CENTER FOR SPACE POLICY AND STRATEGY

MARCH 2026

"A GEOPOLITICAL AWAKENING": THE EUROPEAN UNION AND SPACE

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Summary

The European Union (EU), as a distinct organization and political entity, is on the verge of overtaking the European Space Agency as the center of gravity for space in Europe. As the EU affirms its position as a global space power, including in space security and defense matters, observers will benefit from understanding the EU Space Programme motivations, organizational structures, and funding sources. With such an understanding, decisionmakers will be able to anticipate where barriers to collaboration in Europe may be encountered and where new opportunities may appear.

Introduction

The European space sector is changing dramatically. The European Union (EU) is leading many of these changes by 1) reorienting the EU's space activities toward security and defense and 2) considerably increasing investment in the EU Space Programme. The EU's space initiatives could result in a significant re-ordering of Europe's space landscape with implications for the future of the European Space Agency (ESA) and other European space sector stakeholders.

The EU, as a distinct supranational organization and political entity, is a mature space power with its own budget, space policy, strategy, and space program.[1*] The EU has a large space agency, the European Union Agency for the Space Programme (EUSPA), with advanced space systems that belong exclusively to the EU. However, EUSPA is often confused with ESA, even though the two are separate and distinct. The EU's 2028–2034 seven-year budget proposal shows it is shifting the EU Space Programme's focus to security and defense priorities while doubling or tripling overall EU Space Programme funding to build up its independent space capabilities. If the EU budget proposal is approved, Europe's space ecosystem will be on the cusp of significant change. For instance, the EU could displace ESA as the biggest public stakeholder (by funding) in the European space sector, drive ESA into more space security and defense-related activities, and potentially disrupt ESA's deep-rooted funding method as the EU's influence on ESA grows and ESA's prestige decreases.[2]

This paper begins by describing a three-level framework commonly used in Europe to describe European space governance and Europe's space ecosystem. The framework is key for distinguishing the EU Space Programme from the European Space Agency and other space activities across Europe. The next section describes Europe's long-running

[*] A supranational organization is an international group where Member States voluntarily cede some of their national sovereignty to the organization on at least some internal matters. These organizations allow for collective decisionmaking, shared governance, and have binding legal authority over all Member States in those matters, even if some Member States disagree. The EU exemplifies this governance structure.

quest for strategic autonomy in space, its recent shift toward space for security and defense, and the resulting implications for collaboration with the United States.[3†] While not attempting to describe the entire structure of the EU (which is highly complex), the third section outlines EU Space Programme governance structures and identifies where to find key space-related funding increases in the next EU seven-year budget. The last section outlines the interplay and tradeoffs among EUSPA, ESA, and national-level funding, and identifies potential implications of various policy choices. U.S. observers should then be able to better anticipate how Europe's "geopolitical awakening" (as Josep Borrell, former High Representative of the Union for Foreign Affairs and Security Policy and Vice-President of the European Commission, declared) is shaping the EU's space ambitions.[4] Ultimately, this paper seeks to highlight the importance of viewing space activities in Europe holistically, rather than viewing each new program, budget request, or event separately.

A Common Framework for Considering European Space Activities

European space activities are best viewed through a three-level framework that is familiar across the European space sector.[5] This framework does not imply a hierarchical structure governs space activities. Instead, it helps observers distinguish the EU Space Programme from other European space

Figure 1: Framework for understanding space activities in Europe.

† The phrases "autonomous," "independent," or "sovereign" space capabilities have been used in official documents and statements by Europeans regarding the motives for European space activities over the years. The terms are used interchangeably in this paper, depending on the associated referenced sources.

activities; identify key space organizations within which European countries have pooled their resources; and appreciate how individual countries have kept many sovereign space capabilities within their own national space agencies.

As depicted in Figure 1, space activities in Europe are framed at three distinct levels: 1) the European Union level, 2) the intergovernmental organization (IGO) level, which is mostly ESA, and 3) the national level (individual countries), all of which are supported by a shared space industrial base and workforce.

European Union Level

The European Union level (also referred to as the European level) is often depicted at the top due to the EU's political character as a supranational organization with its own financial resources and as a large independent entity in its own right.‡ The EU Space Programme sits at this level, as does EUSPA—the EU's space agency. The proposed 2025 EU Space Act was initiated at this level as well. EU Space Programme capabilities are summarized in Table 1.

The European Union level also includes the EU Satellite Centre (SatCen). SatCen gathers and

Table 1: Summary of EU Space Programme Capabilities

Program Name	Capability	Notes
Galileo	Global, space-based PNT system	Civil and military dual-use, but currently not optimized for military uses
Copernicus Formerly known as Global Monitoring for Environment and Security (GMES)	Earth observation and monitoring	Combines dedicated EU-owned Sentinel satellite data with data from other satellites and from non-space data
EGNOS European Geostationary Navigation Overlay Service	Regional PNT (GPS) augmentation system for safety of life applications in aviation	Augments GPS. Plans for integrating Galileo PNT signals soon
GOVSATCOM Governmental Satellite Communications	Pooled satellite bandwidth from a collection of secure and resilient government and commercial satellites used by EU security actors for critical missions and governmental operations	GOVSATCOM Hubs (on the ground) interconnect users with the operations centers of the different satellite communication suppliers
IRIS² Infrastructure for Resilience, Interconnectivity and Security by Satellite	EU Secure Connectivity Programme; secure broadband, multi-orbit, proliferated satellite constellation	To be integrated into the GOVSATCOM Hubs
EU SST "Front Desk" EU's Space Surveillance and Tracking (EU SST) Service Provision Portal	Operational provision of SST services to users and supports EU SST system security monitoring	Data provided by the EU SST Partnership's 15 Member States using ground-based sensors; future space-based sensors

‡ Article 47 of Treaty on European Union explicitly recognizes the legal personality of the European Union, making it an independent entity in its own right. See European Union, "Legal Personality of the EU," https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM:union_legal_personality.

processes geospatial intelligence from satellites and disseminates its products and services to EU senior decisionmakers and to authorized entities within the Member States for crisis management, and for security and defense purposes. SatCen is overseen and funded separately from the EU Space Programme activities outlined in Table 1.

Intergovernmental Organization Level

Sometimes known simply as the "ESA level," the next level encompasses European-based intergovernmental organizations (IGOs) that engage in collective space activities for their Member States, as reflected in Figure 1. The IGO level is composed of two organizations: ESA, historically the most prominent European space organization, and the smaller-scale European Organization for the Exploitation of Meteorological Satellites (EUMETSAT), which operates the European meteorological satellite program. The fundamental distinction among the EU, ESA, and EUMETSAT is the EU is a distinct supranational organization that makes independent political decisions that are binding on its Member States, including in many EU space policy, strategy, program, and research activities. ESA and EUMETSAT are more traditional intergovernmental organizations (i.e., not supranational organizations) and therefore do not have similar political authority to make binding, enforceable decisions over Member States. ESA and EUMETSAT consolidate and coordinate the financial resources and expertise of their Member States so they can collectively undertake and benefit from space research and activities that are beyond the ability of one country alone.[6] Both ESA and EUMETSAT have their own organizational charter, missions, priorities, and funding mechanisms.

