EU space programme

OVERVIEW

In June 2018, the European Commission proposed a total budget allocation of €16 billion to finance space activities during the 2021-2027 period. The bulk of this, €9.7 billion in current prices, would be allocated to Galileo and EGNOS, the EU’s global and regional satellite navigation systems, €5.8 billion would be allocated to Copernicus, the EU’s Earth Observation programme, and €500 million would be earmarked for security, such as the Space and Situational Awareness (SSA) programme and the new Governmental Satellite Communication initiative (GOVSATCOM) to support border protection, civil protection and humanitarian interventions, for instance. The main aims of the new space programme are to secure EU leadership in space activities, foster innovative industries, safeguard autonomous access to space and simplify governance. The space programme would upgrade the European Global Navigation Satellite Systems (GNSS) Agency by expanding its tasks and transforming it into the new European Union Agency for the Space Programme.


| Committee responsible: | Industry, Research and Energy (ITRE) |
| Committee responsible: | Industry, Research and Energy (ITRE) |
| Rapporteur: | Massimiliano Salini (EPP, Italy) |
| Rapporteur: | Constanze Krehl (S&D, Germany) |
| Shadow rapporteurs: | Evžen Tošenovský (ECR, Czech Republic) |
| Shadow rapporteurs: | Caroline Nagtegaal (ALDE, the Netherlands) |
| Shadow rapporteurs: | Jaromír Kohlíček (GUE/NGL, Czech Republic) |
| Shadow rapporteurs: | Davor Škrlec (Greens/EFA, Croatia) |
| Shadow rapporteurs: | Dario Tamburrano (EFDD, Italy) |
| Shadow rapporteurs: | Christelle Lechevalier (ENF, France) |
| Next steps expected: | Committee vote |
| Ordinary legislative procedure (COD) (Parliament and Council on equal footing – formerly ‘co-decision’) | |

Next steps expected:

Committee vote
Introduction

With 33 satellites currently in orbit and over 30 planned for the next 10 to 15 years, the EU is the largest institutional customer for launch services in Europe. According to the European Commission, the strategic importance of the space sector for the Union has increased as has the need for the European space sector to adapt to the changing global environment. Space technology, data and services have become indispensable to the daily lives of the public and to the EU's strategic interests. Space can play a crucial role in tackling new challenges such as climate change, sustainable development, border control, maritime surveillance and security.

It was against this backdrop that the European Commission announced a new space programme on 6 June 2018. The new proposal was presented in the framework of the multiannual financial framework (MFF) and builds on the October 2016 space strategy for Europe. Both the Council – in its conclusions adopted on 30 May 2017 – and the European Parliament – in its resolution adopted on 12 September 2017 – welcomed the Commission's 2016 space strategy.

The new proposal for a regulation establishing the space programme of the Union and the European Union Agency for the Space Programme (COM(2018) 447) aims to ensure that EU remains a global leader in the space domain. Today, the EU's space sector employs over 231,000 people and its value was estimated at €53-62 billion in 2017. In this regard, the new programme intends to continue investing in EU space activities, foster technical progress (e.g. high performance computing) and support the competitiveness and innovation of the European space industry, in particular small and medium-sized enterprises (SMEs) and start-ups. The proposed MFF allocates €16 billion (at current prices) for the 2021 to 2027 period.

Context

Every seven years, the EU decides on its long-term budget. On 2 May 2018, the European Commission proposed the next multiannual financial framework (MFF) for the 2021 to 2027 period. It had already presented various options (and their financial consequences) for a framework that would deliver efficiently on EU policy priorities after 2020. The 2001 to 2027 MFF will be the first for the EU of 27 Member States, taking account of the budgetary consequences of the expected withdrawal of the United Kingdom in March 2019. Brexit has triggered not only a debate on the future financial architecture of the EU, but also a discussion on UK companies' direct involvement in the EU space programme and the EU's new satellite navigation system.

