

The New EU Space Programme Regulation Proposal and the future of the EO Downstream Services Sector

The European EO Services industry welcomes the proposal for an EU Space Programme and looks forward to making a strong contribution to its' success. Copernicus remains an extremely important programme for Europe and for our sector. It has demonstrated how to deliver critical information to European policy makers whilst enabling the services industry to develop business in new markets so delivering more highly-skilled jobs in Europe.

The industry already plays a key role in the delivery of the Copernicus Services, but we consider that a great deal more is possible; the proposed programme lays out a number of key measures which can help. Industry has invested strongly in the development of new products and services, many based on the Free and Open data from Copernicus and is ready to invest further. We believe that a partnership between industry and government will enable the best returns for all parties. In this paper we set out our views on a number of the factors which can help deliver these increased benefits for Europe and its policy makers.

European Association of Remote Sensing Companies - EARSC:

EARSC represents the Earth Observation geo-information services sector in Europe with today 101 members (92 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 2016, the sector revenue in Europe was over €1.2b giving work to 7700 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 has been prepared and issued by the EARSC board of directors on behalf of the members of EARSC which are commercial companies, coming from Member States of the EU or ESA, providing services (including consultancy) or supplying equipment in the field of remote sensing or using EO data.

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Introduction:

On June 2018, the new EU Space Programme Regulation Proposal¹ was drafted as an umbrella regulation with common rules for the current and incoming Union's space flagship programmes². The EARSC EO industry welcomes this legislative effort and presents its analysis and views with respect to the European EO downstream services sector.

This legislative proposal delivered to the Parliament and Council for review, includes the space envelope proposal for the next MFF 2021-2027, allocating €16B to “maintain and upgrade the existing infrastructure for Galileo and Copernicus, increase the use of space data, foster a European ‘New Space’ of innovative start-ups, and increase the security of Europeans.”³.

The European EO Services industry has been strongly behind the Copernicus programme from its very outset. It welcomes the recognition that a European programme, constructed to serve public legislative needs can also have alongside it an industrial objective to maximise the impact of the investment return for Europe. The European industry is actively supporting both of these objectives; by deploying its skills and resources to offer European decision makers high quality products efficiently, and to seek to exploit the data and information supplied by Copernicus to develop new business on a global basis.

The public policy makers and the private industry working together is no doubt the best way to maximise jobs and economic benefits in Europe. Hence, we support this joint approach and especially with respect to the renewed commitment to Copernicus. A strong downstream industry, both at home and globally, will be the basis for continued investment in the sector. We strongly support the idea of data-as-a-service as a means to achieve policy goals and a programme which focuses on the products and services required by policy makers can stimulate the use of private funds to invest in infrastructure.

The industry seeks to maintain this commitment to secure a strong industrial base in Europe. We have analysed the proposed programme proposal and wish to present some comments and proposed modifications.

Title I

General Provisions

Article 6. Actions in support of an innovative Union space sector

Article 6(b) the Commission introduces as a new form of partnership the “*space-related innovation partnerships*”⁴ aiming to develop innovative products or services (...). By establishing such, the EO service

¹ COM (2018) 447 final. Proposal for a regulation Establishing the Space Programme of the Union and the European Union Agency for the Space Programme

² Copernicus, Galileo, Gvsatcom and SST (Space Surveillance and Tracking).

³ Elżbieta Bieńkowska, Commissioner for the Internal Market, Industry, Entrepreneurship and SMEs, EC, Press Release EU Budget: A €16 billion Space Programme to boost EU space leadership beyond 2020, June 6, 2018

⁴ Italics represent emphasis of the writer on the legislative text.

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industry understands this partnership aims to put all stakeholders from the value chain together to design and implement innovative solutions; meaning to include up-stream and down-stream sectors at all levels, from the EU institutional, national, and regional levels for a more consolidated sector.

As this initiative develops, the Commission should then:

1. Assure the equilibrium of power between the up-stream and down-stream sectors, along with the balance of interests of end users, service providers and the public and private sectors.
2. Establish a clear definition of roles to achieve equal gains among its members.

Hence, this proposal is softly supported under proper conditions.

Article 6(d) mentions another type of possible cooperation under the form of a *space hub integration*. Nevertheless, in the legislative proposal there is no definition of a space hub. This should be clarified further.

Title II

Budgetary Contribution and Mechanisms

Article 11. Budget

Article 11 (b). The Commission has proposed the budget allocation for Copernicus of €5,8B.

On the MFF 2021-2027 proposal, it is mentioned the intention to fund new space infrastructure to sustain the continuity of the three flagship programmes.⁵ In addition, documentations issued by the Commission's H2020 Call 2018 Copernicus evolution (Sentinel Next Generation missions)⁶ and ESA presentations⁷, give the reason to believe the Commission could follow the former financial strategy of MFF 2014-2020 from which almost 80% was allocated to the space component and 21% for *in-situ* and services⁸ with the development of space infrastructure for a new Sentinel constellation and missions. This intention raises the question how many of those, in addition to the downstream sector activities can be satisfied with the proposed budget?

