Partnership models for the benefit of space-based services
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Identifying innovative funding mechanisms

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Erich Klock
Manager of the IAP Ambassador Platform for the CEE Region
European Space Policy Institute
(erich.klock@espi.or.at)

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Introduction

1. Long-term sustainable cooperation between the public and the private sector
2. Fund and operate infrastructures and/or services
3. In general PPPs should be enablers to develop new services and technologies
4. Opportunity of creating strategic partnerships
5. Increasingly used in infrastructure sectors
6. Traditional PPPs are used for road and airport construction, operation of public infrastructure, etc.
7. Number and importance of partnerships will have to increase in the future, due to economic situation

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PPP in the European space sector

1. Use of PPP for space infrastructure projects is well known (in SatCom, SatNav, and Earth Observation)
2. Every project has different requirements - no standard partnership model used for space projects
3. Attractive option to finance space-related activities
4. It seems as if PPP had to some extent fallen into disrepute
5. Important:
   a. long term commitments by the public sector
   b. Experienced players for this complex set of contracts
6. Is ESA the ideal partner?

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Examples of European space PPPs

Project	Public partner	Private partner	PPP model	Purpose
Alphasat	ESA, UK Government	Inmarsat	BOO	Satcom
Skynet 5	UK MoD	Paradigm Secure	PFI	Secure satcom services (military)
Hylas	ESA	Avanti	BOO	Broadband and broadcast services
TerraSAR-X	DLR	EADS Astrium	Alliancing	High-quality radar images
Satcom BW	German MoD	EADS Astrium, ND SatCom	Service Contract	Secure communications system (military)

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Partnerships for space-based services

1. Only few examples of PPP for space-based services
2. Developing sustainable services is a big challenge
   a. Transition to operational services is crucial;
   b. ESA programmes today only cover the development of new services up to the end of a demonstration phase;
   c. Many die when public funding ends;
   d. Business models can be complex and non-standard
   e. Scale of financing services might be small relative to the effort;
   f. Economic efficiency of a service over its lifetime.
3. New co-funding solutions necessary to overcome the "valley of death"
4. Traditional models may not be so helpful or relevant as they are for infrastructure projects

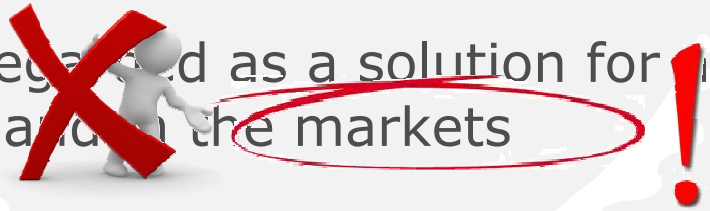
Key issues

1. Set clear goals and agree on a common goal

2. PPPs are time consuming

2. Avoid unclear distribution of risks and competences

3. PPP sometimes regarded as a solution for a lack of clear demand on the markets



4. PPP should not only be considered as financing instrument

Risk sharing as a key element

1. Financial risks
   a. Economic efficiency of the service over its lifetime
2. Operational risks
   a. Technical reliability
3. Market risks
   a. Service maturity with respect to the market demands
4. Legal/regulatory risks
   a. National laws and regulations
   b. Political risks

Risks should be allocated to the parties that manage them best.

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Earth Observation
Tele-communication
Navigation
➔ Developing new services for new user communities
User Demand
Feasibility Study
Demo
Operational Service

Role & Objectives of IAP Ambassador Platforms

a. To **identify and penetrate** new user communities.

b. To **build awareness** of the potential of space-based services among users who are unfamiliar with them.

c. To be an **"honest broker"** between ESA, potential users, service providers and other stakeholders who are interested in participating in the ARTES applications programmes.

d. To **motivate** players to submit viable proposals, and/or to propose partnerships with ESA, where IAP or ARTES 3-4 might be instrumental in meeting user needs.

e. To **federate demand**, creating a critical mass for the development of satellite applications that can lead to sustainable services.

The network of Ambassador Platforms

1. A **growing European network**:
   a. Eight operational IAP Ambassador Platforms;
   b. Several more in preparation;
   c. ESA is looking for more…
2. Each AP has **thematic and/or geographic expertise** and responsibility.
3. Hosted by **institutions/professional organizations** that meet key criteria:
   a. Neutral and trusted as honest brokers;
   b. Expert in their domain with strong local knowledge, experience and contacts with decision-makers, stakeholders, industry and institutions;
   c. Credible as a regional/national entry point to ARTES applications programmes.

