

NEREUS Working Paper on Space Economic  
Diplomacy:

**RECOMMENDATIONS FOR A BROADER SCOPE  
OF INTERNATIONALISATION ACTIVITIES**

## BRIEFING NOTE on SPACE ECONOMIC DIPLOMACY

Following the launch of the Space Strategy for Europe by the European Commission (October 2016), DG GROW and the European External Action Service (EEAS) are working together on developing a new concept, namely "**Space Economic Diplomacy**", including a set of actions reinforcing Europe's role in the global space arena. An important element in this context is the support by the EU's delegations in third countries to European businesses in an international context. The idea of space economic diplomacy builds upon the EC-reflection paper on "*Harnessing globalisation*" (May 2017), which dedicates a specific section to the space sector and suggests three main actions to be further explored: the external investment plan, to create investment opportunities for European space companies; a proactive European economic diplomacy; a significant effort towards climate change solutions, where space technologies are essential.

In order to support the internationalisation of Europe's space sector in the global market, DG GROW and the EEAS organized a stakeholder consultation of the upstream industry, and EUROSPACE (European umbrella organization of Space Manufacturers) issued a position paper. In September, the downstream sector was consulted via a stakeholder meeting, and NEREUS joined together with EARSC (European Association of Remote Sensing Companies)<sup>1</sup>, ESOA (European Satellite Operators)<sup>2</sup> and Galileo Services<sup>3</sup>. Participating stakeholder representatives were then asked to contribute to the overall strategy by submitting a position paper highlighting concrete initiatives, which could be implemented by EU's delegations in third countries. NEREUS was called upon to represent the voice and experiences of regions in this field and bring into the discussion the regional dimension, e.g. approaches by regional administrations to support the internationalisation of SMEs in the space sector, activities of regional aerospace clusters and districts, regional networks and how this can interact with EU initiatives at a global scale.

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<sup>1</sup> EARSC promotes the use of Earth Observation (EO) technology and, in particular, of the EO geo-information services industry.

<sup>2</sup> ESOA represents the interests of all EMEA satellite operators who deliver information communication services across the globe.

<sup>3</sup> Galileo Services is an organization designed to be a major part of the Galileo downstream technology and business development (terminals, applications and services), with a view to sustain the Galileo programme.

## INTRODUCTION

As *Network of European Regions Using Space Technologies*, NEREUS advocates the regional dimension of European space policies and programs and offers a dynamic platform to regions and their stakeholders to better exploit the benefits of space applications for public policies and growth in their territories. Public outreach, awareness raising and promoting a better understanding of space are amongst the core mission of the network.

The network distinguishes itself by bringing the views **of public users but also the commercial service providing businesses and research** into the discussion on space economic diplomacy. A broad range of member organizations representing academia, industry and SMEs<sup>4</sup> have been consulted for this Position Paper.

## RECOMMENDATIONS FOR A BROADER SCOPE OF INTERNATIONALISATION ACTIVITIES

**Above all, NEREUS calls upon a broader scope of internationalization activities putting strong emphasis on promoting European success stories of public users and transfer of knowledge which should be delivered as a comprehensive regional industrial system. Efforts should not be reduced to technology transfer and export of space-based products and services, but address the entire value chain of the downstream sector, looking at both the supply and demand side and thus also include the know-how developed in terms of the reinforcement of public user uptake and societal utility.**

**On this account NEREUS recommends a set of new approaches and actions:**

### **I. Public user as ambassadors for European expertise and quality**

Working for over a decade with regional space uses and users, NEREUS experienced that **public users** are a **large and significant customer group** that drives demand and has thus a key role in the interplay of demand and supply side. They are the level closest to the citizen with a significant expenditure capability in and outside Europe and thus should be increasingly in the focus of internationalisation strategies as a specific target group.

For this reason NEREUS recommends to invite European public user (Local and Regional Authorities) to join initiatives that aim to promote European space systems outside Europe (e.g. fairs and delegation trips to third countries) and serve as ambassadors for European success stories, **promoting their positive experience and giving a vivid testimony of the benefits of space uses for territories and their citizen. They should speak for European capabilities and expertise to their homologues in third countries.**

### **II. Learning from user-uptake efforts in Europe**

In the context of addressing the public user outside Europe, economic diplomacy endeavours should be enriched with the learnings from user-uptake-strategies in Europe and contribute to stimulating demand. NEREUS has defined four core obstacles to user-uptake of space technologies at regional scale<sup>5</sup>: political, technological, financial and social. European approaches to overcome these obstacles can serve as best practice examples to attract public users in third countries and raise the acceptance of European space based services and products globally.