Established in 1975, ESA is not part of the EU, and the EU is not a formal member of ESA. There is significant overlap among the 27 EU Member States and the 22 ESA Member States (see Figure 2), but not all ESA Member States are EU Member States, such as Norway, Switzerland, and the United

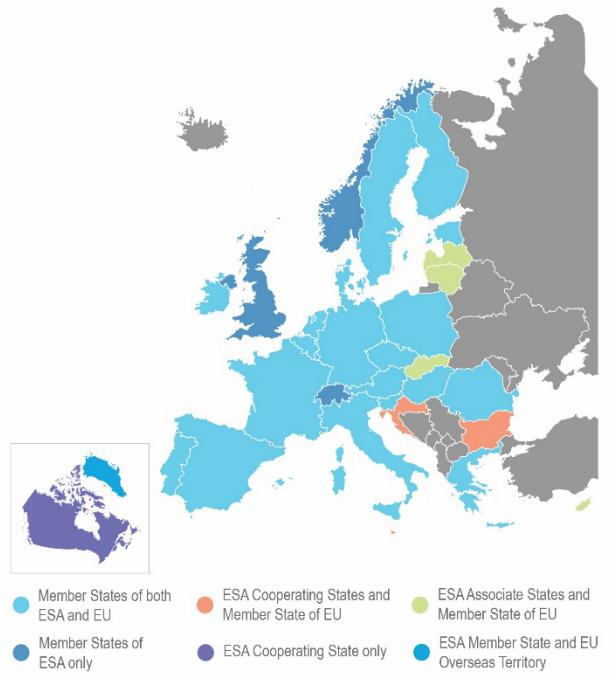

Figure 2: EU Member States compared to ESA Member States.

Kingdom. The relationship between the EU and ESA has been guided by the 2004 EU-ESA Framework Agreement and the more-recent 2021 Financial Framework Partnership Agreement (FFPA).[7] In short, the Framework Agreement establishes that the EU will provide ESA demand for space capabilities, applications, and services, and ESA will provide the supply.[8]

Hence, for over 20 years, ESA has provided technical expertise for EU space capabilities and, in most cases, takes over the system design, development, and procurement tasks. ESA also co-funds many EU-initiated programs. The complex entwining of EU and ESA in this way often obscures understanding of the distinction between their space activities, funding, roles, and responsibilities. For example, at the behest of the EU, ESA developed Copernicus, Galileo, and European Geostationary Navigation Overlay Service (EGNOS) satellite navigation systems and is supporting the development of the Infrastructure for Resilience,

Interconnectivity, and Security by Satellite (IRIS²) and governmental satellite communications (GOVSATCOM) programs. As a result, the EU has become the largest budget contributor to ESA. Over the 2021–2027 budget period, EU investments in ESA will amount to almost €9 billion.[9] They share the same industrial base and workforce, and co-fund, develop, and operate many space capabilities together. Nevertheless, dissimilar governance and decisionmaking mechanisms, different priorities, and different funding methods and budget cycles are constant areas of friction between the EU and ESA.[10]

Sentinel 3 through Sentinel 6 satellite missions illustrate the complex relationships among stakeholders. Sentinel 3 and Sentinel 6 satellites are key components of the EU's Copernicus program, but they were designed and procured by ESA and are now operated for the EU by EUMETSAT.[11]

National Level

The national level is where European countries' individual civil and military space programs and space agencies reside—funded exclusively by national budgets—with France, Germany, and Italy being the largest.[12] Some of the countries at the national level have recently announced they are increasing their space budgets significantly and shifting priorities toward more security-related space activities. For example, France said it is adding €4.2 billion to its military space spending between 2026 and 2030, roughly doubling current spending.[13] France is developing lasers and electromagnetic jammers that can destroy enemy observation satellites and deploying "patrol and surveillance satellites" to monitor and jam unfriendly satellites, if necessary, by 2027.[14] In September 2025, Germany announced it will invest €35 billion in space-related defense projects over the next five years, though it is not clear how much of an increase that is from current spending.[15] According to the Federal Minister of Defence, Boris Pistorius, the money will be spent on offensive space capabilities and building German satellite constellations.[16]

NATO and the European Space Sector

As a collective defense alliance, the North Atlantic Treaty Organization (NATO) is not involved in the governance of the European space sector and is not usually considered part of this framework. The 2019 NATO's Overarching Space Policy and the 2025 NATO Commercial Space Strategy show NATO plans to be primarily a user of alliance member (i.e., national level) and commercial space capabilities to fulfill its space requirements, while not developing its own space capabilities.

Military space capabilities at the national level remain controlled by each country but still give Europe a greater capacity. For example, bilateral military-to-military data sharing arrangements occur at the national level among European countries. France has made several bilateral agreements to bring together the Multinational Space-based Imaging System (MUSIS) that provides space-based intelligence, surveillance, and reconnaissance imagery for the militaries of European partner nations including Belgium, Germany, Greece, France, Italy, Spain, and Sweden.[17] Data sharing occurs on a reciprocal basis.

At the national level, numerous bilateral civil space projects also arise between European countries. For example, the French and German space agencies (CNES and DLR respectively) have partnered on the Merlin satellite, designed to assess the implications of methane gas on global warming and climate change.[§, 18]

[§] Centre national d'études spatiales (CNES) and Deutsche Zentrum fur Luft und Raumfahrt (DLR).

European Space Industrial Base and Workforce

While the three-level framework describes European space governance and the space ecosystem, all levels share the European space industrial base and its workforce. This sharing creates competition for skilled labor and capital, but it also allows for collaboration to advance Europe's space ambitions. After the Cold War, the European space industrial base consolidated across national borders, in part to achieve economies of scale to compete effectively in the global market. The four largest prime contractors in the European space sector are Airbus, Thales Group, Leonardo S.p.A., and Safran. However, in October 2025, Airbus, Thales, and Leonardo announced the merger of their space businesses into a new (as yet unnamed) company with a workforce of 25,000 employees. Projected to be operational by 2027 if approved by EU antitrust regulators, the aim of the new company is to ensure Europe's strategic autonomy in space.[19] This continuing consolidation of the European space industry is in response to competition from U.S. companies, primarily Starlink.[20]

Europe's Long-running Quest for Strategic Autonomy in Space and the New Push for Space Security and Defense

Since the 1960s, Europe's overarching goal for its collective space activities has been strategic autonomy in space.[21] However, this concept is not static. European space policymakers have layered on new rationales to justify this goal as changes in Europe's political, economic, and security environment gave rise to new stakeholders and priorities (see Figure 3).

