EN

Annex VII

Horizon Europe

Work Programme 2026-2027

7. Digital, Industry and Space

Table of contents

Calls

Call - SPACE

HORIZON-CL4-2026-03

Overview of this call[1]

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million) 2026	Expected EU contribution per project (EUR million)[2]	Indicative number of projects expected to be funded
Opening: 10 Mar 2026 Deadline(s): 03 Sep 2026				
Destination: Open Strategic Autonomy in Developing, Deploying and Using Global Space-Based Infrastructure, Services, Applications and Data				
HORIZON-CL4-2026-SPACE-03-11: Reinforcing EU autonomous access to space through EU-based spaceports	IA	23.00	10.00 to 23.00	2
HORIZON-CL4-2026-SPACE-03-31: Digital enablers and building-blocks for Earth Observation and Satellite telecommunication for Space solutions (Space Partnership)	RIA	12.00	3.00 to 6.00	3
HORIZON-CL4-2026-SPACE-03-32: Preparing demonstration missions for Earth Observation and Satellite telecommunication for Space solutions (Space Partnership)	IA	26.00	5.00 to 10.00	4
HORIZON-CL4-2026-SPACE-03-61: Scientific analysis and exploitation of space data	RIA	4.00	1.50 to 2.50	2

[1] The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2026 and 2027.

[2] Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

HORIZON-CL4-2026-SPACE-03-81: Space critical EEE components for EU non-dependence – Radiation Hard FPGA on 7nm	RIA	13.00	12.00 to 13.00	1
HORIZON-CL4-2026-SPACE-03-82: Space critical EEE components for EU non-dependence – GaN MMICs mm-Wave Foundations	RIA	7.00	6.00 to 7.00	1
HORIZON-CL4-2026-SPACE-03-85: Critical Facilities Serving Space EEE components for EU non-dependence – High and Very High Energy Irradiation Test Facility Market Deployment	IA	4.00	3.00 to 4.00	1
HORIZON-CL4-2026-SPACE-03-86: Space critical Equipment for EU non-dependence – Space Refuelling Interface	RIA	3.00	2.00 to 3.00	1
Overall indicative budget		92.00		

General conditions relating to this call	
Admissibility conditions	The conditions are described in General Annex A.
Eligibility conditions	The conditions are described in General Annex B.
Financial and operational capacity and exclusion	The criteria are described in General Annex C.
Award criteria	The criteria are described in General Annex D.
Documents	The documents are described in General Annex E.
Procedure	The procedure is described in General Annex F.
Legal and financial set-up of the Grant Agreements	The rules are described in General Annex G.

Call - SPACE

HORIZON-CL4-2027-03

Overview of this call[3]

Proposals are invited against the following Destinations and topic(s):

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)[4]	Indicative number of projects expected to be funded
		2027		
Opening: 09 Mar 2027 Deadline(s): 02 Sep 2027				
Destination: Open Strategic Autonomy in Developing, Deploying and Using Global Space-Based Infrastructure, Services, Applications and Data				
HORIZON-CL4-2027-SPACE-03-12: Digital solutions for autonomy for space transportation systems, design and simulation tools - Digital enablers and building blocks (Space Partnership)	IA	5.00	2.00 to 3.00	2
HORIZON-CL4-2027-SPACE-03-33: Digital enablers and building blocks for collaborative Earth Observation and Satellite telecommunications for Space solutions (Space Partnership)	RIA	4.00	1.50 to 3.00	2
HORIZON-CL4-2027-SPACE-03-34: Preparing demonstration missions for collaborative Earth Observation and Satellite telecommunication for Space solutions (Space Partnership)	IA	26.00	5.00 to 10.00	4
HORIZON-CL4-2027-SPACE-03-83: Space critical EEE components for EU non-dependence	RIA	0.50	0.25 to 0.30	1

[3] The Director-General responsible for the call may decide to open the call up to one month prior to or after the envisaged date(s) of opening.
The Director-General responsible may delay the deadline(s) by up to two months.
All deadlines are at 17.00.00 Brussels local time.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2026 and 2027.

[4] Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

HORIZON-CL4-2027-SPACE-03-84: Space critical equipment for EU non-dependence	RIA	0.50	0.25 to 0.30	1
Overall indicative budget		36.00		

General conditions relating to this call	
Admissibility conditions	The conditions are described in General Annex A.
Eligibility conditions	The conditions are described in General Annex B.
Financial and operational capacity and exclusion	The criteria are described in General Annex C.
Award criteria	The criteria are described in General Annex D.
Documents	The documents are described in General Annex E.
Procedure	The procedure is described in General Annex F.
Legal and financial set-up of the Grant Agreements	The rules are described in General Annex G.

Destinations

Destination: Open Strategic Autonomy in Developing, Deploying and Using Global Space-Based Infrastructure, Services, Applications and Data

Today, EU citizens enjoy watching satellite TV, increasingly accurate global navigation services for all transport modes and users, extended Earth monitoring for land, marine, atmosphere and climate change, global meteorological observation and accurate cartographies of a wide number of variables. Space also makes important contributions to security crisis management and emergency services. The EU Space Programme components (such as EGNSS and Copernicus) are key assets for the EU policies on climate, environment, transport, agriculture and secure society. Finally, the Space sector is a source of economic growth and jobs.

This Destination is structured along the following building blocks:

- Accessing Space, i.e. the ability to transport satellites, cargo, and humans into space; build and launch the required vehicles, including re-usable systems; and operate the related facilities and services.

- Using Space on Earth, i.e. the ability to provide space-based secure communication, navigation and Earth observation services and applications, including through the EU Space flagships Galileo, Copernicus and IRIS^2.

- Monitoring Space, i.e. the ability to detect, track and anticipate the trajectory of spacecraft, Near-Earth objects, and space debris during their full lifetime; to share data with relevant stakeholders; and to provide solutions for safe international space traffic management. It also includes the tracking and anticipation of other impacts on the space environment, such as Space weather events.

- Acting in Space, i.e. the ability to inspect, rendezvous and dock, grasp, repair, refuel, reconfigure, build, assemble and disassemble, reuse/recycle, relocate, remove and transport operational, non-operational, and other objects in space, including platforms or larger structures.

- Exploring Space, i.e. the ability to conduct high profile space exploration activities, perform excellent science and exploit space data to increase our knowledge about the Universe and celestial bodies, with a view to their exploration for scientific and socio-economic benefits.

- Boosting Space, i.e. the ability to sustain the above strategic capabilities through fostering the competitiveness of the EU space sector; improving education and developing the required skills; accelerating the pace of innovation; supporting EU non-dependency on critical technologies; and strengthening international cooperation.

Those building blocks are implemented through the following headings:

- **Heading 1: Accessing Space**

Autonomous access to space is a prerequisite for the strategic autonomy of the EU. It is a key enabler and indispensable element in the space ecosystem and value chain. European launch systems allow the autonomous deployment of satellites for the Union's flagships Copernicus, Galileo/EGNOS and IRIS^2 and contribute to the security and resilience of Europe's sovereign space infrastructure.

In a context of fierce competition and launch services paradigm changes, ensuring that Europe improves the resilience and the cost-effectiveness of its autonomous access to space is crucial. This requires urgent activities to enable and further consolidate operational capacities before 2030 in line with the Strategic R&I Agenda for EU-funded Space research supporting competitiveness adopted in 2020.

This challenge will be tackled by fostering space transportation solutions through the support to building blocks for smart technologies and digital solutions and through facilitating access to European spaceports.

- **Heading 2: Acting in Space**

In-Space Operations and Services (ISOS) will ensure EU's freedom of action in space and increase the resilience, sustainability, safety and protection of its space infrastructure, and contribute to the strengthening of the competitiveness of its space sector. R&I activities should bring Europe to the forefront of emerging service applications, including inspection, rendezvous and docking, grasping, repair, reconfiguration, assembly and disassembly, manufacturing, resource extraction, reuse/recycling, removal and transport of objects in space, for satellites, platforms and larger structures. Key space R&I activities will be driven by a pilot mission that will contribute to establish and foster a new in-space economy.

Game-changing innovations and enabling technologies are at the heart of ISOS and an important focus of future actions. The paradigm shift towards adaptive space systems builds on automation and robotics, artificial intelligence, modular and reconfigurable spacecraft concepts. Together with other enabling technologies such as electric propulsion, intelligent mechanisms and interfaces or advanced GNC, they will provide new ways on how space assets are designed, produced, tested, transported, and operated. Different means realised with AppStore-like approaches will benefit the future space ecosystem and foster a circular economy.

- **Heading 3: Using Space on Earth related to telecommunications**

The Union Secure Connectivity programme aims to develop a secure and autonomous space-based connectivity system for the provision of guaranteed and resilient satellite communications on Earth. Among the objectives are to develop, build and operate a multiorbital space-based state-of-the-art connectivity system, continuously adapted to governmental satellite communications demand evolution; to complement the Union pool of satellite communication capacities and services; and to integrate the GOVSATCOM ground segment infrastructure, as well as the European quantum communication infrastructure (EuroQCI).

In the context of the co-Programmed European Partnership for Globally Competitive Space Systems (Space Partnership), R&I will focus on cohesive activities in the domain of digital developments under the grand heading of Digitalisation for Commercial Space solutions, more specifically on collaborative and synergetic solutions for Earth Observation and Satellite Telecommunication missions.

- **Heading 4: Using Space on Earth related to Earth Observation**

The evolution of Copernicus core services (Climate Change, Marine Environment Monitoring, Land Monitoring, Atmosphere Monitoring, Emergency Management and Security) is being taken care of through projects launched under the previous R&I work programmes.

In the context of the co-Programmed European Partnership for Globally Competitive Space Systems (Space Partnership), R&I will focus on cohesive activities in the domain of digital developments under the grand heading of Digitalisation for Commercial Space solutions, more specifically on collaborative and synergetic solutions for Earth Observation and Satellite Telecommunication missions.

In addition, we will strive to also support the development of innovative applications of Copernicus' services and data. That said, such support is also coming from non-HE activities carried out by EUSPA, the EU agency for the Space Programme: collaboration with receivers' manufacturers, with mobile phones' manufacturers, with cars' manufacturers, etc., as well as through influencing the development of policies where the use of Earth Observation data is required.

- **Heading 5: Using Space on Earth related to satellite navigation**

For Galileo/EGNOS, the international context, the competitive environment with emerging actors including from the private sector, novel techniques in the value chain such as LEO layer for PNT or ground segment automation based on Artificial Intelligence, the increasing threats in space and in cyber, and the evolution of the technologies, components and systems, call for a constant adaptation of the EU space infrastructure to these changing realities.

To meet these challenges, EU needs sustained investments in R&D for innovative mission concepts, technology and systems. These will ensure the continuity of the EGNSS service, minimise the risks for technology inclusion in the infrastructure, thanks to anticipated development and testing including in-orbit, and protect better this infrastructure against modern threats (notably cyber, jamming/spoofing, natural hazards).

These investments in R&D will contribute to maintaining the EU´s leadership position in the Global Navigation Satellite Systems, and to strengthening the strategic autonomy of the EU.

In addition, we will strive to also support the development of innovative applications of EGNSS' services and data. That said, such support is also coming from non-HE activities carried out by EUSPA, the EU agency for the Space Programme: collaboration with receivers' manufacturers, with mobile phones' manufacturers, with cars' manufacturers, etc., as well as

through influencing the development of policies where the use of satellite navigation data is required.

- **Heading 6: Space sciences and exploration**

Space sciences and exploration are important areas that must be fostered for various reasons, focusing on where the EU can add value with limited financial means. Firstly, it is key to capitalise on Europe's investments in space missions and exploit data coming from European space missions (including demonstration and validation). This should lay the grounds for future exploration missions. Furthermore, such focus on sciences will strengthen the position of leading European scientists and also animate societal interest in space. Last but not least, it will expand human knowledge and the natural curiosity of mankind.