Existing situation

At present, the space sector is governed by the following EU legislation:

- Regulation (EU) No 1285/2013 on the implementation and exploitation of the European satellite navigation systems, Galileo and EGNOS;
- Regulation (EU) No 377/2014 establishing the Copernicus programme;
- Decision No 541/2014/EU establishing a framework for space surveillance and tracking support (SST);
- Regulation (EU) No 912/2010 setting up the European GNSS Agency;
- Decision No 1104/2011/EU on the rules for access to the public regulated service provided by the Galileo system; and
- Council Decision 2014/496/CFSP on aspects of the deployment, operation and use of the Galileo system affecting the security of the European Union.

The European Commission is the programme manager responsible for the EU space policy and sets its priorities and takes operational decisions. The European GNSS Agency (GNSS Agency or GSA) manages public interests relating to European Global Navigation Satellite Systems (GNSS) programmes, European Geostationary Navigation Overlay Systems (EGNOS) and Galileo, the European global satellite-based navigation system. The intergovernmental European Space Agency...
(ESA) is the majority partner in technical and operational programme implementation. In this context, ESA is responsible for the development, design and construction of the Copernicus space infrastructure. Copernicus is the European Earth Observation Programme. The EU fully finances, owns and manages Copernicus, Galileo and EGNOS. The Union allocated some €12.6 billion to space activities for the 2014 to 2020 period, under the budget heading / policy cluster "Single market, innovation and digital".

Parliament's starting position

Parliament has adopted several resolutions on the EU's space activities, the most relevant to the new proposal being the September 2017 resolution on the space strategy for Europe. In this resolution, Parliament welcomes the space strategy, but urges the Commission, inter alia, to seek greater coherence and efficiency. It calls on the Commission 'to study different options by which the complicated institutional landscape in European space governance can be simplified, thereby improving the allocation of responsibilities in the interests of greater effectiveness and cost efficiency'. It also calls for a greater space budget allocation in the upcoming MFF. Parliament also "reiterates that the successful development of downstream markets depends in particular on the timely implementation and continuous evolution" of the Galileo and Copernicus programmes. Here, it calls for acceleration of the full economic exploitation of the Galileo, EGNOS and Copernicus programmes by setting adequate targets for market uptake.

Parliament considers the GOVSATCOM initiative to be "a promising measure to ensure access to secure, efficient and cost-effective services for European institutional actors, addressing user needs in a wide range of areas, while, at the same time, stimulating growth, competitiveness and innovation throughout the whole European satellite telecommunications sector". Regarding space infrastructure and services, Parliament asks the Commission to consider the situation and needs of small and medium-sized enterprises (SMEs) when determining the duration of public contracts. Finally, Parliament calls on the Commission to present a comprehensive communication strategy on the benefits of space technologies for citizens and businesses. This strategy should be based on the following three pillars: raising public awareness of the need for investment in space; informing SMEs and entrepreneurs about the opportunities of the space flagship programmes; and including space in education in order to close the skills gap.

Preparation of the proposal

The new space programme regulation is based on several evaluations, mid-term reports, external studies, workshops, stakeholder consultations and fitness checks of existing legislation. It is also part of the follow-up to the White Paper on European space policy and the space strategy for Europe, which focused on four strategic goals: maximising the benefits of space for society and the EU economy, fostering a competitive and innovative European space sector, reinforcing Europe's strategic autonomy in accessing and using space in a secure and safe environment, and strengthening Europe's role as a global actor and promoting international cooperation.

In line with 'better regulation' policy, the proposal comes with an impact assessment. This was based on three specific goals: ensuring the continuity of existing space infrastructures and services and developing new or enhanced ones; fostering an innovative European space sector; and maintaining the EU's capacity for autonomous access to space, relying on an EU independent industry, guaranteed access to EU space data and services and using them safely and securely. In its impact assessment, the Commission summarises stakeholder views collected following an open eight-week public consultation. The consultation was launched at the beginning of January 2018 and covered the broader policy area of strategic infrastructures. Out of the 441 responses received, 33 were related to space.

According to the Commission, respondents confirmed the long-term sustainability of Europe's space capability to be an important challenge. Stakeholders called for adequate funding and more
simplification as well as less red tape. Regarding the governance structure, some respondents saw scope for better coordination between the various actors and potential for further synergies. The Commission points out that business stakeholders and public authorities share similar views regarding the challenges and the importance of flexibility to react to unforeseen circumstances and new user needs. In this context, it seems that non-governmental organisations have less clear positions – except for their support for action to address environmental and climate issues.

