EO Service Sector Representation

Report T3: Analysis of Services

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Prepared by	:	.....	Gill Joy Consultant, ESYS plc
Reviewed by	:	.....	Matthew Stuttard EO Principal Consultant
Approved (LogicaCMG)	:	.....	Chetan Pradhan Project Manager
Agreed (Customer)	:	.....	Philippe Bally Technical Officer, ESA-ESRIN

Distribution List

Name	Organisation
Philippe Bally, Stephen Coulson	ESA-ESRIN
Matthew Stuttard, Chetan Pradhan	LogicaCMG
Paul Kamoun, Mónica Miguel-Lago	EARSC
Jörgen Hartnor, Jörgen Forsgren	Metria
Birgitte Holt Andersen	ControlWare
Gill Joy, Nina Costa	ESYS
Des Power, Charles Randell	C-CORE

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Executive Summary

This part of the eoVox study – Task 3 – has looked at the services that and EO trade association (EOTA) might offer its members. It follows on from the survey of the EO industry in Task 1 and the work in Task 2 to identify candidate missions for an EOTA (the definition of a mission is taken as **a group of services for a specific audience** and a Service is defined here as **an activity required to deliver a mission.**

A wide ranging analysis has been undertaken looking at

- all potential services that an EO trade association (EOTA) might provide including cost indications, beneficiaries and any barriers
- existing services provided by European industry associations in EO related domains including examples of common issues and individual services relevant to future EOTA provision
- services provided by other associations (scientific, public sector etc) in Europe in EO-related domains, identifying areas of overlap or conflict with industry associations
- "External" analysis and benchmarking of associations in other market sectors (music, biotechnology, smartcards and content management) and in other regions (USA and Canada)

Analysis & Findings

All potential services

The prioritised list of candidate missions identified in Task 2 were further analysed to define which services might be required for each. These covered Upstream, Midstream and Downstream actors and highlighted the scale of effort (cost) required to deliver them and any barriers to provision. A non-exhaustive list of potential services was produced which is summarised below. Note that in the main text the services for each beneficiary audience are dealt with separately.

MISSION	TARGET OF ACTIVITY	EXAMPLES OF SERVICES	EFFORT REQUIRED/BARRIERS
Platform for networking	Internal EO VACs, EU research bodies	Directory of competencies (companies and R&D institutions) Tools for info sharing, joint developments Networking events Links to innovation/IPR agencies for EO	Low cost? EOTA needs to avoid direct intervention in VAC operations or favouring individual companies
Keep track of programmes	Pan-European R&D bodies, public satellite investors	Regular meetings with stakeholders Gather VAC views and feedback to progs Lobbying when new	Medium cost May conflict with others outside EO VACs (R&D community who favour scientific missions, ESA

MISSION	TARGET OF ACTIVITY	EXAMPLES OF SERVICES	EFFORT REQUIRED/BARRIERS
		R&D programmes/missions designed	mainly R&D focused, aerospace own interests)
Raise awareness of EO	User associations, EU public operational bodies	User-focused promotional materials Presentations at events on behalf of EO industry Links on User Assoc websites Meet key stakeholders	Medium cost No conflict provided all VAC application areas covered
Promote capability of EO companies	International initiatives, ESA, EC, User associations, Public operational bodies, public satellite investors	Directories of expertise Ongoing links with stakeholders Timely information on initiatives to EO VACs Promote VACs at events Promotional materials	Low-Medium cost for public bodies Med-High cost for Users and operational bodies No conflict if all members have access to information and are promoted equitably
Representation of EO service sector	Pan European R&D funding bodies, public satellite investors, EC, ESA	Formal role on key decision making bodies Pro-active Intelligence /information on policy developments Consultation responses	Low-medium cost Process and information must be open to all members

Existing services (industry associations and other associations in EO-related sectors)

Prior to the analysis of existing services, a review was undertaken of all the main issues facing the EO service sector and which an EOTA would need to address and these included:

- patchy coverage of EO interests at national and European levels – EO is currently a subset of other interests like GI and space
- EO service sector overly dependent on public funding programmes – technology led
- EO VACs are mainly small-medium companies who are generally sceptical about the benefits representative organisations provide and have little time/money to contribute unless there are clearly defined "wins" in the short term
- existing associations face similar development challenges but can end up competing for members as there is no common mechanism for collaboration across EO and related areas and no shared strategy or roadmap

- the value chain for EO is complex so representation can be complex – ending up with an industry "wish-list" for growth that is too long and unfocused

- Existing links with research & innovation structures are weak in the EO area

The review of existing associations in EO and related domains reveals a wide variety of relevant services addressing all the priority missions identified for an EOTA. However provision is fragmented across different types of organisation. EO industry interests are covered by EARSC and related national associations, however there is in sufficient capacity within these organisations (manpower in secretariat, revenue from membership fees) to fully integrate EO industry interests within the wider industry support structure.

There are many examples of existing services which offer scope for replication in an EO context or services where an EOTA could collaborate with existing providers to meet the needs of EO VACs.

Technical Working Groups and Special Interest Groups are a common mechanism for other associations (industry and scientific) to promote **Networking** as are newsletters, events and website "members-only" areas. For some associations, networking support extends to consortium building and publishing business opportunities. This is a priority area for an EOTA but with many potential services to offer, careful planning and collaboration with others will be required to deliver the most cost-effective solution.

Influencing key programmes concerns all associations who offer a range of services to keep members in touch with development and feedback views to policy makers. However each association has its own agenda so, for an EOTA, there may be areas of potential conflict of interest. Nevertheless some coordination of approaches to programme funding bodies could be beneficial for reconciling EO industry and research requirements or presenting views from EO and other related industries in a coherent way.

Services geared to **raising awareness** present many interesting examples for an EOTA to consider – competitions to reward technological innovations, industry summits, promotional brochures, facts and figures documents and direct approaches to potential clients. For users, the distinction between earth observation and other related technologies may not be clear (or even that important) so an EOTA faces significant challenges raising awareness of EO. Promotional activities by the space industry and geospatial information sector may compete with those of EO in an information-rich environment.

Promoting members' capabilities is achieved mainly through directories (often online) and giving presentations at, or organising, events. Industry summits and workshops provide direct opportunities to highlight company expertise however an EOTA must ensure that this is done in an equitable way not favouring any particular members.

The extent and quality of communications with user audiences varies across different associations – the best examples tend to be in industry associations where customised information has been presented online for different market application areas

Some associations go beyond promoting capability by supporting skills development for their members. According to the T1 survey, this is not a priority area for VACs. The EARSeL association for remote sensing laboratories has a specific remit to develop skills and promote R&D in EO-related areas and would be a useful partner.

Representation services from existing associations are heavily skewed towards lobbying European Commission and European Space Agency and the challenge here for an EOTA is to decide how to position its activities vis à vis those of others when representing different

members' interests. A hybrid approach appears to offer the best solution. The role of EARSC with respect to ESA is already an important channel that can be further developed as is the relationship with other significant European-level representation groups such as Eurogi and Eurospace. (EARSC and EARSeL submitted a joint position paper in 2005) The UKISC Case for Space activity is an interesting mechanism for representation as it translates the industry agenda into wider benefits for the economy (albeit at national level).

General business and innovation support services are available from a number of European Commission and ESA-supported networks and programmes. However these are not currently promoted by existing associations to their members nor integrated in their service portfolios, despite the fact that they offer valuable (and usually free) support to help SMEs innovate, build capacity or exploit their R&D results more effectively. An EOTA could link in to such services in order to expand its support to SMEs without incurring additional costs or duplicating effort.

Comparison of service portfolio for EOTA with EO associations in other regions

In the final element of Task 3, the EOTA proposed service portfolio has been compared to a broad spectrum of North American representative bodies, including the Canadian Institute of Geomatics (CIG), the Alliance for Earth Observation (AEO), the Geospatial Information and Technology Association (GITA) and Geoconnections. EARSC has also been included as a benchmark as it is the main EO trade association currently operating in Europe.

Key findings are:

- significant amount of similarities between all organisations
- majority of North American organisations analysed are not entirely focused on EO, but rather include EO in their mandate
- CIG is perhaps the only organisation focused on interests of VACs. Given that CIG is primarily for geomatics, this appears to leave significant room in North America for a representative body that focuses on Earth Observation.
- the EOTA has almost ALL of the characteristics of the other representative bodies. This suggests that proposal for EOTA is rather ambitious but it is identically what the industry needs for representation. At least some public funding would be needed to deliver these services
- A number of mandates not currently envisioned for EOTA that are of specific interest include scholarships, access to geospatial data, focus on industry-academia-government partnerships, applications development and research sponsorship.
- It is noteworthy that the membership fees to industry bodies that sponsor research are quite significant (in the tens of thousands of Euros), perhaps well above the means of most small VACs.

Associations in other sectors

Services provided by industry associations representing the music, biotechnology, smartcard and content management industries were reviewed in order to compare their approach and missions to those for EO-related associations.

A number of issues proved useful to consider in an EO context:

- Factors for success appear to be ability to bring tangible benefits to members. For IFPI this has been the fight against music piracy, AIIM provides a rich source of information on products and services as well as accredited training, EuropaBio has made strong progress in lobbying EU institutions on behalf of industry in controversial areas and EuroSmart has helped small, diverse smart card companies focus their efforts whilst working across a wide range of applications.

- An EOTA can emulate aspects of these associations work through:

    - working towards a favourable legal situation in relation to copyright and IPR issues for members

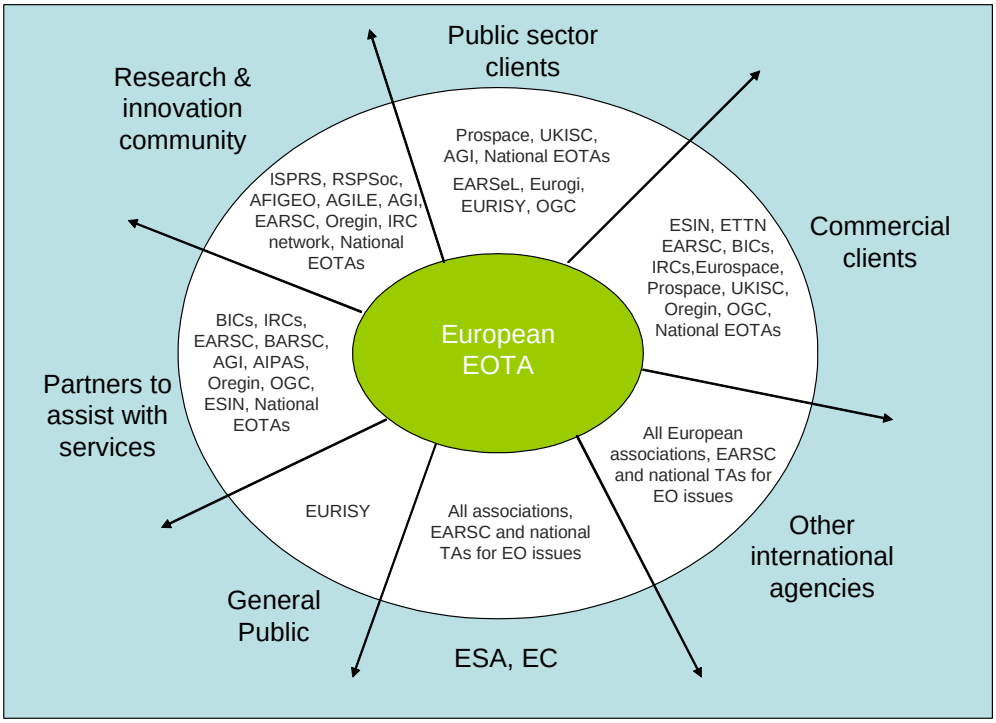
    - providing authoritative and independent information on EO products and services in an easily-accessed format

    - lobbying at European level but with the co-operation of national organisations

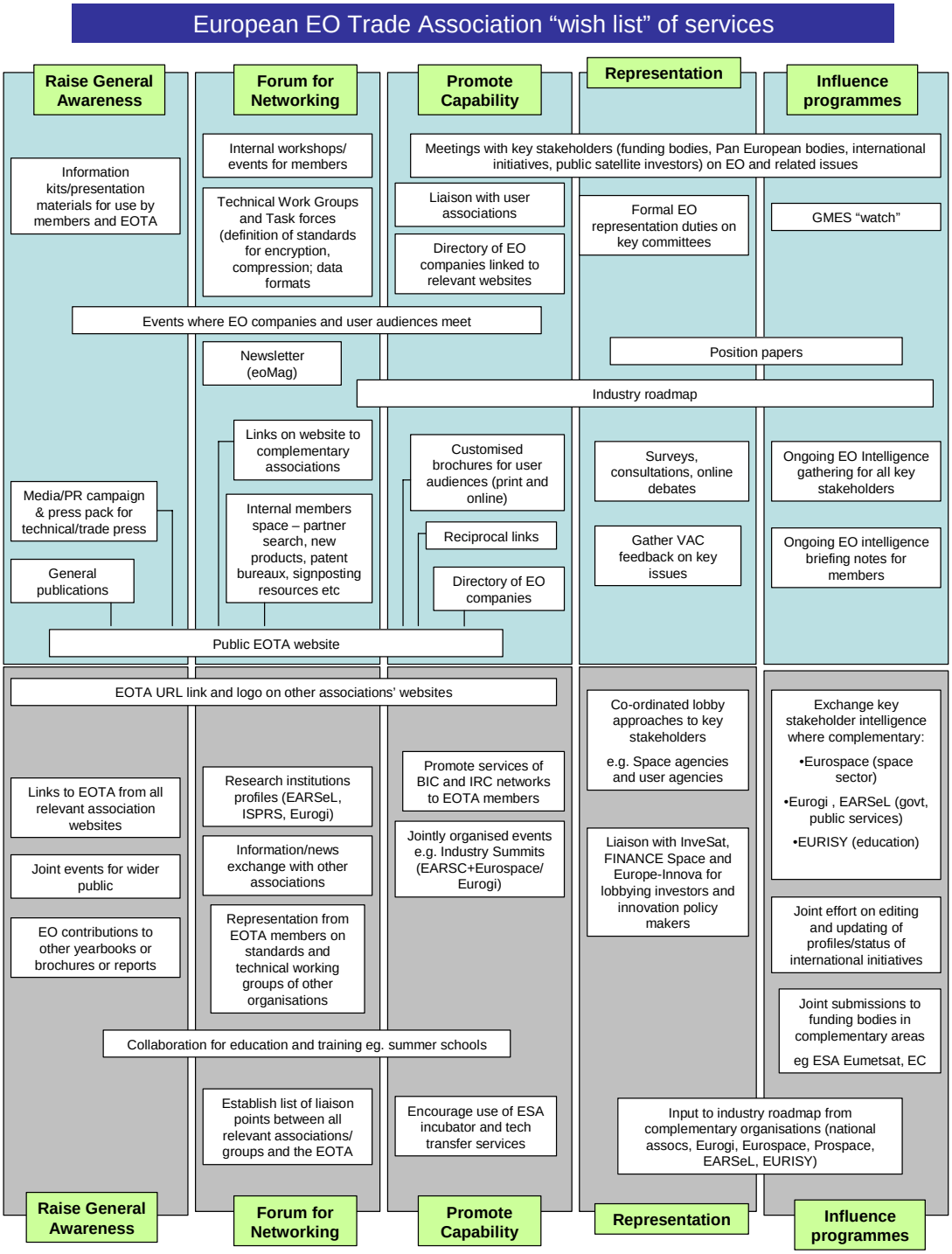
    - educating the markets that members wish to penetrate through high level information campaigns

Proposed service portfolio

Findings from the review and analysis in Task 3 have informed the proposals for an EOTA service portfolio. The illustration below demonstrates the areas where an EOTA and other associations are undertaking activities for a common target audience and where there would be scope for collaboration or coordination.



The following illustration shows which services could be delivered by an EOTA including those that should be delivered either by, or in collaboration with, other organisations (shown in grey boxes).



Open issues and feedback from stakeholders

A number of open issues require to be taken forward for further discussion at the consultation workshop in September 2006 and for further analysis during Task 4. Feedback from industry and stakeholders is welcome via the eoVox website www.eovox.org. The following questions are of particular interest:

a) Although only the "Top 15 missions" have been considered this already produces a very challenging list of services to organise. **Is the proposed service portfolio too ambitious?**

b) **What conditions need to be in place to advance the development of a roadmap for the EO industry?** (e.g. agreement from key stakeholders that a roadmap is needed, willingness to share strategic vision if not tactical solutions)

c) To what extent **should an EOTA develop its own services and branding/identity** as opposed to promoting EO interests within existing associations (eg GI)?

d) The potential services proposed in the preceding sections cover a wide range of audiences – Upstream, Downstream and the Midstream actors (including the VACs themselves). **Which of these audiences should be the main focus for an EOTA?**

e) In order to deliver these services, a multi-skilled team is required combining expertise at different levels. **What are the most important skills required in an EOTA team to deliver benefits for members?**

f) There are many potential services an EOTA could deliver – more than a small secretariat could cover. **To what extent will VACs be willing or able to contribute their time/resources to help deliver EOTA services?**

g) Membership fees alone would be unlikely to cover the costs of a relevant service portfolio. Probably there would be a need for the EO TA to generate income for instance by charging additional fees for events as well as seeking long-term contributions from the actors that would benefit from a healthy EO value-adding industry, e.g. the Pan-European R&D Funding Agencies, the Aerospace Industry and the Public Satellite Investors/Mission Operators. **Will VACs accept such an approach to raising additional income?**

h) **Is this analysis of services sufficiently comprehensive?**

i) **What experiences do you have that support our findings about services?**

In addition, industry and other stakeholders are invited to submit their comments on the proposed service portfolio – a proforma is available in Appendix B of this report which can be submitted to www.eovox.org. We encourage all comments – these will be reviewed at the consultation workshop in September 2006.

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1 Introduction

1.1 Purpose

The EO Service Sector Representation (eoVox) project aims to improve market awareness of, and confidence in, the EO service industry sector by defining the combined capabilities and views of the sector and using these to explore mechanisms for representation. This has the overall aim of supporting greater growth and prosperity for the European and Canadian EO service industry.

This report is the output of Task 3 (Analyse the services a representation body should provide). Figure 1-1 shows a summary of the high level project logic and the position of this report in relation to the other reports and Tasks of the study.

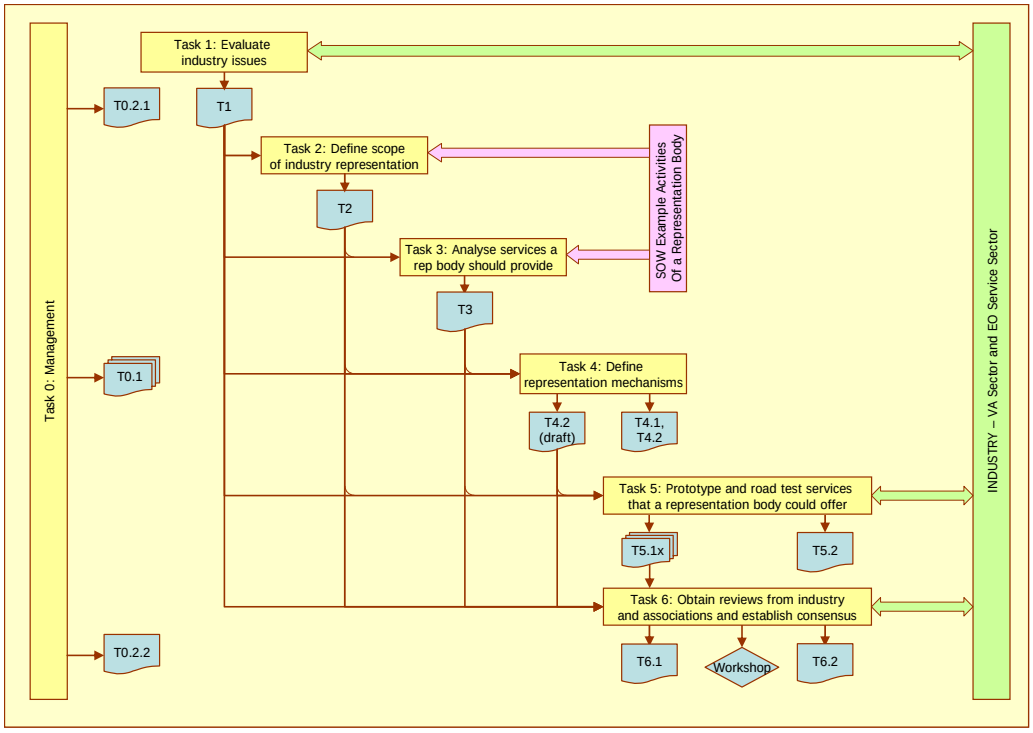


Figure 1-1: eoVox Study Logic

The aim of Task3 from which this report has been produced was defined as follows in the ESA Statement of Work (SoW):

- For the different candidate missions defined in Task 2 breakdown the high level functions into **services relevant to the associated Beneficiaries bases and characterise these services**:
  - Determine all relevant services for industry representation (whether they are currently available or not)
  - Categorise services against the type of main targets (as in Table 1 section 7), considering two situations:
    1) *priority targets are the members of the representation body*
    2) *priority targets external to the representation body (either an industry, institutional users and stakeholders, ESA, EC, national, etc*)
  - For each category:

- describe which interests and needs of the EO service industry are addressed by each service
- illustrate potential services with examples
- for each service characterize the benefits, its importance (compared to other services), its cost ; identify barriers that the representation body has to face for providing the service
- for each service evaluate whether it is covered within industry level representation or it remains the responsibility of individual organisations

  - Synthesise characterisation and present services in groups according to the different proposed candidate missions (i.e. elaborate the service portfolio of candidate missions)

- Based on the preliminary list of existing industry representation bodies and trade associations (i.e. of the GI sector; of the space sector; other associations e.g. scientific associations; non-EO i.e. industry associations not from the EO service sector) identify and characterize existing services from representative associations:

  - identify and characterize existing industry representation bodies and trade associations that concern the EO services sector; this shall be based on preliminary input provided with the proposal and input from representative associations
  - rapidly identify and characterize services from industry representation bodies and trade associations are non-EO examples i.e. industry associations not from the EO, space or GI sectors
  - identify and characterize the services from industry representation bodies and trade associations that concern the EO services sector
    - consider existing services from industry organisations ; analyse which are the issues and how existing services are addressing them ; what are the costs and what are the benefits to association members
    - At the level of individual services, for a selection of services: analyse which are the issues and how existing services are addressing them; assess the benefits to association members
    - At the level of the complete range of services, for a selected range of services: apply the analysis of common issues performed in Task 1 (Deliverable T1) to assess the compatibility, oppositions and synergies between different services, such as for instance:
      - whether marketing individual offerings from industry is compatible with expressing consensual industry positions
      - whether industry positions concerning either scientific, operational or commercial applications of EO are compatible, or have synergy, etc
    - Compare the portfolio of services of existing representation bodies and trade associations to the different candidate missions defined in Task 2

- **identify and rapidly characterize other existing associations** that are not industry associations but that are relevant to the EO services sector (e.g. association of associations, academic/scientific associations, user associations) ; identify and rapidly assess other existing services from those non industry associations:

  - At the level of individual services, for a selection of services: analyse which are the issues and how existing services are addressing them; assess the benefits to association members
  - At the level of the complete range of services, for a selected range of services: assess the compatibility, oppositions and synergies between services of i) other associations and ii) services of industry associations (e.g. assess confrontation between user positions, positions from the scientific arena and industry positions, etc)

- For the different priority missions, based on the service portfolio of each candidate mission, **analyse interactions between the services of the candidate missions and the services of existing industry representation bodies and trade associations** dealing with the EO services sector; analyse how services can be combined from the Representation body and

other existing industry associations; determine the potential blockages, overlaps and synergies and provide recommendations; the analysis of interactions shall take into account the views of representative associations

- For the different priority missions, based on the service portfolio of each candidate mission, compare with examples from non European or Canadian associations (e.g. U.S.)

