49
Initiative name	**Copernicus Marine Environment Monitoring Services**
Initiative type	Data Access (D)
Period active	• Since end 2014
Frequency	• Continuous
Scale	• About 5000 subscribers worldwide
Indicative budget	• N/A
Client / organisational partners	• Mercator-Ocean
Implementing partners	• CLS (France) and about 30 partners (MyOcean consortium)
Targeted geography	• Global
Target user group	• All user types
Website address / contact details	http://marine.copernicus.eu/
Reference Documents	
Description	Service providing products for all marine research and applications. The CMEMS is based on the continuation of a service concept successfully demonstrated through the MyOcean projects. It provides a sustainable response to European user needs in four areas of benefits (maritime safety, marine resources, coastal and marine environment, weather, seasonal forecast and climate) and mostly to public and private intermediate users.
Impact potential	• D5
Actual impact	• D4
Areas for improvement	• Workshop in September 2015 on Service Evolution and User Uptake strategies
Best practice & scaling opportunity	

Reference number	EU.50
Initiative name	**Copernicus Atmosphere Monitoring Services**
Initiative type	Data Access
Period active	• Since Spring 2015
Frequency	• Continuous
Scale	• About 3000 registered users from which 200 regular users
Indicative budget	• N/A
Client / organisational partners	• ECMWF
Implementing partners	• MACC consortium
Targeted geography	• Global
Target user group	• All user types
Website address / contact details	https://atmosphere.copernicus.eu/
Reference Documents	
Description	The Service consolidates many years of preparatory research and development that was funded by the European Union in the form of the series of MACC projects. MACC brought together partner organisations from across Europe with expertise in areas such as environmental monitoring and forecasting services, and research of atmospheric composition. CAMS delivers the following operational services: • Daily production of near-real-time analyses and forecasts of global atmospheric composition • Reanalyses providing consistent multi-annual global datasets of atmospheric composition with a frozen model/assimilation system • Daily production of near-real-time European air quality analyses and forecasts with a multi-model ensemble system • Reanalyses providing consistent annual datasets of European air quality with a frozen model/assimilation system, supporting in particular policy applications • Products to support policy users, adding value to "raw" data products in order to deliver information products in a form adapted to policy applications and policy-relevant work • Solar and UV radiation products supporting the planning, monitoring, and efficiency improvements of solar energy production and providing quantitative information on UV irradiance for downstream applications related to health and ecosystems • Greenhouse gas surface flux inversions for CO2, CH4 and N2O, allowing the monitoring of the evolution in time of these fluxes • Climate forcings from aerosols and long-lived (CO2, CH4) and shorter-lived (stratospheric and tropospheric ozone) agents • Anthropogenic emissions for the global and European domains and global emissions from wildfires and biomass burning activities
Impact potential	• D5
Actual impact	• D4
Areas for improvement	• Ensemble operations to support interim assessment reports • Specialized user interface tools
Best practice & scaling opportunity	

Reference number	EU.51
Initiative name	**CLIPC (Climate Information Platform for Copernicus)**
Initiative type	Data Access (D)
Period active	• 2014-2016
Frequency	• Continuous
Scale	• N/A
Indicative budget	• N/A
Client / organisational partners	• EC FP7 - Natural Environment Research Council
Implementing partners	• Centre for Environmental Data Analysis and Science and Technology Facilities Council, UK (STFC) – Coordinator, and 20 partners
Targeted geography	• Global
Target user group	• All user types
Website address / contact details	http://www.ceda.ac.uk/projects/clipc/
Reference Documents	
Description	CLIPC will provide access to climate information of direct relevance to a wide variety of users, from scientists to policy makers and private sector decision makers. Information will include data from satellite and in-situ observations, climate models and re-analyses, transformed data products to enable impacts assessments and climate change impact indicators. The platform will complement existing Copernicus operational components, but will focus on datasets which provide information on climate variability on decadal to centennial time scales from observed and projected climate change impacts in Europe, and will provide a toolbox to generate, compare and rank key indicators.
Impact potential	• D5
Actual impact	• D1
Areas for improvement	• Initial phase of building implementation
Best practice & scaling opportunity	