On programme funding, the Commission assessed two options. The baseline scenario consisted of a 15 % reduction in the current budget, taking into account the withdrawal of the UK from the EU. The proposed scenario consisted of a sustained level of funding, increased by 50 %, compared with the current budget. The baseline scenario was considered insufficient to achieve the objectives of the Union space policy as set out in the space strategy for Europe. Under the baseline scenario EGNOS would remain operational for the most part. As for Galileo, a decrease in the current budget would lead to a gradual degradation of its infrastructures and services and ultimately to the shutting down of its activities in future decades. Similar consequences could be expected for Copernicus, which could barely continue, let alone make any improvements (e.g. replacing satellites). The proposed scenario would ensure continuity in the operations and service provision by the constellation of Galileo’s 30 satellites, and technological evolution, which would contribute to second-generation deployment, while also supporting the flourishing of the applications markets.7

For GOVSATCOM, a self-standing impact assessment was conducted. This assessment analysed the baseline and several policy options sharing a common set of underlying core elements, including common security requirements, synergies from aggregating national and EU demand, coordinating supply, civil-military coherence, economies of scale and efficiency gains, strengthening of Union autonomy and industrial competitiveness.8

The changes the proposal would bring

The new regulation aims to simplify and streamline the existing Union acquis by bringing it together within a single text.9 In this regard, the new regulation will replace and repeal four legal texts:

- Regulation (EU) No 1285/2013 on the implementation and exploitation of the European satellite navigation systems, Galileo and EGNOS;
- Regulation (EU) No 377/2014 establishing the Copernicus Programme;
- Decision No 541/2014/EU establishing a Framework for Space Surveillance and Tracking Support (SST); and
- Regulation (EU) No 912/2010 setting up the European GNSS Agency.

The new space programme aims to maintain the existing infrastructure and services and introduce a number of new features. The main goals are:

(1) Ensuring leadership: The new space programme aims to safeguard continuity and evolution of Galileo, EGNOS and Copernicus, the world’s most advanced satellite positioning and Earth observation systems, and develop new security initiatives on governmental satellite communication (GOVSATCOM) and space situational awareness (SSA).

(2) Fostering innovative industries: The new proposal aims to create innovation partnerships to develop and purchase innovative products and services; facilitate access to testing and processing facilities for innovative start-ups and emerging business models; and promote certification and standardisation. The programme will be rolled out alongside Horizon Europe, ensuring collaboration between space-related research and innovation actions. The creation of a dedicated equity instrument through the InvestEU programme will also be explored.

(3) Autonomous access to space: The Commission intends to aggregate EU demand for launch services. In this context, it aims to provide investment and support for the use of innovative technology (e.g. reusable launchers), and to contribute to the adaptation of the necessary ground infrastructure. This would ensure Europe’s strategic autonomy regarding critical
infrastructure, technology, security and defence and contribute to autonomous and cost-effective access to space.

(4) **Simplifying governance**: The Commission will continue as responsible programme manager, setting priorities and taking operational decisions. The intergovernmental ESA will remain the major partner in technical and operational programme implementation. The GNSS Agency (or GSA) will be renamed the ‘EU Agency for the Space Programme’ and will support exploitation and market uptake of EU space activities, playing an increased role in security accreditation.

In addition, the proposal provides the Union with a higher space budget with a view to continuing Galileo, EGNOS, Copernicus and space surveillance and tracking support (SST), but also to launching the new GOVSATCOM initiative. While the EU earmarked some €12.6 billion for space activities in the 2014 to 2020 period, the new MFF envisages a rise in long-term budget allocation, i.e. **€16 billion** at current prices for the 2021 to 2027 period. The Commission is proposing to allocate the €16 billion budget as follows.

- **€9.7 billion for Galileo and EGNOS, the EU’s global and regional satellite navigation systems**: The goal is to ensure continuity in operations and to invest in ground infrastructure and satellites. The development of an enhanced precision signal (error margin: 20 cm) and support for market uptake of the satellite navigation services would benefit autonomous and connected cars, drones, robots, the internet of things, smart phones and traffic management.