Figure 1-2: ESA SoW Requirements for eoVox Task 3

In addition to addressing the requirements of the SoW, Task 3 has also taken into account the wider European context of economic growth i.e. Lisbon Agenda initiatives and the various business and innovation support services developed by European Institutions that EO value adding companies (especially small and medium sized enterprises) can utilise.

1.2 Terminology

In this report, as in Report T2, the following definitions are used throughout:

Mission = Grouping of Services for a specific audience

Service = Activity required to deliver mission

Member = Member of an EOTA (most likely to be a value adding company (VAC) but may include other organisations)

1.3 Scope

This document covers the following topics:

Section	Description
Section 1	**Introduction (this section):** Defines the purpose and scope of this document and lists external references and abbreviations used.
Section 2	**Methodology:** Outlines the overall approach taken for the Analysis of Services and the organisations selected for review.
Section 3	**Analysis of potential services for each candidate mission:** Lists all potential services an EOTA might offer (whether currently available or not).
Section 4	**Analysis of existing services:** Identifies, characterises and analyses synergies/conflicts for services already available - from representative industry bodies (EO-related) - from representative non-industry bodies in EO-related sectors (e.g. scientific, public advocacy bodies) - from representative trade bodies (in other market sectors not related to EO) Conclusions are outlined with respect to the evidence gathered and to inform the interactions analysis.
Section 5	**Interactions Analysis:** Brings together the results of Section 3 and 4 analyses to produce a proposed service portfolio and analysis of the role of EO trade association with respect to other relevant actors. The portfolio is compared with the missions/ services mix available from a sample of non-European EO industry associations.
Section 6	**Open issues:** Presents open issues remaining for discussion at the workshop and/or resolution during Task 4.

1.4 Change control

This document is the final T3 Report including all revisions identified during progress meeting 3 in Brussels on 28 May 2006.

1.5 References

No.	Title/Description	File Reference	Version
1	LogicaCMG Management Proposal for EO Service Sector Representation	UK/2004/7852	Issue 1.0 24/10/2005
2	LogicaCMG Technical Proposal for EO Service Sector Representation	UK/2004/7361	Issue 1.0 24/10/2005
3	ESA Statement of Work	EOEP-EOMD-EOPS-SW-05-0001	Issue 1.0
4	Minutes of Negotiation and Kick-off Meeting	EC201705:07.01	Issue 1.0 15/12/2005
5	"The State and Health of the European EO Service Industry" VEGA Group, Booz Allen Hamilton.	EOMD.REP.0.18	Issue A 24/09/2004
6	Minutes of eoVox Progress Meeting 1	EC201705:07.03	Issue 1.0 16/03/2006
7	eoVox Report T1: Analysis of Industry Issues for Representation	EC201705:06.04	Issue 1.4 08/05/2006
8	eoVox Report T2: Analysis of Scope for Representation	EC201705:06.05	Issue 1.0 02/06/2006

1.6 Abbreviations Used

Abbr.	Description
EO	Earth observation
EOTA	EO trade association
EEA	European Environment Agency
EC	European Commission
ESA	European Space Agency
GI	Geospatial information
GMES	Global Monitoring for Environment and Security
INSPIRE	Infrastructure for Spatial Information in Europe
KOM	Kick Off Meeting
RIDs	Review Item Dispositions
RS	Remote Sensing
SoW	Statement of Work
VAC	Value adding company

2 Methodology

2.1 Overview

The overall approach to Task 3 is summarised in Figure 1-1. The work followed four main strands (shown below in different colours), all of which fed into the Interactions analysis.

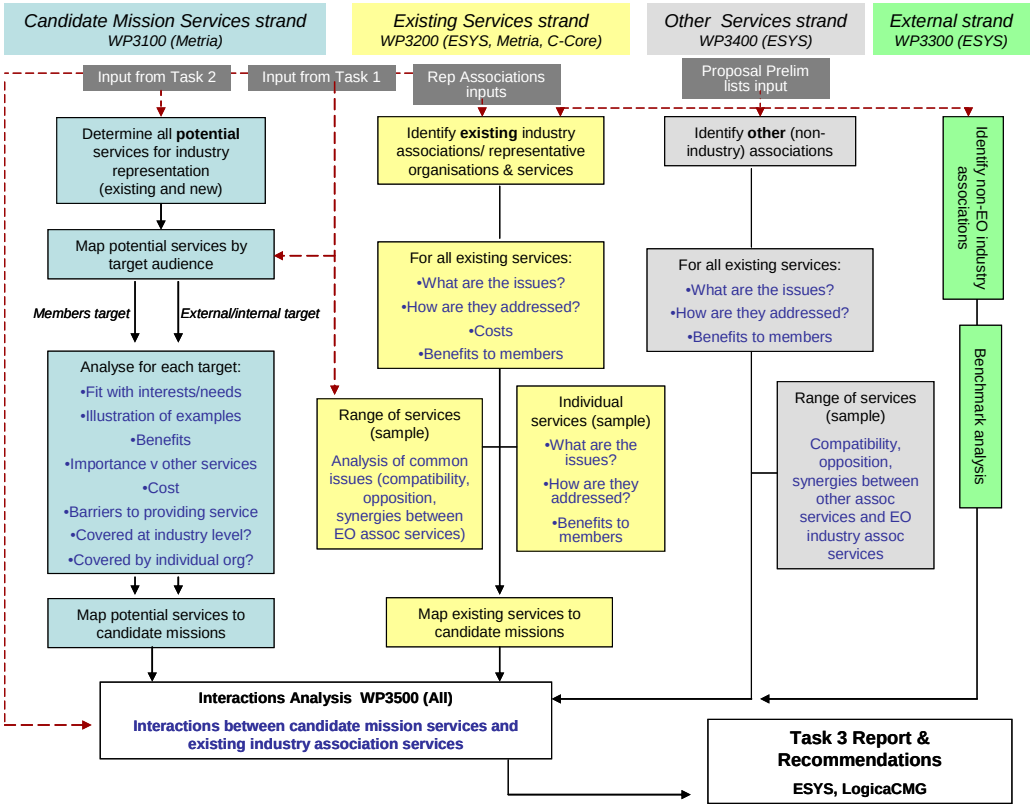


Figure 2-1 Overview of Task 3 approach

2.2 Data Sources

Task 3 involves analysis of the services offered by a range of associations to identify interactions between the candidate missions proposed in Task 2 and the services offered by existing associations.

An initial selection of associations was presented in the consortium's proposal for the eoVox study and reviewed with ESA during Project Meeting 2 in order to derive a final list.

This list provides a balanced sample with respect to:

- Core membership (Industry, Research, Public sector bodies)
- Geographical scope of membership (national, European, international)
- Thematic focus (Observation, Geo-information, Space/SatNav, Other)
- Different sizes of organisation covered in membership
- Different constituencies (industry, research community, public sector institutions, standards community)

- Mix of large and small associations

Table 2-1 below provides details of all associations covered in the study

ASSOCIATIONS	BASE	COVERAGE	WEBSITE
AFIGÉO – Association Française pour IInformation Géographique	France	French EO association for industry and research	www.afigeo.asso.fr
AIPAS – Associazione Italiana PMI per L'Aerospazio	Italy	Association for Italian aerospace SMEs	www.aipas.it
AGI – Association for Geographic Information	UK	GI association for UK – open to industry, research and public sector organisations	www.agi.org.uk
AGILE – Association for Geographic Information Laboratories in Europe	Netherlands	Association for European GI laboratories to promote teaching and research	www.agile-secretariat.org
ALLIANCE FOR EO	USA	Association to strengthen international private sector involvement in EO	http://alliance.strategies.org
BARSC – British Association for Remote Sensing Companies	UK	UK association for companies involved in remote sensing and EO	www.barsc.co.uk
CIG - CANADIAN INSTITUTE OF GEOMATICS	Canada	Scientific and technical association for geomatics professionals in the public and private sectors in Canada	www.cig-acsg.ca
EARSC	Belgium	European association for companies involved in remote sensing and EO	www.earsc.org
EARSEL	Germany	Scientific network of European remote sensing institutes, both academic and commercial	www.earsel.org
ETNO – European Telecommunications Network Operators Association	Belgium	Policy group for European electronic communications network operators	www.etno.be
EURISY	France	NGO to promote benefits of space for European society	www.eurisy.org
EUROGEOSURVEYS	Belgium	Association for the European geological survey organisations	www.eurogeosurveys.org
EUROGI	Portugal	Umbrella organisation of national and pan-European organisations in the field of GI	www.eurogi.org
EUROSPACE	France, Belgium	Association of major European space companies	http://perso.orange.fr/eurospace/
GEOCONNECTIONS	Canada	National partnership programme to expand the Canadian geospatial data infrastructure	www.geoconnections.org
GITA – Geospatial Information & Technology Association	USA	Educational association serving the global geospatial community and promoting use of geospatial information in telecommunications, infrastructure and utility applications	www.gits.org
GLOBAL VSAT FORUM	UK	International association of companies in the VSAT (very small aperture terminal) industry	www.gvf.org
I-SPACE PROSPACE	France	Association of mainly French organisations – companies, investors, regional authorities – for development	www.i-space.fr

		of the space market and promotion of use of space system applications	
ISPRS – International Society of Photogrammetry and Remote Sensing	Turkey	International NGO to advance research and education in remote sensing and Spatial information	www.isprs.org
OPEN GEOSPATIAL CONSORTIUM	USA	Global forum to advance standards for geospatial interoperabiity	www.opengeospatial.org
OREGIN – Organization of European GNSS Equipment and Service Industries	France	European association of companies and research centres involved in GNSS equipment and service industries	www.fdc.fr/oregin/
RSPSoc – Remote Sensing & Photogrammetry Society	UK	Professional society, mainly UK coverage, for remote sensing & Photogrammetry	www.rspsoc.org
UKISC – UK Industrial Space Committee	UK	Space Group within the UK Society of British Aerospace Companies representing companies involved in the space industry	http://www.sbac.co.uk/pages/43611913.asp

Table 2-1 Associations covered by the eoVox study

Four associations were selected in non-EO/GI/space sectors for review:

ASSOCIATIONS	Type			Geographical reach			Companies		Sector
	Research	Industry	Public sector	National	European	International	Large	Small	
AIIM									Enterprise & Content Management, Information Management
EuropaBio									Biotechnology (Pharma, Agriculture, Industrial)
Eurosmart									Smart Cards (many applications areas)
IFPI									Music recording industry

Table 2-2 Non-EO associations covered in the eoVox study

2.3 Approach for characterisation and analysis of services

Each of the associations covered in Task 3 has been reviewed in depth through desk research, working through the association website and relevant publications such as Annual Reports, newsletters, Strategic plans, event reports etc.

For each type of association (EO Industry, EO scientific/public/other and those in other sectors), the various services on offer have been grouped according to the main candidate missions identified in the eoVox T2 Report – Analysis of Scope of Representation. In this way it has been possible to define potential overlaps between the EOTA and existing organisations. The industry association services are presented in Appendix A.

Clearly there is much more detail available on each individual association that cannot be represented in full in a study such as this. A pragmatic approach has been taken to ensure that sufficient examples are presented throughout the analysis to illustrate potential approaches for an EOTA without being too prescriptive regarding actual operations.

3 Analysis of Potential Services for Candidate Missions

3.1 Overview

This element of the study aims to break down the high level functions (candidate missions identified in Task 2) into all possible services relevant to the audiences targeted by value-adding companies (VACs) and to characterise these services. All services analysed are those for the benefit of members rather than services to sustain the internal mechanisms of the association.

The services analysed here may or may not be currently available through existing organisations.

3.2 Characterisation of potential services

3.2.1 Approach

A list of potential services that an EO trade association might provide has been compiled firstly through linking to the priority candidate missions identified in Report T2, in order to maintain continuity with the prioritisation undertaken earlier (i.e the services for which there is most demand from VACs are those derived from the "Top 15" missions for an EO trade association).

In this first listing of services shown in Section 3.2.2, the various actors that VACs wish to target are denoted using the colour references shown in Table 3-1 and which were used in the T2 report:

	Possible Target Group of Actors
UPSTREAM ACTORS	Public Satellite Investors
	The Aerospace Industry, mainly through their TAs
	Data Providers
	Pan-European R&D Funding Agencies
	International Initiatives
	EC/ESA Initiatives
	Standardisation Organisations
	Pan-European Policy Bodies
MIDSTREAM ACTORS	National EO TAs
	European GI TAs
	International TAs
	European Research Institutes
	European/International Research Organisations
	Internal EO TA/Intra-VAC Issues

DOWNSTREAM ACTORS	User Organisations
	International Agencies
	Pan-European Operational Bodies
	General Market

Table 3-1 Possible Groups of Target Actors

Characterisation with respect to benefits has been undertaken for groups of services and these are indicated in the tables in the following section showing the ranking used in Task 2 to prioritise the higher level missions.

EXAMPLE:

Proposed Candidate Mission		Early Win Priority Ranking	Long Term Priority Ranking
WHAT	**TO WHOM**		
Provide a Forum for Networking	Internal EO TA/Intra-VAC Issues: *Development of new products*	**1**	**1**

This ranking methodology involved three steps:

1. Each mission was rated for its suitability to be delivered by an EOTA (as opposed to being handled by the VACs themselves)

2. Each mission was rated according to the interest shown by VACs in the Task 1 survey

3. Each mission was rated according to its ability to deliver both early wins to VACs and long term benefits (recognising that missions may be highly ranked for either or both criteria)

A broad estimate is also given in each of the lists of potential services for the level of effort (and therefore cost to the association) required to deliver them, based on the following categories:

High	>0.25 man year effort per annum
Medium	0.1 – 0.25 man year effort per annum
Low	< 0.1 man year effort per annum

These estimates do not take into account the fact that members may provide manpower at no cost in order to deliver certain services.

Any services highlighted in green indicate potential for revenue generation.

Finally, commentary is provided with respect to any barriers to providing the services or conflicts of interest that might arise.

EXAMPLE:

Proposed Candidate Mission		Early Win Priority Ranking	Long Term Priority Ranking
WHAT	**TO WHOM**		
Provide a Forum for Networking	Internal EO TA/Intra-member Issues: *Development of new products*	**1**	**1**
Identify possible services to help members co-operate with each other or with actors outside the VAC community with the objective of developing new products and services to better meet market requirements (List examples – not intended to be an exhaustive list): • Provide a list on an EO TA internal website containing members competences and field of activities • Provide a tool enabling the members to share information on ideas for new products and services • On request from the members, facilitate contacts with actors outside their community • On request from the members, organise workshops on relevant topics • Collect information on patent bureaus knowledgeable in the GI-field • …			
Barriers and/or conflicts: The TA should only supply the forum and must avoid interfering with the business of individual members and also avoid favouring certain members			
TA Time consumption: Low			

Revenue potential

Effort required by EOTA

It should be noted that the potential services outlined in Section 3.2.2 are not to be considered as an exhaustive list but a prioritised list based on the findings from T1 and T2.

A second listing of potential services is shown in Section 3.2.3. These are services which do not fall into any of the "Top 15" missions i.e. they are not considered by the VACs consulted in the T1 survey[1] as priority activities for an EOTA. Nevertheless, as this part of the T3 analysis covers all potential services these should be included for review.

[1] 63 VACs were interviewed in the survey

3.2.2 Identification of all potential services for priority missions

Proposed Candidate Mission		Early Win Priority Ranking	Long Term Priority Ranking
WHAT	**TO WHOM**		
Provide a Forum for Networking	Internal EO TA/Intra-member Issues: *Development of new products*	**1**	**1**

Identify possible services to help members co-operate with each other or with actors outside the VAC community with the objective of developing new products and services to better meet market requirements:

- Provide a list on an EO TA internal website containing members' competences and field of activities
- Provide a tool enabling members to share information on ideas for new products and services e.g. technology requests and technology offers, examples of demonstrators and prototypes developed in pre-competitive publicly funded research, sources for testing facilities, data services, prototyping, design, specialist manufacture, etc
- On request from members, facilitate contacts with actors outside the VAC community (potential suppliers, partners, advisory groups, other industry associations, institutional networks, etc)
- On request from the VACs organise workshops on relevant topics to support the new product development process
- Collect information on patent bureaux and IPR experts knowledgeable in the GI/EO field (e.g for spin-offs from GMES services)
- Support certification of products and services via external third party
- Set up technical working groups (or arrange for members to join other associations' working groups) to address issues that have an impact on the EO market and/or technological development

Barriers and/or conflicts:
The TA should only supply the forum and must avoid interfering with the business of individual VACs and also avoid favouring certain members

TA Time consumption:
Low

Proposed Candidate Mission		Early Win Priority Ranking	Long Term Priority Ranking
WHAT	**TO WHOM**		
Provide a Forum for Networking	European Research Institutes	**1**	**2**

Identify possible services to facilitate the interaction between members and Research Institutes to obtain faster and more reliable establishment and market acceptance of new products:

- Identify relevant research institutes and provide information on their activities and contact details – e.g. member institutes of EARSeL, AGILE, ISPRS; European networks of excellence
- Organise workshops between the EO TA (and its members) and the research institutes. Focus on technological developments critical to growing the market, areas where research and industry can collaborate, emerging technologies that will influence future market, research into underpinning standards and infrastructure for EO
- On request from members, facilitate contacts with specific departments/individuals inside the research institutes.
- Provide input from industry perspective on educational and research programmes to be delivered in research institutes
- Support design and development of new funded research programmes
- Facilitate joint bidding between members and research institutes into EC and ESA programmes

Barriers and/or conflicts:
The TA must avoid interfering with the business of individual VACs and also avoid favouring certain members, There is a possible conflict between VACs that already have such contacts and VACs that have not.

TA Time consumption:
Low

Proposed Candidate Mission		Early Win Priority Ranking	Long Term Priority Ranking
WHAT	**TO WHOM**		
Keep Track of and Influencing Programmes	Pan-European R&D Funding Agencies	**2**	**3**

Identify possible services to provide information to members on European R&D programmes and lobby on behalf of members to ensure that the programmes are better tailored to their needs and their markets:

- Actively gather information through regular meetings with relevant individuals within the funding agencies, scanning of websites etc and provide this information to the EO TA members:
    - European Commission – e.g. INSPIRE, GMES, Framework Programme 7, DG Transport, DG Agriculture, DG Environment, DG RELEX, Joint Research Centre, DG Enterprise/Lisbon Agenda, Public Sector Information Directive
    - ESA
    - European Environment Agency
- Actively stimulate debate amongst members and provide feedback to the R&D funding agencies on their plans
- Pro-actively stimulate debate amongst members of topics that should be covered by the funding agencies and present and lobby for such ideas vis-à-vis the funding agencies, e.g.

Barriers and/or conflicts:
None inside the VAC community. Possible conflict with the interests of other lobbying groups.

TA Time consumption:
Medium

Proposed Candidate Mission		Early Win Priority Ranking	Long Term Priority Ranking
WHAT	**TO WHOM**		
Raise General Awareness of EO	User Associations	**2**	**4**

Identify possible services to make User Associations and their members aware of the general capabilities of the EO industry to obtain more sales leads for EOTA members:

- Provide information on the general capabilities of EO technologies as such but **structured from a user perspective** on the EO TA web and in printed material to be used both by the EO TA and its members in relation to these organisations. (eoPages, case studies)
- Present the general capabilities of EO technologies as such at conferences/meetings held by user organisations – EOTA to coordinate for European level events while national associations cover events in their own country
- Organise workshops on general EO issues together with the user organisations Focus on
- Convince the user organisations to provide a link to the EO TA website on their own websites
- Provide guidance for user organisations to support procurement and use of EO products or services e.g. independent overviews of groups of products (not specific products) and generic advice on their use in different contexts

Barriers and/or conflicts:
No conflicts provided that the role of each kind of organisation is respected.