Reference number	EU.52
Initiative name	**EUMETCAST**
Initiative type	Data Access
Period active	• Since 2003
Frequency	• Continuous
Scale	• About 3500 users worldwide
Indicative budget	• N/A
Client / organisational partners	• EC and WMO
Implementing partners	• EUMETSAT
Targeted geography	• Global
Target user group	• All user types
Website address / contact details	http://www.eumetsat.int/website/home/Data/DataDelivery/EUMETCast/index.html
Reference Documents	
Description	EUMETCast is a multi-service dissemination system based on standard Digital Video Broadcast (DVB) technology. It uses commercial telecommunication geostationary satellites to multi-cast files (data and products) to a wide user community. EUMETCast also delivers a range of third-party products, including European Commission Copernicus and FP7 funded data and products.
Impact potential	• D5
Actual impact	• D5
Areas for improvement	• Bandwidth evolution to reach 70 Mbits/s in 2020 (22 Mbits/s in 2015)
Best practice & scaling opportunity	

Reference number	EU.53
Initiative name	**ESA Thematic Exploitation Platforms (polar / urban / coastal / forest / hydrology)**
Initiative type	Data Access (D)
Period active	• In preparation
Frequency	• Continuous
Scale	•
Indicative budget	• 5M€ to fund 5 TEPS
Client / organisational partners	• ESA EOP
Implementing partners	• Private consortia
Targeted geography	• Regional or local
Target user group	• All user types (mainly scientists and researchers)
Website address / contact details	Sveinung.Loekken@esa.int ESA/ESRIN Ground Segment Evolution Strategy
Reference Documents	http://www.congrexprojects.com/Custom/15C12/D3_C1B_01_0900_Loekken.pdf
Description	Thematic Exploitation Platforms (TEPs) are innovative virtual platforms which aim to simplify the extraction of information from Earth Observation (EO) data. The principal idea underpinning TEPs is to move the processing to the data, rather than the data to the users, thereby enabling ultra-fast data access and processing using cloud technology. The TEPs should be able to provide : • Rapid data access by avoiding moving large amounts of data on the network, • Full focus on exploitation as users do not spend time on ICT matters, • Synergistic use of different EO data sources, • Community building by fostering a spirit of resource and knowledge sharing, • Rapid prototyping and benchmarking of algorithms, • Fully automated data processing framework allowing generation of products for non-expert users, • Managed services providing expert support (thematic and ICT/GS) for complex exploitation tasks, • Replicability of results, and traceability of workflow and processes, paving the way towards the e.g. new generation of scientific publications, • Cost-effective approach for scalable ICT resources capitalizing on economy of scale through infrastructure pooling • Development of new business models, such as “data rental”, and new pricing models such as pay-per-use.
Impact potential	• D3 – D4
Actual impact	• Not known yet
Areas for improvement	• Platforms under construction • Cloud infrastructure sharing between the five TEPs
Best practice & scaling opportunity	

Reference number	EU.54
Initiative name	**Copernicus Expert Group**
Initiative type	User feedback, training & education (U)
Period active	• N/A
Frequency	• Variable
Scale	• International to local
Indicative budget	• N/A
Client / organisational partners	• Pool of suitably qualified experts from which experts will be selected to form Topical Panels to address one or more of the issues outlined in the technical annex
Implementing partners	•
Targeted geography	• International
Target user group	• Thematic: N/A • Copernicus service: all • User categories:
Website address / contact details	• http://copernicus-expert-group.jrc.ec.europa.eu/
Reference Documents	
Description	The European Commission has decided to establish a Copernicus Expert Group to provide independent advice concerning the status and evolution of the Copernicus Earth Observation programme and delivered results. Individuals from the Copernicus Expert Group will be called upon to form specific Topical Panels to examine issues arising from the initial operations and longer-term development of the Copernicus services as well as the space and ground segments of the programme.
Impact potential	• U3-U5
Actual impact	• U2
Areas for improvement	• Provide information on outcomes as well as activities transparently • Include this information into centralised Copernicus information exchange platform (to be created)
Best practice & scaling opportunity	

