



European Space Policy Institute

About a new European multi-orbit connectivity system

1. *New EU ambitions in the space telecommunication sector*

Over the last years, the EU has shown a growing interest in playing a more active role in the domain of secure space communication. Following preparatory studies and activities, a new component named GOVSATCOM was included in the EU Space Programme to address user needs for secure and cost-effective governmental satellite communication.

More recently, Commissioner Breton and industrial stakeholders have also expressed their interest in moving forward with the development of a “new integrated, secure and autonomous space connectivity system”. A [call for tenders](#) for the execution of a year-long study was published and a consortium of European companies (gathering major actors for a unique bid) was awarded a €7.1 million contract in December 2020. According to the call, this initiative will build on the GOVSATCOM component of the EU Space Programme and include the development of a new multi-orbit connectivity system to complement GOVSATCOM preliminary services. The initiative would also promote innovative quantum cryptography technologies in relation with the EuroQCI (Quantum Communication Infrastructure) initiative.

The study will assess different elements of this new space connectivity system:

- During the “Inception phase”, the consortium will investigate user cases and mission requirements and will provide a first round of recommendations in April 2021.
- During the “System study”, contractors will provide a preliminary architectural design for the space and ground segments, deliver the service provision concept and estimate associated costs.
- According to the results of the Preliminary Design Review in December 2021, the European Commission “might put forward a proposal to the European Parliament and the EU Council and initiate the procurement phase.”

2. *The place of this new initiative in the EU agenda*

This new initiative stands at a crossroad for the European Union. It offers the perspective of a potential new flagship programme complementing Galileo/EGNOS and Copernicus and building on the GOVSATCOM component to further establish the EU in the space telecommunication domain. Such prospect confirms the determination of the European Commission to foster EU’s role in safeguarding and strengthening Europe’s capacity to address autonomously its strategic objectives, namely of the European Digital Agenda and Common Foreign and Security Policy:

- Delivering broadband coverage to EU citizens and commercial enterprises, ensuring connectivity in rural or not-spot areas and more generally bridging the digital divide.
- Offering cost-effective, reliable, resilient, and secure connectivity to governmental and security users, in particular against rising cybersecurity threats.
- Fostering EU leadership in digital research, development and innovation for key enabling technologies, such as Quantum Communication, Internet of Things, 5G and future generations.

Furthermore, such programme, which involves the design, production, launch and operation of a large space infrastructure is certainly welcome for the European space industry at large. The space telecommunication sector is critical for Europe and for its space industry which is highly dependent on healthy competitive satcom markets. Yet, these markets, on which European satellite operators, manufacturers and launch service providers have been World-class leaders, are quickly mutating and the European industry is now facing uncertain prospects. In this respect, this project has clear industrial policy implications.

Although the commercial viability of connectivity services based on large LEO constellations is not demonstrated yet, it becomes increasingly difficult for Europe to disregard the various projects under (fast) development in the United States with SpaceX's Starlink and Amazon's Kuiper, in China and Russia with government-backed projects and now in the United Kingdom with the joint acquisition of Oneweb by the UK government in partnership with India's Bharti Global. The level of risk incurred in such innovative business must be weighed against the risk posed to the European space industry of being left out of what might turn out as the next growth engine for the global space sector.

3. Convergence of public and private stakeholders around a suitable programme scheme

The development of a multi-orbit secure connectivity system is a major endeavour that will be long and resource-intensive. Legitimate questions arise on the capacity of the public need to justify, by itself, such investment, in particular since the new Multiannual Financial Framework does not foresee any dedicated budget for that.

Despite a political interest in the initiative, several Member States have already raised concerns about the funding model for this project during the Council of the EU in January 2021. The possibility to establish some kind of Public-Private Partnership is clearly put forward. This option also makes sense given the global and commercial nature (at least partially) of the communication services to be provided to various users/customers.

Beyond the need to find appropriate arrangements for cost and risk sharing, the success of any PPP necessarily entails some degree of complementarity between public and private objectives. This raises, in turn, the question of European companies' capacity to build a compelling business case around this project. The possibility of a joint investment (purely speculative at this stage) may also pose a challenge to gain the confidence of private investors in the current sanitary crisis context.

Finding a suitable compromise agreeable by all the (many) parties is clearly one of the many questions that the ongoing study will have to address. Following the recent announcements and discussions held during the European Space Policy Conference, there is an undeniable convergence of interest between the European Union and the space industry, but a compelling case will be necessary to:

- Convince all Member States of the common interests at stake to address both secure connectivity needs and industrial policy concerns;
- Establish the legitimacy of the European Commission in these matters;
- Define the role to be played by the various public and private stakeholders, including Member States and ESA.

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