TA Time consumption:
Medium

Proposed Candidate Mission		Early Win Priority Ranking	Long Term Priority Ranking
WHAT	**TO WHOM**		
Raise General Awareness of EO	Pan-European Operational Bodies	**2**	**4**

Identify possible services to make these Operational Bodies aware of the general capabilities of the EO industry to obtain more sales leads for the EOTA members:

- Pro-actively provide information on the general capabilities of EO technologies as such **structured from the perspective of their application areas** – e.g. case studies on how EO technologies have helped to provide improved public services, contribute to more cost-effective operations, meet customers needs more closely, increase quality, etc
- Present the general capabilities of EO technologies as such at conferences/meetings held by these organisations
- Identify and hold meetings with individuals responsible for activities where EO can add value

Barriers and/or conflicts:
No conflicts provided that the role of each kind of organisation is respected.

TA Time consumption:
Low

Proposed Candidate Mission		Early Win Priority Ranking	Long Term Priority Ranking
WHAT	**TO WHOM**		
Keep Track of and Influencing Programmes	Public Satellite Investors/Mission Operators	**3**	**3**

Identify possible services to lobby for and ensure that data from operationally usable EO satellites is available for the EO industry and their customers in time:

- Actively gather information on planned missions through regular meetings with relevant individuals within these organisations, scanning of websites etc and provide this information to the EO TA members
- Actively stimulate debate amongst members and provide feedback to the public satellite investors on their plans
- Pro-actively stimulate debate amongst members on
    - the kind of satellite data they need
    - the timely availability, access conditions and data policy
    - and the operational aspects

  identified by the EO TA members necessary to meet the requirements of the market and present and lobby for such ideas vis-à-vis the public satellite investors
- Present and lobby for the findings of the members by - for instance – organisation of workshops, individual and open meetings with representatives of these organisations and provide members with information tailored for use in individual/group meetings with national representatives in the governing bodies of these organisations etc

Barriers and/or conflicts:
Possible conflict with the R&D community who favour satellites carrying scientific instruments and possibly also with the aerospace industry who are interested in developing new technology. There could also be a conflict with ESA's Charter being – mainly – an R&D organisation.

TA Time consumption:
Medium

Proposed Candidate Mission		Early Win Priority Ranking	Long Term Priority Ranking
WHAT	**TO WHOM**		
Promote European & Canadian EO Capabilities	International Initiatives	**2**	**5**

Identify possible services to ensure that international organisations are aware of European and Canadian capabilities and thus facilitate more sales for members:

- Provide the members with updated, condensed information on the content, status and likely effects of these initiatives.
- Provide general information on the capabilities of European and Canadian value adding capabilities **based on the needs related to these initiatives** to be used both by the EO TA and its members. Material available on the EO TA internal website.
- Present the general capabilities of European and Canadian EO value adding industry at conferences/meetings and trade shows held by these international initiatives and the European and Canadian organisations involved in the implementation, e.g. the EC, EEA, IIASA…
- Develop links to international media (trade and technical press)
- Provide members with the tools and opportunities to promote their individual capabilities through the EO TA website
- Encourage members to join relevant standards groups to ensure that EO requirements are represented (ISO, CEN, OGC); gather and filter news from standards bodies and make available to members

Barriers and/or conflicts:
Possible conflicts between the interests of very small/small VACs and medium VACs.

TA Time consumption:
Low

Proposed Candidate Mission		Early Win Priority Ranking	Long Term Priority Ranking
WHAT	**TO WHOM**		
Promote European & Canadian EO Capabilities	EC and/or ESA Initiatives	**2**	**5**

Identify possible services to ensure that members are well informed on the content and status of these initiatives and thus are well prepared for market and sales activities when the initiatives are implemented:

Provide the members with updated, condensed information on the content, status and likely effects of these initiatives.

- European Commission – e.g. INSPIRE, GMES, Framework Programme 7, DG Transport, DG Agriculture, DG Environment, DG RELEX, Joint Research Centre, DG Enterprise/Lisbon Agenda, Public Sector Information Directive
- ESA – EOMD, Technology Transfer Network, Incubation centres
- European Environment Agency

- Provide general information on the capabilities of European and Canadian value adding capabilities **based on the needs related to these initiatives** to be used both by the EO TA and its members in relation to these initiatives. Material available on the EO TA internal website.
- Present the capabilities of European and Canadian EO capabilities at conferences/meetings held by these initiatives and – in some cases - the European and Canadian organisations involved in the implementation.
- Provide the VACs with the tool and opportunity to promote their individual capabilities through the EO TA website

Barriers and/or conflicts:
Possible conflicts between VACs that are already participating in these initiatives (mainly within GMES) and VACs that are not.

TA Time consumption:
Low/Medium

Proposed Candidate Mission		Early Win Priority Ranking	Long Term Priority Ranking
WHAT	**TO WHOM**		
Promote European & Canadian EO Capabilities	User Associations	**2**	**5**

Identify possible services to (i) ensure that these organisations (and through them: their members) are aware of European and Canadian EO capabilities and (ii) identify relevant export market segments either for joint or separate marketing activities. The objective is to provide members with more sales leads, also from export markets.

- Provide general information on the capabilities of European & Canadian EO value adding industry **structured from a user perspective** on the EO TA web and in printed material to be used both by the EO TA and its members in relation to these organisations.
- Present the general capabilities of European & Canadian EO value adding industry **structured from a user perspective** at conferences/meetings held by these organisations
- Based on discussions amongst the members and on request of the members, interact with these organisations to identify relevant export market segments either for joint or separate marketing activities and inform the VACs of identified opportunities
- Provide the members with the tool and opportunity to promote their individual capabilities through the EO TA website
- Organise media campaign in European technical and trade press (print and online) in major market application areas – provide press releases linked to daily news stories highlighting potential of EO (humanitarian stories, global economy/resources management, security alerts).

Barriers and/or conflicts:
No conflicts provided that the role of each kind of organisation is respected.

TA Time consumption:
Medium/High

Proposed Candidate Mission		Early Win Priority Ranking	Long Term Priority Ranking
WHAT	**TO WHOM**		
Promote European & Canadian EO Capabilities	Pan-European Operational Bodies	**2**	**5**

Identify possible services to (i) ensure that these organisations are aware of European and Canadian EO capabilities. The objective is to provide members with more sales leads.

- Provide general information on the capabilities of European & Canadian EO value adding industry **structured from a user perspective** on the EO TA web and in printed material to be used both by the EO TA and its members in relation to these organisations.
- Present the general capabilities of European & Canadian EO value adding industry **structured from a user perspective** at conferences/meetings held by these organisations.
- Based on discussions amongst the members and on request of the members, interact with these organisations to identify relevant export market segments either for joint or separate marketing activities and inform the VACs of identified opportunities
- Provide the members with the tool and opportunity to promote their individual capabilities through the EO TA website

Barriers and/or conflicts:
None

TA Time consumption:
Medium

Proposed Candidate Mission		Early Win Priority Ranking	Long Term Priority Ranking
WHAT	**TO WHOM**		
Represent the European & Canadian EO Industry	Pan-European R&D Funding Agencies	**2**	**6**

Identify possible services to ensure - through "formal" representation - that these organisations are aware of European and Canadian EO capabilities and the needs of the market to ensure that R&D programmes are better tailored to the needs of the VACs and their markets, for instance support for development of new products:

- Secure a "formal" role in relation to these organisations as representative of the EO value added industry
- Based on information on the agendas of these organisations and collected information on the needs of the members and on their markets act such that the R&D programmes of these organisations are tailored to the needs of the members and their markets
- Provide members with continuous, condensed information on the results of R&D projects (link to existing results services like IST Results, CORDIS, ESA database)

Barriers and/or conflicts:
Possible conflicts between VACs that already have contacts with these agencies and thus have an advantage and VACs that do not have such contacts.

TA Time consumption:
Medium

Proposed Candidate Mission		Early Win Priority Ranking	Long Term Priority Ranking
WHAT	**TO WHOM**		
Promote European & Canadian EO Capabilities	Public Satellite Investors/Mission Operators	**3**	**5**

Identify possible services to ensure that these organisations are aware of European and Canadian EO capabilities and the needs of the market to (i) help VACs to become data distributors/re-sellers and (ii) to optimise satellite operations:

- Present the general capabilities of the VACs in meeting and conferences held by these actors, e.g. GOSS
- Provide the VACs with the tool and opportunity to promote their individual capabilities through the EO TA website

Barriers and/or conflicts:
None, provided interests of existing distributors are respected

TA Time consumption:
Low

Proposed Candidate Mission		Early Win Priority Ranking	Long Term Priority Ranking
WHAT	**TO WHOM**		
Represent the European & Canadian EO Industry	Public Satellite Investors/Mission Operators	**6**	**3**
Identify possible services to counterbalance strong voices in the EO research community and within the aerospace industry which favour developing new missions rather than building systems that guarantee long-term steady supply of data to operational services. The objective is to ensure that operationally usable satellites are available in time. • Secure a "formal" role in relation to these organisations as representative of the EO value added industry • Based on information collected on the agendas of these organisations and on the needs of the VACs and their markets act such that the satellite programmes of these organisations are better tailored to the needs of the VACs and their markets • Provide the VACs with continuous, condensed information on the results			
Barriers and/or conflicts: This Candidate Mission is based on the assumption that the EO TA can secure a formal role vis à vis these actors. No foreseen conflict between the VACs, but possibly with other groups, such as scientific groups and possibly with the aerospace industry.			
TA Time consumption: Low			

Proposed Candidate Mission		Early Win Priority Ranking	Long Term Priority Ranking
WHAT	**TO WHOM**		
Represent the European & Canadian EO Industry	EC and/or ESA Initiatives	**6**	**3**
Identify possible services to ensure that these organisations are aware of European and Canadian EO capabilities and the needs of the market to achieve a better alignment of plans between these initiatives and the VACs. • Secure a "formal" role in relation to these organisations as representative of the EO value added industry • Based on information on the agendas of these organisations and collected information on the needs of the VACs and on their markets act such that the plans of these organisations are better tailored to the needs of the VACs and their markets • Provide the VACs with continuous, condensed information on the results			
Barriers and/or conflicts: This Candidate Mission is based on the assumption that the EO TA can secure a formal role within these initiatives. Possible conflicts between VACs that already are active within these initiatives and VACs that are not.			
TA Time consumption: Low			

3.2.3 Other potential services not covered by priority missions

In addition to the services outlined above, there are a number of additional potential services that an EOTA could provide which are more closely related to the business operations of members but which were not part of the "Top 15" missions resulting from feedback from VACs. These should be available for discussion at the upcoming eoVox consultation workshop (to help validate the results of the work to date) and they include:

- Provision of legal advice
- Joint procurements / purchasing
- Support to recruitment
- Organisation of meetings / Governance issues
- Mutualisation of insurance

Another group of services that was covered in the survey for Task 1 relates to sales and marketing support. The VACs interviewed did not feel that an EOTA should get involved directly in this type of activity however, for completeness, the following potential services should also be noted:

- Help finding customers
- Marketing services for small companies (developing brochures, websites, advise on web marketing)
- Representing individual companies at exhibitions and trade shows

Similarly, education and training services were not ranked highly in the Task 1 survey by VACs but are a prominent element in many other associations' service portfolios and should be included here:

- Training courses for specific themes (technical skills, ICT, sales & marketing, management, etc)
- Continual professional development programmes for key skills groups
- Organisation of secondments, exchanges
- Promotion of educational opportunities available in universities / technical colleges / self learning

Using the same basis to assess the effort as was done for the priority mission services, it is likely that most of the services listed in this section would be in the Medium or High category for effective delivery. The target audience for all of these services is members of the EOTA, primarily VACs.

4 Analysis of Existing Association Services

4.1 Industry associations – EO and related sectors

4.1.1 Characterisation of associations

There are numerous associations already active in EO and related sectors whose main remit is to support industry. For this study, a sample of such associations has been selected using the following criteria:

- mix of scope of operations (national, European, international)
- different scales of membership
- variety of technical scope (EO, remote sensing, GI).

Table 4-1 and Table 4-2 below present the industry associations selected along with initial characterisation data.

ASSOCIATION	Type			Geographical reach			Member Companies		Sector			
	Research	Industry	Public sector	National	European	International	Large	Small	EO value adding	Geo-Information	Space / Satnav	Other
AFIGEO				FR								
AIPAS				IT								
AGI				UK								
BARSC				UK								
EARSC												
ETNO												
EUROSPACE												
GLOBAL VSAT FORUM												
OREGIN												
PROSPACE i-SPACE				FR								
UKISC				UK								

Table 4-1 Characterisation of EO-related industry associations

A number of observations can be made from this table:

- The industry associations that also include research organisations or public institutions as members are all national rather than European. At European level each of these audiences tends to be addressed separately.
- There are few national EO associations – one of the strong arguments for European level representation.

- Most associations represent both large and small companies. The two that focus on SMEs are both national.

- In this industrial group, Earth observation is less well represented than GI or Space/Satnav, demonstrating a gap in provision which is linked to the size/maturity of each market. The three associations involved are BARSC (national), EARSC and Eurospace (predominantly large company membership).

ORGANISATION/ ASSOCIATION	No of organisations in membership	No of individuals in membership	Sponsors / Partners
AFIGEO	60	Total not stated	4 partners
AIPAS	25	0	0
AGI	135 corporate (representing 1,248 people) Other	760	15 sponsors
BARSC	19	0	Informal, larger companies do more
EARSC	83	0	Informal, larger companies do more
ETNO	40	0	10 partners
EUROSPACE	50	0	Space group of ASD[2]
GLOBAL VSAT FORUM	16 Full 184 Associate	0	0
OREGIN	141 companies 4 research centres 4 industry associations	0	0
i-SPACE PROSPACE	iSpace 55 Prospace 42	Total not stated	1 partner – Oregin
UKISC	18	0	Space group of SBAC[3]

Table 4-2 EO industry associations membership numbers

Only three associations admit individual members, all of them predominantly national in coverage. For i-SPACE PROSPACE some companies belong to both categories.

[2] Aerospace and Defence Industries Association of Europe
[3] Society of British Aerospace Companies

4.1.2 Issues facing existing industry associations

Based on information gathered in the preceding tasks and from the direct experience from the Association Chairmen within the consortium the table below describes a range of issues that face existing EO Trade Associations. The analysis has been structured so that mechanisms and actions improvement can be identified, together with the impact of such improvements.

Issue	Challenge for EOTA	Resulting Benefit
Internal: Constitution, Governance and Evolution		
The boards of existing EO service sector representation bodies are run on a 'best efforts' basis by staff who are also engaged in full time jobs. So the industry as a whole does not always develop coherent views and communicate them in a sufficiently coordinated and timely manner.	Identifying and planning the resourcing of an organisational structure and staffing model.	Will enable: - constantly focused effort to develop a coherent, inclusive policy - timely and fully considered response - consistent follow up and tracking of issues - effectiveness of representation to be less dependent on the good will, dedication, inclusiveness and competence of the incumbent executive.
The smallest companies cannot afford the opportunity cost involved in participation because they have to focus on short term revenue generation in order to survive.	Devising a means of developing a representation body that can lobby pro-actively on behalf of small businesses.	Will allow the insights and creativity of the small business sector to become much more visible and have a greater impact on the market and on government and agency policies.
It can be difficult to achieve a balanced representation of interests, particularly between SMEs and large companies in consultations, position papers and lobbying.	Ensuring that the executive structure and procedures are arranged so that the TA's actions are not unduly dominated by strongest members – and in particular where they may conflict with the interests of less powerful members. Procedures that maintain transparency are particularly important.	Will maintain the trust placed in the TA by its members, government agencies and the market – hence maximising the TA's influence.
Views and approaches of existing representation bodies can be greeted with suspicion – particularly in government ministries - as they risk being inconsistent, partisan and not truly representative.	Identifying organisational structures and methods of working that result in development of a consistent agenda built upon evidently transparent consultation with members.	Will build trust, respect and influence amongst stakeholders and in the market.

Issue	Challenge for EOTA	Resulting Benefit
Multiple application areas - EO/RS/GI/LBS - mean that most existing industry associations have to cover a wide stakeholder base.	EO VACs prefer keeping EO TAs separate for now, but a future merger with GI needs to be periodically reviewed. Introducing special interest groups (SIGs).	Will allow EO TA's to maintain the distinct focus required by members, whilst ensuring all member's interest's are represented.
In a maturing market, members will strengthen their positions at all levels (national, European and global) - there could be more mergers which would mean fewer potential members for an EOTA.	If this trend continues the TAs will need to re-structure – for example by introducing a tiered membership fee or by merging with a complementary TA.	In a more mature market this may be a necessary action in order to reduce overlap and duplicaton of effort.
External: Other Associations		
Development issues common across the industry sometimes overlap with other associations.	Creating communications structures and joint working practices between associations that enable constructive dialogue.	Will speed resolution whilst reducing cost and workload within each party
Existence of representation bodies at both national and international level can dilute the strength of both because many members may focus on one at the expense of the other.	Identifying structures (e.g. membership affiliation) and ways of working effectively between national and international level.	Will increase the efficiency of representation at both national and international level and lead to increased unity of purpose through better coordination.
TAs with overlapping interests can tend to compete for members. This can dilute effectiveness. It can result in inefficiency/duplication and result in delivery of mixed messages that can be exploited by anti-industry lobbies to weaken the influence of the TAs.	Avoiding competition by introducing coordination between TAs, in particular seeking mechanisms to federate benefits.	Will ensure that where TAs have overlapping interests they a) mutually support each other to the benefit of members. b) give a unified (stronger) message
Industry and the research sector could collaborate much more effectively.	Coordination and joint events with the societies that represent the research sector.	Will help to achieve knowledge transfer and mutual respect for the skills and know-how in each sector.
Realising Benefits		
Shortcomings of the existing representation bodies are not clearly understood. The executive and members need to be provoked into thinking of more effective actions.	Develop concrete actions (including wide consultation with members and non-members) to identify gaps in the function of current bodies.	Improve the effectiveness of the TA. Increase membership. Increase its influence. Build up the sector.

Issue	Challenge for EOTA	Resulting Benefit
Some VACs are not convinced about the benefits of a representation body. Existing industry representations are often perceived to be a 'club of friends'	Engage directly with the VACs on a one-to-one basis to a) show them what the benefits of joint action are and b) understand why they do not perceive benefits in joint action	Will a) overcome negative perceptions and increase membership b) provide an opportunity to identify genuine shortcomings in the representation bodies' processes
VACs need to be convinced of benefits of services provided and for small companies this usually means more sales.	Draw up and maintain a statement of membership benefits. Develop benefits which clearly return more value to members than they pay in subscription (e.g. free exhibitions, access to potential customers). Periodically review the benefits with members.	Maximise benefits to members. Continuous process improvement.
VACs that participate in representation bodies often do not have time to make a contribution because of conflicting priorities – they need to be cajoled into actions that benefit them by a tactful, knowledgeable and proactive executive.	Initially assisting companies by taking on more of the work involved in participation e.g. editing their material and then asking them to review it e.g. drafting responses to policy papers (e.g. ESA, EC) and asking for comment on a series of drafts rather than just making an "open request for views on attached documents".	Has been found in practice to produce the greatest response from TA members. However, this way of working is time consuming for the executive.
Getting a focused representation can be difficult because the TA has to represent all members' interests and not conflict with any. The public statements of a TA can therefore tend to be a long 'wish list' combining the interests of all the members. This provides a problem for both funding agencies and customers as TA statements can appear bland, unfocused and not provide a basis on which to establish real priorities or plan action.	Focusing TA statements regarding EO policies or priorities (e.g. on sensors, data policy, service priorities) and members offerings to the market.	Will actively help funding agencies to develop their programmes and assist customers to understand what the industry can offer them and how best to approach suppliers. Requires a well informed and impartial small group of 'strategists' in the TA to shape and focus public statements made by the TA.

Issue	Challenge for EOTA	Resulting Benefit
There is no forum to address common structural issues in the market. There are only a few 'role models' with success stories, and they want to keep the details quiet for commercial reasons. VACs too dependent on institutional funding (ESA, EC and national R&D).	Helping all members to be aware of successful business models and re-structure as necessary to adapt to new market conditions.	Will help the sector a) grow overall and maintain healthy competitive conditions. b) reduce its dependence on institutional funding.
Existing associations focus efforts on institutional funding (e.g. GMES) rather than the wider commercial market. Whilst public institutions still play a vital role in infrastructure, in funding and as a major client, TAs should do more to help members adapt from a technology driven market to a customer / downstream focus.	Developing a strategy to represent the industry in the downstream commercial market (in addition to the institutional programmes)	Will help to grow the sector and develop a sustainable industry. But such a strategy must not conflict with member's individual interests.
Lack of communication strategy	Identifying the best strategy for communication	Will improve networking of companies that are driving the development of the value added EO sector and link them more strongly to emerging markets.
Poor unity of action by VACs.	Increased understanding within a network of VACs	Greater synergy between companies to address common problems and barriers faced by customers.
TAs usually have to focus on short-medium term issues in order to justify their membership fees	Adopting a horizon scanning process designed to capture longer term issues e.g. data continuity, GEOSS, dual use, convergence of technologies (GIS/EO/positioning), market trends.	Will a) allow the TA to develop policy statements and therefore to have greater influence on trends and b) raise members awareness so that they can take individual action in response.
The role of TAs in finding partners/suppliers and forming teams is not clear yet (i.e. too hands-on or a vital intervention?).	Testing this 'team building' role by offering a trial service.	Will allow the issue to be resolved without alienating members.
Data supply problems (continuity, access and price) affect sales and result in low margins.	Lobbying institutional providers to adopt data policies that increase downstream sales and margins (whilst not disturbing the market for commercial data vendors). Negotiating preferential prices for members with commercial vendors.	Will result in growth of the EO value adding sector.

Issue	Challenge for EOTA	Resulting Benefit
The internet offers opportunities for associations of all types to interact more cost-effectively with members and external stakeholders – communities of interest have more tools for knowledge exchange.	Maximising use of the internet to provide members services.	Will enhance benefits to members and stakeholders. Care should be taken that internet resources are not too ambitious – so that maintenance costs are low.
The EO domain and its value chain is complex resulting in a requirement for communications with multiple stakeholders.	Ensuring that communications are tailored appropriately to the intended target group.	Will result in messages being correctly understood and result in positive action.
The EO Service Sector lacks a sufficiently strong and unified voice compared to other interests (science, upstream space industry and executive agencies in government), yet it is the service sector which will deliver sustainability in the EO industry.	Demonstrating the advantages of the private sector. e.g. efficiency, cost reduction, cost smoothing, wealth creation.	Will allow focussed and successful cases to be made for purchase of products and services from the private sector.