Reference number	EU.55
Initiative name	**imaGIne – Opportunities Everywhere**
Initiative type	Events (E), Promotional activities (P)
Period active	• Since 2013
Frequency	• 2-3 years depending on funding
Scale	• 150-300 participants
Indicative budget	• 70.000-120.000
Client / organisational partners	• EUROGI with national/regional members
Implementing partners	• EUROGI with national/regional members
Targeted geography	• Europe (however the attendants were from out of Europe as well)
Target user group	• Wider GI and GeoICT community from Private sector, National/MS Institutions and Bodies, Regional and Local Public Authorities, Research and Academic Organisations, Policy Decision Makers
Website address / contact details	http://eurogi.org/ ; Simon Vrečar, EUROGI, tel.: +386 590 33 9 33, +386 41 69 35 37, simon.vrecar@eurogi.org
Reference Documents	http://eurogi.org/eventseurogi/eurogi-conferences
Description	Showcasing the very best Europe has to offer' was the key guiding principle which shaped all aspects of the conference. The defining focus was to highlight Europe's best examples of the use and role of GI&GeoICT in a variety of thematic fields, including energy, job creation and economic growth, environment, demography, smart cities, big data, Internet of Things and open data and other topics. All speakers have been specifically selected on the basis of their expertise or their involvement in particularly innovative practical GI&GeoICT exercises which deliver meaningful value for beneficiaries/users. Since start 2 such events have taken place, one in Dublin and another in Berlin.
Impact potential	• P3., E3
Actual impact	• P1, E1
Areas for improvement	• In the future e.g. in 2017 event could be dedicated to space related topics (Copernicus, Galileo, Egnos,...) and its usage/application on the GI&GeoICT field.
Best practice & scaling opportunity	

Reference number	EU.56
Initiative name	**MPP – Market pull packs**
Initiative type	Events (E), Promotional activities (P), User feedback, training & education (U)
Period active	• Since 2011
Frequency	• Dependent on funding capabilities
Scale	• Dependant on the GI&GeoICT community in certain country
Indicative budget	• 25.000-35.000
Client / organisational partners	• EUROGI with national/regional members, EC, ESA
Implementing partners	• EUROGI with national and regional members
Targeted geography	• Europe (MPPs have been performed on national levels)
Target user group	• GI and GeoICT users, producers, providers from Private sector, National/MS Institutions and Bodies, Regional and Local Public Authorities, Research and Academic Organisations
Website address / contact details	http://eurogi.org/ ; Simon Vrečar, EUROGI, tel.: +386 590 33 9 33, +386 41 69 35 37, simon.vrecar@eurogi.org
Reference Documents	http://eurogi.org/eurogi-downloads/category/144-2013-hungary http://eurogi.org/eurogi-downloads/category/192-2014-germany
Description	The EU-led Copernicus initiative, formerly GMES (Global Monitoring for Environment and Security) is complementary to the INSPIRE Directive in that it produces own European GI content, filling gaps left by the Member States' contributions and letting calibrate their data for homogeneousness and pan-European use. EUROGI accepted the task of building a bridge between the industry sectors of Earth monitoring value adders and GI service providers, both mainly composed of SMEs. The GI&GeoICT companies can bring in their often largely established business relationships with local and national authorities and by the cooperation with research and academic sector. The outputs of the action: • Preparation of survey • Localisation of survey to the national environment and translation if needed • Data processing • Preparation of report • Organisation of the workshop with national and European stakeholders • Promotion in social media
Impact potential	• P4, E4
Actual impact	• E2, P2
Areas for improvement	• MPPs could be in the future extended in various directions: to cover other countries, cross-border approach, transnational approach connected for example to the European Macro regions, sectoral approach within GI&GeoICT community. The main issue is to assure the required funding for the activities.
Best practice & scaling opportunity	