- **€5.8 billion for Copernicus, the EU’s Earth observation programme**: This will maintain the EU’s autonomy and leadership in high-quality environmental monitoring (e.g. observation of polar areas, forest and water management, land use to support agriculture), emergency support for border and maritime security (e.g. improved detection of small objects such as vessels, monitoring of illegal trafficking). New Copernicus missions, such as CO2 monitoring, will enable the EU to become a technological leader in the fight against climate change. The Copernicus Data and Information Access Services (DIAS) will make it much easier for SMEs and start-ups to exploit Copernicus data and develop innovative applications.

- **€500 million for space and situational awareness (SSA) and GOVSATCOM**: The new space programme aims to enhance the performance and autonomy of SSA by further developing space surveillance and tracking of space objects. This would help avoid collisions in space and monitor the re-entry of space objects to Earth. It also intends to address space hazards linked to space weather, solar activities and asteroids or comets threatening critical infrastructures. The new GOVSATCOM initiative aims to provide Member States with reliable, secure and cost-effective access to secure satellite communications. Today, the majority of Member States and EU institutions do not own secure communication satellites. GOVSATCOM aims to support police border protection, diplomatic communities and civil protection and humanitarian interventions for instance. In this regard, the GOVSATCOM initiative aims to contribute to the objectives of the European defence action plan and the European Union global strategy.

### Advisory committees

The European Economic and Social Committee appointed Raymond Hencks (Workers – Group II, Luxembourg) to draft an opinion (INT/861-EESC-2018). The EESC [opinion](#) adopted on 17 October 2018, welcomes the Commission proposal. It suggests, however, conducting an appropriate campaign, so that citizens realise the added value of European space activities. According to the preliminary draft opinion, Europe needs competitive launchers suited to commercial and institutional markets if it wants to maintain its independent access to space in the face of a growing number of launchers. In this context, the preliminary draft opinion encourages the Commission to support research on launch infrastructure.

The European Committee of the Regions appointed Andres Jaadla (Estonia/ALDE) to draft an opinion (ENVE-VI/036). The [draft opinion](#) is scheduled for adoption in the plenary session of 5-6 December 2018. The draft opinion welcomes the Commission proposal, but raises several questions. For instance, how can awareness of the usefulness of space, especially as an enabling...
technology, be increased and how can regions contribute? And how can EU space policy be more competitive regarding industrial policy, support for research and development, special targeted measures for small and medium-sized enterprises or other means? The draft opinion raises the question of how and to what extent local and regional authorities can be engaged and how the initial investment for local and regional authorities can be supported.

National parliaments

The deadline for the submission of reasoned opinions on the grounds of subsidiarity was 13 September 2018. No reasoned opinion was adopted.

Stakeholders' views

The ESA welcomed the Commission proposal as it would 'help consolidate the role of Europe in space and provide further impetus to space activities and their use in different sectors in Europe'. According to the ESA, the proposed regulation shows that the EU-ESA framework agreement of 2004 has been taken fully into consideration. Beforehand, the ESA Director-General had, however, criticised the Commission's proposal to upgrade the GNSS Agency by expanding its tasks and transforming it into the European Union Agency for the Space Programme. According to the ESA Director-General, there was 'no need to develop a new Space Agency in parallel in Europe, the ramp-up of which would take decades and cost billions and would therefore in itself be a major risk to the programmes it manages. We need to streamline, not double administrative layers'.

The European Association of Research and Technology Organisations, EARTO, also welcomed the Commission proposal. It believes, however, that 'Space Situational Awareness (SSA) will require some research, in particular the activities related to space weather. According to EARTO, further information will also be needed 'to understand the purpose of including asteroids as space hazards: if it implies to deviate them for a potential impact with the Earth or if other goals are pursued.'

Legislative process

Parliament assigned the file to the Industry, Research and Energy Committee (ITRE), which appointed Massimiliano Salini (EPP, Italy) as rapporteur. An exchange of views in the committee took place on 9 July 2018. The draft report was published on 2 August. The deadline for tabling amendments was 6 September 2018, and more than 600 amendments were submitted. The vote in the ITRE committee is scheduled to take place in November 2018.