- **Heading 7: Monitoring Space**

Orbital space infrastructure, the data, and the services they deliver have become indispensable for European societies and economies and in the daily lives of Europeans. However, due to an increasingly congested orbital space, the likelihood of a satellite being severely damaged or destroyed in a collision has raised dramatically. Such risk calls for action to preserve European interests by protecting its private and public investments in space in a sustainable manner.

Based on the EU Space Programme, capabilities of the Space Situational Awareness (SSA) component and Space Surveillance and Tracking (SST) services are being developed and consolidated through a Partnership of 15 Member States. The EU SST Partnership Agreement has entered into force on 11 November 2022. With this Partnership, EU SST builds on the good results achieved by the initial consortium of 5 Member States and targets continuity of activities and service provision, improvement of specialisation on expertise, and consideration of the duality and security dimension of SST.

EU SST relies on the European industry, including start-ups, to develop and improve national, public-owned capacities based on Partnership's requirements. In the pursuit of EU strategic autonomy, both as regards the need to protect EU space infrastructures and as regards the need to strengthen EU SST capabilities, research and development activities are aiming the enhancement and consolidation of EU SST autonomy in all orbital zones beyond the existing network of national assets, counting on MS contributions and leveraging complementary contributions from European private capabilities and commercial initiatives.

Importantly, SSA also covers the domains of Space Weather (SW) and Near-Earth Objects (NEO). For those domains, activities are ongoing and no additional ones are needed under the 2026-2027 WP.

- **Heading 8: Boosting space through EU non-dependence for key critical space technologies**

Ensuring non-dependence for critical space technologies is key, especially in the current geo-political context. The European Commission has undertaken several activities and deployed new tools (e.g. the EU Observatory of Critical Technologies) for assessing space technologies

and identify those that are critical from a dependency point of view. Within this domain, a number of technological developments will be initiated with focus on priorities stemming from on-going and planned EU Space missions, including IRIS^2. Emphasis will be on reducing non-EU dependencies on critical space technologies across their whole supply chain from advanced materials to components, equipment, and sub-systems; providing unrestricted access to advanced space technologies relevant for EU space missions and programme components; developing or regaining capacity to operate independently in space by developing resilient space technologies supply chains, relying on EU supply chains and/or trustable and reliable supply chains not affected by non-EU export restrictions; enhancing competitiveness by developing products and capabilities reaching equivalent or superior performance level than those from outside the EU and compete at worldwide level; and opening new opportunities for manufacturers by reducing dependency on export restricted technologies.

- **Heading 9: Boosting Space through innovative space technologies**

Mastering quantum technologies is essential for EU technological sovereignty and their use in EU space missions will offer major improvements in the performance of the EU space systems. Their developments will contribute to EU leadership in this field, in particular quantum sensing technology based on quantum accelerometers, developed in the frame of the Quantum Space Gravimetry pathfinder mission.

- **Heading 10: Boosting Space through IOD/IOV opportunities**

IOD/IOV opportunities continue to be needed for experiments needing aggregation as well as for read-to-fly satellites. This includes the Flight Ticket Initiative to support competitiveness and innovation of the European Space sector.

- **Heading 11: Boosting Space through support to entrepreneurship**

Business development, acceleration and upscaling of start-ups is also much needed, which has given rise to the set-up of the CASSINI Space Entrepreneurship Initiative. CASSINI provides support to business and innovation-friendly ecosystems, including the strengthening business skills in the space market segments and digital services based on space data. CASSINI also aims at making start-ups and scale-ups investment-ready and able to secure venture capital funding and at leveraging synergies with the InvestEU programme and the EU Space Programme.

- **Heading 12 : Boosting Space through support to the Space Act and cybersecurity**

The interinstitutional discussions for the adoption of an EU Space Act will start as soon as the Commission has issued its proposal still in 2025. One adopted, it will be important to foresee some studies and assimilated activities to support its implementation. The same goes for the area of cybersecurity which has become extremely important also in the Space domain.

Budgetary situation

This Work Plan reflects the budgets that may be spent on Destination 5 at the point of finalizing it. That said, we anticipate being able to increase some of the budgets at a later point in time when Associated Countries' contributions are distributed to the different Clusters and Destinations. Without this being any sort of commitment, we expect the following increases:

in €million	Budget in current WP	Expected to be increased later to
Access to Space	23	38
ISOS	1	5
Space sciences	4	6
Critical space technologies	28	40
IOD/IOV	10	15,5
Cassini	10	13
Downstream	1	7,5
Space Act support	1	3

Limiting participation in certain actions to Member States (and certain associated countries to Horizon Europe)

The Space research part of the Horizon Europe Programme is by default open to the world, promoting international cooperation to drive scientific excellence.

However, an important aspect of this Destination consists in ensuring security and strengthening strategic autonomy across key technologies and value chains, taking advantage of the possibilities that space offers for the security of the Union and its Member States. This objective requires special rules in specific cases to set the requisite eligibility and participation conditions to ensure the protection of the integrity, security and resilience of the Union and its Member States. Hence, on an exceptional basis and duly justified, this work programme may foresee a limited participation to entities from selected countries. Such exceptional circumstances would relate to prevalent considerations to safeguard the Union's strategic assets, interests, autonomy or security. Possibilities for such limitations are framed by Article 22(5) of the Horizon Europe Regulation.

The following call(s) in this work programme contribute to this destination:

HORIZON-CL4-2026-03-SPACE

HORIZON-CL4-2027-03-SPACE

HORIZON-CL4-2027-EUSPA-SPACE

Heading 1 - Accessing Space

Proposals are invited against the following topic(s):

HORIZON-CL4-2026-SPACE-03-11: Reinforcing EU autonomous access to space through EU-based spaceports

Call: SPACE	
Specific conditions	
Expected EU contribution per project	The Commission estimates that an EU contribution of between EUR 10.00 and 23.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
Indicative budget	The total indicative budget for the topic is EUR 23.00 million.
Type of Action	Innovation Actions
Eligibility conditions	The conditions are described in General Annex B. The following exceptions apply: If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used). In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, or security, participation is limited to legal entities established in Member States, Norway and Iceland. Proposals including entities established in countries outside the scope specified in the call/topic/action will be ineligible. For the duly justified and exceptional reasons listed in the paragraph above, in order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, may not participate in the action unless it can be demonstrated, by means of guarantees positively assessed by their eligible country of establishment, that their participation to the action would not negatively impact the Union's strategic assets, interests, autonomy, or security. Entities assessed as high-risk suppliers of mobile network communication equipment within the meaning of 'restrictions for the protection of European communication networks' (or entities fully or

	partially owned or controlled by a high-risk supplier) cannot submit guarantees.[5]
Technology Readiness Level	Activities are expected to achieve TRL 8 by the end of the project. The reference TRL definition is the ISO 16290:2013 applicable to the space sector.
Legal and financial set-up of the Grant Agreements	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) [6].

Expected Outcome: Project results are expected to contribute to all of the following outcomes:

- Reinforcing EU strategic autonomy by reducing non-EU dependencies for accessing space;
- Providing an EU access to space necessary for EU space missions through state of the art and innovative solutions;
- Diversifying the access to space providers in the EU;
- Contributing to expand commercial access to space offers and services in the EU;
- Reinforcing Access to Space to ensure that Europe maintains and improve autonomous, reliable and cost-effective access to space.

Scope: The EU needs to improve the resilience of its access to space for the implementation of EU space programme. New entrants will contribute to this endeavour.

5 The guarantees shall in particular substantiate that, for the purpose of the action, measures are in place to ensure that: a) control over the applicant legal entity is not exercised in a manner that retrains or restricts its ability to carry out the action and to deliver results, that imposes restrictions concerning its infrastructure, facilities, assets, resources, intellectual property or know-how needed for the purpose of the action, or that undermines its capabilities and standards necessary to carry out the action; b) access by a non-eligible country or by a non-eligible country entity to sensitive information relating to the action is prevented; and the employees or other persons involved in the action have a national security clearance issued by an eligible country, where appropriate; c) ownership of the intellectual property arising from, and the results of, the action remain within the recipient during and after completion of the action, are not subject to control or restrictions by non-eligible countries or non-eligible country entity, and are not exported outside the eligible countries, nor is access to them from outside the eligible countries granted, without the approval of the eligible country in which the legal entity is established.

6 This decision is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

Projects are expected to support EU launch service providers to set up launch pad(s) in the EU territory enabling to perform EU launch services.

Projects are expected to contribute to the development of necessary ground facilities to conduct launch services from the EU territory; e.g. launch integration, storage and operation facilities, launch pad and complex, control command facility, payload processing and integration facilities, tracking means, safety means, propellant storage...

EU launch service provider(s) are expected to be part of the project consortium and be the ultimate users of the resulting facilities making use of EU launch vehicles for providing EU launch services.

Proposals under this topic should explore synergies and be complementary to past actions related to ground segment for launch services, in particular the topics: HORIZON-CL4-2023-SPACE-01-23 and HORIZON-CL4-2025-02-SPACE-11.

All the activities should be complementary with national and ESA on-going or future activities, in particular those decided at the ESA council Ministerial Meeting in November 2025.

In this topic, the integration of the gender dimension (sex and gender analysis) in research and innovation content should be addressed only if relevant in relation to the objectives of the research effort.

HORIZON-CL4-2027-SPACE-03-12: Digital solutions for autonomy for space transportation systems, design and simulation tools - Digital enablers and building blocks (Space Partnership)

Call: SPACE	
Specific conditions	
Expected EU contribution per project	The Commission estimates that an EU contribution of between EUR 2.00 and 3.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
Indicative budget	The total indicative budget for the topic is EUR 5.00 million.
Type of Action	Innovation Actions
Eligibility conditions	The conditions are described in General Annex B. The following exceptions apply: If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).

	In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, or security, participation is limited to legal entities established in Member States, Norway, Iceland and the other Associated Countries who pass the assessment. Proposals including entities established in countries outside the scope specified in the call/topic/action will be ineligible. For the duly justified and exceptional reasons listed in the paragraph above, in order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, may not participate in the action unless it can be demonstrated, by means of guarantees positively assessed by their eligible country of establishment, that their participation to the action would not negatively impact the Union's strategic assets, interests, autonomy, or security. Entities assessed as high-risk suppliers of mobile network communication equipment within the meaning of 'restrictions for the protection of European communication networks' (or entities fully or partially owned or controlled by a high-risk supplier) cannot submit guarantees.[7]
Technology Readiness Level	Activities are expected to achieve TRL 7-8 by the end of the project. The reference TRL definition is the ISO 16290:2013 applicable to the space sector.
Legal and financial set-up of the Grant Agreements	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the

[7] The guarantees shall in particular substantiate that, for the purpose of the action, measures are in place to ensure that: a) control over the applicant legal entity is not exercised in a manner that retrains or restricts its ability to carry out the action and to deliver results, that imposes restrictions concerning its infrastructure, facilities, assets, resources, intellectual property or know-how needed for the purpose of the action, or that undermines its capabilities and standards necessary to carry out the action; b) access by a non-eligible country or by a non-eligible country entity to sensitive information relating to the action is prevented; and the employees or other persons involved in the action have a national security clearance issued by an eligible country, where appropriate; c) ownership of the intellectual property arising from, and the results of, the action remain within the recipient during and after completion of the action, are not subject to control or restrictions by non-eligible countries or non-eligible country entity, and are not exported outside the eligible countries, nor is access to them from outside the eligible countries granted, without the approval of the eligible country in which the legal entity is established.

	Research and Training Programme of the European Atomic Energy Community (2021-2025) [8].