Reference number	EU.57
Initiative name	**EM-GI Survey and other activities**
Initiative type	Events, Promotional activities, User feedback, training & education
Period active	• Since 2012/13
Frequency	• N/A
Scale	• European GI&GeoICT community
Indicative budget	• N/A
Client / organisational partners	• EUROGI with national/regional members and partners
Implementing partners	• EUROGI with national and regional members
Targeted geography	• Europe
Target user group	• GI and GeoICT users, producers, providers from Private sector, National/MS Institutions and Bodies, Regional and Local Public Authorities, Research and Academic Organisations, Policy and Decision Makers
Website address / contact details	http://eurogi.org/ Simon Vrečar, EUROGI, tel.: +386 590 33 9 33, +386 41 69 35 37, simon.vrecar@eurogi.org
Reference Documents	http://eurogi.org/eurogi-downloads/category/12-graal http://eurogi.org/eurogi-downloads/category/94-publications
Description	EUROGI has within the GRAAL-Project (GMES and Regions – Awareness and Access Link, http://www.gmes4regions.eu/) accepted the task of building a bridge between the industry sectors of GI service providers and Earth monitoring value adders, both mainly composed of SMEs. The GI companies can bring in their often largely established business relationships with LRAs, the target group of GRAAL, as well as the potential of generalised customised GMES-based solutions to be transferred to other regions and cities. Increased spatial resolution has rendered satellite imagery in the meantime to equal the quality of aerial photo-graphs such that data e.g. on land cover / land use, air quality etc. can be derived in local scales over large areas. The activity included: the preparation of survey on the European level, localisation of surveys where needed, collecting of data in several European countries and regions, data processing, preparation of final report, organisation of the European workshop, promotion. In parallel several documents emerged in which the use of GMES data in GI&GeoICT sector has been promoted: Use of geodata in x-border areas; EUROGI Position Paper on GMES funding. Recently EUROGI is finalising the process of preparation policy position papers in 6 topic areas (Linked Data, Big Data, Internet of Things, Open Data, SME promotion, Sustainable Urban and Regional Development) from GI/GeoICT perspective which includes indirectly also the use of Copernicus 'products'.
Impact potential	• P4, E4
Actual impact	• E2, P2
Areas for improvement	• Activities like EM-GI survey should be performed periodically (e.g. every 3 years) in order to measure the impact of implementation of 'space' policies and awareness in the GI&GeoICT community.
Best practice & scaling opportunity	

Reference number	INT.01
Initiative name	**Space Generation Advisory Council (SGAC)**
Initiative type	Network (N)
Period active	• Since 1999
Frequency	• Continuous
Scale	• Global
Indicative budget	• Gross Profit = €119,170.50 • Total Equity = €77,679.90
Client / organisational partners	Sponsors: • Platinum: Lockheed Martin, ScaN (NASA), Secure World Foundation, Space Foundation • Gold: Airbus Defence and Space, Arianespace Inc., SSPI, ULA • Silver: Aerospace, Analytical Graphics, Canadian Space Agency, DLR, Embry-Riddle University, IHI Aerospace, JKIC, International Astronautical Federation, INVAP, JIAAC, MRI, Moon Express, OHB AG, PASCO CORPORATION, Sierra Nevada Corporation, Space Canada, World Space Week Partners: • Czech Space Office, GISAT, SERENUM, Telespazio, The Fisher Institute for Air & Space Strategic Studies, Agenzia Spaziale Italiana, Australian Youth Aeropace Association, FUTURE Space Leaders, EUMETSAT, Group of Astrodynamics for the Use of Space Systems
Implementing partners	• SGAC
Targeted geography	• Global
Target user group	• Students, Young Professionals,
Website address / contact details	http://www.spacegeneration.org/
Reference Documents	N/A
Description	SGAC works on the international, national and local level to link together university students and young professionals to think creatively about international space policy issues and inject the new generation point of view into international space policy creation.
Impact potential	• N5
Actual impact	• N1
Areas for improvement	• No Copernicus-specific activities, leverage the fact that a past President is working at GROW/I3
Best practice & scaling opportunity	• Due to the size and impact of the network, it would be a good springboard to promote Copernicus internationally