In his draft report, the rapporteur welcomes the increase in funding for the space programme to assure the continuity of Galileo, EGNOS and Copernicus. However, he regrets 'a lack of ambition' and suggests, inter alia, an increase of the financial envelope for the implementation of the programme for the 2021 to 2027 period from €16 billion to €16.7 billion in current prices (Amendment 24). The rapporteur suggests a higher budget allocation for the SSA and GOVSATCOM initiatives to €1.2 billion (€600 million for each initiative). This would be an increase of €700 million compared to what the Commission has proposed for both initiatives together (Amendments 25 and 26). The rapporteur justifies the increase by arguing that secure and guaranteed access to satellite communications is 'an indispensable tool' for security actors. He argues that the Commission’s proposed budget allocation does not seem sufficient to cover potential demand, manage operations and provide a European infrastructure.

In order to foster the international competitiveness of European industries, the rapporteur suggests bolstering the EU’s space diplomacy, encouraging international cooperation, promoting EU technology and industry and fostering the principle of reciprocity and fair competition at international level (Amendment 5). The rapporteur also touches on governance aspects and calls for a better interlinkage and coordination of the major actors involved. In Amendment 33, as a new paragraph, he suggests that the European Commission should ‘chair a steering committee, composed of at least four representatives of the Commission, two from the Agency and, where
appropriate, two from the European Space Agency, in charge of issuing recommendations to the
contracting authorities relating to the procurement procedures and decisions relating with the
programme's components'. In Amendment 42, the rapporteur refers to the transformation of the
GNSS Agency into the EU agency for the Space Programme. He proposes to increase the
competencies of the agency, adding the right to sign partnership agreements or other agreements
with national space agencies. Amendments tabled by other ITRE committee Members deal, for
instance, with the (contested) inclusion of security and defence issues in the space programme,
budget allocation, cyber-security, and governance aspects such as the structure of the new agency
and the powers of ESA.\footnote{In Council, talks on the proposal have begun at working party level. The Working Group on Space has met several times, most recently on 16 October 2018. No public document is available as yet.}

**EP SUPPORTING ANALYSIS**


**OTHER SOURCES**


**ENDNOTES**

1. Current prices make no adjustments for inflation, whereas constant prices adjust for the effects of inflation as they are expressed in the price terms of a base period (normally a year; in this briefing, it is 2018).

2. For an overview, see V. Reillon, European space policy: Historical perspective, specific aspects and key challenges, EPRS, European Parliament, EPRS, January 2017, p. 5ff.

3. For an overview, see European Commission, Proposal for a regulation establishing the space programme of the Union and the European Union Agency for the Space Programme, pp. 5-9. See also Annex 2 of the European Commission's impact assessment accompanying the space programme regulation, SWD(2018) 328.

4. In its November 2003 white paper the Commission acknowledged space as a horizontal policy issue that could contribute to the Union's key policy goals: economic growth, sustainable development, stronger security and defence. Key priorities included: satellite navigation, earth observation, telecommunications, bridging the digital divide in Europe, security and defence, and developing international partnerships. One main objective was to secure the EU's strategic independence regarding access to space, technologies and space exploration. See V. Reillon, European space policy: Historical perspective, specific aspects and key challenges, EPRS, European Parliament, January 2017, p. 14.


The legal basis for the new regulation on the space programme derives from Article 189(2) of the Treaty for the Functioning of the European Union, which provides for the Union to draw up European space policy and gives the European Parliament and the Council, acting in accordance with the ordinary legislative procedure, the power to adopt a programme to contribute to attaining that policy’s objectives.

The European Commission, on behalf of the EU, is responsible for management and security of Galileo and EGNOS, and for supervision of the two entities responsible for implementation: the ESA (an inter-governmental agency) and the GNSS Agency (GSA) (a decentralised EU agency). The tasks delegated to the ESA relate mainly to system design and procurement, system maintenance and improvement, and research and development for system evolution. The tasks delegated to the GSA relate mainly to system exploitation and security accreditation together with market development, and research and development for applications. See European Commission, Impact assessment accompanying the proposal for a regulation, SWD(2018) 328, pp. 4-5.

This section aims to provide a flavour of the debate and is not intended to be an exhaustive account of all different views on the proposal. Additional information can be found in related publications listed under 'EP supporting analysis'.

The amendments can be accessed, inter alia, through the Legislative Observatory (OEIL) website.