Expected Outcome: The topic encompasses actions within the scope of the co-programmed European Partnership on Globally Competitive Space Systems ('Space Partnership') in the areas of satellite communication (SatCom), Earth Observation (EO) and New Commercial Space Transportation Solutions and is part of cohesive activities in the domain of digital developments under the grand heading of "digitalisation for commercial space solutions".

Under the area of *Access to Space* related to New Space Transportation Solutions, this topic focusses on the **maturation of disruptive/game changing digital technologies**[9] required to strengthen competitiveness in this domain.

Project results are expected to contribute to one or several of the following expected outcomes:

- Improved space transportation systems and launcher sustainability, reduced costs and operational constraints as well as enhanced system monitoring and autonomy;
- Innovative technologies for New Space Transportation Solutions, including addressing software and digital tools.

This will contribute to developing, deploying global space-based services applications and data and contribute to fostering the EU's space sector competitiveness and sustainability, as stated in the expected impact of this destination.

Scope: To tackle the above-mentioned expected outcomes, R&I is expected to address the maturation of disruptive/game changing digital technologies required to strengthen competitiveness in this domain and sustainability by assessing the impact of these technologies (e.g. by allowing the monitoring of sustainable solutions). More specifically, R&I in one or more of the following areas are expected to be addressed:

- Autonomy, data fusion, navigation, mission planning, and more specifically advanced algorithms for process automation and autonomous flight termination systems;
- Eco-design guidelines for end-to-end aspects and software design tools, and more specifically digital models of the launch system through the use of Model-Based System Engineering, and modelling/simulation of space activity impact on atmosphere;
- Landing solutions for reusability, specifically navigation data fusion for autonomous landing.

[8] This decision is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

[9] **Identified in the Strategic Research and Innovation Agenda (SRIA) of the co-Programmed European Partnership on Globally Competitive Space Systems (https://www.space-aisbl.org/sria/)**

Proposals are expected to promote cooperation between different actors (industry, SMEs, research institutions and academia) and consider opportunities to quickly turn technological innovation into commercial use in space.

It is expected that projects make use of existing EU technologies and/or building blocks, including at component level, contributing to EU non-dependence and strengthening competitiveness, and this should be clearly presented in the proposal. Furthermore, proposed activities should be complementary to H2020 and Horizon Europe funded projects, national activities and activities funded by the European Space Agency (ESA).

This topic contributes to the implementation of the co-programmed European Partnership on 'Globally Competitive Space Systems' (GCSS).

In this topic, the integration of the gender dimension (sex and gender analysis) in research and innovation content should be addressed only if relevant in relation to the objectives of the research effort.

Heading 2 - Acting in Space

For a description of topics/actions related to the ISOS mission, please refer to "Grants to identified beneficiaries" in the section "Other Actions" of this work programme.

Heading 3 - Using Space on Earth - Telecommunications

For a description of topics/actions related to the development of IRIS^2, please refer to "Indirectly managed actions by ESA" in the section "Other Actions" of this work programme.

Headings 3&4 - Using Space on Earth - Telecommunications and Earth Observation

In addition to the below, for downstream activities on Copernicus, please refer to "Indirectly managed actions by EUSPA" in the section "Other Actions" of this work programme.

Proposals are invited against the following topic(s):

HORIZON-CL4-2026-SPACE-03-31: Digital enablers and building-blocks for Earth Observation and Satellite telecommunication for Space solutions (Space Partnership)

Call: SPACE	
Specific conditions	
Expected EU contribution per project	The Commission estimates that an EU contribution of between EUR 3.00 and 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
Indicative budget	The total indicative budget for the topic is EUR 12.00 million.

Type of Action	Research and Innovation Actions
Eligibility conditions	The conditions are described in General Annex B. The following exceptions apply: If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used). In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, or security, participation is limited to legal entities established in Member States, Norway and Iceland and the other Associated Countries who pass the assessment. Proposals including entities established in countries outside the scope specified in the call/topic/action will be ineligible. For the duly justified and exceptional reasons listed in the paragraph above, in order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, may not participate in the action unless it can be demonstrated, by means of guarantees positively assessed by their eligible country of establishment, that their participation to the action would not negatively impact the Union's strategic assets, interests, autonomy, or security. Entities assessed as high-risk suppliers of mobile network communication equipment within the meaning of 'restrictions for the protection of European communication networks' (or entities fully or partially owned or controlled by a high-risk supplier) cannot submit guarantees.[10]
Technology Readiness Level	Activities are expected to achieve TRL 4-5 by the end of the project. The reference TRL definition is the ISO 16290:2013 applicable to the space sector.

[10] The guarantees shall in particular substantiate that, for the purpose of the action, measures are in place to ensure that: a) control over the applicant legal entity is not exercised in a manner that retrains or restricts its ability to carry out the action and to deliver results, that imposes restrictions concerning its infrastructure, facilities, assets, resources, intellectual property or know-how needed for the purpose of the action, or that undermines its capabilities and standards necessary to carry out the action; b) access by a non-eligible country or by a non-eligible country entity to sensitive information relating to the action is prevented; and the employees or other persons involved in the action have a national security clearance issued by an eligible country, where appropriate; c) ownership of the intellectual property arising from, and the results of, the action remain within the recipient during and after completion of the action, are not subject to control or restrictions by non-eligible countries or non-eligible country entity, and are not exported outside the eligible countries, nor is access to them from outside the eligible countries granted, without the approval of the eligible country in which the legal entity is established.

Procedure	The procedure is described in General Annex F. The following exceptions apply: To ensure a balanced portfolio covering all the development areas described in the scope section, grants will be awarded to applications not only in order of ranking but at least also to one proposal that is the highest ranked within each development area, provided that the applications attain all thresholds
Legal and financial set-up of the Grant Agreements	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) [11].

Expected Outcome: The topic encompasses actions within the scope of the co-programmed European Partnership on Globally Competitive Space Systems ('Space Partnership') in the areas of satellite communication (SatCom), Earth Observation (EO) and New Commercial Space Transportation Solutions and is part of cohesive activities in the domain of digital developments under the grand heading of "digitalisation for commercial space solutions".

Digitalisation is a major enabler for enhancing the value of an End-to-End EO and SatCom system. Under the area of *Using Space on Earth* related to SatCom and EO, below this topic focus on the fast increment of the **Low to Mid TRL level building blocks for key technologies**[12] required to strengthen competitiveness in these domains.

Projects are expected to contribute to one or several of the following outcomes:

- New commercial services and applications enabled by increased digitalisation of space solutions;
- Favouring a competitive and sustainable European Space Sector;
- Enable the European Space Industry to maintain a significant share of the global connectivity market;
- Next generation Earth observation and SatCom payloads, technologies and processing means (on ground and in space);

[11] This decision is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

[12] Identified in the Strategic Research and Innovation Agenda (SRIA) of the co-Programmed European Partnership on Globally Competitive Space Systems (https://www.space-aisbl.org/sria/)

- Security of SatCom and EO services, supporting next-generation technologies for both ground and space commercial applications;

- Improved access to satellite data through interoperable systems.

This will contribute to developing, deploying global, more flexible and reactive space-based services applications, to contribute to fostering the EU's space sector competitiveness, as stated in the expected impact of this destination.

Scope: The areas of R&I, which needs to be addressed to tackle the above-mentioned expected outcomes are:

- R&I on End-to-End SatCom Mission capabilities for current and future satellite networks interoperability including both space and ground-based assets, and digital on-ground infrastructure to test and enhance operational efficiency;

- R&I on Earth Observation equipment, subsystems, applications and services, improving the End-to-End timeliness of an EO system and enhanced resolution, miniaturisation of instrument designs and digital techniques and technologies to support operations and harmonisation enabling interoperability among multiple EO missions;

- R&I on building blocks and processes common to EO and SatCom systems, such system resources usage optimisation, high-performance processing payload H/W to support space network capabilities including an improvement in downlink and tasking capabilities of the European infrastructure, RF and optical hybrid ground stations for anchoring services and quantum technologies adaptation for space application.

Proposals may contribute to one or more of the above R&I areas, however the main area addressed must be clearly and unambiguously identified in the proposal text.

Proposals are expected to promote cooperation between different actors (industry, SMEs, research institutions and infrastructures and academia) and consider opportunities to quickly turn technological innovation into commercial use in space.

It is expected that projects make use of existing EU technologies and/or building blocks, including at component level, contributing to EU non-dependence and strengthen competitiveness, and this should be clearly presented in the proposal. Furthermore, proposed activities should be complementary to H2020 and Horizon Europe funded projects, national activities and activities funded by the European Space Agency (ESA).

This topic contributes to the implementation of the European Partnership on ‘Globally Competitive Space Systems’ (GCSS).

In this topic, the integration of the gender dimension (sex and gender analysis) in research and innovation content should be addressed only if relevant in relation to the objectives of the research effort.

HORIZON-CL4-2026-SPACE-03-32: Preparing demonstration missions for Earth Observation and Satellite telecommunication for Space solutions (Space Partnership)

Call: SPACE	
Specific conditions	
Expected EU contribution per project	The Commission estimates that an EU contribution of between EUR 5.00 and 10.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
Indicative budget	The total indicative budget for the topic is EUR 26.00 million.
Type of Action	Innovation Actions
Eligibility conditions	The conditions are described in General Annex B. The following exceptions apply: If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used). In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, or security, participation is limited to legal entities established in Member States, Norway and Iceland. Proposals including entities established in countries outside the scope specified in the call/topic/action will be ineligible. For the duly justified and exceptional reasons listed in the paragraph above, in order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, may not participate in the action unless it can be demonstrated, by means of guarantees positively assessed by their eligible country of establishment, that their participation to the action would not negatively impact the Union's strategic assets, interests, autonomy, or security. Entities assessed as high-risk suppliers of mobile network communication equipment within the meaning of 'restrictions for the protection of European communication networks' (or entities fully or partially owned or controlled by a high-risk supplier) cannot submit guarantees.[13]

[13] The guarantees shall in particular substantiate that, for the purpose of the action, measures are in place to ensure that: a) control over the applicant legal entity is not exercised in a manner that retrains or restricts its ability to carry out the action and to deliver results, that imposes restrictions concerning its

Technology Readiness Level	Activities are expected to achieve TRL 7-8 by the end of the project. The reference TRL definition is the ISO 16290:2013 applicable to the space sector.
Procedure	The procedure is described in General Annex F. The following exceptions apply: To ensure a balanced portfolio covering all the development areas described in the scope section, grants will be awarded to applications not only in order of ranking but at least also to one proposal that is the highest ranked within each development area, provided that the applications attain all thresholds
Legal and financial set-up of the Grant Agreements	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) [14].
Security Sensitive Topics	Some activities resulting from this topic may involve using classified background and/or producing of security sensitive results (EUCI and SEN). Please refer to the related provisions in section B Security — EU classified and sensitive information of the General Annexes.

Expected Outcome: The topic encompasses actions within the scope of the co-programmed European Partnership on Globally Competitive Space Systems ('Space Partnership') in the areas of satellite communication (SatCom), Earth Observation (EO) and New Commercial Space Transportation Solutions and is part of cohesive activities in the domain of digital developments under the grand heading of "digitalisation for commercial space solutions".

infrastructure, facilities, assets, resources, intellectual property or know-how needed for the purpose of the action, or that undermines its capabilities and standards necessary to carry out the action; b) access by a non-eligible country or by a non-eligible country entity to sensitive information relating to the action is prevented; and the employees or other persons involved in the action have a national security clearance issued by an eligible country, where appropriate; c) ownership of the intellectual property arising from, and the results of, the action remain within the recipient during and after completion of the action, are not subject to control or restrictions by non-eligible countries or non-eligible country entity, and are not exported outside the eligible countries, nor is access to them from outside the eligible countries granted, without the approval of the eligible country in which the legal entity is established.