Well before the EU took its current form, Western European decisionmakers assessed that a lack of independent European space capabilities would perpetually relegate Europe to a secondary, junior-partner role in collaborative space projects with the United States and others.[22] Because of this, independent capabilities were considered prerequisites for getting the most benefit from partnering. They also decided that to develop technology for large, complex space projects, Europe would need to pool financial resources and expertise. As a result, the European Launcher Development Organization (ELDO) was established in 1962, and the European Space Research Organization (ESRO) was founded in 1964. These organizations merged in 1975 to form ESA. Through these collective efforts, a highly capable space industrial base emerged in Europe and provided advanced space technologies that enabled independent space launch capabilities (the Ariane space launch vehicle), communication satellites (European Telecommunications Satellite Organization (EUTELSAT)), meteorological satellites (Meteosat), space science and exploration, and more.[23, 24, 25]

In 1993, the Treaty on European Union (the Maastricht Treaty) changed the context for European space activities as it provided the EU with significant powers and responsibilities. Thereafter, the EU began to recognize the importance of space to its economic security, competitiveness, and society.[26] For example, driven by the rapidly growing economic importance of space-based positioning, navigation, and timing (PNT)—as provided by the U.S. Global Positioning System (GPS)—the EU began funding the European Geostationary Navigation Overlay Service (EGNOS), which increases the accuracy of GPS over Europe and the North Atlantic. In 1998, the EU also found it required an independent Earth observation (EO) satellite system and began the Copernicus program, referred to (at the time) as the Global Monitoring for Environment and Security (GMES) program. The EU then acknowledged the need for an *independent* European space-based PNT system—to avoid reliance on GPS—and, using creative means, found the financial resources to develop Galileo in 2007.[27]

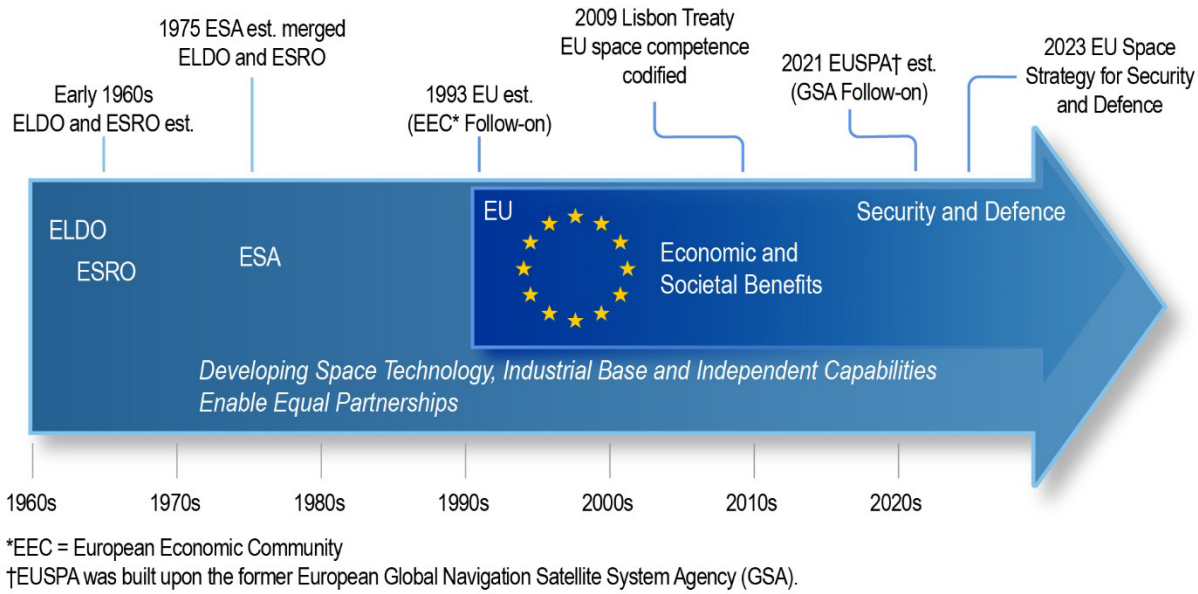

Figure 3: Key European space organizations and accumulating rationales for pooling resources.

The EU cemented its role in the European space landscape in the 2009 Treaty on the Functioning of the EU, also known as the Treaty of Lisbon.

The treaty provided the EU formal authority (called "competence" in the EU's vernacular) to develop, operate, and finance its own space programs.[28] However, to avoid duplicative European space programs and conserve resources, the EU has developed its space capabilities with ESA's help and technical expertise from the 1990s to present day.

Until recently, the EU's drive for strategic autonomy in space was focused primarily on the benefits that space-based services provide to its economy and society. The EU accepted the dual-use security and defense benefits of satellites, but those benefits were of secondary importance to the economic, societal, and technological benefits. While the Galileo and Copernicus programs foresaw security-related services, references to potential defense and military applications were downplayed.

Shifting to Space Security and Defense

An inflection point occurred in 2020 with the release of the EU's Coordinated Annual Report on Defence (CARD), which highlighted "defence in space." The report said space defense must be integrated into the EU's wider space efforts and identified the need for a common European approach.[29] Soon thereafter, with the EU's "geopolitical awakening" in the aftermath of Russia's full-scale invasion of Ukraine, the EU's Strategic Compass for Security and Defence, released in March 2022, identified space as a "strategic domain," and shifted the motivation for its space activities more toward security and defense-oriented rationales.[30]

Then, with the release of the EU Space Strategy for Security and Defence in March 2023, EU space activities took a historic turn. The strategy says the EU will:

- Defend its strategic interests in and from space
- Strengthen its autonomy in the space domain

- Make space systems and services more resilient
- Respond to any hostile activities or threats
- Further develop space-enabled services for security and defense.[31]

Former EU Commissioner for Internal Market, Thierry Breton, said at the time:

> "Space plays a vital role in both our economic and security interests, but it is also an increasingly contested arena with competing interests vying for dominance. The EU's new strategy marks a paradigm shift, aimed at bolstering our resilience in and from space. It bridges the gap between space and defense, breaking down silos and strengthening our flagship programs in space for security and defence purposes."[32]

The strategy acknowledges the EU requires the ability to protect its space assets from counterspace threats and identifies several actions to strengthen EU space system resilience and protection. Likewise, it proposes measures to maximize the use of space for the EU's security and defense.[33] Several such measures are identified in Table 2 along with other announced measures.

These security and defense measures should be viewed in the context of the EU's quest for strategic autonomy in space—and considered holistically rather than as disconnected EU initiatives. New ESA initiatives undertaken in the interests of the EU should also be considered in this light. The EU and ESA have already begun working on some of these measures. Investments in space security and defense at the national level may also contribute toward collective EU space initiatives.

As a significant component in the 2023 EU Space Strategy for Security and Defence, the proposed 2025 EU Space Act's progress toward approval should also be tracked given its potential to "enhance the level of resilience of space systems and services in the EU and ensure coordination between Member States."[34] The act also aims to reduce EU space market fragmentation by leveraging the European single market and strengthen the space industry overall.

EU development of the recently announced European Space Shield—identified in October 2025 as a priority for financing in The Defence Readiness Roadmap 2030—underscores the EU's sense that urgent action toward developing space security and defense capabilities is required.[35] However, details and funding for these ambitions are not set as of February 2026.