The EO services industry has three suggestions:

1. The need to focus more of the budget allocation on service procurement rather than the investment in a heavy, space infrastructure.
2. A larger part - around 30-35% of the budget - should be allocated for the delivery of downstream services, including the in-situ component and the commercial EO data procurement needed to feed these services, and by this giving a major focus on the services uptake and data to foster the development of new services. This could become even higher with the wider introduction of a service-led, infrastructure-as-a-service and/or data-as-a-service approach.

⁵ COM(2018)321 final, The Multiannual Financial Framework for 2021-2027, Space

⁶ H2020 Call Space LC-SPACE-02-EO-2018: Copernicus evolution-Mission exploitation concepts

⁷ Jutz, S. Copernicus Space Component and its possible mid-term evolution, ESA, March, 20016

⁸ European Parliament, Securing the Copernicus Programme, April 2017, p. 10

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3. The industry supports Europe's ambitions for new Sentinel procurement and missions especially where this can be ultimately service-led and provided that the balance of the space segment and downstream sector should be maintained.

Title III

Financial Provisions

Article 14. Principles of procurement

Article 14(b). Presents the principle for the provision of services focused on prevention of a single provider.

The EO services industry fully supports this approach for the provision of services as a preference over the procurement of infrastructure. An increase in the use of commercially supplied data is possible given the heavy investments being made by the private sector into new satellite systems. We also support competition which avoids a situation leading to supplier lock-in and which favours:

1. European competition and private supply for EO services at a European level that could balance the private-public mix of interests.
2. Innovation for new products, services, technology, business models etc. for example, the European, EO downstream industry could create a joint cloud platform to share big data aiming to offer layers of information that will be connecting towards the provision of Copernicus services.
3. Commercialization of EO services in the private sector to complement Copernicus services (i.e. the supply of VHR imagery and VA products for the Copernicus Security Service).

Procurement of services should also be organised to enable and encourage the participation of SME's and new, start-up companies, most particularly those in Europe, which can offer innovative new solutions.

Article 17. Sub-contracting

The intention to stipulate a certain percentage of sub-contracting to SME's is welcomed noting that the majority of companies in the sector offering EO services are in fact SME's. This condition should also recognise the potential to contract directly with SME's for the supply of services.

Where services are contracted from EU entities ie Entrusted Entities, a harmonised process of procurement should be favoured so as to facilitate SME participation.

Article 20. Grants for pre-commercial procurement and procurement of innovative solutions

The Commission establishes pre-commercial procurement as a financial mechanism for contracting its space activities, including the Copernicus Programme.

The EO services industry fully supports this measure for its utility in acquiring and developing new services. Better public procurement policies can help boost innovation and expanding the services abroad under

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the pre-commercial procurement. For example, service demonstrations, could greatly help both public and private partners to achieve their goals.

Further procurement measures should be introduced most specifically to procure services rather than infrastructure (as is discussed elsewhere in this paper). Commonly referred to as “Infrastructure-as-a-service” the public needs are expressed in terms of information requirements leaving the private sector to realise them through investment in the necessary infrastructure. The conditions for this should need to be studied for each information source to ascertain the relative roles and investment in a public-private approach as has previously been proposed by EARSC⁹.

Title IV

Governance of the Programme

Article 29. The role of the Commission

Article 29.5. The Commission *shall promote and ensure the uptake and use of the data and services provided by the Programme's components in the public and private sectors, including by supporting appropriate development of those services and by fostering a stable long-term environment.*”

The Commission retains its task to support the uptake of the downstream services and leverage the European EO commercial capabilities.

Due to the progress achieved so far in the growth of the downstream sector, the EARSC EO service industry supports the continuity of this governance structure for Copernicus and suggests maintaining the Commission as being directly responsible for the Copernicus data and services. This is then in line with the European space strategy adopted in 2016.¹⁰ Should this task be transferred to another entity, it will jeopardize the continuity and progress of the downstream sector achieved so far. Further, this will alter the spirit of the agreed space strategy.

Article 30. The role of the European Space Agency

Article 30.1(c) the GSA will undertake communication and promotion activities, and activities relating to the commercialisation of the services offered by *Galileo and EGNOS*;

The rebranded European Global Navigation Satellite Systems Agency (GSA) as the new EU Agency for the space programme, will be responsible for the uptake and commercialization of the Galileo and EGNOS services. The EO service industry supports the allocation of responsibilities limited to the flagship GNSS programmes taking into consideration its long expertise to ensure GNSS service provisions.

⁹ EARSC Position paper on Copernicus Evolution, June 2017. Page 3 Sustained Access to Data.

¹⁰ COM(2016) 705 final, Space Strategy for Europe, Maximising the Benefits of Space for Society and the EU Economy, p.3

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However, there has been some discussion towards placing the Copernicus activities and services under the responsibility of the GSA. Here the industry has strong concerns about the disruptive impact of bringing a new player into the governance of the programme hence changing the relationships with the entities entrusted with the delivery of the Copernicus Services.