[14] This decision is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

Digitalisation is a major enabler for enhancing the value of an End-to-End EO and SatCom system. Under the area of *Using Space on Earth* related to SatCom and EO, below this topic focusses on the **Mid to High TRL level developments of key technologies**[15] required to strengthen competitiveness in these domains, contributing to the preparation of EO and SatCom demonstration missions.

Projects are expected to contribute to one or several of the following outcomes:

- Favouring a competitive and sustainable European Space Sector;
- Enable the European Space Industry to maintain a significant share of the global connectivity market;
- Advanced Earth observation and SatCom payloads, technologies and processing means (on ground and in space);
- Advanced EO and SatCom fostering AI across space system;
- Enhanced security of SatCom and EO services, supporting advanced technologies for both ground and space commercial applications;
- End-to-end demonstrator for collaborative Earth Observation and Satellite telecommunication for Space solutions.

This will contribute to developing, deploying global, more flexible and reactive space-based services applications, to contribute to fostering the EU's space sector competitiveness, as stated in the expected impact of this destination.

Scope: The areas of R&I, which needs to be addressed to tackle the above-mentioned expected outcomes are:

- R&I on End-to-End SatCom Mission capabilities, secure SatCom services and satellites as network nodes in a distributed system, radio-frequency payloads, flexible and modular testbed for complex satcom system architectures to assess performances, testbed for processing RF signal directly onboard the spacecraft, compatibility of the different elements and operations concepts;
- R&I on LEO or VLEO earth observation equipment, subsystems, applications and services enabling real time reaction (e.g. under emergency situations), on on-board processing to optimize EO missions' performance or timeliness, EO ground segment interfaces and data flow standardisation and adoption, smart multi-source EO intelligence information fusion also on ground;
- R&I on synergetic technologies, building blocks and processes with applicability across both EO and SatCom next generation operation systems such as operational optimisation

[15] Identified in the Strategic Research and Innovation Agenda (SRIA) of the co-Programmed European Partnership on Globally Competitive Space Systems (https://www.space-aisbl.org/sria/)

for increasing lifetime, design optimisation for increasing efficiency and advanced techniques for large system of systems or multi-mission operation optimisation, as well as tip & cue demonstration combining RF and EO using inter-satellite links (including optical).

Developments should aim at EO and Telecom technologies on-ground in relevant environment and in orbit software demonstration when flight is feasible and adding value focusing on software and digital tools (e.g. algorithms, functions).

Proposals may contribute to one or more of the above R&I areas, however the main area addressed should be clearly and unambiguously identified in the proposal text.

Proposals are expected to promote cooperation between different actors (industry, SMEs, research institutions and infrastructures and academia) and consider opportunities to quickly turn technological innovation into commercial use in space via e.g., on-ground relevant environment or in orbit demonstration.

It is expected that projects make use of existing EU technologies and/or building blocks, including at component level, contributing to EU non-dependence and strengthen competitiveness, and this should be clearly presented in the proposal. Furthermore, proposed activities should be complementary to H2020 and Horizon Europe funded projects, national activities and activities funded by the European Space Agency (ESA).

This topic contributes to the implementation of the European Partnership on 'Globally Competitive Space Systems' (GCSS).

In this topic, the integration of the gender dimension (sex and gender analysis) in research and innovation content should be addressed only if relevant in relation to the objectives of the research effort.

HORIZON-CL4-2027-SPACE-03-33: Digital enablers and building blocks for collaborative Earth Observation and Satellite telecommunications for Space solutions (Space Partnership)

Call: SPACE	
Specific conditions	
Expected EU contribution per project	The Commission estimates that an EU contribution of between EUR 1.50 and 3.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
Indicative budget	The total indicative budget for the topic is EUR 4.00 million.
Type of Action	Research and Innovation Actions

Eligibility conditions	The conditions are described in General Annex B. The following exceptions apply: If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used). In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, or security, participation is limited to legal entities established in Member States, Norway, Iceland and the other Associated Countries who pass the assessment. Proposals including entities established in countries outside the scope specified in the call/topic/action will be ineligible. For the duly justified and exceptional reasons listed in the paragraph above, in order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, may not participate in the action unless it can be demonstrated, by means of guarantees positively assessed by their eligible country of establishment, that their participation to the action would not negatively impact the Union's strategic assets, interests, autonomy, or security. Entities assessed as high-risk suppliers of mobile network communication equipment within the meaning of 'restrictions for the protection of European communication networks' (or entities fully or partially owned or controlled by a high-risk supplier) cannot submit guarantees.[16]
Technology Readiness Level	Activities are expected to achieve TRL 4-5 by the end of the project. The reference TRL definition is the ISO 16290:2013 applicable to the space sector.
Legal and financial set-up of	The rules are described in General Annex G. The following exceptions apply:

[16] The guarantees shall in particular substantiate that, for the purpose of the action, measures are in place to ensure that: a) control over the applicant legal entity is not exercised in a manner that retrains or restricts its ability to carry out the action and to deliver results, that imposes restrictions concerning its infrastructure, facilities, assets, resources, intellectual property or know-how needed for the purpose of the action, or that undermines its capabilities and standards necessary to carry out the action; b) access by a non-eligible country or by a non-eligible country entity to sensitive information relating to the action is prevented; and the employees or other persons involved in the action have a national security clearance issued by an eligible country, where appropriate; c) ownership of the intellectual property arising from, and the results of, the action remain within the recipient during and after completion of the action, are not subject to control or restrictions by non-eligible countries or non-eligible country entity, and are not exported outside the eligible countries, nor is access to them from outside the eligible countries granted, without the approval of the eligible country in which the legal entity is established.

the Grant Agreements	Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) [17].

Expected Outcome: The topic encompasses actions within the scope of the co-programmed European Partnership on Globally Competitive Space Systems ('Space Partnership') in the areas of satellite communication (SatCom), Earth Observation (EO) and New Commercial Space Transportation Solutions and is part of cohesive activities in the domain of digital developments under the grand heading of "digitalisation for commercial space solutions".

Digitalisation is a major enabler for enhancing the value of an End-to-End EO and SatCom system. Under the area of *Using Space on Earth* related to SatCom and EO, below this topic focusses on the **Low to Mid TRL level developments of key technologies**[18] required to strengthen competitiveness in these domains with a dedicated focus on synergies between Earth observation and Satellite telecommunication technologies.

Projects are expected to contribute to one or several of the following outcomes:

- Next generation Earth observation and SatCom payloads, technologies and processing means (on ground and in space);
- Security of SatCom and EO services, supporting next-generation technologies for both ground and space commercial applications.

This will contribute to developing, deploying global, more flexible and reactive space-based services applications, to contribute to fostering the EU's space sector competitiveness, as stated in the expected impact of this destination.

Scope: The areas of R&I, which needs to be addressed to tackle the above-mentioned expected outcomes are:

- R&I on End-to-End SatCom Mission capabilities for increased robustness, energy efficient connectivity and compatibility with 5G & 6G waveforms such as constellation and network software management systems and optical communications, including both space and ground-based assets, and digital on-ground infrastructure to test and enhance operational efficiency;

[17] This decision is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

[18] Identified in the Strategic Research and Innovation Agenda (SRIA) of the co-Programmed European Partnership on Globally Competitive Space Systems (https://www.space-aisbl.org/sria/)

- R&I on building blocks and processes common to EO and SatCom systems allowing for in-orbit reconfigurability, faster data availability, on-board and on-ground smart computing and improved operation resilience.

Proposals are expected to promote cooperation between different actors (industry, SMEs, research institutions and infrastructures and academia) and consider opportunities to quickly turn technological innovation into commercial use in space.

It is expected that projects make use of existing EU technologies and/or building blocks, including at component level, contributing to EU non-dependence and strengthen competitiveness, and this should be clearly presented in the proposal. Furthermore, proposed activities should be complementary to H2020 and Horizon Europe funded projects, national activities and activities funded by the European Space Agency (ESA).

This topic contributes to the implementation of the European Partnership on 'Globally Competitive Space Systems' (GCSS).

In this topic, the integration of the gender dimension (sex and gender analysis) in research and innovation content should be addressed only if relevant in relation to the objectives of the research effort.

HORIZON-CL4-2027-SPACE-03-34: Preparing demonstration missions for collaborative Earth Observation and Satellite telecommunication for Space solutions (Space Partnership)

Call: SPACE	
Specific conditions	
Expected EU contribution per project	The Commission estimates that an EU contribution of between EUR 5.00 and 10.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
Indicative budget	The total indicative budget for the topic is EUR 26.00 million.
Type of Action	Innovation Actions
Eligibility conditions	The conditions are described in General Annex B. The following exceptions apply: If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used). In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, or security, participation is limited to legal entities established in Member States, Norway and Iceland.

	Proposals including entities established in countries outside the scope specified in the call/topic/action will be ineligible. For the duly justified and exceptional reasons listed in the paragraph above, in order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, may not participate in the action unless it can be demonstrated, by means of guarantees positively assessed by their eligible country of establishment, that their participation to the action would not negatively impact the Union's strategic assets, interests, autonomy, or security. Entities assessed as high-risk suppliers of mobile network communication equipment within the meaning of 'restrictions for the protection of European communication networks' (or entities fully or partially owned or controlled by a high-risk supplier) cannot submit guarantees.[19]
Technology Readiness Level	Activities are expected to achieve TRL 7-8 by the end of the project. The reference TRL definition is the ISO 16290:2013 applicable to the space sector.
Procedure	The procedure is described in General Annex F. The following exceptions apply: To ensure a balanced portfolio covering all the development areas described in the scope section, grants will be awarded to applications not only in order of ranking but at least also to one proposal that is the highest ranked within each development area, provided that the applications attain all thresholds.
Legal and financial set-up of the Grant Agreements	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions

[19] The guarantees shall in particular substantiate that, for the purpose of the action, measures are in place to ensure that: a) control over the applicant legal entity is not exercised in a manner that retrains or restricts its ability to carry out the action and to deliver results, that imposes restrictions concerning its infrastructure, facilities, assets, resources, intellectual property or know-how needed for the purpose of the action, or that undermines its capabilities and standards necessary to carry out the action; b) access by a non-eligible country or by a non-eligible country entity to sensitive information relating to the action is prevented; and the employees or other persons involved in the action have a national security clearance issued by an eligible country, where appropriate; c) ownership of the intellectual property arising from, and the results of, the action remain within the recipient during and after completion of the action, are not subject to control or restrictions by non-eligible countries or non-eligible country entity, and are not exported outside the eligible countries, nor is access to them from outside the eligible countries granted, without the approval of the eligible country in which the legal entity is established.

	under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) [20].
Security Sensitive Topics	Some activities resulting from this topic may involve using classified background and/or producing of security sensitive results (EUCI and SEN). Please refer to the related provisions in section B Security — EU classified and sensitive information of the General Annexes.

Expected Outcome: The topic encompasses actions within the scope of the co-programmed European Partnership on Globally Competitive Space Systems ('Space Partnership') in the areas of satellite communication (SatCom), Earth Observation (EO) and New Commercial Space Transportation Solutions and is part of cohesive activities in the domain of digital developments under the grand heading of "digitalisation for commercial space solutions".

Digitalisation is a major enabler for enhancing the value of an End-to-End EO and SatCom system. Under the area of *Using Space on Earth* related to SatCom and EO, below this topic focusses on the **Mid to High TRL level developments of key technologies**[21] required to strengthen competitiveness in these domains, contributing to the preparation of EO and SatCom demonstration missions.

Projects are expected to contribute to one or several of the following outcomes:

- Favouring a competitive and sustainable European Space Sector;
- Enable the European Space Industry to maintain a significant share of the global connectivity market;
- Advanced Earth observation and SatCom payloads, technologies and processing means (on ground and in space);
- Advanced EO and SatCom fostering AI across space system;
- Enhanced security of SatCom and EO services, supporting advanced technologies for both ground and space commercial applications;
- End-to-end demonstrator for collaborative Earth Observation and Satellite telecommunication for Space solutions.