Reference number	INT.02
Initiative name	**Joint International Symposium on Deformation Monitoring**
Initiative type	Event (E)
Period active	• Since 2011 (every other year)
Frequency	• Every other year (more or less, editions in 2011, 2013, 2016)
Scale	• Around 200 participants from 25+ countries
Indicative budget	• N/A
Client / organisational partners	• FIG, IAG + local partners
Implementing partners	• Same as above
Targeted geography	• Global
Target user group	• Scientists, young researchers, students
Website address / contact details	jisdm2016@tuwien.ac.at http://jisdm2016.org/
Reference Documents	http://www.egu2015.eu/A-voyage-through-scales-book.pdf
Description	The 1st JISDM was held between 2-4 November 2011, in Hong Kong, China and combined three major events: the 14th FIG Symposium on Deformation Measurement and Analysis, the 5th IAG Symposium on Geodesy for Geotechnical and Structural Engineering and the 2nd International Workshop on Spatial Information Technologies for Monitoring the Deformation of Large-Scale Man-made Linear Features. The 2nd JISDM was held on the charming campus of the University of Nottingham on September 9-10, 2013. Around 200 people from 26 countries attended the conference, with a strong group from China due to the local conference chair, Dr. Xiaolin Meng, who is Director of the Nottingham Sino-UK Geospatial Engineering Centre, but indicating an increasing interest in China in this topic, too. For this 2nd JISDM 180 paper abstracts were submitted, 80 papers were selected for oral presentations in 20 parallel sessions and 30 paper abstracts were presented as posters. Additionally six student paper prizes were awarded. Ten organisations and companies presented their latest deformation monitoring solutions at the associated exhibition. The 3rd JISDM will be held in Vienna between 30 March – 1 April 2016. The 3rd Joint International Symposium on Deformation Monitoring (JISDM) follows the more than 40 years old tradition of the FIG Symposium series on Deformation Measurements and of the IAG Symposium series on Geodesy for Geotechnical and Structural Engineering. The actual denomination JISDM was introduced five years ago in Hong Kong and expresses the tight collaboration between the two of the most important geodetic organisations the FIG and the IAG in the fields of deformation measurements and deformation analysis.
Impact potential	• E4
Actual impact	• E2
Areas for improvement	• Include dedicated Copernicus Information Session
Best practice & scaling opportunity	

Reference number	INT.03
Initiative name	**GEO / GEOSS**
Initiative type	Network (N)
Period active	• Since 2015
Frequency	• Repetitive • Plenary sessions and summit 11-12-13 Nov 2015
Scale	• High level participants
Indicative budget	• NA
Client / organisational partners	• Public • Global
Implementing partners	• N/A
Targeted geography	• Global
Target user group	• International Organisation and Bodies / EU Institutions and Bodies / National& MS Institutions and bodies • Benefit of EO data (incl. Copernicus)
Website address / contact details	https://www.earthobservations.org/index.php
Reference Documents	N/A
Description	GEO is a voluntary partnership of governments and organisations that envisions "a future wherein decisions and actions for the benefit of humankind are informed by coordinated, comprehensive and sustained Earth Observations and information." regular meeting are organised and they can be considered as User Uptake opportunities
Impact potential	• TBD
Actual impact	• TBD
Areas for improvement	
Best practice & scaling opportunity	