Implications for Collaboration with the United States

Europe's enduring pursuit of strategic autonomy in space suggests the United States will continue to face some barriers to collaboration with the EU on new defense-related space projects (Table 2). First, the EU may show reluctance to partner with the United States in a specific space mission area—such as in-orbit servicing—until the EU, ESA, or a Member State has developed independent space capabilities comparable to what the United States possesses. Likewise, the EU will endeavor to avoid dependence on U.S. space technologies, even if the economic cost of going it alone is far greater.

Collaboration can take many forms, however. The EU and United States can design their respective space capabilities to be compatible and

"Without strategic autonomy in space, there can be no strategic autonomy on Earth."

—European Parliament Report

Table 2: A Sample of Proposed EU Space Security and Defense Measures Identified in the EU Space Strategy for Security and Defence and Other Sources
Invest in capabilities to protect and defend the on-orbit, link, and ground segments of existing EU space systems such as Galileo and Copernicus
Invest in exploiting existing dual use EU space capabilities and upgrading them for security and defense purposes, e.g., Galileo and Copernicus programs
Invest in enhancing the resilience of EU space systems and services including responsive space launchers, improved space situational awareness services, and in-orbit servicing
Embed military and security requirements at the start of all new EU Space Programme projects
Invest in access to space such as reusable launchers and micro-launchers
Consider piggybacking payload options for defense on existing or future space systems
Invest in filling defense-related space capability gaps such as: • High-resolution Earth imaging for space-based reconnaissance • Resilient and secure satellite communications • Space-based missile warning[36] • Provide EU budget support to EU Member States in the development of Space Domain Awareness (SDA) sensors and enable Member States that own SDA capabilities to provide SDA services to the EU • Provide EU budget support and facilitate collaboration among EU Member States in the development of other military space capabilities   • For example, the EU is funding work on a joint space-based missile warning system between Germany and France[37]
Develop disruptive services for security and defense by incentivizing collaborative work between space, security, and defense start-ups
Participate in, develop, and conduct relevant space exercises for readiness and interoperability

interoperable and improve resilience without creating dependencies. The 2004 GPS-Galileo agreement exemplifies this approach.[38] The EU and the United States also can agree on information sharing. Current space situational awareness (SSA) data information sharing between the EU Space Surveillance and Tracking (SST) Partnership and the U.S. Department of Commerce Traffic Coordination System for Space (TraCSS) program reflects this approach, as do several dozen bilateral SSA Data Sharing Agreements.[39] Bilateral military-to-military and NATO approaches to sharing bandwidth on various military communication satellites have also been successful endeavors.[40] This makes it likely the EU will be willing to:

- Make independent EU Space Programme capabilities compatible and interoperable with U.S. space capabilities
- Make agreements to share data coming from its space capabilities
- Reach satellite bandwidth-sharing agreements with the United States when the EU gains comparable broadband satellite internet communication capabilities

As the EU closes space capability gaps, the EU may become more receptive to collaboration with the United States in those respective areas.

The EU and NATO
Space Security and Defense Relationship

The EU is developing closer cooperation with NATO on space security given NATO's lead role in Europe's defense. However, the EU is not a NATO alliance member and therefore space capabilities wholly owned and operated by the EU, such as Galileo, are not formally covered by NATO's Article 5 collective defense clause. Closer cooperation between the EU Space Programme and NATO is critical for the EU's efforts to close its security and defense gaps in space.[41] The EU and NATO are working jointly to ensure their responses to space incidents and threats are complementary and mutually reinforcing.[42]

Charting EU Space Governance and Potential Funding Increases

Identifying the EU organizations that oversee and implement the EU's space activities, as well as analyzing current and planned spending, is necessary for anticipating the direction of the European space sector. The EU currently spends about €3 billion per year to sustain and modernize existing EU space activities, invest in space-related research, and stimulate private investment. To achieve its new space security and defense goals, a conservative estimate forecasts EU investments in space may double or triple to €6 to €9 billion per year.[43] However, based on the combined total of several EU funding streams and optimistic assumptions about approval of all budget proposals currently being considered, a more aggressive estimate is EU funding for space could more than *quadruple* to €14 billion per year. Such increased investment, whether at the low or high end, could drive significant change across the European space sector.

For analytical purposes, this section distinguishes several areas of activity resourced by the EU, but in practice, determining how an activity is funded is not straightforward. For example, ESA may be simultaneously co-funding specific space development activities and operations, and resources can move across the three levels of the European space framework depending on the specifics of various projects and funding arrangements. The blending may obscure the origin of the resources and how precisely they are being devoted to various EU space activities. The top-level descriptions of funding described below do not detail where every euro comes from for every EU space activity but provide a baseline for understanding the source and level of resources the EU is committing in pursuit of its strategic goals in space.

Space Governance and Funding Under the European Commission

As one of the four decisionmaking bodies in the EU, most space activities are managed by the European Commission (EC, or simply, the Commission), the EU's executive branch.** Within the EC, the position of commissioner for Defence and Space was established for the first time in December 2024, reflecting the EU's recognition of the strong nexus between defense and space. The commissioner is supported by the Directorate General for Defence Industry and Space (DG DEFIS) (see Figure 4).

DG DEFIS also implements the EU Space Programme and is responsible for EU space policy,

** The four main decisionmaking institutions of the EU are the European Parliament; the European Council (heads of states and governments from each member state); the Council of the European Union; and the European Commission (EC).

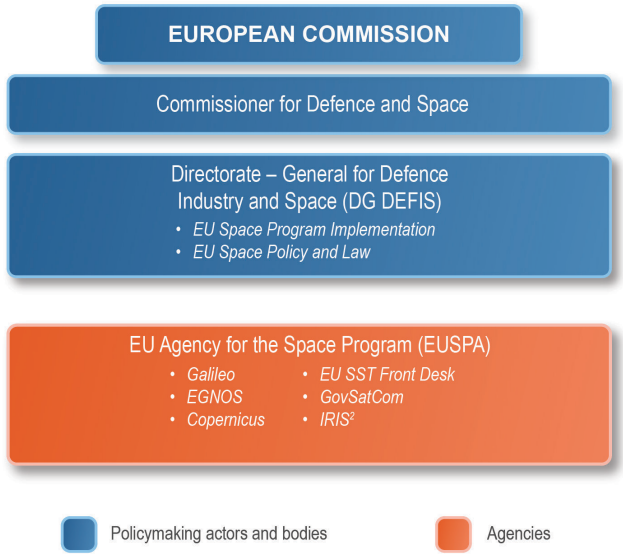

Figure 4: Space governance under the Commission (simplified).

strategy, and the proposed EU Space Act, now in the EU legislative revision and approval processes.[††] DG DEFIS provides program management for the EU Agency for the Space Programme (EUSPA).[‡‡] Established in its current form in 2021, EUSPA operates the EU's space capabilities often in partnership with other entities (see Table 1). With each new program and budget cycle, the roles, competencies, and tasks of EUSPA increase.

