EARSC Views on

H2020 Space for WP 2018-2020

EARSC, the European Association of Remote Sensing Companies represents the Earth Observation geo-information services sector in Europe. Today EARSC has 75 members (66 full members and 9 observers), coming from 23 countries covering the full EO services value chain including commercial operators of EO satellites, resellers of data, value-adding companies, geospatial information suppliers, consultancies and system/software providers. The sector plays a key role in providing value-added, geo-spatial information to its customers in Europe and the world. In 2014, the revenue of the sector in Europe was €900m giving work to 6800 highly skilled employees; it has been growing at around 8% per annum. The sector is dominated by small and medium enterprises with over 95% of the companies having less than 50 and over 60% having less than 10 persons employed.

This paper reflects the views of the full members of EARSC which are commercial companies, coming from Member States in the EU or in ESA, providing services (including consultancy) or supplying equipment in the field of remote sensing or using EO data. EARSC observer members are informed and may have commented on the paper but are not necessarily endorsing its conclusions.

In response to the request from the EC to provide views, here are a list of activities which EARSC wishes to present for consideration in the 2018-2020 work-programme:

1. General orientations

- **Public procurement of services applied to Earth Observation (EO)**
  The public sector is a key customer for many of the products and services produced using EO data but procurement of services especially when brokered is not easy for public administration due to strict procurement rules. Research should be undertaken into the different rules which could be applied coming from examples around the world with application to EO or geospatial data. The legal, technical and commercial aspects should be addressed.

- **EO application / business services**
  Thematic research is still needed into new applications of EO data covering new sensors, in-situ data assimilation and processing techniques. Such research should have a strong commercial orientation and should be linked to business opportunities with robust commercial exploitation plans. The work could introduce a focus on integration of in-situ data with satellite and other data (rather diverse data sources). An integrative approach with in-situ data producers and adding e.g. drones, citizen science, social media (passive data) should be looked for.

- **Legislation**
  EO products and services are applicable for many areas of policy making. Research is needed into the policies which can benefit from the application of EO products and services and how best to introduce these into the legislative process. A blunt approach specifying the use of such products can be appropriate for some instances but other approaches are also possible and sometimes making “light” legislation where EO provides the means of control may be the cleverer way to proceed. A systematic approach should be followed to assess different EU policies and to identify the possibilities for legislation to influence the uptake.

- **Legal aspects of Earth Observation**
  Legal matters are of increasing importance to the commercial EO sector. This includes a broad range of topics, such as public international law framework, practical implication of public data policies, license conditions for access to and use of public EO data, risks of warranty and liability and their handling through licenses, contracts and Service Level Agreements, increasing concerns on privacy and uncertainties about the application of the EU data

protection legislation, national provisions on security handling of EO data and their distribution, obligations for cloud-based platform operators, or the use of Open Source software for data processing. These matters are not well clarified, resulting in uncertainties for industry. The project should bring together the leading European legal experts on aspects of Earth Observation, via the organisation of workshops or a larger conference, involving also industry and public stakeholder representatives. A study prepared as outcome of the project should provide clarification on the diverse legal matters determining the framework for commercial EO products and services.

- **International partnerships**
  EO is a global technology. Europe has developed the Copernicus programme to meet its own needs for information whilst also supporting internationalisation by making the data free and open. Now applied research activities can help the European sector to develop links internationally to both gain access to new data sources but also to investigate how to apply European skills in other regions of the world. For instance, how transferable are algorithms and processing techniques? How compatible are European data with that from other non-European sources?

2. Thematic areas

Other recommendations concerning Earth observation are:

- **Support to new private initiatives for services**
  Traditionally, EO information has been supplied in the form of bespoke products with experts “in-the-loop” to interpret and manipulate the data. Increasingly, this will move on-line with machine to machine services becoming far more common. How will these services be structured and what sort of machine infrastructure is necessary? Research is needed into the software elements which can enable these machine-to-machine services to be developed.

- **PCP focus at regional level**
  The Pre-commercial procurement initiative is to be welcomed and can be applied to EO data products and services with a particular effort to be made at regional level.

- **Product quality**
  Quality of products becomes increasingly important to ensure that the results are fit for purpose. Research is needed to develop new paradigms and techniques to ensure that the quality of the data and the processing chain is recognised and respected.

- **Market data and statistics**
  The market for EO data and services is very diverse as is the supply side. New techniques and methodologies for addressing the gathering of economic data, information on the market and market forecasts and statistics linked to the use and supply of EO products and services should be investigated.

3. General comments

Many of the R&D actions in Europe do not lead to exploitable results. EARSC should like to see that exploitation of the results gets a stronger weighting in the evaluation process. This will give more incentive and focus to industrial participation in research projects.