To quote some examples for these activities:

- **targeted and moderated dialogue between public user and service providers,**

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<sup>4</sup> List of NEREUS-members (Full Members and Associate Members) see Annex II

<sup>5</sup> In the frame of a joint project with the European Space Agency, NEREUS delivered an in-depth analysis on the obstacles to Copernicus user uptake among local and regional authorities, suggesting ways to overcome them. The four core obstacles can be expanded to other space technologies.

- **dialogue between the political and the technical level of public users,**
- **targeted promotion material and**
- **specific training/education for public user.**

Strong and convincing promotional material<sup>6</sup>, e.g. illustrative examples demonstrating how space technologies contribute to better informed decision-making and long-term planning, raise efficiency, smarter spending, is the important starting point for all target groups. Therefore Internationalisation strategies should include the **identification of suitable European promotion material but also the development of promotional material tailored to the needs of third countries.**

Europe gained in the past years considerable experience with training and education measures related to the use of space (Copernicus and Galileo). To quote some European initiatives such as the Copernicus Training and Information Sessions, the Copernicus Video Tutorials<sup>7</sup> or the dedicated training modules developed by Copernicus Services and the European Space Agency could serve as examples. **Building on this expertise it is recommended that the offer of European space based services and products should be complemented with specific training and education measures tailored to the needs of public users in third countries, considering public competences, territorial strategies and thematic needs.** This might be also a unique selling point of European capabilities as it demonstrates that technology transfer comes with skills and knowledge and contributes to present services and products as part of an industrial system.

### **III. Building on the experience of European space clusters and districts**

The protagonists for network activities are in many member regions aerospace districts, aerospace cluster and regional networks<sup>8</sup> that have considerable experience with supporting SME and entrepreneurs with doing business in and outside Europe. NEREUS recommends building on the successful experience of clusters, aerospace districts, boosters (France) as a pillar of the space economic diplomacy:

- a. **Mapping and presenting EU success stories abroad** with the objective to showcase the capabilities of the EU's space sector as a domain that has stemmed from regional ecosystems to global arenas.
- b. The model of European space clusters and districts (triple helix structure<sup>9</sup>) is for different reasons met with great interest by countries outside Europe. Space cluster/districts make the link between the identification of public needs and the fine-tuning of available services by commercial service providers. **Therefore they could serve as an ideal scale for exporting space capabilities as a comprehensive industrial system.**
- c. NEREUS stakeholders underlined the interest of third countries to rather buy the infrastructure than the services and products. To this end the network recommends to combine the marketing and promotion of space based services and products with opportunities of cooperation. **Space clusters, districts etc. could be a point of reference for Europe and contribute to develop suitable cooperation initiatives** such as Copernicus hub development centre or centres that provide access to Copernicus data etc., or establish "best practices exchanging platforms".
- d. Internationalisation is a competence of national authorities<sup>10</sup> and only in some countries it is shared with the regional level. However, due to the significance of the regional ecosystem for Europe's economy and growth, the regional dimension should be emphasized in internationalisation strategies and better financially equipped.

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<sup>6</sup> Material especially targeted towards public authorities, to serve as a basis for the dialogue between politicians, as well as between the political and the technical level developed by NEREUS could serve as an example.

<sup>7</sup> Developed by DG GROWTH in the frame of the Copernicus-User-Uptake Framework contract

<sup>8</sup> see Annex I – List of Cluster organizations present on the NEREUS-platform

<sup>9</sup> The Triple Helix thesis<sup>9</sup> is that the potential for innovation and economic development in a Knowledge Society lies in a more prominent role for the university and in the hybridisation of elements from university, industry and government to generate new institutional and social formats for the production, transfer and application of knowledge.

<sup>10</sup> E.g. Foreign Affairs Ministry, Trade, etc.