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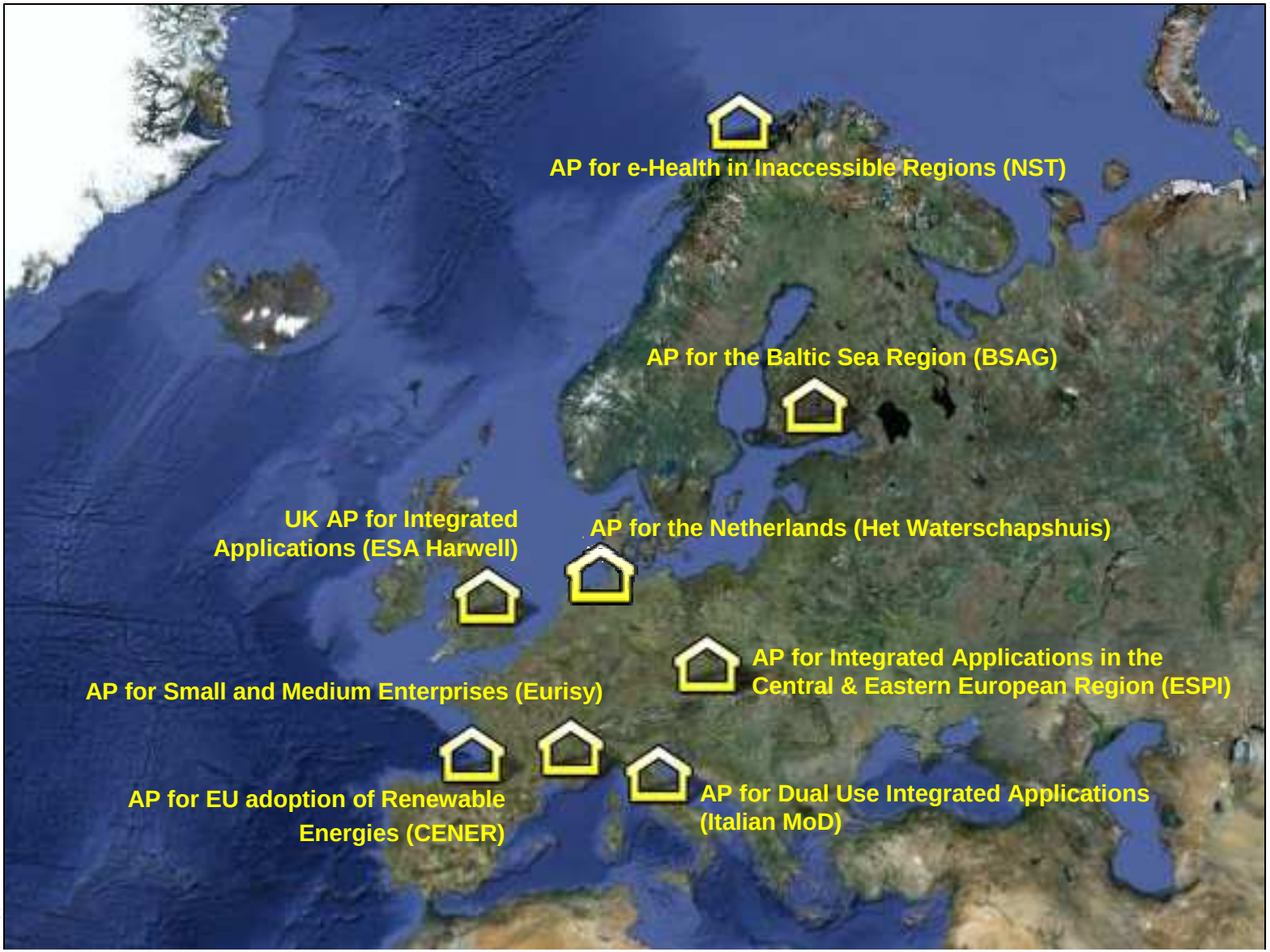
Network of IAP Ambassador Platforms



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Ambassador Platform network

Hosted by the Baltic Sea Action Group (BSAG) in Helsinki.

Hosted by the European Space Policy Institute (ESPI) in Vienna.

Hosted by the Office of the Advisor for Aerospace Activities Italian Ministry of Defence (CIRA) in Rome.

Hosted by the National Renewable Energy Centre of Spain (CENER).

Hosted by The Norwegian Centre for Integrated Care and Telemedicine (NST) in Tromso.

Hosted by the ESA office at Harwell in the United Kingdom.

Hosted by Eurisy in Paris

Hosted by Het Waterschapshuis in the Netherlands.

IAP programme – status quo

1. After 3 years of effective operation
   a. > 75 activities; in various cooperation/partnership models
   b. > 50 studies and projects currently underway.
2. ITT on the applicability of PPP in the development of space-based services will be released by end of 2012; €250k ESA funding
3. Aims to identify and define optimum models for PPP in the context of space-based services and applications:
   a. should include various forms of 3rd party funding partnerships;
   b. Characterisation and identification of the most appropriate kinds of space-based services and projects for PPP;
   c. Make concrete recommendations on the optimum PPP models for IAP projects.

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Conclusions (I)

1. **Lessons learned from past examples** have to be considered
2. **No space PPP** has yet **reached its natural end**
3. **No single model** has turned out as **dominant** in the space sector
4. **Partnership model** itself is **less important** than other key elements (e.g. pre-planning of how to handle risks)
5. PPP does **not** automatically **solve all issues**
6. **Understanding of the market** of interest is indispensable
7. Space industry and investors often don't **speak the "same language"**

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Conclusions (II)

8. **Critical success factors** include
   a. Realistic expectations and clear objectives;
   b. Real market that is quantifiable and long term;
   c. Clarity of agreements rather than formality;
   d. Pre-planning of how to handle failure, success, or neither;
   e. The partnership must be a win-win situation for both sides;
   f. Risk sharing.
9. **Stop thinking** about partnership models **as funding mechanisms**
10. **Focus on the partnership aspect**, be more flexible and open minded when developing third party arrangements

Thank you for your attention!

Questions?

erich.klock@espi.or.at