[20] This decision is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

[21] Identified in the Strategic Research and Innovation Agenda (SRIA) of the co-Programmed European Partnership on Globally Competitive Space Systems (https://www.space-aisbl.org/sria/)

This will contribute to developing, deploying global, more flexible and reactive space-based services applications, to contribute to fostering the EU's space sector competitiveness, as stated in the expected impact of this destination.

Scope: The areas of R&I, which needs to be addressed to tackle the above-mentioned expected outcomes are:

- R&I on End-to-End SatCom Mission capabilities, secure satcom services and satellites as network nodes, and digital on-ground infrastructure to test and enhance operational efficiency;

- R&I on Earth Observation equipment, subsystems, applications and services, improving data processing for performance or timeliness, smart multi-sources EO data fusion, fostering interoperability among EO missions, miniaturisation of instrument designs and EO ground segment interfaces, digitalised technology steps such as high-performance cloud-based architectures and active and adaptative optics and/or higher-power electronics;

- R&I on building blocks and processes common to EO and SatCom systems, such as on-board processing capabilities, maturing high performance processing payload H/W to support space network capabilities and reducing environmental impact of future missions, maturation of technologies and products improving system security and threats identification, characterization and possible mitigation and RF and optical hybrid ground stations for anchoring services.

Proposals may contribute to one or more of the above R&I areas, however the main area addressed are expected to be clearly and unambiguously identified in the proposal text.

Proposals are expected to promote cooperation between different actors (industry, SMEs, research institutions and infrastructures and academia) and consider opportunities to quickly turn technological innovation into commercial use in space via e.g., on-ground relevant environment or in orbit demonstration.

It is expected that projects make use of existing EU technologies and/or building blocks, including at component level, contributing to EU non-dependence and strengthen competitiveness, and this should be clearly presented in the proposal. Furthermore, proposed activities should be complementary to H2020 and Horizon Europe funded projects, national activities and activities funded by the European Space Agency (ESA).

This topic contributes to the implementation of the European Partnership on ‘Globally Competitive Space Systems’ (GCSS).

In this topic, the integration of the gender dimension (sex and gender analysis) in research and innovation content should be addressed only if relevant in relation to the objectives of the research effort.

Heading 5 - Using Space on Earth - Satellite navigation

For a description of topics related to the development of Galileo and EGNOS, please refer, on the one hand, to "Indirectly managed actions by ESA" in the section "Other Actions" of this work programme and, on the other hand, to “Indirectly managed actions by EUSPA” in the section "Other Actions" of this work programme.

Heading 6 - Space sciences and exploration

Proposals are invited against the following topic(s):

HORIZON-CL4-2026-SPACE-03-61: Scientific analysis and exploitation of space data

Call: SPACE	
Specific conditions	
Expected EU contribution per project	The Commission estimates that an EU contribution of between EUR 1.50 and 2.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
Indicative budget	The total indicative budget for the topic is EUR 4.00 million.
Type of Action	Research and Innovation Actions
Eligibility conditions	The conditions are described in General Annex B. The following exceptions apply: If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used).
Technology Readiness Level	Activities are expected to achieve TRL 4 by the end of the project. The reference TRL definition is the ISO 16290:2013 applicable to the space sector.
Legal and financial set-up of the Grant Agreements	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the

	Research and Training Programme of the European Atomic Energy Community (2021-2025) [22].

Expected Outcome: Project results are expected to contribute to the following expected outcomes:

- European space science breakthroughs fostered by data analysis and exploitation of European missions (incl. low-cost/small satellite) and instruments, in conjunction, when relevant, with international missions. This data may also originate from European in-orbit validation experiments with a focus on space science and exploration.
- A higher number of European scientific publications based on space data, high-level data products made available through appropriate archives, and tools and methods developed for the advanced processing of data.
- Increased collaboration of scientific teams both within and outside Europe across different domains, adding value to existing activities on European and international levels and enhancing and broadening research partnerships.
- European scientific excellence and development of leading-edge scientific research in Europe.

Scope: The aim of this topic is the analysis (including validation) and exploitation of acquired and available data provided by scientific and exploration instruments and missions in their pre-operative, operative, post-operative or data exploitation phase, focusing on astronomy and astrophysics, heliophysics, deep space and solar system exploration, ensuring complementarity with activities already supported by agencies during development phases. Such data may also originate from CubeSat and small satellite missions for advancing space science and exploration.

More specifically, data to be analysed are expected to result from science and exploration missions (including cubesat to small satellite missions) from ESA, national space agencies, research organisations and universities missions. Earth observing missions are not considered in the scope of this topic. This analysis may require innovative and advanced data processing techniques, the use of advanced artificial intelligence techniques, novel statistical approaches, multidimensional data fusion while optimizing the use of advanced computing hardware architectures, as well as novel data (re)presentation and visualization techniques.

Projects may rely on data available through ESA Space Science Archives when possible or other means (e.g. instrumentation teams). Combination and correlation of this data with international scientific mission data, as well as with relevant data produced by ground-based infrastructures all over the world, is encouraged to further increase the scientific return and to

[22] This decision is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf

enable new research activities using existing data sets. These activities shall add scientific value through analysis of the data, leading to scientific publications and higher-level data products, tools and methods. When possible, enhanced data products should be suitable for feeding back into the ESA Space Science archives. Resulting analyses should help preparing future European and international missions.

International cooperation is encouraged in particular with countries active in space exploration and space science.

In this topic, the integration of the gender dimension (sex and gender analysis) in research and innovation content should be addressed only if relevant in relation to the objectives of the research effort.

Heading 7 - Monitoring Space

For a description of topics related to SST, please refer to "Identified beneficiaries" in the section "Other Actions" of this work programme.

Heading 8 - Boosting Space through EU non-dependence for critical space technologies

Proposals are invited against the following topic(s):

HORIZON-CL4-2026-SPACE-03-81: Space critical EEE components for EU non-dependence – Radiation Hard FPGA on 7nm

Call: SPACE	
Specific conditions	
Expected EU contribution per project	The Commission estimates that an EU contribution of between EUR 12.00 and 13.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
Indicative budget	The total indicative budget for the topic is EUR 13.00 million.
Type of Action	Research and Innovation Actions
Admissibility conditions	The conditions are described in General Annex A. The following exceptions apply: The page limit of the application is 80 pages.
Eligibility conditions	The conditions are described in General Annex B. The following exceptions apply: If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of

	Copernicus and/or Galileo/EGNOS (other data and services may additionally be used). In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, or security, participation is limited to legal entities established in Member States, Norway and Iceland. Proposals including entities established in countries outside the scope specified in the call/topic/action will be ineligible. For the duly justified and exceptional reasons listed in the paragraph above, in order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, may not participate in the action unless it can be demonstrated, by means of guarantees positively assessed by their eligible country of establishment, that their participation to the action would not negatively impact the Union's strategic assets, interests, autonomy, or security. Entities assessed as high-risk suppliers of mobile network communication equipment within the meaning of 'restrictions for the protection of European communication networks' (or entities fully or partially owned or controlled by a high-risk supplier) cannot submit guarantees.[23]
Technology Readiness Level	Activities are expected to achieve TRL 6 by the end of the project. The reference TRL definition is the ISO 16290:2013 applicable to the space sector.
Procedure	The procedure is described in General Annex F. The following exceptions apply: The evaluation committee will be composed partially by representatives of EU institutions.
Security Sensitive Topics	Some activities resulting from this topic may involve using classified background and/or producing of security sensitive results (EUCI and SEN). Please refer to the related provisions in section B Security — EU classified and sensitive information of the General Annexes.

[23] The guarantees shall in particular substantiate that, for the purpose of the action, measures are in place to ensure that: a) control over the applicant legal entity is not exercised in a manner that retrains or restricts its ability to carry out the action and to deliver results, that imposes restrictions concerning its infrastructure, facilities, assets, resources, intellectual property or know-how needed for the purpose of the action, or that undermines its capabilities and standards necessary to carry out the action; b) access by a non-eligible country or by a non-eligible country entity to sensitive information relating to the action is prevented; and the employees or other persons involved in the action have a national security clearance issued by an eligible country, where appropriate; c) ownership of the intellectual property arising from, and the results of, the action remain within the recipient during and after completion of the action, are not subject to control or restrictions by non-eligible countries or non-eligible country entity, and are not exported outside the eligible countries, nor is access to them from outside the eligible countries granted, without the approval of the eligible country in which the legal entity is established.

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Reinforcing EU strategic autonomy by reducing non-EU dependencies on critical space EEE components and related technologies across their entire supply chain;
- Providing unrestricted access to critical space EEE components and related technologies relevant for EU space missions (Galileo, EGNOS, Copernicus, IRIS^2 and EU pilot missions on In-Orbit Space Operations and Quantum Gravimetry);
- Developing or regaining capacity to operate independently in space by developing resilient space EEE components and related technologies supply chains, relying on EU supply chains and/or trustable and reliable supply chains not affected by non-EU export restrictions;
- Enhancing competitiveness by developing products and capabilities reaching equivalent or superior performance level than those from outside the EU and compete at worldwide level.

Scope: Unrestricted access to state-of-art space EEE components and related technologies is a pre-requisite for the EU space industry responding to EU space missions. However, especially for some families of components, the available solutions in EU do not meet the current high-performance space requirements. Currently, alternative products sourced from outside EU, are either affected by non-EU export control, that limits its use, or present challenges in terms of trustable supply chains for the implementation of EU space missions with a security dimension.

Within the frame of this topic, it is expected to finance and implement a development project aiming at maturing critical space EEE components with the final goal of lowering the dependency from outside EU. This will be done by establishing a long-term sustainable supply chain for supporting EU strategic autonomy in the space sector. The selection of the supply chains shall reflect this objective. Therefore, the supply chain shall preferably be built fully based in EU and when this can only be achieved partially (i.e. because of lack of current EU capabilities for unrestricted advanced semiconductor processes or advanced materials that cannot be developed within the project), services procured from outside EU shall nevertheless ensure that the overall supply chain will remain trustable and not affected by non-EU export control. The latest scenario is subject to the approval of the granting authority.

Below, the space EEE component and related technologies relevant for this Call. It has been identified based on needs related to strategic institutional space programs, inputs from European stakeholders and the EU Observatory of Critical Technologies.

- Radiation hard FPGA on 7nm

Additional, context information and technical requirements are provided in the Technical Requirements Guidance document published on the Funding & Tenders Portal.

Space is a low volume market affected by a dynamic industrial landscape compared to the terrestrial market therefore, technological spin in and/or bilateral collaborations should be enhanced between European non-space and space industries. Furthermore, proposed activities should be complementary to relevant national or other activities at European level. Complementary activities should be clearly identified, described and the proposal should report how the complementarity is ensured.

To achieve the non-dependence objective, applicants are expected to include a dedicated proposal's paragraph covering:

- The description of the technology and/or technology processes and high-level breakdown of the space EEE component supply chain to be used. Applicants should demonstrate that the supply chain and final product are free of any legal export restrictions or limitations, such as those established in the International Traffic in Arms Regulations (ITAR) or equivalent instruments applicable in other non-EU jurisdictions. Applicants shall also report, in a dedicated subsection, if and which part of the supply chain is affected by non-EU export controls such as the Export Administration regulation (EAR) i.e. EAR99.

- The description of the suitable technology development process that has been identified and set up within the consortium for avoiding export restrictions of non-EU states and assess vulnerabilities of the supply chain.

