



EARSC

European Association
of Remote Sensing
Companies

EARSC Position Paper

on

Earth Observation Services Industry Internationalisation & Economic Diplomacy

Summary

European companies offering Earth Observation (EO) products and services see growth in export business as a major target for the next few years. But most are small or micro-sized and, as a result of their scale, face strong barriers for international business. A European effort on Economic Diplomacy can help companies overcome these barriers.

Alongside the strong industrial competences, the European Copernicus programme is seen as being a major asset to drive growth for Europe. It is a major policy tool by which policy makers can help industry gain competitive advantage for Europe and help drive business growth. Many countries are watching this European effort and at the same time are striving to develop their own competing assets. As Copernicus becomes fully operational, now is the time to take advantage of this European flagship programme in the global market, before others have time to react.

The free and open data policy gives a great deal of diplomatic credit to Europe. But this policy helps non-European companies as much as European ones. If the European Union (EU) is to take full advantage of the investment in Copernicus then a concerted effort is necessary between public and private actors.

In recognition and anticipation, companies are encouraging EARSC to increase its activities with the goal to help them develop new business in international markets. EARSC is ready to play a key role on behalf of its members and welcomes the increased focus from the European Commission (EC) on this same goal. One step could be to establish an Internationalisation Office to act as a source and focus for expertise available to both industry and to the engaged public stakeholders.

1. Introduction

Europe has a strong and diversified EO services industry¹ capable of providing many products and services derived from satellite observations across a wide range of applications². These include satellite imagery as well as geospatial information often referred to as value-added products. They are mainly products developed for a single client, tailored to their needs and requiring specific expertise in processing and interpreting satellite data as well as domain knowledge relevant to the client. In this respect, selling into new markets requires a personal approach more like a physical good than a digital service which can be marketed broadly over the internet.

The industry is already active on the world market and, today around 15% of revenues are coming from “export” markets. This is targeted to grow strongly over the next few years. But most (>95%) of the companies are small or even micro-sized and find it especially difficult to develop a presence outside their home market.

As the interest in the use of EO products and services grows and as Copernicus becomes operational, now is the ideal time for a concerted effort. Copernicus, with its free and open data policy, offers a strong potential to grow the international market for downstream services. That Europe offers these free to everyone around the world enables a global competition. On the other hand, through this open policy, Europe develops goodwill which can be favourable to European industry.

The opportunity needs to be taken now; competition is growing and the next few years will be crucial in establishing a competitive advantage; the European industry has many strengths and capabilities to build upon. Further, many European policy and programmatic measures are already in place but are mostly unconnected. Efforts to link them up are necessary. An EU policy on Economic Diplomacy can provide a framework for a joined-up effort with industry and public sector working together.

This short paper sets out why the EO services industry believes that it is a prime time to act and what specific measures, linked to a core policy of economic diplomacy, are considered necessary by the industry to help it succeed in the international market.

2. The Industry and International markets

The industry is active internationally but increasing revenues from outside each company’s home country is a key target for the sector. All companies have their own specific strengths which leads to

¹ EO products and services are intermediate products and are mainly used by government (B2G) and businesses (B2B). They are referred to extensively throughout this paper. The focus in promoting them shall be on their use rather than the fact that they are derived from satellite observations or EO. Nevertheless, the specialist industry which generates them is referred to as the EO services industry and is the sector represented by EARSC.

² The European industry is active right along the value chain of EO services; from companies supplying data, value-added services to geo-spatial information as well as software and equipment to produce them. A profile of the industry is produced by EARSC every 2 years with the latest covering 2016 (published in 2017) showing over 500 companies generating nearly €1.2b of sales and generating nearly 8000 highly skilled jobs. Over 95%, of the companies are small (<50 employees) or micro (<10 employees) in size.

a diversity of interests. Some are focused on Asia, others on Africa and or Latin America depending on a mix of factors such as language, cultural links. Furthermore, the product range of the company can be applied to different vertical sectors depending on the country identified for example; forestry, urbanisation, ice, energy, agriculture/farming/food, health, can all have a different focus. To recall also that some companies are also seeking to address “export” markets closer to home such as Eastern Europe, Russia and the former Commonwealth of Independent States.

All this is to say that a European-wide effort, unlike that from a single Member State, must respect a wider range of interests and be adaptable to different priorities. At the same time, several companies working together can provide a more complete offer under a single contract. An internationalisation effort should include measures to encourage partnership building amongst teams of European companies.

Industry, through EARSC has recently committed to increase activities to help the sector develop international business. A strategy has been written and is available on our web-site³. This sets out general goals and a working group has been set up to help define priorities both in terms of regions and countries as well as specific vertical sectors which can be targeted in which region.

One key element of internationalisation is that of capacity building. The strategic nature of geospatial information and the ability to gather intelligence at a global level means that an export activity is often associated with the need to develop a local presence. The European industry understands this quite well and has proven experience in this respect.