Space Funding Under the European Commission

The Commission uses a seven-year budget, called the Multiannual Financial Framework (MFF). On July 16, 2025, the Commission released its proposal for the MFF covering 2028–2034. The final 2028–2034 MFF must still be negotiated and approved, which likely will not occur until 2027.[§§] The budget proposal calls for the "Defence and Space" portion of the budget to increase fivefold to €131 billion, the biggest growth line in the entire proposal (see Figure 5).[44] However, instead of including a dedicated budget line just for space as it has done in past MFFs, the budget proposal folds space and defence spending into a newly proposed larger category called the European Competitiveness Fund focused on strategic technologies and industrial capacity. The Commission's rationale for proposing the European Competitiveness Fund is to keep funding for defense and space flexible over the next several years and avoid locking fixed amounts into the different budget lines, due to the dynamic security environment and rapid technological changes.

Nevertheless, as of February 2026, based on comments by senior EC officials, and with the support of advocates within the European Parliament and industry, the space portion of the budget looks set to grow considerably.[45, 46, 47] In

[††] Other Directorates General contribute to EU space-related activities to various degrees, but DG DEFIS is the key EC stakeholder.
[‡‡] Sometimes referred to as the EU Space Programme Agency.
[§§] The overall EU budget and the legislation for the EU Space Programme are proposed by the European Commission but adopted by the EU Council and the European Parliament as co-legislators.

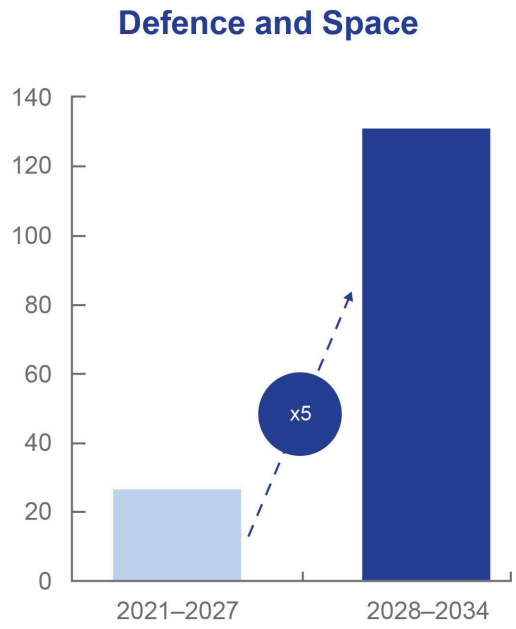

***Figure 5: Growth in EU funding for Defence and Space**. Courtesy of the European Commission.*

November 2025, European Commissioner for Defence and Space, Andrius Kubilius, suggested the European Competitiveness Fund would provide roughly €60 billion for space in the 2028–2034 MFF.[48, 49] Such an increase would quadruple the EU's funding for space activities compared to the 2021–2027 MFF budget of €14.9 billion.[50] Throughout the budget negotiations and approval process during 2026 and 2027, observers should watch for indicators to help anticipate how much the increase for space will be. In addition, if the new approach is adopted, more budget flexibility could result in fluctuations in funding the EU's space activities based on changing priorities.

In addition, the separate EC's Readiness 2030 initiative, formerly known as ReArm Europe, mobilizes another €800 billion in EU and EU Member State defense spending over the next four years, most certainly including space capabilities for security and defense. This, along with emerging plans for a European Space Shield, as suggested in the Commission's Defence Readiness Roadmap 2030, indicates the EU budget for space-related initiatives could swell even more than in the proposed 2028–2034 MFF.[51]

How the EU Budget Is Financed*

- A proportion of each EU's country's gross national income, based on its own wealth
- Customs duties on imports from outside the EU
- The profit made by the EU from the difference between the face value of the euro and the cost to produce it
- A small percentage of the Value Added Tax (VAT) collected by each EU country
- A contribution based on the amount of non-recycled plastic packaging waste in each EU country
- Other revenue, such as contributions from non-EU countries to certain programs, interest on late payments and fines, as well as any surplus from the previous year

* Source: https://www.consilium.europa.eu/en/policies/financing-the-eu-budget/

Funding for Research and Innovation in Space

In support of the EU's quest for strategic autonomy in space, the Commission manages several sources of funding for space outside of the EU Space Programme. The main sources of funding for space-related research are the Horizon Europe program and the European Defence Fund.

Horizon Europe

The EU's main source of funding for research and innovation is the Horizon Europe program. Horizon Europe is primarily overseen by the EC Directorate-

General in charge of Research and Innovation.*** In the space sector, Horizon Europe provides funds supporting EU Space Programme activities, including ensuring independent access to space, development or improvement of EU space and ground infrastructures, development of new user applications, SSA and satellite communication, on-orbit servicing capabilities, and quantum technologies.[52, 53]

As shown in Figure 6, the proposed 2028–2034 overall Horizon Europe budget nearly doubles from €95.5 billion to €175 billion. While information on how much of that increase will be allocated toward space research is not publicly available yet, a range of conservative to more aggressive estimates for space-specific research budget increases will provide observers with a means to measure the level of the EU's commitment to strategic autonomy in space.

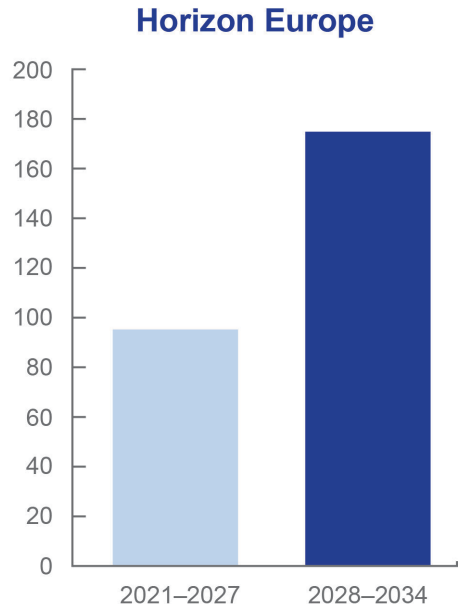

Figure 6: Growth in EU funding for Horizon Europe (in euro billions).

The EU research budget for space should, at a minimum, increase in sync with the larger Horizon Europe budget (i.e., also nearly double).[54] Given the Horizon Europe program's 2021–2027 budget dedicated €1.6 billion (1.68 percent) to space research, or €228.6 million per year, observers can anticipate the 2028–2034 budget for space research being at least €2.94 billion or €420 million per year.[55] However, it is plausible a larger proportion of the Horizon Europe budget will be devoted to funding space research, but it remains to be seen.

European Defence Fund

The European Defence Fund (EDF) is another funding source for EU research and development (R&D) for space. The EDF is the EU's defense R&D program.[56] The 2021-2027 budget for the EDF is nearly €8 billion. On average, roughly 8.5 percent has been devoted to R&D projects directly related to space each year, or about €97 million per year. The funding has been allocated for research into such areas as space threat surveillance and protection of space assets, including bodyguard satellites, space-based space surveillance, on-orbit operations and services, a space-based intelligence, surveillance, and reconnaissance constellation, and using artificial intelligence (AI) to improve multi-source satellite image processing for military users (see Figure 7).[57] Given the cross-cutting nature of space applications, other EDF Work Programme categories may indirectly benefit space R&D, such as investment in information superiority, cyber, and missile defense.