#### IV. Enhancing support by EU delegations

Considering that the EU plays a fundamental role in the International Relations with almost all countries worldwide and in different fields, such as the promotion of human rights, trade, development and humanitarian aid and working with multilateral organisations, depending on the different countries' priorities. The EU is the largest donor of development finance around the world, therefore, for better defining the possible support of EU delegation to EU space actors it is important to consider in which specific Third Country<sup>11</sup> support is needed.

##### a. Strengthening the role of EU-delegations as a reference for advice and support

The network welcomes the fact that EU delegations have been instructed with implementing specific measures to support the space sector in third countries. NEREUS-stakeholder identified a reliable information base **on the relevant market and economy in respective third** countries as crucial for their decision to engage and invest in activities abroad. EU-delegations should be equipped to provide interested companies with market analysis and condensed information on the economy of the respective country, including market structures, future trends and specificities.

More specifically stakeholders highlighted also the difficulties when doing business with the public sector outside Europe, referring to public procurement, public service contracts and payment procedures, IPR, custom duties, import regulations etc. It would be important to build the expertise and knowledge on these matters in EU-delegations so that they can better serve the needs of space businesses and reduce the risk of investment.

##### b. Introducing the public user dimension in internationalization actions targeting b2b

Considering the key role of the public sector in third countries (see above), **EU-delegations could act as facilitators identifying public users, their competences and their needs to which commercial service providers from Europe could respond.** They could support the contact initiation and foster b2b encounters with a focus on the public user. European stakeholder associations which have a thorough sectorial knowledge and a broad overview on the European scene (e.g. available products and services, European success stories) could facilitate these matchmaking efforts of EU-delegations.

#### V. Emphasising the role of space applications and identifying sectors with high-relevance for public user in respective third countries

With view to up-scaling the dimension of space in the internationalisation and international cooperation strategy, **NEREUS recommends an in-depth analysis of relevant programs<sup>12</sup>**, to better demonstrate the cross-cutting impact of space on economic and industrial domains with high-relevance to the public sector in third countries. Following the rationale behind the definition of regional smart specialisation strategies an overall internationalization strategy should be defined and implemented starting from the identification of pressing needs of the public sector in respective third countries. Sectors where the Union has a strategic interest or which are vital for the development of cooperation such as food security, emergency management, water management and maritime affairs, urbanisation should be underlined.

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<sup>11</sup> Relations with developed countries (Canada, China, India, Japan, Russia and the United States); European Neighbourhood Policy (ENP)(Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco, Syria, Tunisia, Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine); Relations with developing countries; Asia & Latin America;

<sup>12</sup> (Ex: European Development Fund, European Neighbourhood Instrument, Horizon 2020, COSME, Humanitarian aid and civil protection, etc.)

Annex I: List of Cluster present on NEREUS-platform

Country	Region	Entity	Website
Belgium	Wallonie	SKWYIN WALLONIE	<a href="http://www.skywin.be/en">http://www.skywin.be/en</a>
France	Midi- Pyrénées	Aerospace Valley	<a href="http://www.aerospace-valley.com/en">http://www.aerospace-valley.com/en</a>
Germany	Bavaria	bavAIRia e.V.	<a href="http://www.bavaria.net/bavaria-ev/">http://www.bavaria.net/bavaria-ev/</a>
Germany	Brandenbu rg	Berlin Brandenburg Aerospace Alliance	
Germany	Bremen	WFB Bremen	<a href="https://www.wfb-bremen.de/en/page/bremeninvest-start">https://www.wfb-bremen.de/en/page/bremeninvest-start</a>
Italy	Puglia	DTA (The Apulian Aerospace District)	<a href="http://www.dtascarl.it/en/">http://www.dtascarl.it/en/</a>
Italy	Basilicata	TeRN consortium	<a href="http://www.tern.it/">http://www.tern.it/</a>
Italy	Lazio	Distretto Aerospaziale Lazio	<a href="http://www.lazio-aerospazio.it/en/home">http://www.lazio-aerospazio.it/en/home</a>
Italy	Lombardia	Distretto Aerospaziale Lombardo	<a href="http://www.aerospacelombardia.it/aerospace/cms2.nsf/fe_home_new?Readform">http://www.aerospacelombardia.it/aerospace/cms2.nsf/fe_home_new?Readform</a>
Italy	Piemonte	Torino Piemonte Aerospace	<a href="https://www.aero-mag.com/piedmont-leads-the-way/">https://www.aero-mag.com/piedmont-leads-the-way/</a>
Italy	Veneto	Veneto Innovazione Spa	<a href="http://www.venetoinnovazione.it/?q=eng">http://www.venetoinnovazione.it/?q=eng</a>
Italy	Sardinia	Distretto Aerospaziale Sardegna	<a href="http://www.dassardegna.eu/">http://www.dassardegna.eu/</a>
Poland	Mazovia	Mazovia Region	
Spain	Madrid	Cluster Aeroespacial	<a href="http://www.madridaerospace.es/en/">http://www.madridaerospace.es/en/</a>
Greece	Attica	Si-cluster	<a href="http://www.si-cluster.gr/en">http://www.si-cluster.gr/en</a>