Proposal covering space EEE components and related technology developments that are targeting a final TRL equal or higher than 5, shall include a list of proposed applicable standards (e.g. EN, ECSS, ESCC, MIL, JEDEC,…) that are considered relevant for implementing a formal space evaluation and/or qualification. Additionally, projects that aim at a formal space qualification shall deliver the full data pack planned to be submitted to the qualification authority. This deliverable shall me marked sensitive and it shall be shared with the granting authority (i.e. DG-DEFIS and HaDEA). Products that will successfully complete the space evaluation/qualification, either within the EU-COM activity or as a consecutive follow up, shall inform DG-DEFIS and engrave on the package the EU flag.

The proposal must include specific tasks as part of the work plan and related dedicated confidential deliverables to be provided within 6 months from the start of the project to the relevant Commission DG and Executive Agency (i.e. DG-DEFIS and HaDEA), with the objective of:

1. Analysing and describing, **in detail**, the full supply chain, each entity and its role in the supply chain, level of criticality and, if relevant, identify dependencies from outside EU;

2. Describing the industrial technical roadmap and a business plan for commercialization with accurate understanding of applications needs, space mission insertion, including time to market indication, of the developed product.

3. Reporting the list of relevant non-EU export control with extra territorial applicability for the specific technology/product under development, independently from the supply chain established for the EU-COM project.

4. Undertaking a comprehensive literature review of the relevant technology/product reporting the state-of-the-art and highlighting potential gaps between current EU solutions and competition from outside EU.

Unless otherwise agreed with the granting authority before the grant agreement, beneficiaries must ensure that none of the entities that participate as affiliated entities, associated partners or subcontractors are established in countries which are not eligible countries or target countries set out in the call conditions.

It is recalled to the applicants that all provisions reported by the Model Grant Agreements, related to topics with restricted eligibility conditions, are applied. For example, under this light, the consortiums shall ensure that for a period up to 4 years after the end of the action, supply and availability of the products and/or processes developed and/or qualified within the project (consortium as whole or individual beneficiaries) shall be given to any entity in EU, at fair and reasonable market prices, conditions and with no legal restrictions and limitations stemming for example from International Traffic in Arms Regulations (ITAR), or equivalent instruments applicable in non-EU jurisdictions. Additionally, beneficiaries that intend to transfer ownership or grant an exclusive licence must formally notify the granting authority (i.e. DG-DEFIS and HaDEA) before the intended transfer or licensing takes place and the granting authority may up to four years after the end of the action object to a transfer of ownership or the exclusive licensing of results.

In this topic, the integration of the gender dimension (sex and gender analysis) in research and innovation content is not relevant.

HORIZON-CL4-2026-SPACE-03-82: Space critical EEE components for EU non-dependence – GaN MMICs mm-Wave Foundations

Call: SPACE	
Specific conditions	
Expected EU contribution per project	The Commission estimates that an EU contribution of between EUR 6.00 and 7.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
Indicative budget	The total indicative budget for the topic is EUR 7.00 million.
Type of Action	Research and Innovation Actions
Admissibility conditions	The conditions are described in General Annex A. The following exceptions apply: The page limit of the application is 80 pages.
Eligibility conditions	The conditions are described in General Annex B. The following exceptions apply:

	If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used). In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, or security, participation is limited to legal entities established in Member States, Norway and Iceland. Proposals including entities established in countries outside the scope specified in the call/topic/action will be ineligible. For the duly justified and exceptional reasons listed in the paragraph above, in order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, may not participate in the action unless it can be demonstrated, by means of guarantees positively assessed by their eligible country of establishment, that their participation to the action would not negatively impact the Union's strategic assets, interests, autonomy, or security. Entities assessed as high-risk suppliers of mobile network communication equipment within the meaning of 'restrictions for the protection of European communication networks' (or entities fully or partially owned or controlled by a high-risk supplier) cannot submit guarantees.[24]
Technology Readiness Level	Activities are expected to achieve TRL 5 by the end of the project. The reference TRL definition is the ISO 16290:2013 applicable to the space sector.
Procedure	The procedure is described in General Annex F. The following exceptions apply: The evaluation committee will be composed partially by representatives of EU institutions.
Security Sensitive Topics	Some activities resulting from this topic may involve using classified background and/or producing of security sensitive results (EUCI and

[24] The guarantees shall in particular substantiate that, for the purpose of the action, measures are in place to ensure that: a) control over the applicant legal entity is not exercised in a manner that retrains or restricts its ability to carry out the action and to deliver results, that imposes restrictions concerning its infrastructure, facilities, assets, resources, intellectual property or know-how needed for the purpose of the action, or that undermines its capabilities and standards necessary to carry out the action; b) access by a non-eligible country or by a non-eligible country entity to sensitive information relating to the action is prevented; and the employees or other persons involved in the action have a national security clearance issued by an eligible country, where appropriate; c) ownership of the intellectual property arising from, and the results of, the action remain within the recipient during and after completion of the action, are not subject to control or restrictions by non-eligible countries or non-eligible country entity, and are not exported outside the eligible countries, nor is access to them from outside the eligible countries granted, without the approval of the eligible country in which the legal entity is established.

	SEN). Please refer to the related provisions in section B Security — EU classified and sensitive information of the General Annexes.

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Reinforcing EU strategic autonomy by reducing non-EU dependencies on critical space EEE components and related technologies across their entire supply chain;
- Providing unrestricted access to critical space EEE components and related technologies relevant for EU space missions (Galileo, EGNOS, Copernicus, IRIS^2 and EU pilot missions on In-Orbit Space Operations and Quantum Gravimetry);
- Developing or regaining capacity to operate independently in space by developing resilient space EEE components and related technologies supply chains, relying on EU supply chains and/or trustable and reliable supply chains not affected by non-EU export restrictions;
- Enhancing competitiveness by developing products and capabilities reaching equivalent or superior performance level than those from outside the EU and compete at worldwide level.

Scope: Unrestricted access to state-of-art space EEE components and related technologies is a pre-requisite for the EU space industry responding to EU space missions. However, especially for some families of components, the available solutions in EU do not meet the current high-performance space requirements. Currently, alternative products sourced from outside EU, are either affected by non-EU export control, that limits its use, or present challenges in terms of trustable supply chains for the implementation of EU space missions with a security dimension.

Within the frame of this topic, it is expected to finance and implement a development project aiming at maturing critical space EEE components with the final goal of lowering the dependency from outside EU. This will be done by establishing a long-term sustainable supply chain for supporting EU strategic autonomy in the space sector. The selection of the supply chains shall reflect this objective. Therefore, the supply chain shall preferably be built fully based in EU and when this can only be achieved partially (i.e. because of lack of current EU capabilities for unrestricted advanced semiconductor processes or advanced materials that cannot be developed within the project), services procured from outside EU shall nevertheless ensure that the overall supply chain will remain trustable and not affected by non-EU export control. The latest scenario is subject to the approval of the granting authority.

Below, the space EEE component and related technologies relevant for this Call. This Call represent the direct implementation of the EU Observatory of Critical Technologies (OCT) Technology Roadmap named GaN for RF and mm-wave Space and Defence Applications and available to EU27 stakeholders via the OCT Hub of the EU Space Ecosystem Platform.

- GaN MMICs mm-wave foundations

Technical requirements and detailed expected development is provided in the Technical Requirements Guidance document published on the Funding & Tenders Portal.

Space is a low volume market affected by a dynamic industrial landscape compared to the terrestrial market therefore, technological spin in and/or bilateral collaborations should be enhanced between European non-space and space industries. Furthermore, proposed activities should be complementary to relevant national or other activities at EU level. Complementary activities should be clearly identified, described and the proposal should report how the complementarity is ensured.

To achieve the non-dependence objective, applicants are expected to include a dedicated proposal's paragraph covering:

- The description of the technology and/or technology processes and high-level breakdown of the space EEE component supply chain to be used. Applicants should demonstrate that the supply chain and final product are free of any legal export restrictions or limitations, such as those established in the International Traffic in Arms Regulations (ITAR) or equivalent instruments applicable in other non-EU jurisdictions. Applicants shall also report, in a dedicated subsection, if and which part of the supply chain is affected by non-EU export controls such as the Export Administration regulation (EAR) i.e. EAR99.

- The description of the suitable technology development process that has been identified and set up within the consortium for avoiding export restrictions of non-EU states and assess vulnerabilities of the supply chain.

Proposal covering space EEE components and related technology developments that are targeting a final TRL equal or higher than 5, shall include a list of proposed applicable standards (e.g. EN, ECSS, ESCC, MIL, JEDEC,…) that are considered relevant for implementing a formal space evaluation and/or qualification. Additionally, projects that aim at a formal space qualification shall deliver the full data pack planned to be submitted to the qualification authority. This deliverable shall me marked sensitive and it shall be shared with the granting authority (i.e. DG-DEFIS and HaDEA). Products that will successfully complete the space evaluation/qualification, either within the EU-COM activity or as a consecutive follow up, shall inform DG-DEFIS and engrave on the package the EU flag.

The proposal must include specific tasks as part of the work plan and related dedicated confidential deliverables to be provided within 6 months from the start of the project to the relevant Commission DG and Executive Agency (i.e. DG-DEFIS and HaDEA), with the objective of:

1. Analysing and describing, **in detail**, the full supply chain, each entity and its role in the supply chain, level of criticality and, if relevant, identify dependencies from outside EU;

2. Describing the industrial technical roadmap and a business plan for commercialization with accurate understanding of applications needs, space mission insertion, including time to market indication, of the developed product.

3. Reporting the list of relevant non-EU export control with extra territorial applicability for the specific technology/product under development, independently from the supply chain established for the EU-COM project.

4. Undertaking a comprehensive literature review of the relevant technology/product reporting the state-of-the-art and highlighting potential gaps between current EU solutions and competition from outside EU.

Unless otherwise agreed with the granting authority before the grant agreement, beneficiaries must ensure that none of the entities that participate as affiliated entities, associated partners or subcontractors are established in countries which are not eligible countries or target countries set out in the call conditions.

It is recalled to the applicants that all provisions reported by the Model Grant Agreements, related to topics with restricted eligibility conditions, are applied. For example, under this light, the consortiums shall ensure that for a period up to 4 years after the end of the action, supply and availability of the products and/or processes developed and/or qualified within the project (consortium as whole or individual beneficiaries) shall be given to any entity in EU, at fair and reasonable market prices, conditions and with no legal restrictions and limitations stemming for example from International Traffic in Arms Regulations (ITAR), or equivalent instruments applicable in non-EU jurisdictions. Additionally, beneficiaries that intend to transfer ownership or grant an exclusive licence must formally notify the granting authority (i.e. DG-DEFIS and HaDEA) before the intended transfer or licensing takes place and the granting authority may up to four years after the end of the action object to a transfer of ownership or the exclusive licensing of results.

In this topic, the integration of the gender dimension (sex and gender analysis) in research and innovation content is not relevant.

HORIZON-CL4-2026-SPACE-03-85: Critical Facilities Serving Space EEE components for EU non-dependence – High and Very High Energy Irradiation Test Facility Market Deployment

Call: SPACE	
Specific conditions	
Expected EU contribution per project	The Commission estimates that an EU contribution of between EUR 3.00 and 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
Indicative budget	The total indicative budget for the topic is EUR 4.00 million.
Type of Action	Innovation Actions

Admissibility conditions	The conditions are described in General Annex A. The following exceptions apply: The page limit of the application is 80 pages.
Eligibility conditions	The conditions are described in General Annex B. The following exceptions apply: If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used). In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, or security, participation is limited to legal entities established in Member States, Norway and Iceland. Proposals including entities established in countries outside the scope specified in the call/topic/action will be ineligible. For the duly justified and exceptional reasons listed in the paragraph above, in order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, may not participate in the action unless it can be demonstrated, by means of guarantees positively assessed by their eligible country of establishment, that their participation to the action would not negatively impact the Union's strategic assets, interests, autonomy, or security. Entities assessed as high-risk suppliers of mobile network communication equipment within the meaning of 'restrictions for the protection of European communication networks' (or entities fully or partially owned or controlled by a high-risk supplier) cannot submit guarantees.[25]
Technology Readiness Level	Activities are expected to achieve TRL 8 by the end of the project. The reference TRL definition is the ISO 16290:2013 applicable to the space sector.