The proposed 2028–2034 MFF calls for the EDF budget line to be subsumed into the overall "Defence and Space" focus area of the European Competitiveness Fund, implying a fivefold increase in EDF funding to almost €500 million annually for

*** Illustrating the complex nature of EU space funding, management of space research is also shared with the Health and Digital Executive Agency (HaDEA), the EU Agency for the Space Programme (EUSPA), the European Space Agency (ESA), and the European Commission.

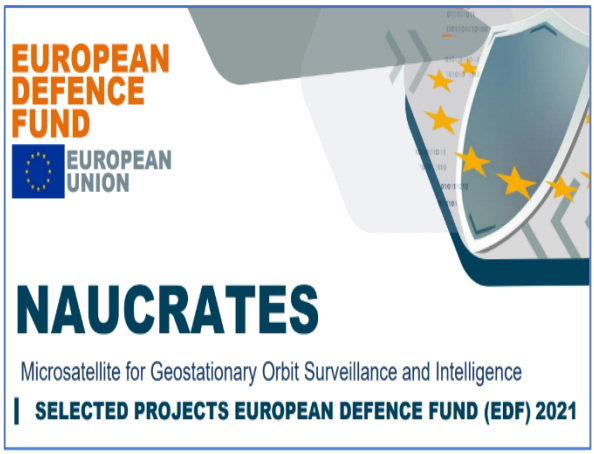

Figure 7: Example of an EDF-funded project. *Courtesy of the European Commission.*

space defense research. Unfortunately, projecting EDF funding for space is unclear as of February 2026.

EU Seed Capital and Financing for New Space

The EU recognizes the power of the commercial space sector and the role of venture capital in funding new space technology and space services, as well as the critical importance that government can play as anchor customers for emerging technology.[58] While EU bureaucracy and legacy rules make it much more difficult for such levers to be successful in the EU compared to the United States, the EU is reforming its processes and providing seed capital to stimulate innovation, competition, and speed within the EU commercial space ecosystem.

CASSINI Space Entrepreneurship Initiative

The proposed 2028–2034 MFF includes continued funding for CASSINI. CASSINI's purpose is to enable many more EU-based, new entrant, space companies to raise risk capital, with CASSINI providing seed capital to venture capital funds. Currently, CASSINI provides €1 billion dedicated to stimulating and supporting European space entrepreneurship, start-ups, and the New Space industry.

CASSINI funding is available to companies active across all areas of the EU Space Programme such as products and services enabled by space data and covering capabilities from nano satellites to launch vehicles.[59] As of September 2024, 13 European venture capital funds and more than 200 European New Space start-ups received CASSINI support, raising over €1.3 billion in private venture capital funding.[60] CASSINI also supports prizes, accelerators, mentoring, and hackathons. In addition, the EC hopes to use CASSINI to help bolster the development of anchor-customer contracts, and help coordinate grants, loans, and equity.[61] The level of CASSINI funding expected in the 2028–2034 budget is unclear as of February 2026, but observers should note that doubling or tripling current funding would be an additional €1–€2 billion investment in space.

European Investment Bank (EIB) and Space TechEU

The EIB is the EU's financial investment arm and lends money on favorable terms to projects aligned with EU policy objectives.[62] No EIB funds come from the MFF or elsewhere in the EU budget; rather, EIB borrows money on capital markets.[63]

In late 2025, in partnership with the EC and ESA, EIB established the Space TechEU financing program for the European space sector. EIB will provide €500 million to support small and medium-sized European companies, provide credit lines and guarantees to EU commercial banking partners, and in the coming years, expects to stimulate an estimated €1.4 billion in New Space investment.[64]

The overarching goals of Space TechEU are to ensure the EU's priority for strategic autonomy in space is matched with adequate financing to support Europe's space industrial base and to strengthen supply chain resilience.[65] As a newly announced program, it is unclear when the next tranche of Space TechEU financing will become available.

Space Governance and Funding Under the Common Foreign and Security Policy

While most EU space activities are managed by the EC, the Commission does not have authority over the EU's Common Foreign and Security Policy (CFSP). The CFSP deals with EU security and defense matters over which Member States retain full sovereignty and control. The CFSP therefore comes under the European Council.

The European Council defines the general political direction and priorities of the European Union. The Council is where collective EU security and defense matters are discussed, decided upon, and funded by the member states using distinct European Council decisionmaking rules and funding procedures. EC and European Parliament participation in European Council decisionmaking procedures is very limited. While the Council of the European Union is another key EU decisionmaking institution directly involved in security and defense issues, its role is set aside here for the sake of conciseness.††† Likewise, discussion of the Common Security and Defense Policy (CSDP), the major component of the CFSP, is also put aside.‡‡‡

The governance and funding of the space activities that come under the CFSP is separate from the governance and funding of Commission space activities. The CFSP role and its leadership are described below along with its key space-related connections with the EC. As noted earlier, for analytical purposes, this paper dissects EU space-related institutions and funding streams into several areas, but in practice, interrelationships across institutions blur the picture while funding streams splash across the boundaries sketched here. Nevertheless, the descriptions outlined here provide a baseline for understanding.

High Representative of the Union for Foreign Affairs and Security Policy and Vice-President of the European Commission

The CFSP encompasses all areas of foreign and security policy (including key space-related activities) and provides the institutional mechanism for the EU to have an effective role in international affairs.[66, 67] The EU's High Representative of the Union for Foreign Affairs and Security Policy/Vice-President of the European Commission (HR/VP) steers CFSP implementation through various organizational entities and has many responsibilities, including some related to essential EU space activities. The HR/VP is often referred to simply as the "High Representative."[68]

The HR/VP leads the EU's diplomatic service (i.e., the European External Action Service (EEAS) and is the EU's chief diplomat (see Figure 8). The HR/VP also provides operational direction to the EU Satellite Centre (SatCen), heads the European Defense Agency (EDA), and possesses responsibilities and authorities for responding to threats to EU-owned space systems and services—for example, in case of jamming or spoofing.

Importantly, as a Vice-President of the Commission, the HR/VP provides a direct link between the CFSP and the space activities that fall under the purview of the Commission, also depicted in Figure 8. The HR/VP—with one foot in the Commission and the other in CFSP foreign and defense policy issues—ensures consistency, efficiency, and security across the space-related activities of these EU decisionmaking institutions. Commission entities support the HR/VP on CFSP activities and may use resources from the CFSP budget to respond rapidly to external conflicts and crises and to protect the EU and its citizens.[69, 70]

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††† The EC proposes new EU laws, and the Parliament and Council of the European Union adopt them. The Member States then implement them. The European Commission ensures the laws are properly implemented.

‡‡‡ More information on the CSDP can be found at https://www.eeas.europa.eu/eeas/common-security-and-defence-policy_en#8784.