Including Copernicus under GSA responsibilities would represent a challenge to the programme and for the industry. It would disrupt the working relationships which have been built up with the industry and the institutional stakeholders. It would herald a period of transition at a time when an aligned European effort is strongly needed to compete effectively on the international market.

What's missing: The role of the industry.

The EO services industry maintains its request for a means of formal communication between the Commission and the downstream sector. This should include, but is not necessarily limited to, industry representatives participating to the Copernicus User Forum. Introducing such a mechanism can increase the engagement and contribution of the private sector.

Services developed by the private sector and fulfilling public policy needs can be introduced into the Copernicus portfolio. With the guarantee of a minimum public service provision, companies can further specify and invest into new products and services. Investment in innovation and R&D can lead to healthy competition between suppliers.

It is worth to recall this proposal was already mentioned in a Parliament document in 2014¹¹ and in the Fifth Space Council resolution of 2008, which stated the need to develop a formal channel between the industry and the governance stakeholders. Industry can help to shape the programme by maximising the impact of its own investment and developing strategies for future policies to the mutual benefit.

Furthermore, this would help to sustain the development of the downstream sector through a *legislative framework* by “developing adequate EU instruments and funding schemes, taking into account the specificities of the space sector, the need to strengthen its overall and its industry's competitiveness and the necessity of a balanced industrial structure”¹².

Such clarity has not been provided yet under any legislative work of the Union related to Copernicus.

Title VII

Copernicus

Article 48 and 52 establish the free and open data policy for Copernicus.

The EO services industry fully supports the continuation of the free and open data policy of Copernicus, considering it as a strong driver in the EO Services market helping to create new companies, new and

¹¹ European Parliament, Directorate-General for Internal Policies, Space Market Uptake in Europe, 2016, p. 40.

¹² 2008/C 268/01. Council Resolution ‘Taking forward the European Space Policy’

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innovative EO services and supporting the development of innovative solutions, making it one of the most important aspect of the Copernicus programme. Industry understands and accepts the institutional interest to apply this policy on a global basis as part of a diplomatic mission which implies that competitors outside of Europe are also able to profit from it, provided that the reciprocity is guaranteed by ensuring open and free access by European industry to non-European data and core services.

In order to ensure that European companies can benefit fully, support is needed from the European institutions for the European industry. This can take the form of economic diplomacy and other soft measures. Furthermore, participation as a supplier to European customers ie Copernicus Services and beyond, is a very strong reference for European companies seeking export sales. The industry is ready to support auditing of the benefits of the free and open policy as well as other aspects of the programme.

Conclusions:

The EO services industry is pleased to see a uniform proposal for an EU space programme including Copernicus. Whilst the whole scope of the programme will be important for the space industry, our main interest lies with Copernicus. The key regulatory points are:

1. The Commission regulatory power should create a better integration of EO data into other policy areas of the EU. Industry is very ready to work with the EC in support of this goal.
2. The Commission should act as an enabler under the Copernicus Free and Open data policy to stimulate innovation and new businesses whilst acting to balance the mix of public and private interests through specific legislation or policy measures favouring the commercial supply of EO services.
3. A specific financing mechanism for SME's in the space sector is sought which can help ensure the European exploitation of Copernicus.
4. The role of the public sector, going beyond the regulatory power, should be as an intelligent customer/anchor tenant and sponsor for the R&D in the short-term. Also, to foster the public demand, it should focus on demonstration mission(s) tailored to public-sector demands. The commercial market could then, test and develop new services under a PPP arrangement.
5. To enhance the EO services industry, the Commission should provide more involvement to the industry on the supply of Copernicus services, especially where new products are to be added into the portfolio, and more investment in the user uptake as the only entity responsible for this task.
6. Whilst designing the public procurement policies, the Commission should focus on the procurement of services, rather than (space) infrastructure i.e. infrastructure-as-a-service, as a means to meet its own information needs.
7. The views and roles for industry should be introduced more formally to programmatic as well as operational decision making complementing the public policies. The former could take the shape of an Industry Forum whilst the latter could be met through participation to the Copernicus User Forum. Clearly, a stronger input is necessary to enable increased private investment.
8. The budget proposal for Copernicus is ambitious but possibly does not meet all the ambition of Member States and the Space Industry. It is vital that an adequate budget should be earmarked for

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the downstream services on which any future upstream programme should be justified. The industry considers that a target of 30-35% of the budget should be dedicated to downstream activities and procurement of data from commercial sources as needed to provide these services (data-as-a-service should be encouraged rather than pure public space infrastructure investment).

9. Sub-contracting and innovative procurement measures should be used more widely in order to encourage and facilitate the participation of SME's. The Copernicus ecosystem provides a fantastic opportunity for European business to establish a strong global lead if the means to enable SME's participation in the Copernicus Services and export markets are introduced.

Hereby, the industry calls upon the European stakeholders to introduce a more formal consultation process to cover the points raised. The roles of each player and the modalities of procurement, including innovative measures, should be addressed in order to enable a thriving and innovative, European, EO services industry able to be a leading player in a competitive global market. Copernicus creates this opportunity, we envision working together to make it happen.

Brussels, October 2018