Reference number	INT.04
Initiative name	**AARSE Conferences**
Initiative type	Scientific programme, exhibition, side-events, pre- and post-conference workshops, special events for parliamentarians, private sector roundtables
Period active	• Since 1996
Frequency	• Bi-annual (even year numbers), always at different locations
Scale	• International, regional (Africa) and local (host country) about 700-1000 global delegates
Indicative budget	• N/A
Client / organisational partners	• African Association of Remote Sensing of the Environment AARSE (www.africanremotesensing.org)
Implementing partners	• Host country organisation(s) (mostly universities), relevant government agencies (ministries, space agencies), sponsors (e.g. ESRI, Google, ESA)
Targeted geography	• The African continent (54 countries)
Target user group	• Thematic: EO & geoinformation in support of sustainable development in Africa • Copernicus service: all and GMES&Africa • User categories: public authorities, ministries, academia, private sector, educational institutions
Website address / contact details	AARSE2014 www.aarse2014.co.za AARSE2016 aarse2016.org
Reference Documents	Website (concept, conditions for participation, costs, etc.)
Description	The AARSE conferences normally bring together about 700 - 1000 global delegates entailing scientists, academicians, practitioners, policy makers, technology developers/experts and business entities from various interdisciplinary fields of geo-information science, hazard and disaster science, humanitarian assistance, geography, engineering, geology, water, ecology, agriculture, social sciences and space science to deliberate on issues of enhancing and accelerating sustainable development in Africa in the midst of natural resource degradation, conflict, global environmental changes and rapid demographic changes.
Impact potential	• E5
Actual impact	• E4
Areas for improvement	• Supporting international cooperation such as the Africa-Europe Partnership in Space (GMES&Africa), linking Copernicus and GMES&Africa by research networks and private sector collaboration. Organise dedicated Copernicus Information Session, booth.
Best practice & scaling opportunity	• Information sessions • Private sector matching events (business fora)

Reference number	INT.05
Initiative name	**C-SIGMA**
Initiative type	Network (N)
Period active	• Since 2011
Frequency	• Continuous
Scale	• International
Indicative budget	• N/A

Client / organisational partners	• The advisory committee is comprised of members from the following organisations:
	  • CMRE (NATO Centre for Maritime Research & Experimentation)
	  • ESA/ESRIN
	  • NSC (National Space Centre, Ireland)
	  • JRC (EC Joint Research centre)
	  • US Navy
	  • US Coast Guard

Implementing partners	• As above
Targeted geography	• International, Martime areas
Target user group	• International Organisations and Bodies, National /MS Institutions and Bodies
Website address / contact details	www.c-sigma.org info@c-sigma.org
Reference Documents	N/A
Description	C-SIGMA stands for Collaboration in Space for International Global Maritime Awareness. It brings together the most relevant international agencies and bodies being active in maritime and coastal monitoring and security, such as weather organisations, national coast guards and even military entities (CMRE, US Navy). The network organises a dedicated workshop in irregular intervals, ranging from twice a year to biennial, its latest edition took place in London (12/2015).
Impact potential	• N4
Actual impact	• N3
Areas for improvement	• Increase the regularity of the organisations' main event, i.e. make it an annual event
Best practice & scaling opportunity	