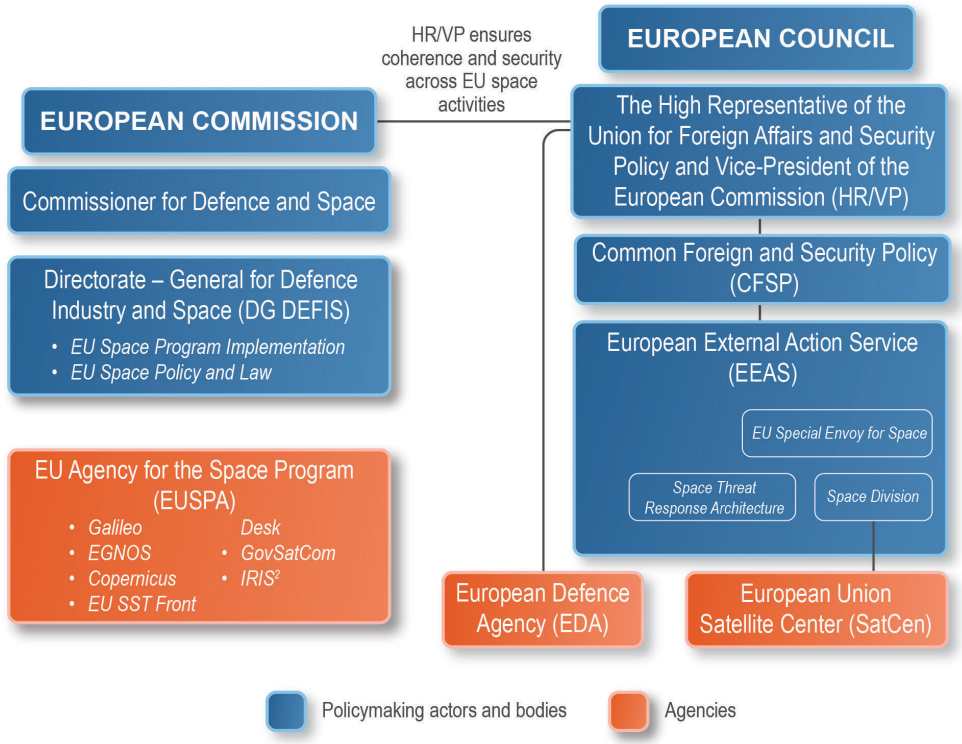

Figure 8: Governance of Common Foreign and Security Policy (CFSP) space activities.

The European Council funds specific Member State-approved activities, programs, and projects annually through direct Member State contributions rather than from the Commission's MFF. As such, the funding for each distinct space-related activity initiated under the auspices of the CFSP is case-by-case and interwoven in the descriptions of each entity below, as needed.

European External Action Service (EEAS)

The EEAS is usually described as the EU's diplomatic service with the HR/VP as the EU's top diplomat and top security and defense official.[71] Specific to the space sector, EEAS represents EU space interests internationally, plays a key role in EU space governance, and even performs some security and defense-related space operations.

Here the HR/VP delegates many space responsibilities to the EU Special Envoy for Space. The Special Envoy for Space implements the HR/VP's operational space responsibilities and oversees the EEAS Space Division (Figure 8). The Space Division supports EU space-related diplomatic activities and partnerships and provides operational direction for the EU Satellite Centre (SatCen). The Space Division also provides the EU with the ability to influence international space law, regulations, standards, best practices, and norms of responsible behavior in outer space to align with EU interests.

The HR/VP also has operational responsibility in relation to possible threats to EU space systems and services. The EU's Agency for the Space Programme (EUSPA) follows the HR/VP's instructions to prevent or mitigate threats or serious harm to the EU or individual Member States. In this regard, the EEAS Space Threat Response Architecture (STRA) operates 24 hours a day to manage space threats or attacks against the EU and EUSPA space assets. [72]

European Union Satellite Centre (SatCen)

SatCen comes under the operational direction of the HR/VP via the EEAS. Incorporated as a fully operational EU agency in 2002, SatCen supports EU senior decisionmakers in crisis management and supports EU security and stability operations around the world by gathering, processing, and disseminating contributing European military, civil, and commercial satellite imagery and radio frequency (RF) detection data to users.[73, 74] The HR/VP is the SatCen Tasking Authority (i.e., prioritizes requests for SatCen satellite imagery among the multiple stakeholders noted below). The HR/VP delegates collection, tasking, and prioritization responsibilities to the EEAS Special Envoy for Space with the support of the Space Division.[75, 76]

The main users of SatCen geospatial intelligence products and services are EEAS, EU Member States, EU missions and operations, other EU agencies, non-EU countries, and international organizations such as the United Nations and NATO.[77] SatCen cooperates closely with the EC, ESA, the European Defence Agency (EDA), and other organizations involved in space and security.

Importantly, SatCen takes in imagery provided from national military satellites such as French Helios and German SARah and SAR-Lupe satellites and a wide variety of satellite imagery from EUSPA's Copernicus program including Copernicus' Sentinel radar and optical satellites.[78] The Copernicus ground segment integrates and distributes satellite imagery data coming from multiple commercial and European civil satellite constellation contributing missions as illustrated in Figure 9. These Earth observation systems vary widely in the type of data they collect and in image resolution—from medium resolution to less than a meter.[79]

SatCen is funded primarily by annual contributions coming directly from EU Member States. Representatives from all EU Member States comprise its governing board, which approves its annual budget.[80] Budget numbers for 2024 and 2025 were unavailable at the time of this writing, but

Figure 9: Satellite sensor imagery accessible by SatCen.

assessing earlier budget numbers reveals the relative size of SatCen funding. SatCen funding in 2023 was more than €38 million, a 20 percent increase from 2022.[81] SatCen's operations reflected a "remarkable increase" in demand in 2023 and output grew 37 percent in 2023 compared to 2022, expanding significantly since the invasion of Ukraine.[82] SatCen operational output is expected to grow 20–30 percent a year, indicating SatCen budgets should grow with the EU's and Member States' growing emphasis on security and defense.

European Defence Agency (EDA)

The HR/VP also heads EDA. Founded in 2004, EDA's purpose is to coordinate the EU's defense industry and development of EU defense capabilities. EDA has become the hub for European defense cooperation as it enables and facilitates the 27 Member States' militaries in forming collaborative partnerships for capability development projects.[83] A key EDA focus area is space capability development given that EDA recognizes that most defense capabilities are space-enabled in one way or another.[84] EDA is also working to strengthen EU space capabilities' security and defense, but currently with limited contributions.[85]

Space-related priority areas for development include Earth observation, PNT, satellite communication, space situational awareness, ballistic missile defense, space-based intelligence, surveillance, and reconnaissance, and cyber defense in space. EDA has initiated several research technology and development programs in related areas with financial contributions to individual projects in the range of €10–€70 million-plus each.

The budgets for these individual projects are not included. Further research may be useful for assessing the combined amounts being devoted across EDA-facilitated projects, especially as Member States seek more areas for collaborative space research with other Member States as funding increases at the national level.

In 2022, EDA became an indirect partner with the EC's Directorate-General for Defence Industry and Space (DEFIS) in management of the EDF discussed earlier. EDA, for example, may help with European Defense Fund (EDF) grant preparation, monitoring, and payments, demonstrating again the intertwining of the space-related activities and funding across the Commission and the CFSP.