[25] The guarantees shall in particular substantiate that, for the purpose of the action, measures are in place to ensure that: a) control over the applicant legal entity is not exercised in a manner that retrains or restricts its ability to carry out the action and to deliver results, that imposes restrictions concerning its infrastructure, facilities, assets, resources, intellectual property or know-how needed for the purpose of the action, or that undermines its capabilities and standards necessary to carry out the action; b) access by a non-eligible country or by a non-eligible country entity to sensitive information relating to the action is prevented; and the employees or other persons involved in the action have a national security clearance issued by an eligible country, where appropriate; c) ownership of the intellectual property arising from, and the results of, the action remain within the recipient during and after completion of the action, are not subject to control or restrictions by non-eligible countries or non-eligible country entity, and are not exported outside the eligible countries, nor is access to them from outside the eligible countries granted, without the approval of the eligible country in which the legal entity is established.

Procedure	The procedure is described in General Annex F. The following exceptions apply: The evaluation committee will be composed partially by representatives of EU institutions.
Security Sensitive Topics	Some activities resulting from this topic may involve using classified background and/or producing of security sensitive results (EUCI and SEN). Please refer to the related provisions in section B Security — EU classified and sensitive information of the General Annexes.

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Reinforcing EU strategic autonomy by reducing non-EU dependencies on critical space EEE components across their entire supply chain, including radiation testing facilities;
- Providing unrestricted access to critical space EEE components and testing facilities relevant for EU space missions (Galileo, EGNOS, Copernicus, IRIS^2 and EU pilot missions on In-Orbit Space Operations and Quantum Gravimetry);
- Developing or regaining capacity to operate independently in space by developing resilient space EEE components and testing facilities supply chains, relying on EU supply chains and/or trustable and reliable supply chains not affected by non-EU export restrictions;
- Enhancing competitiveness by developing products and capabilities reaching equivalent or superior performance level than those from outside the EU and compete at worldwide level.

Scope: Unrestricted access to state-of-art space EEE components and related technologies is a pre-requisite for the EU space industry responding to EU space missions. However, especially for some families of components, the available solutions in EU do not meet the current high-performance space requirements. This is also the case for testing facilities, especially high and very high energy testing facilities which are not available in EU. Currently, alternative irradiation testing facilities located outside EU, are either overbooked or often prioritized under the light on national security limiting their use by EU space stakeholder or severely delaying their access. This represents a challenge in terms of reliable and trustable supply chains for the implementation of EU space missions.

Within the frame of this topic, it is expected to finance and implement a development project aiming at maturing the development of a dedicated irradiation test facility open to EU space stakeholders with focus on testing EEE components for space applications and final goal of lowering the dependency from outside EU. This will be done by moving from small scale prototype irradiation testing demonstrations to a fully-fledged irradiation test facility with sufficient beam time spread across the entire year supporting EU strategic autonomy in the space sector. The selection of the supply chains shall reflect this objective. Therefore, the supply

chain shall preferably be built fully based in EU and when this can only be achieved partially, services procured from outside EU shall nevertheless ensure that the overall supply chain will remain trustable, not subject to national prioritization and not affected by non-EU export control. The latest scenario is subject to the approval of the granting authority (i.e. DG-DEFIS and HaDEA).

Below, the focused space development relevant for this Call. It has been identified based on needs related to strategic institutional space programs, inputs from European stakeholders and the EU Observatory of Critical Technologies.

- High and Very High Energy (70 MeV/n up to 1GeV/n) Irradiation Test Facility Market Deployment

Additional, context information and technical requirements are provided in the Technical Requirements Guidance document published on the Funding & Tenders Portal.

Space is a low volume market affected by a dynamic industrial landscape compared to the terrestrial market therefore, technological spin in and/or bilateral collaborations should be enhanced between European non-space and space industries. Furthermore, proposed activities should be complementary to relevant national or other activities at European level. Complementary activities should be clearly identified, described and the proposal should report how the complementarity is ensured.

To achieve the non-dependence objective, applicants are expected to include a dedicated proposal's paragraph covering:

- The description of the technology that will be used for providing the irradiation beam and high-level breakdown of the supply chain relevant for the whole test facility. Applicants should demonstrate that the supply chain and final test facility are free of any legal export restrictions or limitations, such as those established in the International Traffic in Arms Regulations (ITAR) or equivalent instruments applicable in other non-EU jurisdictions. Applicants shall also report, in a dedicated subsection, if and which part of the supply chain is affected by non-EU export controls such as the Export Administration regulation (EAR) i.e. EAR99.

The testing facility shall be open and accessible toward EU and non-EU space stakeholders nevertheless in case the amount of beam time requested will be exceeding the beam time available, the allocation shall be prioritizing EU based stakeholders. Requests coming from non-EU shall be analysed on an ad-hoc basis, considering also the remaining available beam time. This prioritization scheme shall be reflected in the proposal. The test facility as well as related control software and booking platform/website toward the public should clearly report the EU flag.

The proposal must include specific tasks as part of the work plan and related dedicated confidential deliverables to be provided within 6 months from the start of the project to the relevant Commission DG and Executive Agency (i.e. DG-DEFIS and HaDEA), with the objective of:

1. Analysing and describing, **in detail**, the full supply chain, each entity and its role in the supply chain, level of criticality and, if relevant, identify dependencies from outside EU;

2. Describing the technical roadmap and a business plan for commercialization (e.g. open access of the facility to the external space stakeholders) and future possible upgrades with accurate understanding of applications needs and relevance for EU space missions.

3. Undertaking a comprehensive literature review of the relevant high and very high energy radiation test facilities at global level reporting the state-of-the-art and highlighting potential gaps between current EU solutions and competition from outside EU.

Unless otherwise agreed with the granting authority before the grant agreement, beneficiaries must ensure that none of the entities that participate as affiliated entities, associated partners or subcontractors are established in countries which are not eligible countries or target countries set out in the call conditions.

It is recalled to the applicants that all provisions reported by the Model Grant Agreements, related to topics with restricted eligibility conditions, are applied. For example, under this light, the consortiums shall ensure that for a period up to 4 years after the end of the action, supply and availability of the products and/or processes developed and/or qualified within the project (consortium as whole or individual beneficiaries) shall be given to any entity in EU, at fair and reasonable market prices, conditions and with no legal restrictions and limitations stemming for example from International Traffic in Arms Regulations (ITAR), or equivalent instruments applicable in non-EU jurisdictions. Additionally, beneficiaries that intend to transfer ownership or grant an exclusive licence must formally notify the granting authority (i.e. DG-DEFIS and HaDEA) before the intended transfer or licensing takes place and the granting authority may up to four years after the end of the action object to a transfer of ownership or the exclusive licensing of results.

In this topic, the integration of the gender dimension (sex and gender analysis) in research and innovation content is not relevant.

HORIZON-CL4-2026-SPACE-03-86: Space critical Equipment for EU non-dependence – Space Refuelling Interface

Call: SPACE	
Specific conditions	
Expected EU contribution per project	The Commission estimates that an EU contribution of between EUR 2.00 and 3.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
Indicative budget	The total indicative budget for the topic is EUR 3.00 million.
Type of Action	Research and Innovation Actions

Admissibility conditions	The conditions are described in General Annex A. The following exceptions apply: The page limit of the application is 80 pages.
Eligibility conditions	The conditions are described in General Annex B. The following exceptions apply: If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used). In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, or security, participation is limited to legal entities established in Member States, Norway and Iceland. Proposals including entities established in countries outside the scope specified in the call/topic/action will be ineligible. For the duly justified and exceptional reasons listed in the paragraph above, in order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, may not participate in the action unless it can be demonstrated, by means of guarantees positively assessed by their eligible country of establishment, that their participation to the action would not negatively impact the Union's strategic assets, interests, autonomy, or security. Entities assessed as high-risk suppliers of mobile network communication equipment within the meaning of 'restrictions for the protection of European communication networks' (or entities fully or partially owned or controlled by a high-risk supplier) cannot submit guarantees.[26]
Technology Readiness Level	Activities are expected to achieve TRL 5 by the end of the project. The reference TRL definition is the ISO 16290:2013 applicable to the space sector.

[26] The guarantees shall in particular substantiate that, for the purpose of the action, measures are in place to ensure that: a) control over the applicant legal entity is not exercised in a manner that retrains or restricts its ability to carry out the action and to deliver results, that imposes restrictions concerning its infrastructure, facilities, assets, resources, intellectual property or know-how needed for the purpose of the action, or that undermines its capabilities and standards necessary to carry out the action; b) access by a non-eligible country or by a non-eligible country entity to sensitive information relating to the action is prevented; and the employees or other persons involved in the action have a national security clearance issued by an eligible country, where appropriate; c) ownership of the intellectual property arising from, and the results of, the action remain within the recipient during and after completion of the action, are not subject to control or restrictions by non-eligible countries or non-eligible country entity, and are not exported outside the eligible countries, nor is access to them from outside the eligible countries granted, without the approval of the eligible country in which the legal entity is established.

Procedure	The procedure is described in General Annex F. The following exceptions apply: The evaluation committee will be composed partially by representatives of EU institutions.
Security Sensitive Topics	Some activities resulting from this topic may involve using classified background and/or producing of security sensitive results (EUCI and SEN). Please refer to the related provisions in section B Security — EU classified and sensitive information of the General Annexes.

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Reinforcing EU strategic autonomy by reducing non-EU dependencies on critical space Equipment and related technologies across their entire supply chain;
- Providing unrestricted access to critical space Equipment and related technologies relevant for EU space missions and pilots (e.g. In-Orbit Space Operations);
- Developing or regaining capacity to operate independently in space by developing resilient space Equipment and related technologies supply chains, relying on EU supply chains and/or trustable and reliable supply chains not affected by non-EU export restrictions;
- Enhancing competitiveness by developing products and capabilities reaching equivalent or superior performance level than those from outside the EU and compete at worldwide level.

Scope: Unrestricted access to state-of-art space equipment and related technologies is a pre-requisite for the EU space industry responding to EU space missions. However, especially for some families of equipment, the available solutions in EU do not meet the current high-performance space requirements. Currently, alternative products sourced from outside EU, are either affected by non-EU export control, that limits its use, or present challenges in terms of trustable supply chains for the implementation of EU space missions with a security dimension.

Within the frame of this topic, it is expected to finance and implement a development project aiming at maturing critical equipment with the final goal of lowering the dependency from outside EU. This will be done by establishing a long-term sustainable supply chain for supporting EU strategic autonomy in the space sector. The selection of the supply chains shall reflect this objective. Therefore, the supply chain shall preferably be built fully based in EU and when this can only be achieved partially, services procured from outside EU shall nevertheless ensure that the overall supply chain will remain trustable and not affected by non-EU export control. The latest scenario is subject to the approval of the granting authority (i.e. DG-DEFIS and HaDEA).

Below, the space equipment and related technologies relevant for this Call. This Call represent the direct implementation of the EU Observatory of Critical Technologies (OCT) Technology Roadmap named Robotics Manipulators for Space Applications and available to EU27 stakeholders via the OCT Hub of the EU Space Ecosystem Platform.

- Space Refuelling Interface

Technical requirements and detailed expected development is provided in the Technical Requirements Guidance document published on the Funding & Tenders Portal.