Reference number	INT.06
Initiative name	**International Symposium on Remote Sensing of Environment**
Initiative type	Event (E)
Period active	• Since 1962 (2015 in Berlin)
Frequency	• Biennial
Scale	• N/A
Indicative budget	• N/A
Client / organisational partners	• International Society of Photogrammetry and Remote Sensing
Implementing partners	• International Centre for Remote Sensing of Environment • DLR Agency (2015)
Targeted geography	• International
Target user group	• Research and Academic Organisations, International Organisations and Bodies, National /MS Institutions and Bodies, Downstream Industry End Users, Downstream Value-Added Service Providers
Website address / contact details	• www.isrse36.org • www.copernicus.eu/events/isrse-36-36th-international-symposium-remote-sensing-environment
Reference Documents	
Description	The ISRSE Symposium, being held since 1962, represents a major event of the internationally recognized ISRSE meetings. The overall theme of the 36th symposium was the use of Earth Observation systems and related Remote Sensing techniques for understanding and managing the Earth environment and resources. ISRSE in general provides opportunities to learn about major Earth Observation programmes and their initial results. It is an important forum to present applications based on these new missions and to exchange views on future directions of Earth Observation technology and geographic information management.
Impact potential	• E4
Actual impact	• E4
Areas for improvement	
Best practice & scaling opportunity	

Reference number	INT.07
Initiative name	**The Climate Symposium**
Initiative type	Event (E)
Period active	• 2014
Frequency	• One-time so far
Scale	• nearly 500 participants from about 50 nations
Indicative budget	• N/A
Client / organisational partners	• WCRP (World Climate Research Programme) • Eumetsat (public)
Implementing partners	• ESA (public) • EC (public)
Targeted geography	• International
Target user group	• Research and Academic Organisations • International Organisations and Bodies
Website address / contact details	www.theclimatesymposium2014.com
Reference Documents	http://www.theclimatesymposium2014.com/index .php/climatesymposium/page?cat=SCHEDULE&page=INDEX
Description	The main goal of the symposium was to provide a forum for discussing the current state of climate science and climate observations in order to evaluate recent achievements, ascertain critical objectives to be achieved with satellite-based climate information, and identify gaps in the current space-based component of the climate observing system. A major topic having been discussed is the proposed Architecture for sustained Climate Monitoring from Space that has been developed under the auspices of the Committee on Earth Observation Satellites (CEOS), the Coordination Group of Meteorological Satellites (CGMS) and WMO. Beyond the monitoring of the current state of the Climate System, the conference also considered how Earth Observation contributes to future developments in climate prediction and climate change projection.
Impact potential	• E4
Actual impact	• E3
Areas for improvement	• Start a regular series and monitor impact of Copernicus data becoming available • Make Copernicus more visible (not mentioned in the programme)
Best practice & scaling opportunity	

Reference number	INT.08
Initiative name	**Free and Open Source Software for Geospatial Conference - FOSS4G**
Initiative type	Event (E)
Period active	• Since 2004
Frequency	• Annual (none in 2005 and 2012), 2016 in Bonn
Scale	• Between 500 and 900 attendees
Indicative budget	• N/A
Client / organisational partners	• Open Source Geospatial Foundation (OSGeo, private)
Implementing partners	• Open Source Geospatial Foundation (OSGeo, private) • FOSSGIS e.V. (private)
Targeted geography	• International
Target user group	• Research and Academic Organisations, Downstream Value-Added Service Providers
Website address / contact details	http://foss4g.org/
Reference Documents	http://2015.foss4g.org/wp-content/uploads/2015/10/FOSS4G_Seoul_Final_Reports_0930.pdf
Description	Most important international conference regarding open-source-geoinformation-systems and dedicated software. As such, these tools might very well be used to analyse data gathered by Copernicus systems.
Impact potential	• E2, U2
Actual impact	• E2, U3
Areas for improvement	• Organise Copernicus Information Session
Best practice & scaling opportunity	