Permanent Structured Cooperation (PESCO)

The PESCO framework enables EU Member States to jointly finance and develop defense capabilities and was included as a cooperative mechanism in the 2009 Treaty of Lisbon.[86] Member State commitments to PESCO projects are legally binding, marking a key difference between PESCO and other forms of cooperation within the EU and among Member States.[87] The HR/VP oversees PESCO projects with military advice provided by the Military Committee of the European Union (EUMC).[88] EEAS, EDA, and the EUMC serve as the PESCO secretariat.

While Member States directly provide most of the funding for PESCO projects, the projects may be co-funded from the EU budget via the EDF budget.[89] Several space defense projects have been structured under PESCO, including projects focusing on PNT, military space situational awareness, space protection and defense, and space early missile warning and interception. Further research is needed to uncover the budgets for these individual projects.

EU space initiatives benefit from many additional sources of funding that are not targeted directly at space but provide spillover benefits to the space program and space research and development, e.g., significant EU investments in cybersecurity, digital infrastructures, maritime security, artificial intelligence (AI), microchips, and more.

Interplay Among Key Organizations, Levels, and Budgets: Implications for the European Space Sector

Among numerous organizations with different priorities and funding methods, the complex interplay across the three levels of European space activities makes it difficult to foresee what lies ahead. However, it is possible to anticipate some of the major issues and decisions facing European decisionmakers that observers should monitor to anticipate the future of the European space sector. This section highlights key issues and decisions, and potential implications of various choices.

EU Budget Debate

The debate over the EC's 2028–2034 seven-year budget proposal—the MFF—will clarify the prioritization and funding of several high-profile space activities, including the EU Space Programme, EUSPA, Horizon Europe, the EDF, CASSINI, and other EC-funded activities. The final MFF budget decision, due in 2027, will illuminate whether the EU will displace ESA as the biggest public stakeholder in the European space sector. In addition, annual funding for collaborative research and development projects, carried out under the auspices of the EDA and PESCO, should be considered. Observers should also track SatCen growth and EEAS space-related activities to accurately gauge the growth in EU space ambitions.

Balance Between the EU and ESA

Observers should monitor how assumed increases in EU funding for space will shape ESA's future. Currently, the EU provides about 25 percent of the ESA budget over and above what ESA Member States contribute to ESA directly.[90] This amount makes the EU the largest single source of funding in ESA's budget. [91] Because of this, if the proposed EU space budget increase is approved, these funds will flow into and swell the overall ESA budget at the EU turns to ESA to develop (and potentially co-fund) new EU space capabilities. While at first glance this seems beneficial to ESA, it carries some negative implications for ESA's standing as Europe's preferred organization for pooling European resources in pursuit of strategic autonomy in space. A large increase in EU funding for space could significantly raise the proportion of the ESA budget provided by the EU, perhaps to over 50 percent. This may present a challenge to a core aspect of ESA's identity, that is, ESA's geographic return funding rule.

ESA's geographic return funding rule mandates that companies in ESA Member States receive contracts proportional to their country's financial contributions to the agency, providing a key rationale for ESA Member States to provide funds for ESA's budget. The geographic return rule has been the primary mechanism by which European countries have pooled resources for space, leading to decades of ESA success. Yet, detractors of the geographic return rule characterize it as causing the fragmentation of the EU's industrial base, as inefficient, as driving up costs, and as lacking the agility needed for the European space industrial base to be globally competitive. They also argue that current geopolitical threats make these issues more urgent to resolve than ever.[92]

With that in mind, the EU prohibits ESA from following the geographic return rule with funds provided by the EU. Instead, with EU-provided funds, ESA must follow EU procurement and financial rules which are based on open competition across the EU and value for money.[93] A surge in EU funding to ESA for EU space projects could diminish the importance of the geographic return rule and make it more tenable for ESA and its Member States to implement the politically difficult funding and procurement reforms called for in recent high-profile governmental reports.[94]

In addition, as ESA becomes more reliant on EU funding, the EU's influence will grow on ESA priorities and spending decisions.[95] For example, as

EU space security and defense imperatives drive future programs, other ESA ambitions, such as space exploration and space missions, could be deprioritized.

Multilevel Budget Cycle Interactions

Observers should consider how budget decisions and processes at one level may interact with budget decisions at other levels. For example, budgets at the national level can be adjusted annually, while ESA's funding is based on a three-year budget cycle, and EU funding is based on a seven-year budget cycle. This means, in February 2026, that observers have knowledge of ESA's funding for the next few years, and insight into 2026 national budgets, but will not see the outcome of the EU's MFF budget proposal until it is approved in 2027. This delay creates some uncertainty about the future direction of the European space sector.

For example, Germany's intention to boost its spending on space-related defense projects to an unprecedented €35 billion by 2030, and the 46 percent increase in Germany's contribution to ESA's 2026–2028 budget may drive Germany to oppose significant increases in the EU space budget during the ongoing EU budget negotiations.[96] Similarly, Belgium, Spain, and Poland are also dramatically increasing their spending at the national level on space for security and defense, while also significantly increasing their contributions to ESA. The combined weight of this new spending might motivate these countries to oppose sharp EU space budget increases.[97, 98]

On the other hand, the new national-level priority on space-related defense projects could motivate most EU Member States to favor increasing the EU space budget, so they can use the EU's economy of scale and ability to pool resources efficiently to develop space capabilities they cannot afford by themselves. Observers should closely monitor such decisions to appreciate where European decisionmakers place their priorities.

Debates Over Security

The interplay between the EU and its Member States regarding the EU's role in security and defense also bears watching. Member States retain full sovereignty and control over their individual security and defense matters. The EC's move to significantly increase funding for space security and defense implies a growing role for the EC in defense affairs.[99] This may create friction with Member States and inhibit a surge in MFF funding for space security and defense from fully materializing. If friction does occur, observers should assess and weigh the implications for the future of the EC's space ambitions.

Conclusion

Dramatic changes are underway across the European space ecosystem. The EU, as a distinct supranational organization, is on the verge of dramatically increasing funding and reorienting the EU Space Programme to support Europe's military and defense needs. With the benefit of ESA's technical expertise and with the EU's and ESA's combined ability to pool resources from across their Member States, the EU could soon position itself as the foremost space actor in Europe and a leading global actor in space security and defense.

With a potential doubling, tripling, or even fivefold increase in the EU's budget for space activities and with large increases in funding for ESA and at the national level, Europe is moving closer to its decades-long goal of strategic autonomy in space. The three-level European space governance framework should help observers perceive the inter-relationships among the stakeholders and assess space activities in Europe holistically, rather than viewing each new program, budget request, or entity in isolation. With that broad perspective in mind, U.S. observers should be able to better anticipate where new opportunities for collaboration may arise or where roadblocks may appear as the EU asserts itself as a major space power.

Acknowledgments

The author would like to thank the many scholars and colleagues who informed the research and foundation of this paper. Thanks to Audrey Allison who edited the paper, and Colleen Stover, who engaged deeply with the paper and provided extensive feedback. Thank you to Adam Glover, Denise Betts, Jacob Bain, and Richard Reed for their editorial and graphics support.

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