4.1.3 Experience of trade associations today in responding to common issues

Following a desk research review of all services provided by existing industry associations, it was confirmed that all can be broadly categorised according to the following candidate missions:

- Provide a forum for networking
- Keep track of and influence programmes
- Raise general awareness of the sector/industry/technology covered
- Promote members' capabilities
- Represent members with respect to key decision makers / policy bodies / market players.

Looking across all services offered by existing industry associations in EO and related areas, there is a good deal of similarity in the generic portfolios of activities and facilities offered to members and external stakeholders. Virtually all associations studied provide services to support the five candidate missions listed above. An overview of the services provided by existing industry associations is provided in Appendix A and the findings are summarised here.

4.1.3.1 Services responding to EO industry issues

Forum for networking

For networking activities, most associations offer a mix of events for members, newsletters and access to members-only information on their website as well as a range of technical working groups they can actively contribute to.

The frequency of events and newsletters varies – some larger associations have a very active calendar of regular events whereas the smaller ones may only have an annual meeting of members, with online communications used to maintain contacts throughout the rest of the year.

Participation in technical working groups and task forces is a popular means of engaging members in furthering the aims of the industry by addressing topical issues. Looking across the themes covered by such groups, there are opportunities for an EO trade association to contribute to several groups in existing associations that address relevant themes (EUROSPACE has a GMES/Earth Observation group, UKISC has an EO Applications and Missions committee, etc). Other relevant groups for an EOTA to become involved with would include the Open Geospatial Consortium and INSPIRE (described in Section 4.2.2).

Not all of the groups seen on associations' websites are active or conducted on a structured basis – most tend to be *ad hoc*. It is not clear how different working groups across EO/RS/GI interact currently and it must be assumed that there is potential for conflict of interest in areas related to upstream/downstream public budgets.

For many associations, encouraging better networking amongst members has the underlying objective of supporting collaboration at various stages in the value chain – R&D agreements, collaborative new product/service development and manufacturing, marketing or distribution agreements. In the EO and related sectors, there are some indications that industry associations are supporting this process:

- National associations may be better placed to form sufficiently close relationships with members to promote collaboration – AIPAS in Italy helps to "form consortia capable of working on programmes that members individually could not address" – however its membership consists of only 25 aerospace SMEs making this type of hands-on support feasible. This type of service is also easier when members' skills are complementary.

- In smaller associations, a well-informed Director can act as a broker between member companies or between members and external business partners but this has to be done on an as-requested basis by the parties concerned. A number of associations offer an Enquiry/matching service which offers initial matching between members and enquiring organisations (OREGIN, Prospace I –Space). EARSC facilitates one-to-one meetings between members at their General Assembly Meeting and responds to requests by email about companies working in specific areas. Potential customers have asked for a directory of EO companies to facilitate business to business communications.

- A well established 'laissez faire' method is to establish events with a mixture of formal and informal networking opportunities, either exclusively for members or in association with carefully selected target actors. For example EARSC facilitates exchanges between members through its Annual General Assembly Meeting and BARSC holds an Annual Lunch. Both of these events include an invited speaker and maybe other guests from one or more of the target groups. Such events always have a high attendance from members, which shows that members place a high value on them.

- Members-Only areas on website can also support teaming, for example AGI has online discussion boards, posting of CVs, news about member activities and press

releases. The Global VSAT Forum's members only page includes sections on Business Opportunities and Contacts.

The challenges for an EOTA regarding networking are:

- persuading members to collaborate more closely (to create new business opportunities/products and reduce the industry's dependency on public funding) without intervening directly in their business
- actively assisting members to find ways in which they can team effectively (reducing misperceived threats, increasing opportunities, finding complementarities in strengths and support for weaknesses)
- smaller VACs do not have the time or resources to attend working groups / networking events across Europe so some form of virtual participation or regional focus may be required. A complementary solution is to have only one very high profile event each year, so that this can be a focus for all members and even the members with the lowest spare resources feel it is worth attending.
- any facilitation from the secretariat needs to be equitable and transparent – avoid favouring individual companies.
- the provision of information about members' capabilities online can benefit other members as well as external partners and can encourage inter-member networking. A members-only area can allow VACs to publish information that they might not want to put on the public website.
- finding a balance between facilitating contacts on public websites and restricting that activity to members-only pages.

Influencing programmes

Most existing TAs have successfully positioned themselves in order to ensure they are consulted in policy making bodies at national, European and (for a few) at international levels:

- AGI, BARSC and UKISC have very strong national presence on relevant UK Parliamentary policy committees. Official advisory roles have helped to strengthen their respective positions. Occasionally these roles are supported with paid contracts. UKISC is actively involved in presenting the "Case for Space" to the UK government.
- EUROSPACE has achieved official status in relation to the ESA R&D programme and to collection and presentation of statistics on the space industry as well as establishing informal links to ESA and European institutions – EUROSPACE directors are involved in EARSC so the EO community has a direct link through them to policy and programme developments.
- EARSC and BARSC suggestions for amendments to draft text for ESA Programmes are sometimes adopted.

- The OREGIN network run by France Développement Français (FDC) has close links to the Galileo Joint Undertaking (GJU) and other European Commission Directorates as does EUROGI although their membership comprises national GI associations rather than industry.

- The French Prospace I-Space association has become involved directly in European R&D programmes in order to build influence and visibility "bottom up". This is an unusual achievement for a national association.

The challenges for an EO TA looking to provide services to take forward the shaping of key programmes are:

– can it expect to be invited to participate in policy or programme planning with ESA and the EC if it only represents part of the industry?

– even if it is requested for consultation, how can it ensure that this is not just a token process, that its opinions actually carry weight and end up influencing the programme?

– are the existing associations who are already accepted in high level groups able to adequately address EO concerns?

– should services focus on indirect influence via existing associations, leaving more resources for following specific programmes more directly?

Raise general awareness of the sector/industry/technology covered

A number of different approaches have been adopted by existing industry associations to raise awareness of their sector. Some activities are specifically aimed at downstream application areas – others are more general, aimed at all potential audiences.

Industry associations in the GI area have a comprehensive mix of tools including:

– Dictionary of GI terms and What is GI? publication on the AGI website

– Geo d'Or competition for GI applications for various themes (citizens, health, education, major risks etc) supported by AFIGEO

– GI "outreach" conferences, Industry Days and workshops at national, regional and European level to seek out new markets and educate potential new customers.

In the RS/EO areas, EARSC has organised an Industry Summit and BARSC has produced a brochure of UK capability to raise awareness of EO expertise. BARSC also organises an annual workshop where it can leverage its extensive links to raise awareness of members capabilities within user organisations.

OREGIN takes a more focused approach on behalf of the Galileo applications industry, disseminating information from ongoing Galileo projects to manufacturing industries who are not directly involved in the programme but who are interested in their results. Defining their sector is perhaps not so clear cut as for GI and EO and their promotional activities cut across other industries, as befits an organisation dedicated to cross-fertilisation of ideas.

In the space sector, several associations have invested effort in developing information resources to promote the industry capability. An annual Industry Facts and Figures

publication is issued by EUROSPACE covering over 150 of its members whilst Prospace focuses on data files and statistics about existing and emerging space applications (including Imaging and EO) as a means of raising general awareness. UKISC has published a range of documents over the past 3 years highlighting the benefits of UK participation in the space industry and the technology strategy (including inputs from BARSC).

The challenges facing an EOTA in raising awareness of the EO sector include:

- definition of EO with respect to RS/GI etc – potential clients and stakeholders may have a different understanding of the scope of EO and how it relates to other sectors – is EO an enabler or an industry in its own right?
- Raising awareness at a European level requires good access to the press/media (both general and specialist) – the media need a compelling "story" and many associations are competing for good coverage.
- Information needs to be "pushed" out – stakeholders and users will not seek out information sitting on a website unless they know it's there.

Promote members' EO capabilities

Several industry associations offer searchable or browse-able directories of their members' activities and sometimes their products and services. This is an information resource which the EO community has tried to set up in the past [ref Compendium of EO on ESA website?] and which will require to be re-established in the future.

Looking at the other industry associations related to EO, a number are promoting their members' capabilities through directories or promotional materials:

- EARSC has prepared a brochure on the EO sector for the EO Industry Summit in 2005 and will support a workshop in Paris in 2006 on the role of industry.
- AFIGEO publishes the Yearbook of GéoEnterprises (includes EO but only covers France) which is hosted on the SIG La Lettre website.
- BARSC has produced a brochure on UK Industrial Capability in Earth Observation, which is also published on its web site.
- EUROSPACE endorses the annual European Space Directory publication and provides an annual review of the space industry based on a survey of over 150 companies in Europe. This report is sent free of charge to all stakeholders and industry participants.
- Global VSAT Forum has an online directory of members' products and services which can be searched by various categories – the application areas overlap with EO interests. The directory also has a "Member of the Week" feature which offers an opportunity for one member to appear on the main directory entry page.
- OREGIN has a more hands-on approach, offering to identify individual members in response to enquiries (possible with 150 members but may not be very transparent). This type of matching is also offered by Prospace I-Space.

Another important means of promoting members' capability is through organisation of or attendance at events showcasing the EO and other sectors, e.g.:

- UKISC regularly represents the UK space industry at international exhibitions and seminars, including Farnborough International air-show and trade missions to the Far East and South America.

- EARSC has organised an EO Industry Summit in collaboration with EUROSPACE

A few associations offer training courses or support facilities – helping to build capability in their sector as a precursor to promoting EO industry capabilities:

- Global VSAT Forum offers a range of courses for installers, engineers, students developed and delivered by volunteers from within their own membership.

- AFIGEO has a Club Export which, in addition to promoting French expertise at international fairs, also provides guidance materials and sets up meetings with representatives from other countries.

The challenges for an EOTA with respect to awareness-raising are:

- As the T1 survey revealed, not all VACs want an EOTA to promote individual companies, fearing conflict of interest.

- collecting information on members' capabilities and keeping it up to date can be very time-consuming and most organisations need a lot of prompting to update their own profiles.

- print publications are useful but can become out of date.

- any communications tools should allow SMEs to be promoted on an equal basis to larger VACs.

- events can be effective but need to provide useful and specific outcomes for attendees. For EO, targeting events may be problematic given the wide range of potential user communities / stakeholders.

- Maintaining a good contact list is difficult to do properly – it is time consuming and requires dedicated and continuous effort from the members to review it.

Represent members with respect to key decision makers / policy bodies / market players

The majority of representation requirements in the EO industry currently relate to relationships with public funding bodies (mainly ESA and the European Commission) so many of the examples highlighted above under "Influencing key programmes" apply here – in particular regular, high level meetings with relevant officials.

Position papers and consultation responses are an important tool in the representation process and existing associations vary in the quantity and regularity with which these are produced. These are perhaps the least transparent communications as they are often produced in the form of letters from the chairman to a key influencer. Some are available on public websites so provide user communities with useful information as well as member organisations. There is no central repository for position papers/consultations across the EO/RS/GI sectors.

As an association operating in a more mature market, the ETNO telecom network operators association focuses its representation on Competition units in the European Commission and on regulatory bodies:

- 25 CEOs from ETNO member companies will meet with EU Commissioners Kroes (Competition) and Reding (Information Society & Media) in the coming months. These CEOs will have been allowed this level of access to the Commission because they represent major national providers – highlighting the importance of a representation for smaller companies who would never be granted this type of meeting.

- There is a strong ETNO representation role with respect to defining the EU Regulatory Framework for e-Communications Services. ETNO maintains frequently updated and comprehensive online information resource for this Framework including latest news, position papers, related press releases, upcoming milestones, links and FAQs.

As with teaming and networking activities, there is a challenge for industry associations in ensuring that the voices of all members are represented.

- It tends to be tacitly understood in all association that those who put more into the TA (e.g. by participating in Committee work, drafting public statements or organising workshops) get more out of it and this is actually a mechanism which ensures sustainability of the organisation. However, controls and balances are needed to ensure that the association does not become a closed 'club of friends' – the primary balance being transparency.

- OREGIN claims to represent both small and large companies – it benefits from the "vast experience of leading industrial groups combined with the innovative spirit and responsiveness of SMEs". The main focus of its representation is towards the Galileo Programme and related initiatives/policies at European level

4.1.3.2 Common issues for trade associations

In this section four areas of trade association operations have been highlighted where common issues apply across the existing organisations:

- representation of a common industry position in the context of multiple EO application areas
- effective information strategy that avoids duplication of effort but focuses on members' specific interests
- ensuring favourable copyright and IPR conditions for the industry
- tapping into existing mechanisms for business and innovation support that could help EO and related sectors

These areas are explored in more detail below, looking at compatibility, opposition and synergies between EO association services.

Representation of common industry position

Whilst applications of EO address different markets/thematic domains there are commonalities that a Trade Association is well placed to handle through policy development, networking events and communications materials allowing multiple target audiences to be addressed:

- Common interest in the upstream, particularly in supply of data (types of sensor, data quality, continuity, accessibility, availability and pricing).

- Common technologies e.g. data access, interoperability and usability, Open GIS, high performance computing, mobile computing and positioning.

- Exploiting synergies in established applications of airborne remote sensing that allow satellite EO technology to be 'pulled through' where it adds value or reduces costs.

- Promoting recent advances in integration of environmental sensor data within information systems as a new, disruptive technology that has a strong beneficial impact on businesses and delivery of government services. A trade association has greater credibility and authority when it demonstrates this to users, than does a promotion by an individual company.

- Common structuring of marketing materials/directories, whilst accommodating different thematic domains (e.g. agriculture, maritime, marine pollution, water industry, energy industry).

- Collaboration with other associations – particularly associations in thematic industry sectors – to bring users/customers and EO service providers together.

Information Strategy

Information is the life-blood of representation organisations, whether large or small, for industry or for research. The review of existing services for Task 3 has identified a wealth of information activities (both online and in print) – news, directories, briefing papers, position papers, work group minutes, databases and directories, presentations and multimedia content.

The information currently available represents a massive investment in time, both to gather the information and also to maintain and update it. There are several types of information that are duplicated across different associations' websites – for example, news about programmes, agencies and key players in EO and related sectors, events information, programme descriptions, public policy documents, Directives and regulatory information. For an EOTA with limited resources, opportunities should be explored for collaboration with others to source information that is common to several associations with efforts focused thereafter on adding value through filtering according to EO interests or adding commentary.

News relevant to EO companies in the energy sector could be of no interest whatsoever for others developing applications for agriculture. Providing more customised news feeds by theme, based on information sourced through others could be an effective means of meeting members' needs and justifying membership subscriptions.

As a formal representative of the EO industry in Europe, an EOTA should leverage its position to acquire information that individual companies may find difficult to source – for example, papers from ESA, the European Commission and upstream stakeholders.

Any information received by an EOTA should be made available to members in a transparent and equitable way to ensure that particular companies are not favoured. A members-only area on an EOTA website can be used to provide information that has a particular value to VACs or that companies outside Europe and Canada could use to compete with EOTA members.

Business and innovation support

One of the key aims for an EOTA is to strengthen the industry. Although it should not be involved directly in business development or marketing for individual companies, it could provide a useful focal point for promoting European networks and programmes that offer support for business growth or innovation.

A number of these exist already, many with a particular remit to support small and medium-sized companies (SMEs) so EO VACs are well placed to benefit.

The main networks and programmes are summarised in Appendix B with indications of how they could add value to EOTA services and any areas of potential conflict of interest. They represent a combination of generic services (Business Innovation Centres, Innovation Relay Centres and Europe-Innova) and those provided by ESA and the European Commission specifically for the space sector and related industries.

There is currently no evidence that trade associations in EO-related areas are linking into these types of business and innovation support mechanisms.

4.1.4 Sample of individual services relevant to an EOTA

In the course of the research for Task 3, a number of interesting individual services have been reviewed in more detail in order to illustrate how a particular approach has succeeded in addressing specific EO industry issues.

UKISC: Case for Space achieving high level lobbying impact

In the early part of 2006 UKISC led an initiative to develop and promote the 'Case for Space' within the UK. The objective of this initiative is to highlight the benefits of space to all aspects of UK society and economy and thus to encourage Government investments in space that would create opportunities for the UK space industry.

The initiative originated from an opportunity to present the case for space at a high level within UK Government. It is also timely because it coincides with submissions for the three year UK Government Comprehensive Spending Review being prepared for initiation in 2007.

The basis for the Case for Space is a series of parallel studies covering topics such as the role of space in the economy, communications, environment, science, transport, education as well as cross cutting studies such as policy mapping and international benchmarking. These studies have made the general case for the value of space, but have also tried to address specific opportunities within application sectors.

The outputs from the studies are supporting a series of high level briefing meetings to which senior decision makers within Government have been invited. The conclusion of the activity is intended to be the presentation of a clear and succinct case for UK investment in space at the highest levels of Government.

Global VSAT Forum: Well structured website addresses problem of multiple user audiences

The GVF is a niche industry association representing companies involved in delivering advanced digital fixed satellite systems and services. However their target audience includes

consumers, commercial enterprises and government worldwide in a wide variety of application areas, several similar to those for EO – e.g. content distribution, risk management, natural resources & utilities.

The GVF website has been designed and populated in such a way that interested user organisations can easily identify relevant information for their own requirements. For example, the Case Studies section (See Figure 4-1) can be browsed by thirteen different application categories, providing access to short case examples submitted by member companies and highlighting how their products/services have been applied in a particular context. Although these are by nature self-promoting pieces, they provide a useful signposting service for potential customers as well as explaining what the industry as a whole is capable of in any given area. It is assumed that all case studies are subject to some validation by the GVF secretariat prior to going online.

Figure 4-1 Global VSAT application areas

Other areas of the website also allow the user to see only the information of relevance to the area they are browsing. In the Telecoms Solutions section, selecting "Oil & Gas" provides the user with data and links from one single page to Case Studies, Virtual Workshops, News, Events, Links, Publications and Solutions Providers. See Figure 4-2.

Figure 4-2 Linking content to audience

An EOTA should consider carefully the presentation of information on its website, particularly as it will be targeting a number of quite distinct audiences. Whilst it may not have the resources to create (and maintain) a large amount of content immediately, content can be sourced from members (case studies, white papers, product/services) and via other associations through links.

AFIGéo – Strategic partnerships to promote GI capability

AFIGéo, the national French association for geoinformation, has established strategic partnerships which are strengthening its efforts to promote GI companies and raise awareness of the role of GI in different applications areas. These offer useful examples of how partnerships can help an industry association achieve visibility beyond its core audience.

As a partner of the major annual French GI event, **Geo-événement**, AFIGéo gains visibility amongst major decision makers, policy bodies, industry and end users. The 2006 event attracted 60 exhibitors, 400 conference attendees and 3,000 visitors and an AFIGéo conference session provided an opportunity to raise revenue from these attendees (€48 charged for attending the "Assises des Géomaticiens") as well as promoting membership of AFIGéo (attendees encouraged to join at the same time as signing up for the Assises).

Geo-événement also provides a focus for various competitions run to promote GI achievements and to generate wider interest in the potential uses of geo-information tools. AFIGéo is a sponsor of the Concours Géo d'Or to reward an outstanding GI system or application.

The “Concours Google Earth” focuses on interesting applications of the Google Earth API and, on a lighter note, the Concours Géo-Loufoques d’Or rewards the use of GI systems to analyse a ridiculous subject – “une grosse bêtise”.

All such competitions are useful mechanisms for attracting press and media coverage in areas that may be perceived as specialist and not immediately relevant to the “man in the street”. An Earth observation industry association could usefully deploy similar techniques or piggy-back on existing competitions and events.

AFIGéo also collaborates with **SIG la lettre**, a monthly publication in France dedicated to GI systems themes, that hosts the “Annuaire des Acteurs” (directory of key players in GIS) on its website. The directory is produced by AFIGéo and has 170 profiles currently. Geo-événements is a partner for the service. By hosting the directory on sig-la-lettre.com, AFIGéo benefits from exposure on a site that has regular visitors across the GI community. An EO directory should also be linked to popular media channels if possible.

4.2 Other Associations

4.2.1 Characterise services

There are several associations working in areas that are relevant to EO industry but whose missions focus not on commercial goals but on agendas important to the research community, public sector agencies and standards/infrastructure bodies.

A number have been selected for review as part of Task 3 with the objective of identifying activities that could contribute to the mission(s) of a European-level EO trade association:

AGILE	Association of GI Laboratories for Europe www.agile-secretariat.org
EARSeL	European Association of Remote Sensing Laboratories www.earsel.org
EURISY	Bridging Space and Society www.eurisy.org
EUROGI	European Umbrella Organisation for Geographical Information www.eurogi.org
ISPRS	International Society of Photogrammetry & Remote Sensing www.isprs.org
EGS	EuroGeoSurveys www.eurogeosurveys.org
OGC (Europe)	Open Geospatial Consortium www.opengeospatial.org
RSPSoc	Remote Sensing & Photogrammetry Society www.rspsoc.org

These are listed in Table 4-3 below with an initial characterisation of their main interest (Type), geographical reach, size and thematic focus (Sector).