Reference number	INT.09
Initiative name	**International Geoscience and Remote Sensing Symposium**
Initiative type	Event (E)
Period active	• Since 1981
Frequency	• Annual in July
Scale	• Around 2000 participants
Indicative budget	• N/A
Client / organisational partners	• Institute of Electrical and Electronics Engineers (IEEE)
Implementing partners	• IEEE Geoscience and Remote Sensing Society (GRSS)
Targeted geography	• International
Target user group	• Research and Academic Organisations, International Organisations and Bodies
Website address / contact details	• http://igarss2015.org/ • http://www.ieee.org/conferences_events/conferences/conferencedetails/index.html?Conf_ID=20532 • Nancy Sutta Berns Conference Management Services, Inc. 3833 South Texas Avenue, Ste. 221 Bryan TX USA 77802 +1 973 886 8852 nancy@cmsworldwide.com
Reference Documents	
Description	International Geosicence and Remote Sensing Symposium (IGARSS) is the annual flagship event of the IEEE Geoscience and Remote Sensing Society (IEEE GRSS). The topics of IGARSS cover a wide variety of the research on the theory, techniques, and applications of remote sensing in geoscience, which includes: the fundamentals of the interactions electromagnetic waves with environment and target to be observed; the techniques and implementation of remote sensing for imaging and sounding; the analysis, processing and information technology of remote sensing data; the applications of remote sensing in different aspects of earth science; the missions and projects of Earth Observation satellites and airborne and ground based campaigns. The theme of IGARSS 2016 is "Advancing the Understanding of our Changing Planet", and some emphases will be given on the special topics of remote sensing applications on global change. ESA already held events on initial results of Sentinel 2 during the most recent conference in 2015.
Impact potential	• E4
Actual impact	• E3
Areas for improvement	• Improve visibility of Copernicus
Best practice & scaling opportunity	• Considering the importance of the IEEE network, provides a good springboard for Copernicus promotion.

Reference number	INT.10
Initiative name	**UNIGIS Distance Learning Programme**
Initiative type	User feedback, training & education (U)
Period active	• > 20 years
Frequency	• Continuously
Scale	• International/global outreach • See the UNIGIS sites global distribution here: http://www.unigis.net/study-programmes/map
Indicative budget	• N/A
Client / organisational partners	• Bentley Systems • Definiens • ESRI • Intergraph • ERDAS • Oracle • Full list online: http://www.unigis.net/about/technology-partners
Implementing partners	• Salzburg University: http://salzburg.unigis.net/
Targeted geography	• GIS Professionals Worldwide
Target user group	• Thematic: N/A • Copernicus service: all • User categories: GIS Professionals Worldwide
Website address / contact details	• http://www.unigis.net/
Reference Documents	
Description	UNIGIS is the global, virtual, and multilingual network of GIScience. UNIGIS meets the needs of the GI industry and provide an understanding of the conceptual, technical and organisational aspects of GIScience. UNIGIS is an exclusive and growing worldwide network of higher education institutions dedicated to enhance the competence of GIS professionals. Members from all over the world offer internationally recognized study programmes and qualifications. The UNIGIS network benefits from expertise drawn from an international group of over 50 GI-specialists.
Impact potential	• U4-U5
Actual impact	• U3-U4
Areas for improvement	• Bridging the gap between scientific education and company needs with a clear focus on existing COPERNICUS services • Identification of future needs that provide possibilities for companies to develop latest solutions including EO data, remote sensing and GI technology.
Best practice & scaling opportunity	

Reference number	INT.11
Initiative name	**UNIGIS u_Lectures**
Initiative type	Promotional activities (P); User feedback, training and education (U)
Period active	• N/A
Frequency	• N/A
Scale	• International
Indicative budget	• N/A
Client / organisational partners	• UNIGIS Network • Invited speakers from academia, GI industry, public administration, NGOs and further actors in the field of Geoinformatics and GIScience
Implementing partners	• N/A
Targeted geography	• international
Target user group	• Thematic: N/A • Copernicus service: • User categories:
Website address / contact details	• http://www.unigis.net/study-with-UNIGIS/ulectures
Reference Documents	
Description	• This online lecture series serves as a professional and academic ‚updating' opportunity within generic ‚lifelong learning' framework.
Impact potential	• P4-5, U4-5
Actual impact	• P4, U4
Areas for improvement	• Link with centralised Copernicus information exchange platform (to be created)
Best practice & scaling opportunity	

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