The industry also has excellent experience of the Copernicus programme as well as the use of data from other satellites. For example, companies have worked with commercial data from TerraSAR-X, Pleiades and Cosmo-SkyMed data as well as scientific data from institutional missions for many years. This broad experience can be extremely valuable in export markets where products need to be adapted to local conditions.

A particular opportunity arises based upon the services from Copernicus. A joint effort between the providers of the Copernicus Services (the European Entrusted Entities or EEE’s) and the industry could prove particularly effective. An industry-led strategy has been proposed as part of a wider analysis⁴ supported by the European Commission. Elements of this fit particularly well in an effort linked to Economic Diplomacy.

3. Tools and Instruments

Copernicus represents a key European asset which should be at the heart of the internationalisation effort. But this is not to forget that European companies are also selling services based on other data which will be part of the package which can be offered. The free and open data policy makes it attractive to international users whilst the Copernicus Services provide examples that can be used and adapted to local needs. The EO service companies are partners to help build upon the European capability for customers internationally.

³ EARSC Internationalisation Strategy, May 2017,
http://earsc.org/file_download/448/EARSC+Internationalisation+Strategy+%28May2017%29.pdf

⁴ Final Report on “Assessment of the role and participation of the European services industry in the EU Earth observation research and innovation actions”; PwC and EARSC for the European Commission, July 2017.

Copernicus Services also provide a proven reference for the products being generated. That public users are engaged on a long-term and durable basis provides confidence to overseas clients that they can benefit from the programme as well. In some cases, the existing Copernicus product can be easily integrated into decision chains in other countries whilst in many case, adaption of the products to local conditions will be necessary.

Through EARSC, the industry has also developed tools which are designed to help potential clients find solutions. eoPages is a brokerage site based on bespoke services (ie those tailored to specific clients' needs), whilst eoMALL is being developed as a marketplace for on-line services. Further resources are linked to these two on-line tools including a database of applications, success stories and case studies demonstrating the value of products and services.

EARSC is working on a strategy to open-up new opportunities in vertical markets by working with other industries in relevant supply chains. EO services industries will be promoted at international trade shows focused on different vertical sectors ie Oil and Gas, Insurance, Construction, Mining etc. Further, conferences bringing together public users are also targeted as are trade shows and exhibitions which reflect local and regional priorities. Mature and proven products should be tailored to specific geographic markets.

Europe also provides many goods and services internationally linked to Development Programmes. Stronger integration of EO services, which is an enabling technology, could be made. Hence an International development project for infrastructure or services could promote the use of EO services at each phase of the project life-cycle.

In our view, the EC can support:

- Trade missions around Copernicus as well as specific ones around geographical and thematic priorities. An example here is the recent mission to Chile and Bolivia where an EC supported effort led to regional workshops bringing together regional users.
- The new Data and Information Access Service (DIAS) can provide a service based focus. An ecosystem of EO service providers will be built upon the DIAS and export missions with these as a focus could be an effective tool.
- Copernicus services can be promoted as the basis for services in other countries providing a foundation for offering services tailored to the local geographic and thematic conditions.
- Links between EO services and international development projects sponsored by the EU.

EARSC can provide:

- Information on products and services offered by EU companies together with success stories and analyses showing the value coming from their use
- An introduction to EO service companies which can help meet local needs
- Introduction to the tools eoPages and eoMALL which are designed as on-line marketplaces through which the EU companies are offering their services
- Introduction to tools, generated by the industry, linked to communications, brochures, etc.

EARSC is ready to work with the EU in order to develop a strategy and to plan the activities including the definition of geographical and application priorities. To underpin the effort and to provide a concrete focus for the European External Action Service (EEAS) and other EC services, EARSC could

establish an “internationalisation” office as part of its secretariat in Brussels. The “office” would have the role to provide the link between the EU stakeholders (EC, EEAS etc) and the industry.

4. Actions

The main focus of support needed by the industry is towards opening new opportunities in marketing and business development. A number of instruments which can support companies and especially Small and Medium Enterprises (SME) develop international business are applicable and a guide to these instruments has been put together by the EC which is a very helpful tool for the industry. The guide should be maintained on a regular basis. The specific actions identified in the guide could be addressed to ensure that EO services are included in the sectors which can be covered by the different instruments. Introducing EO as a recognised sector will boost the possibility to win funding.

Measures which can help the industry are:

a) Leverage Copernicus as a means to develop commercial business

Copernicus is a great success for Europe and can be used to help develop the downstream industry. The use of the Sentinel data and Copernicus Services by other countries and regions under the Free and Open Data policy can be promoted by the European Union. Products coming from the Copernicus Services may be used directly or can be adapted by industry with local partners to meet local conditions. Local partners can also help to ensure access to the in-situ data necessary to fulfil local products and services.