It should be noted that there are other groups that do not have the status of association which have not been reviewed in detail but which are important in the EO context nevertheless as industry participates alongside scientific representatives:

- CEOS Working Groups http://www.ceos.org/pages/subs.html
- United Nations Working groups for GI

ASSOCIATION	Type			Geographical reach			Size		Sector
	Research	Industry	Public sector	National	European	International	Large	Small	
AGILE									GI
EARSeL									RS/EO
EURISY									Space
EUROGEOSURVEYS									Geospatial
EUROGI									GI
ISPRS									RS/EO
OGC (& OGC Europe)									Geospatial
RSPSoc				UK					RS/EO

Table 4-3 Non-industry EO associations

Interestingly, half of associations here also include industry members (who presumably join in order to keep up to date with professional development and research issues relevant to their business). With some industry associations also including research institutions as members, the distinction between industry and non-industry associations appears somewhat blurred. In practice however it is fairly distinct because the main purpose of groups such as EARSeL, RSPSoc and ISPRS are to function as research networks. Whilst they encourage industry members, such networks have historically viewed commercial members more as sponsors (i.e. supporting the aims of the association through a financial contribution, with out expecting a direct return). This is likely to remain the situation, because it is important for academically based organisations to avoid vested interests, whereas a Trade Association openly acknowledges it has a vested interest in the development of its market.

If an EOTA is to represent mainly VAC interests, admitting research members may dilute its efforts and may duplicate the efforts of existing associations. This is explored in more detail in Section 5, Interactions Analysis.

Looking at the size of the non-industry associations (See Table 4-4), there is quite a variety in the selected sample. Eurogi and Eurogeosurveys have a lower number of member organisations compared to the others. However, as most of these members are major national associations or public bodies, they reach a much larger number of practitioners (e.g. Eurogeosurveys has 32 members representing 7,500 people working in national geosurvey bodies). A European EOTA may wish to access a wider audience through strategic alliances with organisations that represent large numbers of practitioners using EO.

ASSOCIATION	Membership Numbers		
	Organisations in membership	Individuals in membership	Sponsors / Partners
AGILE	87	0	
EARSeL	250 laboratories	0	ESA, EC, European Council founding members
EURISY	40	0	4,000 partners
EUROGEOSURVEYS	32	Represents 7500 individuals	
EUROGI	20	(will be allowed from 2007)	(will be allowed from 2007)
ISPRS	90 National 10 Associate societies 12 Regional member associations	0	50
OGC (Europe & US)	312	0	MOU with AGILE, GITA, ISO and others
RSPSoc	44	1000	EARSeL is a member

Table 4-4 Membership Numbers – Non-Industry Associations

Non-industry associations face different issues depending on their purpose. Those selected fall into three broad groups as shown in Figure 4-3 below:

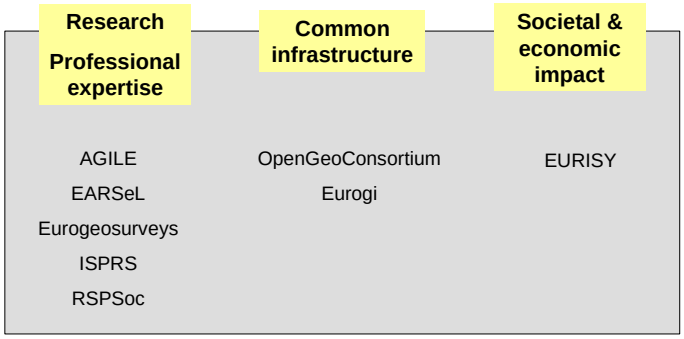


Figure 4-3 Focus of Non-Industry Associations

The majority have evolved from a need to bring together the research and professional interests within RS and GI – as has happened in most industry or skills domains over many years. There is a strong tradition of institutes in most European countries that act as "guardians" of a technical domain or profession and promote scientific excellence through peer-reviewed publications and conferences. The ethos for these organisations is strongly dependent on sharing knowledge – quite different to the competitive environment underpinning industry associations – although increasingly research institutions also compete at national and international levels for contracts and project funding.

There are two associations that focus on common infrastructure objectives within the EO-related domain (OGC and Eurogi). Here the emphasis is on developing and promoting common standards and data frameworks which help make products and services more

interoperable. This is clearly of benefit to individual companies but needs to be driven by an independent association that can work for the overall good of the whole sector.

The third type of association is focused on the wider societal and economic impacts of space related technologies – as represented by Eurisy. Services offered by this sort of organisation cover advocacy and promotional campaigns and are geared to influencing public opinion (i.e. the "man in the street") as much as public sector and commercial stakeholders.

The issues addressed by each of these association types and the related high level services are summarised in Figure 4-4 below:

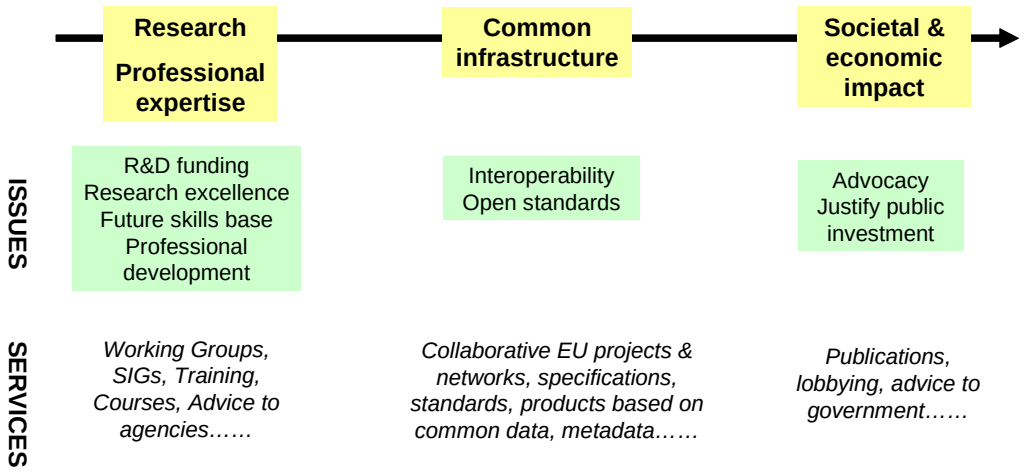


Figure 4-4 Issues faced by non-industry associations

The review of non-industry associations operations in EO-related areas reveals a high level of interaction between them, as one might expect given the amount of overlap across their interests and the common issues they face:

- Most associations have established Working Groups and Special Interest Groups as a mechanism to create and share knowledge. Each one takes effort to administer and findings may or may not be disseminated beyond the membership, depending on the resources available for marketing. Similar group topics can be seen on several associations' websites but there is no evidence of how these groups exchange relevant information.

- All the non-industry associations selected have strong links with government and public agencies and this could be useful for an EOTA when planning its own lobbying. Coordinated approaches from all associations could have a greater impact than separate campaigns although (as already emphasised) the research-focused associations tend to want to maintain an industry-independent stance in their dealings with public bodies.

- Non-industry associations are often working on medium to long term issues – some mention a 3-4 year strategic cycle, linked to the timing of European R&D programmes. For an industry association, this may be too long term a view, especially for VACs where the focus is on short-medium term wins.

4.2.2 Analysis of a sample of services

In this section, a more in-depth view is taken of a sample of non-industry services and associations that need to be taken into account in the operation of an EOTA. These are:

- Lobbying/advocacy services for all identified associations (potential conflict of interest with EOTA)
- Education and training activities (Review of EARSeL as complementary association for an EOTA)
- Infrastructure/standards-related services (Open Geospatial Consortium standards work, INSPIRE work by EUROGI) which may have an impact on the business development opportunities for EO VACs

Lobbying and advocacy services

The SOW requires analysis of a selected range of non-industry services to assess the compatibility, oppositions and synergies between these services and similar ones in industry associations (what confrontation between user positions, positions from scientific arena and industry positions). Lobbying and advocacy services is an interesting case to explore here as both industry and scientific/research associations target similar organisations but can often have quite different agendas. Table 4-5 below provides a high-level analysis of the issues.

Other association	Lobbying/advocacy target(s)	Key strengths/weaknesses	Synergies with EO industry needs	Conflicts of interest
AGILE	European Science and Research bodies EC	- Too small for major impact - insufficient resources to fund lobbying on wide scale	Access to GI researchers for events, R&D results	None.
EARSeL	ESA EC National and European RS structures	+ Well connected + established 1977 + ESA and EC are closely engaged	Already co-operates with ISPRS, EARSC, EUROGI, Eurogeographics and RSPSoc.	Education & training remit is complementary to industry needs Research lobby may conflict depending on focus
Eurogeosurveys	EU institutions	+ Brussels base + Active as independent advisor - Representation restricted to specific type of organisation – national survey orgs	Limited – use as channel for news in and out	In medium term may see EO as a threat?
EUROGI	EC incl JRC Policy makers local, national and European	Key role in lobby for ESDI and INSPIRE Directive Regular meetings with	Working on underlying infrastructure projects which will help new product	Strong EUROGI presence within EC may preclude EOTA from similar arrangement.

Other association	Lobbying/advocacy target(s)	Key strengths/weaknesses	Synergies with EO industry needs	Conflicts of interest
		senior EC officials MOU with JRC	development (common data structures etc)	
EURISY	European institutions GJU ESA United Nations		Addresses higher level space policy issues Addresses links with civil society Close links to national space agencies	None – case for space helps EO
ISPRS		International participation, many WGs although very technical remit	Limited – use as channel for news in and out.	Too technical to conflict with EOTA
OGC	European Commission European open standards bodies	Very narrow interest area but with potentially large impact on market	Advancing open standards in GI software is beneficial for VACs. Effort cost of participation can be high so an EOTA could federate EO VACs interests in OGC.	OGC parent organisation is US based (though European group also exists).
RSPSoc	No direct targets	Research focus (with UK dominance), not political. Links with ISPRS, EARSeL and International map trade association (IMTA).	n/a at European level. Has same relation to BARSC at national level as EARSeL has to EARSC at European level.	Too technical to conflict with EOTA

Table 4-5: Synergies With Other EO Organisations

Education and training – EARSeL

EO VACs (and larger EO companies too) rely on the research and education sector for a supply of laboratory facilities, trained staff and new graduates with relevant skills as well as access to R&D results and technology.

EARSeL's core mission covers all of these so it is interesting to consider in more detail the synergies between EARSeL and an EOTA. Figure 4-5 below summarises the main missions and services of the association. Established in 1977 under the auspices of the European Space Agency European Commission and the Council of Europe, it has strong links to the main funding bodies for EO as well as an established network of some 250 member laboratories, mainly in universities, research institutions and government agencies (with around 30 company members).

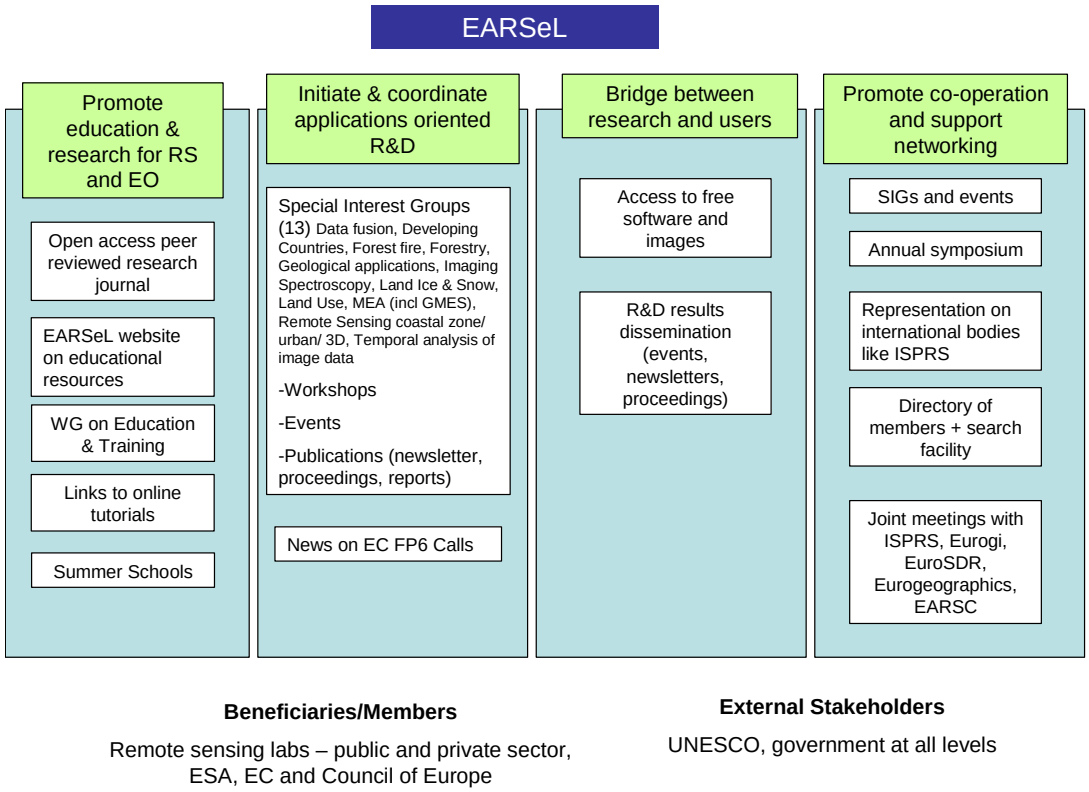


Figure 4-5 Main Missions and Services of EARSeL

The Secretariat for EARSeL is hosted by a member laboratory in Germany. Although small (or possibly because it is small!) the EARSeL secretariat is very active in collaborating with other complementary organisations covering industry, scientific and public sector interests.

The Education & Training remit of EARSeL is particularly interesting for an EOTA as this would be an important bridge into the research community and sources of new product / service ideas as well as a means of keeping up to date with developments to the underpinning science and technologies for Earth observation. For an EOTA to track this type of information on its own would be a duplication of resources and would detract from time required to pursue other more commercially-focused activities for members.

The proposed services for an EOTA where EARSeL could play an active role include:

- providing information on relevant R&D activities, facilities and emerging results which have a particular EO interest (for EOTA to then disseminate to own members)
- take information from EOTA and publish in own publications/website where relevant to own members
- Promote industry opportunities to researchers and students in EO related disciplines (especially for smaller VACs)
- organise joint events to promote academic/industry links, consultancy, teaming for publicly funded research projects and other forms of knowledge transfer
- share exhibition costs through joint stands at other organisations' events

- matching/enquiry service for EO VACs seeking specific partners (note searchable online directory of EARSeL members already exists)

- Work with EOTA secretariat to identify lobbying opportunities where research and industry share similar goals; compile joint position papers where appropriate to strengthen lobbying case

- Identify EARSeL members willing to host EO events for combined audiences

These potential roles and how they might be realised with respect to other organisations is explored in Section 5.

Services supporting industry Infrastructure

The Open Geospatial Consortium is an international industry consortium of more than 300 companies, government agencies, research organisations, and universities participating in a consensus process to develop publicly available interface specifications. OGC Europe was formed in 2001.

OpenGIS Specifications support interoperable solutions that "geo-enable" the Web, wireless and location-based services, and mainstream IT. The specifications enable technology developers to make complex spatial information and services accessible and useful with all kinds of applications.

OGC Europe (OGCE) aims to address some of the interoperability issues that can constrain information and communications markets. An EOTA can play a useful role in enhancing OpenGIS specifications via:

- the identification of VACs requirements

- the provision of test beds

- involvement in pilots and specification working groups.

Through links to OGC in the USA, early information on emerging products from major players using OpenGIS may be sourced, providing valuable market intelligence for EO companies in Europe.

OGCE is also actively involved in a number of European Union Projects (ETEMII, GETIS, GINIE , INSPIRE) so would represent a useful strategic partner for links to the geospatial technology R&D community.

The INSPIRE Directive (Infrastructure for Spatial Information in Europe http://www.ec-gis.org/inspire/) is stimulating much debate in the commercial and public sectors in Europe. It would be an important target for intelligence gathering, lobbying and representation by an EO TA in order to ensure that the interests of VACs are taken into consideration as the Directive moves towards adoption.

With relatively limited resources for an EOTA secretariat, any information services or consultations for EO industry related to INSPIRE may be more effective if channelled through existing players such as EUROGI and OGC.

Involvement in OGC test beds and standards development is very time consuming, an EOTA might be able to find ways of securing funds to resource OGC activity relevant to EO on behalf of the EOTA members.

4.3 Comparison with EO sector support in other regions

The EOTA has been compared to a broad spectrum of North American representative bodies, including the Canadian Institute of Geomatics (CIG), the Alliance for Earth Observation (AEO), the Geospatial Information and Technology Association (GITA) and Geoconnections. Of these organisations, AEO is the only organisation that truly focuses on EO, while the others are more broadly focused on geospatial data and geomatics. Of these organisations, Geoconnections is the most unique, since it is a wholly publicly funded initiative that involves the interests of a large number of government departments and stakeholders.

4.3.1 Organisations Summary

A summary of the organisations is given below in Table 4-6. This is followed by a brief description of each organisation. EARSC has also been included in the table for reference and comparison to the EOTA.

Relevant Associations	Affiliated Country	Year Initiated	Mission Statement	Objective	Publications / Annual Conferences	Funding Sources
Canadian Institute of Geomatics (CIG)	Canada	1982	To advance the development of geomatics sciences in Canada	Geospatial data	Journal, Annual Conferences	Non-profit (Annual Membership)
Geoconnections	Canada	1999	Making Canada's geographic data, tools and services readily accessible on-line	Geospatial data	E-Newsletters, Conferences	Government of Canada
Alliance for Earth Observations	US	2004, IGES - 1994	To promote the understanding and use of Earth Observation for societal and economic benefit.	Just EO	Newsletter, Promotes related conferences, workshops	Non-profit (Part of IGES)
Geospatial Information & Technology Association (GITA)	US	1998	To be the leading information resource and community for anyone who has a vested interest in the use of geospatial information.	Geospatial data	Newsletter, Annual Conference	Non-profit (Annual Membership/ Donations)
European Association of Remote Sensing Companies (EARSC)	European	1989	Promotion of European Remote Sensing community	Remote Sensing, mainly EO	Quarterly newsletter, Annual Conference	Non-profit (Annual Membership)

Table 4-6 Overview of EO associations in other regions

Canadian Institute of Geomatics (CIG)

http://www.cig-acsg.ca/

The Canadian Institute of Geomatics has evolved to be a non-profit scientific and technical association that represents the largest and most influential geospatial knowledge network in Canada. Over 50% of its members are senior managers and researchers in government, private sector, academic and NGO organisations.

The objectives of the Institute are:

- to advance the development of geomatics sciences in Canada;
- to enhance public awareness on the role geomatics plays in their daily lives;
- to maintain a publication record of the history, development and progress of geomatics in Canada;
- to further the professional development of its members;
- to foster cooperation between and promote unity of purpose and action among Canadian geomatics organisations;
- to represent internationally and promote Canadian interests in geomatics;
- to provide a forum for professional networking through information exchanges, communications, and publications.

Geoconnections (Canada)

http://www.geoconnections.org/

Geoconnections is a national partnership program to evolve and expand the Canadian Geospatial Data Infrastructure (CGDI). The CGDI provides Canadians with on-demand access to geographic information (e.g. maps, satellite images) and related services and applications in support of sound decision making. The CGDI is intended to provide Canadians with access to geospatial information, technologies and services through a network of data, service and technology suppliers.

Alliance for Earth Observations (USA)

http://alliance.strategies.org/

The Alliance for Earth Observations' main purpose is to strengthen the private sector's role in EO. Its members includes individual companies, research and education institutions, societies and non-governmental organisations (NGOs) interested in the use of space-based, airborne and *in situ* data and the derived information products. The Alliance for Earth Observations is a publicly and privately funded initiative of the Institute for Global Environmental Strategies (IGES) to promote the understanding and use of land, air and sea observations for societal and economic benefit. The IGES, formed in 1994, is an international, nonprofit, organisation which is a leader in Earth and space education, communication and outreach and in fostering international collaboration.

The Alliance's mission is to advance the private sector's involvement in the development, use and integration of Earth observation and derived information for social and economic benefit.

Geospatial Information & Technology Association (GITA) (USA)

http://www.gita.org/

The Geospatial Information & Technology Association (GITA) is a non-profit educational association serving the global geospatial community. GITA's mission is to provide excellence in education and information exchange on the use and benefits of geospatial information and technology in telecommunications, infrastructure, and utility applications worldwide. The industries that GITA serves are defined as infrastructure-based organisations that can benefit from the application of geospatial information technologies. These industries include:

- Electric utilities
- Gas utilities
- Telecommunications companies
- Water/wastewater utilities
- Public works/local government
- Oil and gas pipelines

4.3.2 Cross Comparison of the EOTA with North American Bodies

An analysis between the North American bodies and EOTA reveals a significant amount of similarities between all organisations. To highlight the similarities, a table of roles and characteristics of each organisation has been assembled in Table 4-7. This table includes all of the proposed candidate missions of the EOTA, albeit generalised somewhat to allow a straightforward comparison of the EO activities outlined for the EOTA compared to the more generalized geomatics activities of the other organisations. EARSC has also been included in the table for reference and comparison to the EOTA.

The first important comparison is that the majority of North American organisations analysed are not entirely focused on EO, but rather include EO in their mandate. The AEO is really the only North American body that is focused on EO; however, this organisation is not focused on representing the smaller value added companies per se, but rather the large aerospace companies that build EO systems. This is further evidenced by the cost of membership to the AEO, which is much higher than a typical VAC would want to pay for representation. Of the other organisations, GITA is strictly focused on representing infrastructure based companies rather than VACs. Geoconnections is not a true representative body; rather it is a government funded initiative whose mandate is to promote and advance the use of geospatial data. In doing so, Geoconnections has some of the requisite characteristics of a representative body. This leaves CIG as perhaps the only organisation that is focused on representing the interests of VACs. Given that CIG is more generally focused on Geomatics, this appears to leave significant room in North American for a representative body that focuses on Earth Observation.

The second important comparison that can be made is that the EOTA has almost ALL of the characteristics of the other representative bodies. This serves to highlight the EOTA in its presently envisioned form is a rather ambitious initiative. However, it also serves to highlight that the EOTA is identically what the industry needs for representation. Given its rather ambitious mission, it highlights the needs for at least some public funding.