## The NEREUS Regions (\*) - Full Members

1. Abruzzo (Italy)
2. Andalusia (Spain)
3. Apulia (Italy)
4. Azores (Portugal)
5. Baden-Württemberg (Germany)
6. Basilicata (Italy)
7. Bavaria (Germany)
8. Brandenburg (Germany)
9. Brittany (France)
10. East Midlands (United Kingdom)
11. Free Hanseatic City of Bremen (Germany)
12. French Guiana (France)
13. Hesse (Germany)
14. Occitanie (France)
15. Lazio (Italy)
16. Lombardy (Italy)
17. Madrid (Spain)
18. Mazovia (Poland)
19. Nouvelle Aquitaine (France)
20. Piedmont (Italy)
21. Podkarpackie (Poland)
22. Provence-Alpes-Côte d'Azur – PACA (France)
23. South Holland (Netherlands)
24. Tuscany (Italy)
25. Veneto (Italy)
26. Wallonia (Belgium)

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## The NEREUS Associate Members (\*)

1. ASI – Agenzia Spaziale Italiana (Lazio)
2. AIPAS (Lazio)
3. Airbus Defence and Space (Occitanie)
4. ALTEC SpA (Piedmont)
5. AvioSpace (Piedmont)
6. Compagnia Generale per lo Spazio, CGS SpA (Lombardy)
7. Centre d'Etudes et d'Expertise sur les Risques, l'Environnement, la Mobilité et l'Aménagement CEREMA (Occitanie)
8. Centre National d'Etudes Spatiales, CNES (Occitanie)
9. Instituto de Investigacao em Vulcanologia e Avaliacao de Riscos, IVAR (former CVARG) (Azores)
10. Centro Interdipartimentale Studi e Attività Spaziali, CISAS, «G. Colombo» (Veneto)
11. Cité de l'Espace (Occitanie)
12. Conftrasporto - Confcommercio Imprese per l'Italia
13. Consorzio per la Gestione di Coordinamento delle Attività di Ricerca Inerenti il Sistema Lagunare di Venezia, CORILA (Veneto)

14. Consorzio per le Technologie per le Osservazioni della Terra e dei Rischi Naturali, TeRN (Basilicata)
15. Distretto Aerospaziale Sardegna (Sardinia)
16. EDISOFT SA (Azores)
17. EURAC European Research Academy (South Tyrol)
18. FEUGA (Galicia)
19. FFG, Austrian Research Promotion Agency (City of Vienna)
20. Geoville Information Systems (Innsbruck)
21. GIS Bretagne Télédétection (BreTel) (Brittany)
22. Institute for Electromagnetic Sensing of the Environment, IREA CNR UOS, Milan (Lombardy)
23. Interbalkan Environment Center, i-BEC (Lagadas, Greece)
24. Observatoire Midi-Pyrénées (Occitanie)
25. Pole Mer Bretagne (Brittany)
26. Politecnico di Milano, B.E.S.T. Department (Lombardy)
27. Politecnico di Torino (Piedmont)
28. Società Aerospaziale Mediterranea, SAM (Campania)
29. SES SA (Luxembourg)
30. SPACETEC Partners
31. Spanish Association of Telecommunication Engineers, AEIT (Madrid)
32. TECHNAPOLI (Campania)
33. TELESPAZIO FRANCE (Midi-Pyrénées)
34. Thales Alenia Space
35. Toscana Spazio (Tuscany)
36. University of Bologna (Emilia Romagna)
37. University of Turin (Piedmont)