Missions to promote the use of Copernicus can be a very useful way to promote the European industry and encourage partnerships between European and local companies by:

- Promoting capacity building and industry support in national and multi-national space programmes leveraging the unique experience from joint national and European space and EO activities as door opener for European industry. If not done, this opportunity will be taken over by other actors (e.g. China).
- Building upon the Copernicus services as a strong model for other countries to follow and emulate. The EC can open the doors to raise the awareness of the services whereby European Entrusted Entities (EEE's) and the industry can establish a strategy to offer services to international customers. The EC should support the establishment of agreements between the EU industry and the EEE's to “export” Copernicus Services and to deliver more tailored products.
- Link Copernicus to international policies on the environment. The European Environment Council emphasized the role of European climate diplomacy in encouraging implementation of the global agreement on climate change reached in December 2015. Specific reference to use of Copernicus in achieving these goals can help EU industry in international outreach.

a) Diplomatic measures

International co-operation is a strong tool for developing business. The EU has many co-operative mechanisms which can help the industry. These include International fora such as with Africa, China, Russia, Japan etc. Furthermore, international organisations such as the United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM), GEO (Group on Earth

Observation), Committee on Earth Observation Satellites (CEOS) are all channels which can be used to promote industrial capability.

The EU diplomatic missions provide a particularly strong capability to:

- Provide intelligence on the local market; ie local companies, competitor presence, the key priorities for the country or region. They can also help with support for companies to meet with key stakeholders especially those in the local administration.
- Help organise workshops and business-to-business (B2B) events where industry is able to meet with local stakeholders in both public and private sectors. Trade missions are an effective way to provide intensive meetings. These could be both inward and outward missions.
- Ensure open markets which are fundamental to doing business internationally. Provision of services is poorly covered by World Trade rules and whilst today is not a big issue, it is likely to become more critical in the future.

b) Policy Measures

An International Partnership Programme can enable the uptake of EO services in countries and with organisations which are not yet fully aware of the capabilities. An EU company in partnership with a company in a designated country could bid for grants from a dedicated fund.

- Development Aid policies can be tailored to enable the use of EO data and services. This needs to be defined at an early stage when projects and programmes are initiated and designed.
- Encourage International Financial Institutions (IFI's) eg. World Bank, Asian Development Bank, European Investment Bank etc to incorporate EO products and services in their work for planning, implementation and monitoring purposes. Enable pilot or demonstration projects with targeted institutions similar to the programme being developed by the European Space Agency (ESA).
- Specific actions targeted on countries/regions could introduce the application of EO data and services to projects. For example, in policy documents like Joint Communication to the European Parliament and the European Council for a renewed impetus on the Africa-EU Partnership" where we find further resonance in terms of "people centred partnership", "b-to-b contacts and exchanges", "foster European and African Business relations".

c) Support from Research and Development (R&D) actions

Whilst this paper is mainly focused on Copernicus and economic diplomacy, R&D actions provide a direct means to enable and support the industry in particular for market uptake. Many potential user or client organisations do not have the resources to even understand the technical possibilities offered by products using EO data. In many instances, they are unaware (quite correctly) that satellite data has been used in their generation.

Whilst dedicated, focused projects are welcome and necessary, the introduction of EO as a recognised tool in R&D actions focused on developments in other sectors is also very important. For example, the development of smart cities, smart farming, smart logistics, construction and extractive industries can all be enhanced with EO as a horizontal tool. These can extend into those sectors focused also on export business. Hence, we should like to see:

- Pilot/demonstration projects to help overcome barriers to the adoption of geospatial technology and start to build capacity inside organisations whether public or private to introduce geospatial information into their processes. Open Research & Development (R&D) calls should be used which enable industry-led proposals over a wide range of projects with an internationalisation focus.
- Dedicated pilots/demonstrations as part of capacity building measures with countries directly. This can link with the effort on Economic Diplomacy where missions can be briefed to establish priorities in terms of the application and the country where it should be applied.
- Training as a key tool to raise awareness and build local capacity. Several instruments can be used if the priority for training in geospatial technology and space based observations could be introduced into the work programmes.

In support of all these actions, EARSC is prepared to establish an internationalisation office through which expertise in EO data and services could be accessed by policy makers. The office would generate material to inform the EU diplomatic service and provide a help desk when questions arose.

5. Conclusions

Industry is keen to expand its business in export markets and is pleased that the EC takes new measures linked to Economic Diplomacy. The time to act is now as Copernicus reaches operational status and before other space-faring nations can react. Industry is seeking greater support in order to draw benefit from the free and open data policy before the advantage is gained by non-European players. Through EARSC, the industry is ready to establish greater means to interact with the European stakeholders and the EC and EEAS in particular.

In this paper, a number of measures have been described which can help European industry grow its business in the international (export) market. Many of these are directly linked to the proposed new policy on Economic Diplomacy and with a priority set for the space industry. We look forward to further discussions and specific actions to make this work.

European Association of Remote Sensing Companies - EARSC:

EARSC represents the Earth Observation geo-information services sector in Europe with today 99 members (89 full members and 10 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 2016, the sector revenue in Europe was over €1b giving work to 7000 highly skilled employees; The sector is dominated by SME's with over 95% of the companies having less than 50 and over 60% 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.