A number of mandates in the Table 4-7 list that are not currently envisioned for EOTA that are of specific interest include scholarships, access to geospatial data and the focus on industry-academia-government partnerships. Scholarships are certainly a worthy endeavour for an industry body since it fosters professional development that would have direct benefit to the membership. A database of free satellite data is also worthy of consideration since these databases exist (see for example the Global Land Cover Facility at the University of Maryland) in other organisations and are known to be very popular. However, it is recognized that such an endeavour would require a substantial amount of base funding to become fully established. And finally, a focus on industry-university-government collaboration, although not currently a focus for the EOTA, may in fact evolve over time. EO has an inherent necessity for Research and Development and, consequently, industry-university-government collaboration is already inherent in the EO sector.

The other major characteristics in Table 4-7 that are not envisioned for the EOTA include Applications Development and Research Sponsorship. These characteristics have been included because they are part of the mandates of several other North American non-EO representative bodies (see for example the Pipeline Research Council International, www.prci.org) and are also the main objectives of Geoconnections. In the case where industry representative bodies have been established to sponsor research, it has been recognized that gaps exists for applications development and as a consequence an industry body has been established to benefit of industry collaboration and to lever voluntary industry funding. In the case of EO, the industry already benefits from national and international space agency funding, and therefore, the EOTA need not have applications development as one of its mandates. It is noteworthy that the membership fees to industry bodies that sponsor research are quite significant (in the tens of thousands of Euros), perhaps well above the means of most small VACs. The issue of fees for an EOTA will be addressed in Task 4.

REMOTE SENSING ORGANISATION	EOTA	EARSC	Alliance for EO	GITA	Geo connections	CIG
Service characteristics						
Sponsors research						
Leads application development						
Training						
Scholarships to Grad/Undergrads						
Internal workshops						
Annual meeting or conference	TBD					
General publications						
Represents members in meetings with stakeholders						
Partnership building/ facilitates collaboration						
Liaison with end user associations						
Maintains links with similar international organisations						
Promotes awareness of EO						
Membership guidance on policy issues						
Endeavours to influence policy with Government						
Helps establish or influence standards						
Links between industry, academia, NGO, govt						
Gathers/disseminates EO intelligence						
Gathers information on member issues						
Provides databases of free geospatial data						
Promotes international programmes (eg GMES)						
Directory of EO companies						
Media and public relations						
Customised brochures on services						
Newsletter						
Promotes members and services on website						
Membership focus on certain sector/industry	*	*	*	***	**	**
Non-profit organisation	TBD				Govt	
Receives public funding	TBD					
Membership fees	TBD	€400	€750-€7500	€300-€4000		€200

High Priority
Medium Priority
Low or No Priority

* Earth Observation
** Geomatics
*** Linear Infrastructure

Table 4-7 Comparison of North American Representative Bodies with EOTA and EARSC

4.4 Review of industry representation bodies in other market sectors

4.4.1 Selection of associations

The candidate missions and related services provided by four industry associations outside the EO, space and GI sectors have been rapidly reviewed and analysed. The organisations have been selected on the basis that they share one or more characteristics with the proposed EO TA:

- operate at European or international level
- include both large and small companies
- include members that are national trade associations
- are in sectors where public sector stakeholders hold a strong position
- are in sectors where technological change is a major driver
- represent members working across the value chain

On this basis, we have selected the following for analysis

AIIM **www.aiim.org**

EuroSmart **www.eurosmart.org**

EuropaBio **www.europabio.org**

IFPI **www.ifpi.org**

4.4.2 Analysis of activities and relevance for EOTA

The candidate missions, target audiences and related services of these four organisations are presented below, with commentary highlighting issues of relevance to an EO TA.

4.4.2.1 AIIM

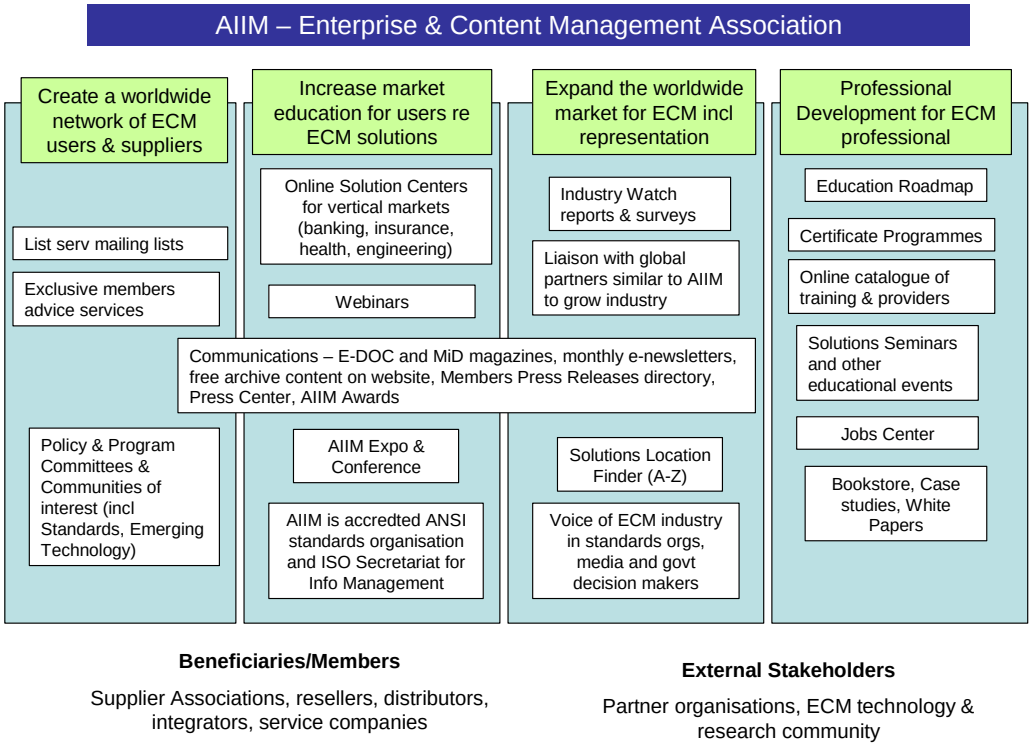


Figure 4-6 Main Missions and Services of AIIM

- AIIM is the international industry association for Enterprise Content Management (ECM). With 35,000 members it does not compare in size to the proposed EO TA however it does face similar issues – information or data underpins all activities in ECM and the rate of technological change in the industry has been very rapid.

- There is a small number of large, dominant companies whose activities can be both an opportunity and a threat to the many small value-adding companies working in niche ECM areas. AIIM has to represent all member interests and adapt to the increasing convergence across channels and players.

- AIIM also plays a very active role in developing standards which could be of interest to an EO TA.

- With its role in education, professional development and industry standards, AIIM has established a very strong and influential presence in the content management market. In EO and related sectors, education and standards are being actively developed by other associations but an EOTA could strengthen its strategic position by alliances with such associations, providing an industry needs input to courses, training and early standards work.

- Professional development is useful as a non-competitive area of operations and it brings together diverse interest/skills groups – is there a role for an EOTA in promoting short courses for professionals in complementary sectors wishing to develop their EO knowledge? In this context it is also worth noting that the GI world is also beginning to consider professional certification, initially through continuing professional development. Is it too early to introduce a Chartered Remote Sensing Practitioner, or too include this discipline as a branch of an established profession such as surveying?

4.4.2.2 Eurosmart

Eurosmart is an international association representing the voice of the smart card industry for multi-sector applications. Although it has a highly focused remit compared to an EO TA, its membership is of a similar scale to EO associations (32 members) and it has a small secretariat compared to the other associations reviewed here. Useful for benchmarking – i.e. what can be achieved within limited resources.

- Split activities between underpinning issues for market (education, research, standards, common criteria) and outreach (lobbying, market intelligence, communications)

- Involved in developing technology roadmap for Smartcards – perhaps a similar process for an EO industry roadmap.

4.4.2.3 Europabio

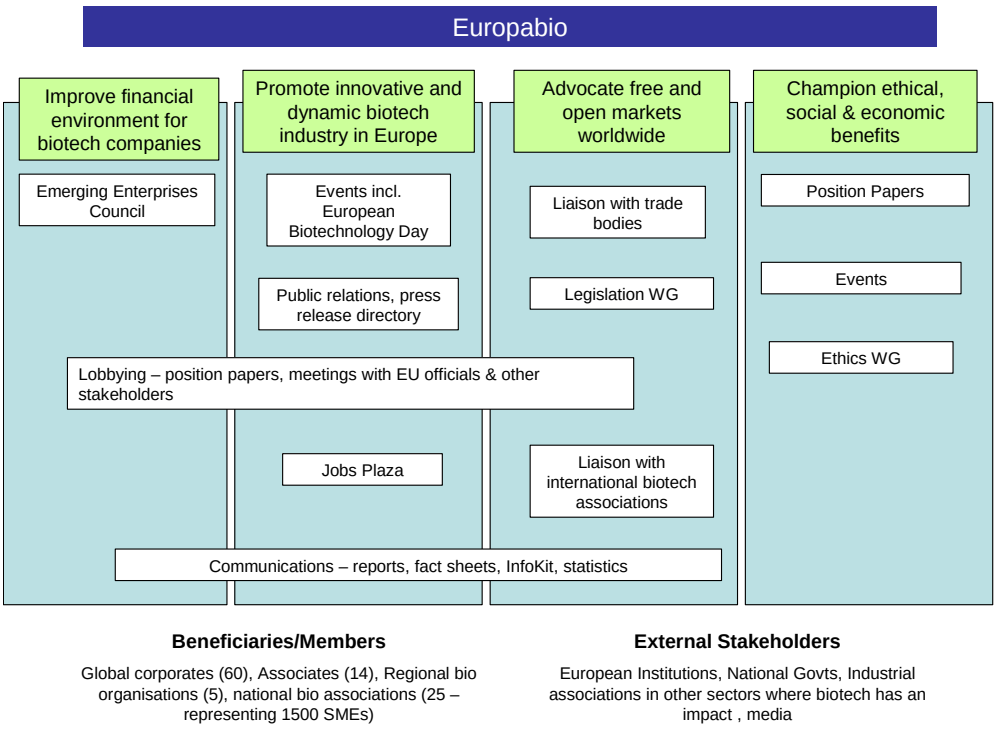


Figure 4-7: Main Missions and Services of Europabio

- Europabio is an interesting example of an industry association which shares similar characteristics to the proposed European EO TA. It is a pan-European biotechnology representation body whose membership includes both national trade associations and some 1,500 SMEs.

- Its members operate at all stages of the biotech value chain and there are strong links to public markets in the health and agricultural sectors.

4.4.2.4 IFPI

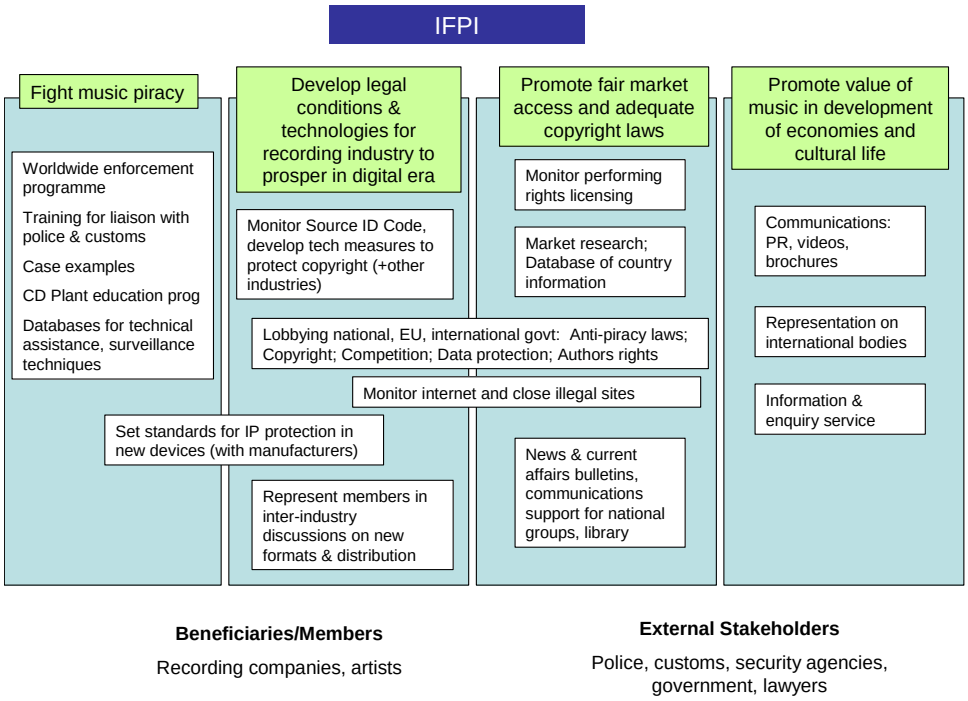


Figure 4-8: Main Missions and Services of IFPI

- As with EO data, the core technologies and compounds developed in biotechnology have potential applications in many areas so there is an active value-added industry involving companies of all sizes.

- The International Federation of Phonographic Industries operates on a federated model, working at national, regional and international levels, which makes it a useful subject for this EO study.

- IFPI undertakes a number of very challenging missions in response to the rapid technological developments in the music market and the threat of music piracy, including lobbying governments for new legislation and monitoring piracy developments.

- It is a large association – over 1450 members in 75 countries with affiliated associations in 48 countries – but the approach it takes to international coverage may provide relevant input to Task 4.

4.5 Key findings from review of existing associations

Based on the rapid analysis of services above, a number of conclusions can be reached with respect to a representative body for the EO service sector and mechanisms for fostering the industry in the future.

Focus on EO

- there are gaps in provision as few associations focus only on EO – EARSC is the strongest European candidate in this respect but it has insufficient capacity as currently constituted to expand its services.
- There are relatively few national EO associations compared to GI and the non EO associations.
- EO issues are covered through various task forces and working groups. Working to a shared roadmap or framework could add real value to the strategic outcomes of this work.
- The most active lobbying activities appear to be focused on a wider space agenda rather than the EO service element.

Common issues

- All membership associations have to work hard to win new members – especially where there is no "accreditation" associated with membership.
- Information and communications are the lifeblood of all associations – some are making better use of their websites to exploit this than others.
- Most associations have to address multiple target audiences and there is often overlap across member bases.
- Most associations reviewed have a strong link to the same public funding agencies – ESA and EC in particular - although each one maintains separate intelligence on developments. There are real possibilities to co-ordinate better any services geared to lobbying and influencing programmes.

Barriers or conflicts

- lack of a shared strategic "roadmap" for industrial players in EO and no explicit definition of the role of the EO service sector in the strategic objectives/vision of sectors related to EO (GI, space).
- EO does not present itself as an industry in its own right in association websites (although EARSC now promotes itself as EO rather than Remote Sensing).
- The presence of other associations may dilute EO communications if activities are not co-ordinated effectively.
- Associations with the highest profiles tend to include the largest players (both public and private) who can pay higher membership fees and provide manpower to sustain services / secretariats.

- Research associations prefer to be disassociated from industry interests in order to maintain their independence.

Learning from other sectors

- Factors for success appear to be the ability to bring tangible benefits to members. For IFPI this has been the fight against music piracy, AIIM provides a rich source of information on products and services as well as accredited training, EuropaBio has made strong progress in lobbying EU institutions on behalf of industry in controversial areas and EuroSmart has helped small, diverse smart card companies focus their efforts whilst working across a wide range of applications.

- An EOTA can emulate aspects of these associations' work through:

    - working towards a favourable legal situation in relation to copyright and content management issues for VACs.

    - providing authoritative and independent information on EO products and services in an easily-accessed format.

    - lobbying at European level but with strong co-operation of national organisations.

    - educating the markets that VACs wish to penetrate through high profile information campaigns.

Lisbon agenda

- There is no evidence of representative bodies making explicit links to the wide range of business and innovation support mechanisms provided by the European Commission or ESA. Given the resources available through such mechanisms this is a real gap which an EOTA should address.

Potential for interaction/ collaboration

- There are numerous opportunities for an EOTA to "piggy back" on the activities of others in order to bring an EO perspective, however these interactions will require careful planning and possibly some formalisation through memoranda of understanding / partnership agreements.

5 Conclusions

5.1 Potential model for service provision

The results of the analysis of potential services and the review of existing association services have been used to determine a potential service portfolio for an EOTA. See Figure 5-1.

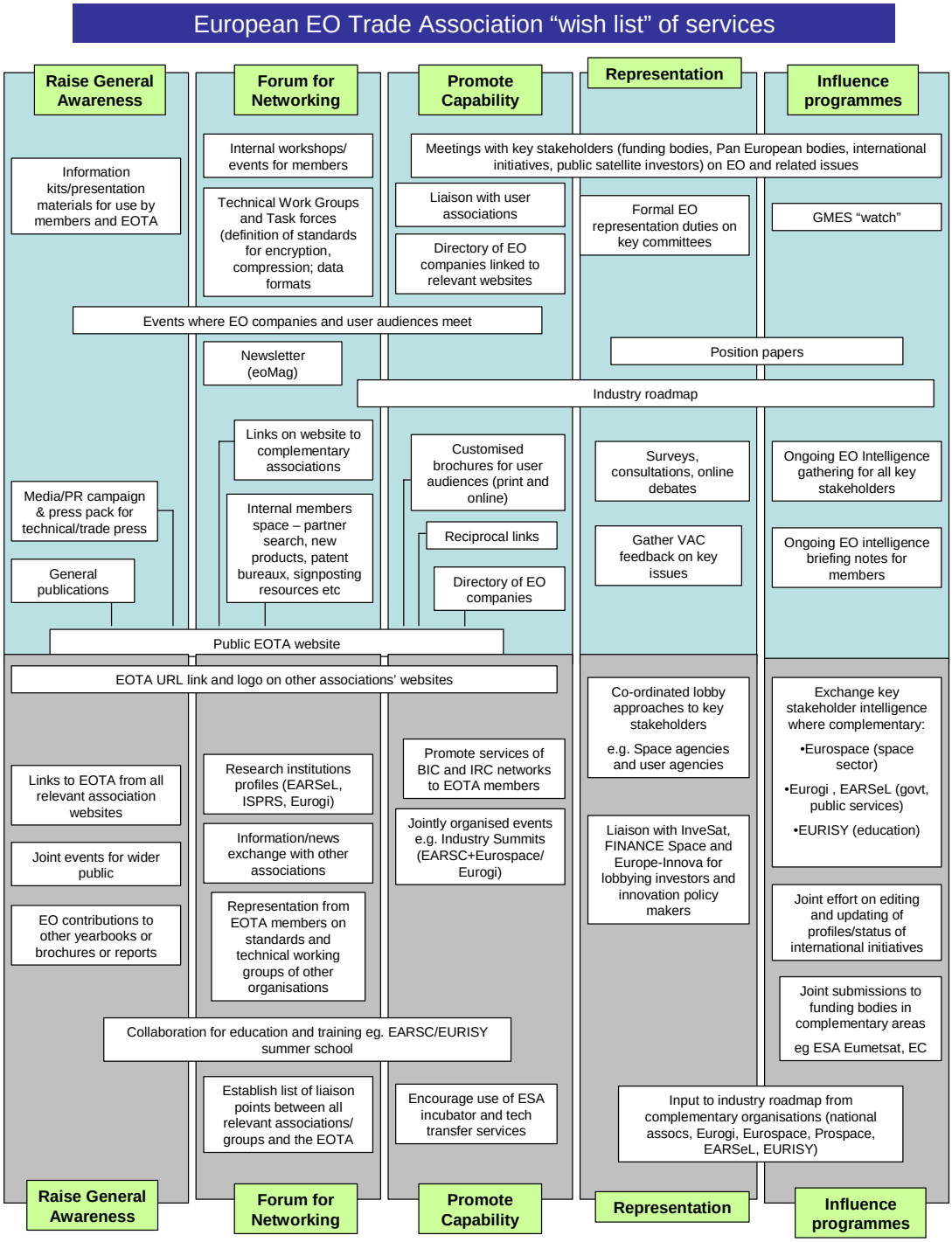


Figure 5-1 Potential model for EOTA service portfolio

Figure 5-1 summarises the services that could be delivered by an EOTA (blue boxes) as well as other activities that could be undertaken by, or in collaboration with, other organisations. (grey boxes).

The proposed service portfolio takes into account the potential services identified in Section 3 and those of existing associations characterised in Section 4. This analysis provides a well grounded starting point for Task 4.

A number of services straddle one or more candidate missions, indicating that these are fundamental to the EOTA operation (for example the website and associated services, meetings with key stakeholders and the industry roadmap).

Figure 5-2 shows the potential relationships between a European EOTA and other associations or networks in relation to specific target audiences that EOTA members wish to reach.

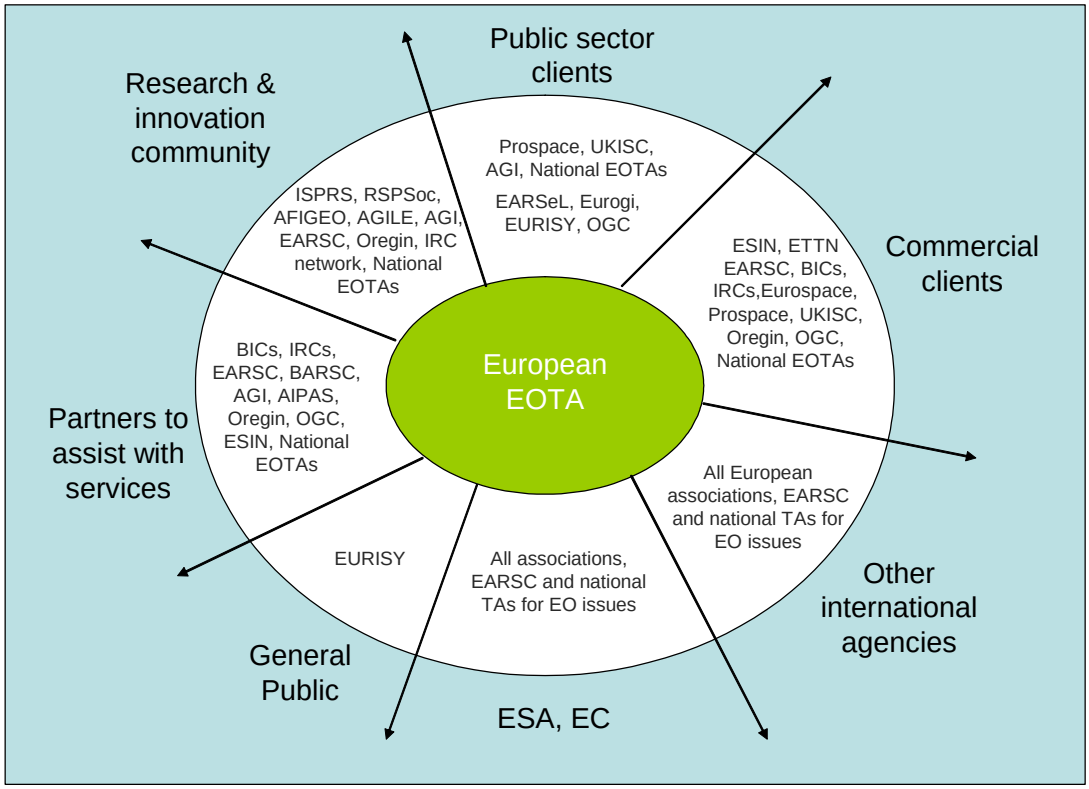


Figure 5-2 Working with others to reach target audiences

Figure 5-2 is a theoretical representation but it helps to demonstrate the number of interactions required for an EOTA to reach these audiences effectively on behalf of its members. EARSC is shown as one of these interactions however a possible outcome of eoVox is that EARSC expands its remit to become the EOTA.

5.2 Feedback from industry and stakeholders

A number of open issues require to be taken forward for further discussion at the consultation workshop in September 2006 and for further analysis during Task 4. Feedback from industry and stakeholders on this T3 report are encouraged via the eoVox website www.eovox.org. The following questions are of particular interest:

a) Although only the "Top 15 missions" have been considered this already produces a very challenging list of services to organise. **Is the proposed service portfolio too ambitious?**

b) What conditions need to be in place to advance the development of a roadmap for the EO industry? (e.g. agreement from key stakeholders that a roadmap is needed, willingness to share strategic vision if not tactical solutions)

c) To what extent **should an EOTA develop its own services and branding/identity** as opposed to promoting EO interests within existing associations (eg GI)?

d) The potential services proposed in the preceding sections cover a wide range of audiences – Upstream, Downstream and the Midstream actors (including the VACs themselves). **Which of these audiences should be the main focus for an EOTA?**

e) In order to deliver these services, a multi-skilled team is required combining expertise at different levels. **What are the most important skills required in an EOTA team to deliver benefits for members?**

f) There are many potential services an EOTA could deliver – more than a small secretariat could cover. **To what extent will VACs be willing or able to contribute their time/resources to help deliver EOTA services?**

g) Membership fees alone would be unlikely to cover the costs of a relevant service portfolio. Probably there would be a need for the EO TA to generate income for instance by charging additional fees for events as well as seeking long-term contributions from the actors that would benefit from a healthy EO value-adding industry, e.g. the Pan-European R&D Funding Agencies, the Aerospace Industry and the Public Satellite Investors/Mission Operators. **Will VACs accept such an approach to raising additional income?**

h) **Is this analysis of services sufficiently comprehensive?**

i) **What experiences do you have that support our findings about services?**

We also welcome input on the proposed portfolio of services. A list is provided below with space for your comments.

EO Trade Association proposed services	**Your comments**
Internal workshops/events for members: - technical themes - market themes - policy	
Technical working groups/ special interest groups	
Events for members to meet potential clients: - organised by EOTA - organised by others and EOTA attends	
Newsletter, e-bulletin	
Dedicated EOTA website (public) Members-only space on website with: - partner search - exchange new product ideas - contacts for patent/IPR advice - directories of resources/technical services	
Reciprocal website links with other organisations	
EOTA meets with key stakeholders (funders, user associations, satellite investors, etc) to promote EO capability	
Formal roles as EO representative on relevant committees/groups	
Lobbying EC, ESA, other policy makers - EOTA positions - coordinated lobbying with other interest groups/associations	
Produce position papers based on members surveys and feedback	

EO Trade Association proposed services	Your comments
Coordinate development of the EO industry "roadmap"	
Intelligence gathering (markets, ESA and EC programmes (incl GMES) and feedback to members	
Online debates, discussion groups	
Directory of EO value adding capability	
Customised materials for different user audiences to promote EO value adding sector	
Liaison/meetings with representatives from user communities	
Media/press campaign – press releases, press pack for technical and trade press	
General publications about EO	
Promote use of ESA incubator and technology transfer services by VACs	
Promote use of EC funded business and innovation support services by VACs	

In addition to the services outlined above, there are additional services which might be provided but which VACs interviewed for the survey did not feel were a priority for them. Feedback on any of these that should be re-considered and why is welcome at www.eovox.org

- Provision of legal advice
- Joint procurements / purchasing
- Support to recruitment
- Organisation of meetings / Governance issues
- Mutualisation of insurance
- Help finding customers
- Marketing services for small companies (developing brochures, websites, advise on web marketing)
- Representing individual companies at exhibitions and trade shows

- Training courses for specific themes (technical skills, ICT, sales & marketing, management, etc)
- Continual professional development programmes for key skills groups
- Organisation of secondments, exchanges
- Promotion of educational opportunities available in universities / technical colleges / self learning

Appendix A - Services Provided by Existing Industry Associations

CANDIDATE MISSION: Forum for Networking	
EXISTING ASSOCIATIONS	**Services**
AFIGEO	Events – National colloquia with partners, General Assembly (annual) Regional network of correspondents Thematic interest groups: Territorial Collection and local actors; Flood Risk; Infrastructure and Network Management Directory of members activities - short 4-5 line profiles but no web links to member websites Monthly members newsletter (restricted access) and monthly Flash Info (non restricted access) Members Only area on website Best practice reports (in collaboration with Centre National de L'Information Geographique AFIGEO Work Programme
AIPAS	Help to form consortia capable of working on programmes that members individually could not address Provide room hire in AIPAS Rome office AIPAS Assemblies & Annual Conference Events to promote competitiveness of Italian SMEs in aerospace (with CNR) Events calendar for relevant networking events in Italy and beyond Members Only area on website
AGI	Regional Groups Special Interest Groups and related case studies (Address Geography, Crime & Disorder, Environmental, European, Health, Local Government, Marine & Coastal Zone, Property, Technical, Utilities & Telecommunications, Public Policy Action Working Groups (set up for time-limited period for specific task) News for Members (some restricted) Events (Suggest an Event – Events Manager to help members organise their own) Specialist seminars for industry developments, standards and best practice Members Only area on website – online discussion board, post CVs, publish news about member activities, post press releases, job vacancies, events info Host UK's main GI conference and exhibition (reduced member rates)

CANDIDATE MISSION: Forum for Networking	
EXISTING ASSOCIATIONS	**Services**
BARSC	Members meetings BARSC Forums Occasional whole day conferences on topical themes (commercialisation of EO data, export opportunities, future EO data policy, VHR, 3D/4D, Environmental sensing) Networking, lobbying and information circulation Outreach: Newsletter “Overview”, members’ brochure
EARSC	Events for members – General Assembly Meeting (One-to-one meetings x members) Working groups propose policies and programmes- and Event calendar of other relevant networking events Working Groups – Policy develop position papers & Oceanography (consultancy one-off rather than regular meetings) EoMag newsletter Network partner search Online Membership directory – dynamic system for real time updating Searchable news – content management system to browse by categories EARSC is member of EARSeL to assist networking with research community Collaborating with EURISY on Risk Management Summer School for post graduate students (with support from ESA/Austrian government) Earth Observation Industry Summit (with EUROSPACE)
ETNO	Annual ETNO conference (4 to date) – includes industry, EU Institutions, national regulatory authorities ETNO General Assembly (27 to date) Workshops on specific themes – organise own plus promote those of other telecomms organisations Newsletter – members and non-members Comprehensive information resource base on website – news, events, links to member sites
EUROGI	Members profiles on website GI People directory Bi-annual newsletter Members Meetings (how often?) EU Industry Day events held within larger events – linking industry to policy

CANDIDATE MISSION: Forum for Networking	
EXISTING ASSOCIATIONS	**Services**
	makers GI workshops hosted by members, held as often as requested. Open to non-members including EC Members Only website pages Enquiry service Eurogi is European regional secretariat for Global Spatial Data Infrastructure (GSDI) providing link to international organisations and activities
EUROSPACE	Well established network of national space agencies in Europe and with the relevant national ministries Working Groups chaired by industry reps, organised by secretariat: Industry Policy, Security & Defence, GMES (Earth Observation), Navigation (Galileo), ECSS (Standardisation). EEE parts & Components, Research & Technology, Space Industry Markets (SIM), IPR and Legal Affairs Listing of Members with URLs to websites
GLOBAL VSAT FORUM	Member Directory Case studies, Members press releases/feature articles Members Only space on website – business opportunities – contacts – Working Groups – Executive Briefings Online product/services directory Network of local representatives
OREGIN	Network has grown to over 150 members – too many to hold regular discussions / face-to-face consultations as before Enquiry/matching process – provide information on members with specific profile in response to requests for partners/ subcontractors / suppliers etc Particular focus on fostering partnership between large companies and SMEs OREGIN brings together industry and research community (have some university members) Membership includes national Galileo/navigation industry groups
PROSPACE i-SPACE	Membership is mainly large companies and French so networking at European scale is not widespread. Members-only forums Newsletter “Le Bulletin” publishes details of other associations’ events and publications (eg EURISY, AFIGEO) The I-Space task forces include representatives from the space industry and existing and potential users. Their aims are to: - take thematic inventory of existing applications, and identify sources of know-how, - identify complementary industrial development for operational products and

CANDIDATE MISSION: Forum for Networking	
EXISTING ASSOCIATIONS	**Services**
	services, and - propose research or pilot projects in collaboration with interested partners. Communicate members' needs to the research community Support technology transfer and cooperation agreements Back-up for start-up companies (incubators, mentoring/support from I-Space members) Provide information on national and EC calls for tender
UKISC	Sub-Committees (members + external specialists): • EO Applications and Missions • Research & Technology • Security & Defence • Satellite Navigation • Satellite Telecommunications • Space Science Working Groups for GMES and Meteorology Main Committee followed by briefings from senior figures from UK or international space community (Chatham House rules (non attributable comments) allow for open discussion.

CANDIDATE MISSION: Keep track of and Influence programmes	
EXISTING ASSOCIATIONS	**Services**
AFIGEO	AFIGEO representative in INSPIRE expert group for GI advising European Commission
AIPAS	No direct representation on programme groups?
AGI	Member of UK Govt GI Panel – provide advice to Office of Deputy Prime Minister on high level GI issues of national importance
BARSC	Liaison with UK government departments, national and international (ESA EOPB, GMES GAC, ESA C-MIN, EUMETSAT) programmes
EARSC	Co-operation with EC on a number of activities relating to EO links between EO actors Participation in - GMES Working Groups & Plenary meetings - Space Policy Consultation workshops Eurospace directors are also involved in EARSC so access to space policy/programme developments Institutions join EARSC as Observers
ETNO	Major effort to influence EU Regulatory Framework for e-Communications Services – dedicated information space on ETNO website, regular position papers and press releases, notification of new developments and milestones. High level meetings between ETNO members and EU officials and international delegations
EUROGI	Eurogi meets twice a year with EC Senior Officials to discuss GI related issues (Eurogi derived from a DG Information Society project in 1993) Eurogi is facilitator for several EC Directorate Generals and other European organisations. Invited to attend meeting/workshops to present views of members MOU signed with Joint Research Centre to collaborate in areas of common interest
EUROSPACE	Permanent programmatic, technology and policy watch activity through working groups Permanent liaison with ESA. Frame contract between ESA and Eurospace since 1987 – Eurospace performs advisory work for ESA Official and informal contacts with ESA, National Agencies and EU bodies (Commission, Council, Parliament) - High Level Panel on Space - GMES Partner - Input to EC Green and White Papers Prepare proposal for future comprehensive space programmes Consultation and report on Space R&T Priorities delivered to European space authorities
GLOBAL VSAT FORUM	Regulatory Database – to keep track of regulatory issues hindering VSAT use
OREGIN	OREGIN came from Galileo project (GALILEAN) and maintains close links with Galileo Joint Undertaking (GJU).

CANDIDATE MISSION: Keep track of and Influence programmes	
EXISTING ASSOCIATIONS	**Services**
	Secretariat run by FDC who have a strong presence in GJU-funded projects. Aim to support Galileo Programme from definition stage in order to obtain early benefits and standardise Galileo-based products. Provide EU, EC and space industry with single point of reference for user segment views in order to shape future programmes.
PROSPACE i-SPACE	Involved in R&D, Experimental and demonstration programmes – influence programmes from "within".
UKISC	Works with UK Government to develop a rationale for the future funding of technology and key space infrastructure "Case for Space" initiative

Candidate Mission: Promote capability of members	
EXISTING ASSOCIATIONS	**Service**
AFIGEO	Club Export – help members develop new markets by promoting French Expertise at international events, Cahiers de savoir faire, thematic papers, meetings with reps from other countries, projects Studies & reports Surveys Attend key events (Salon des Maires, Interoute, Journée de L'IMAR, Festival International de Géographie, Assise des NTIC, Fete de la Science, Géo-Evenements Publish Yearbook of Géo-Entreprises (French GI companies – including EO?)
AIPAS	Support members participation in industrial and commercial fairs Undertake PR and promotional activities Promote capability of SMEs to large companies and public authorities (Italy or Europe-wide?)
AGI	Host UK's main GI conference and exhibition Members send CVs to AGI website Annual industry awards Support Continuing Professional Development of members (Chartered Geographer Scheme in collaboration with Royal Geographic Society/Inst British Geographers
BARSC	Representatons to UK government via BNSC. Newletter, Glossy brochure & downloadable PDF (UK Industrial Capability in Earth Observation) widely distributed via UK events and BARSC mailing list.
EARSC	Preferred access to international projects developed by EARSC (Alliance EO) - for set-up of GEOSS EC Earth Observation Industry Summit (with EUROSPACE)

Candidate Mission: Promote capability of members	
EXISTING ASSOCIATIONS	**Service**
ETNO	Facts and Figures publications Members information on website (links) Press releases
EUROGI	EU Industry Days Local to Global workshop – aimed at promoting EO industry to local/regional government Website with GI and members information – recently upgraded to include content management system GI People directory Reports on GI activities, national associations GINIE survey of supply side organisations and their products/services List of GI experts to contribute to and others' consultations Agreement with Geo:Connexion magazine to profile a Eurogi member in each issue (reaches 70,000 subscribers) – ran from 2002 to 2004. Strong presence at EC organised annual GI and GIS workshop Eurogi hosts EGIN website – European GI Network – a collaboration between Eurogi and other European GI association roundtable
EUROSPACE	Events organisation: Earth Observation Industry Summit (Feb. 2005 - Brussels) The Future of Space R&T in Europe (Oct. 2005 - Paris): to review the trends, expectations and needs of space R&T in Europe and present a roadmap for the future. Since 1990 Eurospace has been organising the annual 'DASIA' (DAta Systems In Aerospace) conference in different countries. 2006. European Space Directory – endorsed by Eurospace. Annual publication Eurospace produces, since 1996, the sole annual comprehensive review of the state of the space industry in Europe: • Industrial statistics collected at the source. • Annual survey, 150+ space companies in Europe. • Proven consolidation methodology • Full chronological consistency and comprehensive series • Unique economic indicators The print report is distributed free of charge to industry participants, to the main space policy actors in Europe (ESA, EU, National Agencies, Ministries...), and to the press.

Candidate Mission: Promote capability of members	
EXISTING ASSOCIATIONS	**Service**
GLOBAL VSAT FORUM	Online Directory of Member products and services – searchable by various categorisations. Application areas overlap with EO sectors ("Member of the Week" featured) TRAINING Education & Training Workgroup – volunteers from membership have developed and now deliver intensive training courses for VSAT installers (at 3 levels) – also available online Satellite Technology course designed for professional engineers in SMES/Govt, students, postgraduates Sales & marketing course – introduction to SatComms
OREGIN	Provides single source for information about wide range of companies with capability in Galileo applications areas OREGIN involved in numerous Galileo projects as representative of user segment
PROSPACE i-SPACE	Matching service between space service members and potential user companies and organisations Thematic conferences
UKISC	UKISC members regularly represent the UK space industry at major international exhibitions and seminars. For example, at Farnborough International 2004, UKISC co-sponsored, with the SBAC and the US Space Foundation, the first ever International Space Pavilion at the Show. This was a major and highly successful activity in a dedicated hall and exhibitors included BNSC, NASA, ESA, and UK, European and US industry. Similar activity to be repeated in 2006. UKISC supports its members on outward missions - most recently in Japan, Korea, the USA and China and provides opportunities for members to present to incoming missions from overseas agencies - most recently from Brazil, Argentina, Japan and China. UKISC works closely with the BNSC in other export related initiatives and with the SBAC on export control issues.

Candidate Mission: Raise general awareness of industry/sector	
EXISTING ASSOCIATIONS	**Service**
AFIGEO	Valorisation of innovative applications (annual Geo d'Or competition covering targeted themes – citizens, health, major risks, education) Promotion of GI as formal career path
AIPAS	Promoting actions with the larger enterprises and Public Agencies so that the potential and the capability of Italian Aerospace SMEs becomes adequately valued from a market point of view
AGI	What is GI? publication Dictionary of GI terms Host UK's main GI conference and exhibition
BARSC	Representatons to UK government via BNSC. Newletter, Glossy brochure & downloadable PDF (UK Industrial Capability in Earth Observation) widely distributed via UK events and BARSC mailing list. Annual workshop with targeted invitation list. Web site with member listings/links.
EARSC	Relationship with media and public to promote benefits of RS/EO Earth Observation Industry Summit (with EUROSPACE)
ETNO	Facts and Figures publication (soon to go online) Events – attend others' events and organise own workshops and conferences to which external stakeholders are invited Thematic Reports on members' activities – Environment, ICTs for Co2 reduction, Vision for the Future
EUROGI	EU Industry Days Local to Global workshop – aimed at promoting EO industry to local/regional government Website with GI information. Strong presence at EC organised annual GI and GIS workshop Reports, surveys
EUROSPACE	Industry Facts and Figures – annual survey 150+ members
GLOBAL VSAT FORUM	www.gvf.org – one-stop shop promoting the VSAT industry
OREGIN	Disseminate information from Galileo projects out to manufacturing industries in Europe that have an interest in Galileo but who are not directly involved. OREGIN involved in numerous Galileo projects as representative of user segment
PROSPACE i-SPACE	Information about existing and emerging space applications – includes section on Imaging and EO (data file and statistics) Conferences – Éspace et Société Cover both upstream and downstream industry
UKISC	Raise profile on contribution of space industry to UK economy

Candidate Mission: Representation	
EXISTING ASSOCIATIONS	**Services**
AFIGEO	Consultation – open letter on Référentiel a la Grand Echelle Position sur le décret relatif a l'IGN Compile White Paper on GI Liaison with other French associations – represent French GI in EUROGI
AIPAS	Represent AIPAS members in collaboration with other organisations (North West Aerospace Alliance, Association of Specialist Technical Organisations for Space, AeroSME (EU Framework Prog), Parliamentary Committee for Technological Innovation and Sustainable Development, FILAS)
AGI	Responses to Consultations (incl INSPIRE Partial Regulatory Impact Analysis, EU Directive Public Sector Information (PSI)) Member consultations to support lobbying of ministers, departments and agencies Lobbying for National GI Strategy
BARSC	Represent UK members in EARSC Represent interests of members in all national, international and government committees which exert influence on spheres of interest of members Represent UK members in relation to overseas government and other bodies (for trade visits and exhibitions)
EARSC	Workshops to present findings to key public opinion leaders
ETNO	Major representation role with respect to European Commission and regulatory bodies (European and international) High level direct contacts between member CEOs and European Commissioners
EUROGI	Instrumental in INSPIRE initiative – lobbying by national GI associations in early 2004 to ensure INSPIRE adopted Papers prepared and sent to MEPs, MPs and public affairs organisations Eurogi meets twice a year with EC Senior Officials to discuss GI related issues Eurogi is a founding member of Global Spatial Data Infrastructure (GSDI) since 2004, sits on Board Annual General Meeting held in Commission premises and EC representatives attend Eurogi is facilitator for several EC Directorate Generals and other European organisations. Invited to attend meeting/workshops to present views of member MOU signed with Joint Research Centre to collaborate in areas of common interest
EUROSPACE	Part of larger representation body Aerospace & Defence Industries Association of Europe (ASD) Official and informal contacts with ESA, National Agencies and EU bodies

Candidate Mission: Representation	
EXISTING ASSOCIATIONS	**Services**
	(Commission, Council, Parliament) - High Level Panel on Space - GMES Partner - Input to EC Green and White Papers Office in Brussels 2001 MOU with ESA recognising Eurospace as representative body (covering new programmes, R&T, competitiveness, administration) Position papers on research & technology, GMES, security & defence, navigation
GLOBAL VSAT FORUM	Represent industry interests in relation to regulatory and policy issues – eg. high licensing fees, cost-prohibitive customs duties, burdensome license application process, artificial domestic or international service barriers
OREGIN	Regularly attend European Institutions' meetings to represent interests of Galileo user segment (industry and research players) Very closely allied to Galileo Programme – operational and strategic links through FDC who have numerous projects funded by GJU Representation covers companies of all sizes
PROSPACE i-SPACE	Representation is not a significant part of services – main focus is providing support to members rather than lobbying others
UKISC	UKISC is strongly represented on all BNSC Advisory Boards and works with the all-party Parliamentary Space Committee representing the views of the space industry as a whole to government. There are frequent ministerial and official briefings and regular liaison with European and other international agencies, space manufacturing facilities, space centres and the International Space Conference. UKISC is involved with BARSC and AGI in the UK in developing the "Case for Space" – a high level lobbying action to justify future national investments in space related activities.

Candidate Mission: Support certification, standards	
EXISTING ASSOCIATIONS	**Services**
AFIGEO	None?
AIPAS	None?
AGI	GI Gateway service – metadata discovery service – quality stamp for GI data sets Specification of MetaGenie record creation tool (based on new Intnl standard
BARSC	None
EARSC	None
ETNO	Close collaboration with ETSI telecomms standards institute but no direct role in standards development
EUROSPACE	Eurospace is the space industry standardization body. Eurospace standardisation activities are currently organised within the ECSS panel. The Eurospace ECSS panel aims at bringing together industry views and concerns about the standardisation processes and to reach consensual industry positions that are conveyed by our representatives in the ESA standardisation bodies. Eurospace is, here again, recognised as the exclusive industrial interlocutor of the European and National Space Agencies. The ECSS panel is composed of 71 representatives from industry. The ECSS panel nominates industry representatives to ECSS bodies.
GLOBAL VSAT FORUM	Members Only pages include Type Approvals and Mutual Recognition Agreements for Telecomms equipment for global markets Aim to resolve regulatory issues Accredited training programmes for engineers installing VSATs
OPEN GEOSPATIAL CONSORTIUM	None
OREGIN	None
PROSPACE i-SPACE	None Some involvement in developing prototypes through R&D project involvement
UKISC	None

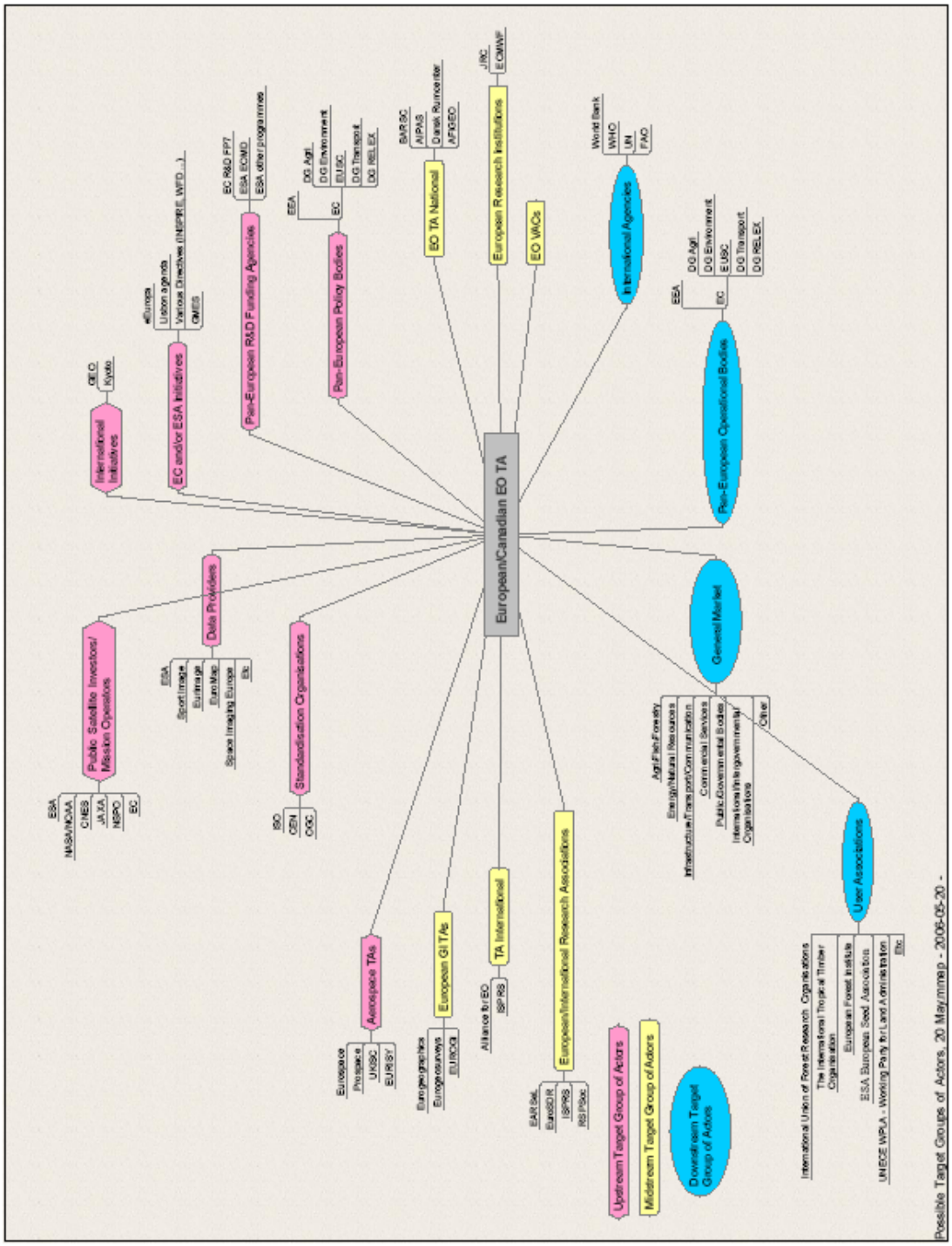


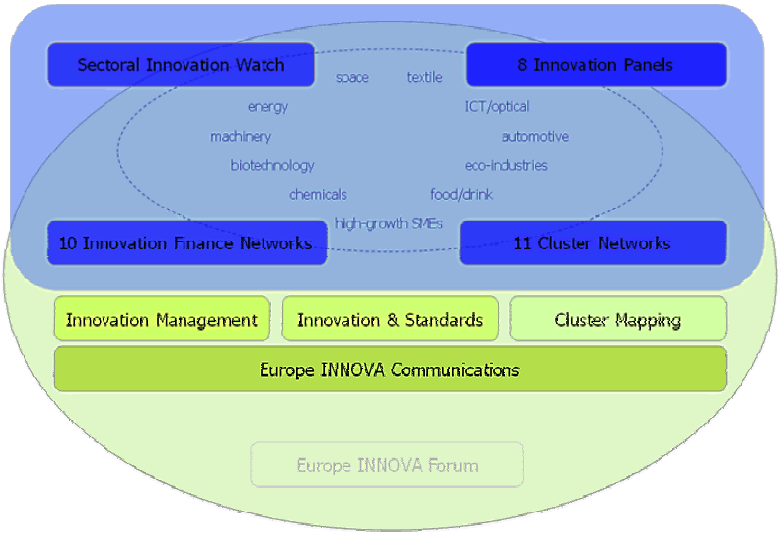
Figure A-3 Possible Target Groups of Actors with which a European/Canadian EO TA could Interact.

Appendix B - Examples of business and innovation support services

Network or Programme	**Business Innovation Centres (BICs)** www.ebn.be
Sponsoring Agency	European Commission, DG Enterprise. EBN has been granted the exclusive licence management of the BIC trademark by the European Commission. ESA has developed a partnership with EBN through the European Space Incubators Network (ESINET). Through this partnership, both the ESA and EBN will facilitate a better access and understanding of space technologies in non-space markets, generate added value to national, regional and European authorities through the rapid diffusion of space technologies and the creation of innovative SMEs, and produce long-term economic benefits for space industry.
Scope	150 Full members 50+ Associate members with an interest in the activities of BICs in regional development, innovation, incubation and entrepreneurship
Objectives	BICs are a regional innovation tool for economic development – the creation of new innovative businesses and helping existing ones to innovate in a global context of internationalisation Priority is given to a key set of services to be implemented, which are: • promotion of entrepreneurship • detection of innovative projects • strategic guidance (incubation and follow-up) • sign-posting towards business support organisations
Key services relevant to EO VACs	Core-business services - Pro-active detection of innovative projects (individual, collective, entrepreneurs, SMEs) - Strategic guidance during incubation: risk analysis, business planning support, mentoring, access to premises and to financing follow-up after creation: financial engineering, internationalisation and sign-posting towards existing service providers and other support organisations; Services and activities to be implemented if not otherwise supplied in the area - To offer physical incubation and related services for innovative projects - Internationalisation of innovative projects - Technological assistance of innovative projects - Spin-off and spin-out engineering - Training of innovative entrepreneurs - Co-operation (including clustering) between innovative businesses
Potential conflicts of interest with EOTA operations	BICs cover all technologies – only a few, if any, will have in-depth knowledge of EO-related technologies and application markets. Generic advice may not be appropriate?

Network or Programme	**Innovation Relay Centres** http://www.innovationrelay.net/home.cfm
Sponsoring Agency	European Commission, DG Enterprise
Scope	EC-supported network of 71 Innovation Relay Centres covering virtually all of Europe
Objectives	The mission of the IRCs is to support innovation and transnational technological co-operation in Europe with a range of specialised business support services. IRC services are primarily targeted at technology-oriented small and medium-sized enterprises (SMEs), but are also available to large companies, research institutes, universities, technology centres and innovation agencies.
Key services relevant to EO VACs	Identification of potential partners The Innovation Relay Centre Network promotes innovative products and processes produced in one region of Europe to companies in the rest of Europe, and helps identify specific instances of technology demand. The IRCs are connected by intranet which allows rapid diffusion of technology profiles across Europe. These profiles are also stored in a searchable database. The bringing together of potential partners Partners for technical assistance, for licence agreements, joint ventures and/or further joint development are matched using the network of IRCs, through contact with SMEs and technology centres, and through regular pan-European partnership events, trade fairs and cluster trips. A local IRC can use a company's technology profile to help organise meetings at European brokerage events. The IRC can represent a company at these events if they cannot attend. The Relay Centre can also promote companies' technologies at exhibitions, trade fairs, partnering events and through the day to day interaction it has with the rest of the IRC network. Advice and assistance - on licensing, negotiation, financing options - on Intellectual Property Rights (IPR) - identifying relevant research data - guidance on the exploitation of RTD results and advice on the transfer of research results and technologies to other regions of the EU.
Potential conflicts of interest with EOTA operations	IRCs cover all technologies – only a few, if any, will have in-depth knowledge of EO-related technologies and application markets. Generic advice may not be appropriate?

Network or Programme	**Gate2Growth & Europe-Innova** http://cordis.europa.eu/innovation/en/policy/europe-innova.htm
Sponsoring Agency	European Commission DG Enterprise & Industry
	Gate2Growth is the pan-European Business Platform for : • Entrepreneurs seeking financing (Business Matching), • Investors (InvestorNet), • Technology Incubator Managers (Incubator Forum),

	• Knowledge Transfer Offices (Proton Europe), • Academia in entrepreneurship, innovation and finance (Academic Network), • Innovative companies seeking expert service providers (Service Center)
Scope	G2G work is currently being taken forward by Europe-Innova, an EC initiative to promote innovation and finance in key sectors. 
Objectives	Europe INNOVA is an initiative for **innovation professionals** supported by the European Commission under the 6th Framework Programme. The fundamental objectives of this initiative fall in line with the policy direction set out within the FP6 priority of "Structuring the European Research Area". In acting as the focal point for innovation networking in Europe, Europe INNOVA aspires to inform, assist, mobilise and network the key stakeholders in the field of **entrepreneurial innovation**, **including** firm managers, policy makers, cluster managers, investors and relevant associations.
Key services relevant to EO VACs	**Gate2Growth** Through the Gate2Growth.com service center Investors and Entrepreneurs can access a complete range of services, resources, industry foresight and networking opportunities via a Europe-wide platform that allows to rapidly identify these qualified partners and evaluate their offerings. The Gate2Growth.com database contains experts and service providers that offer a wide range of resources for innovative businesses, ranging from incubators, patent lawyers to accountants and training providers in every European country. The database is browsable and searchable on subject, competence, sector, industry, country, etc. **Europe INNOVA**, the flagship initiative driving European innovation, is placing its activities in the spotlight with a new web portal. This will provide policy makers, innovation intermediaries and enterprises with an insight into sectoral innovation analysis and networking in Europe. The portal will present the work and results of Europe INNOVA projects and networks in areas such as cluster management, standards and financing and

	managing innovation. A Sectoral Innovation Watch contains analyses for more than ten industrial sectors. News and events services and an interactive discussion forum will inform and involve users in efforts to stimulate innovation in Europe. See separate tables below for CASTLE, Invesat and FINANCE Space
Potential conflicts of interest with EOTA operations	May overlap with policy related initiatives of an EOTA as Space is one of the sectors covered by Europe-INNOVA. EOTA should ensure close liaison and information sharing.

Network or Programme	**CASTLE** **C**lusters in **A**erospace and **S**atellite **N**avigation **T**echnology **A**pplications **L**inked to **E**ntrepreneurial **I**nnovation http://www.europe-innova.org/index.jsp?type=page&lg=en&from=child&classificationId=5025&classificationName=CASTLE&cid=5111&parentClassificationId=4961&parentClassificationName=Clusters&parentContentId=5104
Sponsoring Agency	European Commission DG Enterprise & Industry
Scope	CASTLE is a trans-national aerospace technologies cluster encompassing 3 European regional clusters and with a strong sectoral focus on satellite navigation (SatNav) applications. CASTLE will support the 3 contributing clusters to become more competitive and leaders in Europe for innovative and creative applications covering existing and new fields of SatNav.
Objectives	Objectives are to mobilise existing SatNav clusters; to collaborate and exploit synergies; to exploit the success factors and reduce the weaknesses in clusters; to establish joint projects and formulate business strategies with cluster partners; and make policy recommendations that will benefit new member states.
Key services relevant to EO VACs	• development and implementation of concepts for the scientific coordination of the project, including key issues of cluster management, a draft methodology for data collection and analysis, and [address validating of input] and quality assurance. • collect and analyse data according to a typology, to enable detailed examination of the current structure and needs of each cluster. • communication and the exchange of current knowledge and best practice. • identify trends, addresses the gap between capabilities and current trends, and organise annual meetings to provide feedback and identify areas for improvement. • bring together cluster partners to assist in exchange of competencies, interests and objectives. • formulate policy lessons and recommendations for policy makers to enable the building of successful regional and trans-regional clusters. • exploitation and dissemination of results and deliverables and raising awareness among regional cluster innovation actors within the network.
Potential conflicts of interest with EOTA operations	Focus of CASTLE is improving clusters for SatNav – EOTA members may or may not be involved in such clusters but the association stands to benefit from the results of CASTLE work in areas like exchange of competencies and information on industry needs.

Network or Programme	**INVESat** **www.invesat.com**
Sponsoring Agency	European Commission DG Enterprise & Industry financial support Partners include European Business & Innovation Centres Network, ESA Incubator Network ESIN, various innovation finance consultants.
Scope	'Bridging the gap between **IN**novative enterprises and financial In**VE**stors in the emerging ICT markets of **SaT**ellite applications'
Objectives	The overarching goal of the INVESat project is to: *Consolidate and disseminate in a coordinated way, the knowledge components required to stimulate and support more efficient investment in innovative services exploiting satellite capabilities in earth observation, navigation, timing, geo-positioning and telecommunications.*
Key services relevant to EO VACs	To identify the critical generic and specific innovation financing features of SME-based business models involving application of Europe's satellite capabilities To reinforce and extend the connections of the ESINET network to European investors willing to invest in innovative services using satellite capabilities To develop and validate specific good practice, guidelines and tools designed for entrepreneurs, incubators or investors willing to finance innovative services using satellite capabilities To disseminate results to stakeholders (ranging from companies involved in satellite developments and operations, to regional investors or entrepreneurs looking at the development of new and innovative services using capabilities) To prepare and policy recommendations regarding public-private partnerships involving satellite capabilities, highlighting the value data for the enlarged Europe. Networking events and forums (from May 2006)
Potential conflicts of interest with EOTA operations	INVESat will "make an assessment of the critical business model features that will condition innovation financing by investors in the applications markets of GALILEO and GMES" – EOTA will want to ensure that this takes due account of EO VAC needs. The focus of INVESat on finance and investment is complimentary to an EOTA and should help provide member companies with a favourable environment for seeking finance.

Network or Programme	**FINANCE Space** **http://www.europe-innova.org/index.jsp?type=page&lg=en&classificationId=5035&classificationName=FinanceSpace&cid=5121**
Sponsoring Agency	European Commission DG Enterprise & Industry Coordinator: ESA TEC SR, France
Scope	To set the stage for business success in the potentially huge space market will require forward-looking policies and investments that go beyond short-term commercial concerns. The FINANCE Space project aims to explore as many options as possible and to strive to make Europe a breeding ground for future technologies, products and services.
Objectives	The overarching goal of the FINANCE Space project is to: *Increase investment activity in innovative space companies and projects across Europe aiming to commercialize Space Technology to non-space applications & services across Europe, such that more space innovations will receive funding through an increasing number of active and potential investments in the*

	space sector.
Key services relevant to EO VACs	Research and identification of key sources and actors with an interest in European Space Sector innovation financing. Mobilisation of the extensive network of existing Space Sector actors and key stakeholders as well as the creation of a Space sector typology. Research and analyses of existing studies and of academic research on Space Sector innovation financing, as well as compilation of a list of the funding organisations in Europe likely to be interested in Space Sector innovative investments. Identification and analysis of the specific problems related to innovation financing, ranging from the drafting of business plans and the preparation of appropriate IP strategies to the identification of optimal sources for funding investments. Highlighting existing synergies between different market players and identifying barriers to co-operation as well as the generation and validation of tools and guidance materials. Drawing up of recommendations to assist policy makers at both national and European level with the aim of bridging the legitimate interests of Space Sector innovative enterprises and financial investors.
Potential conflicts of interest with EOTA operations	May not take EO VAC interests fully into account as remit is much wider. Information produced by FINANCE Space will be useful for EOTA members – EOTA should ensure timely access to latest reports and links to databases direct from EOTA site.

Network or Programme	**ESA Technology Transfer Network (TTN)** http://www.esa.int/SPECIALS/Technology_Transfer/SEMVNURMD6E_0.html
Sponsoring Agency	ESA Technology Transfer & Promotion Office
Scope	ESA's Technology Transfer and Promotion Office is supported by an international network of companies specializing in brokerage and in the provision of technical and commercial expertise for space technology exploitation. Under the lead of MST Aerospace GmbH (D), the ESA Technology Transfer Network (TTN) members perform the key activities for the Technology Transfer Programme in all ESA member states including Canada.
Objectives	• Support transfer of technology from ESA funded R&D projects
Key services relevant to EO VACs	TTN members have responsibility • to identify technologies with potential for non-space applications • to ascertain the technological needs and requirements of the non-space sector • to match available technologies with the non-space needs and subsequently provide assistance in the transfer process. Special initiatives include technology transfer for Harsh Environments, Health Care, Space, Art & Culture European Association of Research & Technology Organisations (EARTO) collaborates in technology assessments (useful contact for EOTA)
Potential conflicts of interest with EOTA operations	None – EOTA not envisaged to provide technology transfer support directly. EOTA should promote the TTN TTN also works closely with Innovation Relay Centres and European Space Incubators Network

Network or Programme	**ESA Incubator Network (ESIN)** http://www.esa.int/SPECIALS/Technology_Transfer/SEMALURMD6E_0.html
Sponsoring Agency	ESA Technology Transfer & Promotion Office
Scope	Through its European Space Incubator (ESI) initiative, the ESA Technology Transfer and Promotion Office is providing entrepreneurs increasing opportunities to create their own start-up companies to offer new services or applications emerging from the creative use of space technologies and/or systems in non-space sectors. 34 partners from Belgium, Bulgaria, Finland, France, Germany, Ireland, Israel, Italy, Luxembourg, Poland, Portugal, Spain, Sweden, The Netherlands, United Kingdom and Ukraine; each of them is deeply involved in space incubation activities. The hub of ESINET is the European Space Incubator, ESI (www.esa.int/esi), located in Noordwijk, The Netherlands, at ESTEC, the technical centre of ESA.
Objectives	• accelerate business start-ups • act as a catalyst in creating companies that use space technology and systems in non-space fields
Key services relevant to EO VACs	Start-ups can avail themselves of such facilities as: • office space and shared facilities • provision of 'hands-on' assistance and business/marketing development support • access to finance • access to engineering support and expertise from ESA experts • access to international markets and partners through ESINET.
Potential conflicts of interest with EOTA operations	None – EOTA should promote ESI/ESIN to promising start-ups/ SMEs within its membership EOTA not envisaged to have such a hands-on role in incubation International markets and partners also available through BIC and IRC networks

Network or Programme	**EO Market Development Programme** http://www.eomd.esa.int
Sponsoring Agency	ESA
Scope	Earth Observation Market Development (EOMD) is an element of activity within the ESA Earth Observation Envelope Program (EOEP). It started in year 2000 for an initial period of three years. It is now in its second phase, which runs from 2003 to 2007. This will continue to extend the mechanisms developed within EOMD phase 1 to strengthen Europe's industrial capacity for providing geo-information services, based primarily on EO data, within Europe and beyond. Open to all ESA members including Canada but with the exception of Ireland and Portugal
Objectives	The main objective of the EOMD programme element is: *To foster the emergence of a European Downstream Industry offering EO-based services, with the prospect of becoming sustainable, to Public & Private customers on the global market.*
Key services relevant to EO VACs	The EOMD programme provides financial support to industry for well-identified business opportunities for validated EO based geo-information services. With the support of the EOMD programme, leading value adding companies are working with well-established market owners and their clients, to develop a stronger market for EO data and information services. Under the terms of these contracts all aspects of commercial confidentiality are

	fully respected EOMD includes "vertical" actions that are focussed on specific marketable services, as well as "horizontal" actions that address industry-wide issues such as best-practice, standards, supply-chain organisation and international promotion. EOMD provides strong incentives for small, specialised EO value-adding companies to team with major, operational service industries (Market owners) that have distribution channels to a large international customer base. Any vertical services addressed by EOMD are required to have demonstrable and realisable - albeit limited - market potential today. The level of resources industry and customers are willing to commit to match the support from ESA, is a key selection criterion for EOMD contracts.
Potential conflicts of interest with EOTA operations	None – complementary. Focused on SMEs

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