Space is a low volume market affected by a dynamic industrial landscape compared to the terrestrial market therefore, technological spin in and/or bilateral collaborations should be enhanced between European non-space and space industries. Furthermore, proposed activities should be complementary to relevant national or other activities at EU level. Complementary activities should be clearly identified, described and the proposal should report how the complementarity is ensured.

To achieve the non-dependence objective, applicants are expected to include a dedicated proposal's paragraph covering:

- The description of the technology and/or technology processes used for developing the equipment and high-level breakdown of the supply chain to be used. Applicants should demonstrate that the supply chain and final product are free of any legal export restrictions or limitations, such as those established in the International Traffic in Arms Regulations (ITAR) or equivalent instruments applicable in other non-EU jurisdictions. Applicants shall also report, in a dedicated subsection, if and which part of the supply chain is affected by non-EU export controls such as the Export Administration regulation (EAR) i.e. EAR99.
- The description of the suitable technology development process that has been identified and set up within the consortium for avoiding export restrictions of non-EU states and assess vulnerabilities of the supply chain.

Proposals covering space equipment and related technology developments that are targeting a final TRL equal or higher than 5, shall include a list of proposed applicable standards (e.g. EN, ECSS, ESCC, MIL, JEDEC,…) that are considered relevant for implementing a formal space evaluation and/or qualification. Additionally, projects that aim at a formal space qualification shall deliver the full data pack planned to be submitted to the qualification authority. This deliverable shall me marked sensitive and it shall be shared with the granting authority (i.e. DG-DEFIS and HaDEA). Products that will successfully complete the space evaluation/qualification, either within the EU-COM activity or as a consecutive follow up, shall inform DG-DEFIS and engrave on the package the EU flag.

The proposal must include specific tasks as part of the work plan and related dedicated confidential deliverables to be provided within 6 months from the start of the project to the relevant Commission DG and Executive Agency (i.e. DG-DEFIS and HaDEA), with the objective of:

1. Analysing and describing, **in detail**, the full supply chain, each entity and its role in the supply chain, level of criticality and, if relevant, identify dependencies from outside EU;

2. Describing the industrial technical roadmap and a business plan for commercialization with accurate understanding of applications needs, space mission insertion, including time to market indication, of the developed product.

3. Reporting the list of relevant non-EU export control with extra territorial applicability for the specific technology/product under development, independently from the supply chain established for the EU-COM project.

4. Undertaking a comprehensive literature review of the relevant technology/product reporting the state-of-the-art and highlighting potential gaps between current EU solutions and competition from outside EU.

Unless otherwise agreed with the granting authority before the grant agreement, beneficiaries must ensure that none of the entities that participate as affiliated entities, associated partners or subcontractors are established in countries which are not eligible countries or target countries set out in the call conditions.

It is recalled to the applicants that all provisions reported by the Model Grant Agreements, related to topics with restricted eligibility conditions, are applied. For example, under this light, the consortiums shall ensure that for a period up to 4 years after the end of the action, supply and availability of the products and/or processes developed and/or qualified within the project (consortium as whole or individual beneficiaries) shall be given to any entity in EU, at fair and reasonable market prices, conditions and with no legal restrictions and limitations stemming for example from International Traffic in Arms Regulations (ITAR), or equivalent instruments applicable in non-EU jurisdictions. Additionally, beneficiaries that intend to transfer ownership or grant an exclusive licence must formally notify the granting authority (i.e. DG-DEFIS and HaDEA) before the intended transfer or licensing takes place and the granting authority may up to four years after the end of the action object to a transfer of ownership or the exclusive licensing of results.

In this topic, the integration of the gender dimension (sex and gender analysis) in research and innovation content is not relevant.

HORIZON-CL4-2027-SPACE-03-83: Space critical EEE components for EU non-dependence

Call: SPACE	
Specific conditions	
Expected EU contribution per project	The Commission estimates that an EU contribution of between EUR 0.25 and 0.30 million would allow these outcomes to be addressed

	appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
Indicative budget	The total indicative budget for the topic is EUR 0.50 million.
Type of Action	Research and Innovation Actions
Admissibility conditions	The conditions are described in General Annex A. The following exceptions apply: The page limit of the application is 80 pages.
Eligibility conditions	The conditions are described in General Annex B. The following exceptions apply: If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used). In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, or security, participation is limited to legal entities established in Member States, Norway and Iceland. Proposals including entities established in countries outside the scope specified in the call/topic/action will be ineligible. For the duly justified and exceptional reasons listed in the paragraph above, in order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, may not participate in the action unless it can be demonstrated, by means of guarantees positively assessed by their eligible country of establishment, that their participation to the action would not negatively impact the Union's strategic assets, interests, autonomy, or security. Entities assessed as high-risk suppliers of mobile network communication equipment within the meaning of 'restrictions for the protection of European communication networks' (or entities fully or partially owned or controlled by a high-risk supplier) cannot submit guarantees.[27]

[27] The guarantees shall in particular substantiate that, for the purpose of the action, measures are in place to ensure that: a) control over the applicant legal entity is not exercised in a manner that retrains or restricts its ability to carry out the action and to deliver results, that imposes restrictions concerning its infrastructure, facilities, assets, resources, intellectual property or know-how needed for the purpose of the action, or that undermines its capabilities and standards necessary to carry out the action; b) access by a non-eligible country or by a non-eligible country entity to sensitive information relating to the action is prevented; and the employees or other persons involved in the action have a national security clearance issued by an eligible country, where appropriate; c) ownership of the intellectual property arising from, and the results of, the action remain within the recipient during and after completion of the action, are not subject to control or restrictions by non-eligible countries or non-eligible country entity, and are not

Technology Readiness Level	Activities are expected to achieve TRL 6 by the end of the project. The reference TRL definition is the ISO 16290:2013 applicable to the space sector.
Procedure	The procedure is described in General Annex F. The following exceptions apply: To ensure a balanced portfolio covering all the development areas described in the scope section, grants will be awarded to applications not only in order of ranking but at least also to one proposal that is the highest ranked within each development area, provided that the applications attain all thresholds. The evaluation committee will be composed partially by representatives of EU institutions.
Security Sensitive Topics	Some activities resulting from this topic may involve using classified background and/or producing of security sensitive results (EUCI and SEN). Please refer to the related provisions in section B Security — EU classified and sensitive information of the General Annexes.

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Reinforcing EU strategic autonomy by reducing non-EU dependencies on critical space EEE components and related technologies across their entire supply chain;
- Providing unrestricted access to critical space EEE components and related technologies relevant for EU space missions;
- Developing or regaining capacity to operate independently in space by developing resilient space EEE components and related technologies supply chains, relying on EU supply chains and/or trustable and reliable supply chains not affected by non-EU export restrictions;
- Enhancing competitiveness by developing products and capabilities reaching equivalent or superior performance level than those from outside the EU and compete at worldwide level;
- Opening new opportunities for manufacturers by reducing dependency on non-EU export restricted technologies.

Scope: Unrestricted access to state-of-art space EEE components and related technologies is a pre-requisite for the EU space industry responding to EU space missions. However, especially for some families of components, the available solutions in EU do not meet the current high-

exported outside the eligible countries, nor is access to them from outside the eligible countries granted, without the approval of the eligible country in which the legal entity is established.

performance space requirements. Currently, alternative products sourced from outside EU, are either affected by non-EU export control, that limits its use, or present challenges in terms of trustable supply chains for the implementation of EU space missions with a security dimension.

Within the frame of this topic, it is expected to finance and implement development projects aiming at maturing critical space EEE components with the final goal of lowering the dependency from outside EU. This will be done by establishing a long-term sustainable supply chain for supporting EU strategic autonomy in the space sector. The selection of the supply chains shall reflect this objective. Therefore, the supply chain shall preferably be built fully based in EU and when this can only be achieved partially (i.e. because of lack of current EU capabilities for unrestricted advanced semiconductor processes or advanced materials that cannot be developed within the project), services procured from outside EU shall nevertheless ensure that the overall supply chain will remain trustable and not affected by non-EU export control. The latest scenario is subject to the approval of the granting authority.

Below, the list of space EEE components and related technologies relevant for this Call. It has been identified based on needs related to strategic institutional programs, inputs from European stakeholders and the EU Observatory of Critical Technologies.

- XXX [Target final XX]

The above list cannot be drawn at the point of finalizing this work programme. It will be proposed and validated with the HE delegations at a later stage and formalized either through a Guidance document or through an amendment to the work programme. Context information and technical requirements are provided in the Technical Requirements Guidance document published on the Funding & Tenders Portal outlining all relevant information for each of the above-mentioned development lines.

Space is a low volume market affected by a dynamic industrial landscape compared to the terrestrial market therefore, technological spin in and/or bilateral collaborations should be enhanced between European non-space and space industries. Furthermore, proposed activities should be complementary to national activities and European space agencies. Complementary activities should be clearly identified, described and the proposal should report how the complementarity is ensured.

HORIZON-CL4-2027-SPACE-03-84: Space critical equipment for EU non-dependence

Call: SPACE	
Specific conditions	
Expected EU contribution per project	The Commission estimates that an EU contribution of between EUR 0.25 and 0.30 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

Indicative budget	The total indicative budget for the topic is EUR 0.50 million.
Type of Action	Research and Innovation Actions
Admissibility conditions	The conditions are described in General Annex A. The following exceptions apply: The page limit of the application is 80 pages.
Eligibility conditions	The conditions are described in General Annex B. The following exceptions apply: If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used). In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, or security, participation is limited to legal entities established in Member States, Norway and Iceland. Proposals including entities established in countries outside the scope specified in the call/topic/action will be ineligible. For the duly justified and exceptional reasons listed in the paragraph above, in order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, may not participate in the action unless it can be demonstrated, by means of guarantees positively assessed by their eligible country of establishment, that their participation to the action would not negatively impact the Union's strategic assets, interests, autonomy, or security. Entities assessed as high-risk suppliers of mobile network communication equipment within the meaning of 'restrictions for the protection of European communication networks' (or entities fully or partially owned or controlled by a high-risk supplier) cannot submit guarantees.[28]

[28] The guarantees shall in particular substantiate that, for the purpose of the action, measures are in place to ensure that: a) control over the applicant legal entity is not exercised in a manner that retrains or restricts its ability to carry out the action and to deliver results, that imposes restrictions concerning its infrastructure, facilities, assets, resources, intellectual property or know-how needed for the purpose of the action, or that undermines its capabilities and standards necessary to carry out the action; b) access by a non-eligible country or by a non-eligible country entity to sensitive information relating to the action is prevented; and the employees or other persons involved in the action have a national security clearance issued by an eligible country, where appropriate; c) ownership of the intellectual property arising from, and the results of, the action remain within the recipient during and after completion of the action, are not subject to control or restrictions by non-eligible countries or non-eligible country entity, and are not exported outside the eligible countries, nor is access to them from outside the eligible countries granted, without the approval of the eligible country in which the legal entity is established.

Technology Readiness Level	Activities are expected to achieve TRL 6 by the end of the project. The reference TRL definition is the ISO 16290:2013 applicable to the space sector.
Procedure	The procedure is described in General Annex F. The following exceptions apply: To ensure a balanced portfolio covering all the development areas described in the scope section, grants will be awarded to applications not only in order of ranking but at least also to one proposal that is the highest ranked within each development area, provided that the applications attain all thresholds. The evaluation committee will be composed partially by representatives of EU institutions.
Security Sensitive Topics	Some activities resulting from this topic may involve using classified background and/or producing of security sensitive results (EUCI and SEN). Please refer to the related provisions in section B Security — EU classified and sensitive information of the General Annexes.

Expected Outcome: Project results are expected to contribute to all of the following expected outcomes:

- Reinforcing EU strategic autonomy by reducing non-EU dependencies on critical space equipment and related technologies across their entire supply chain;
- Providing unrestricted access to critical space equipment and related technologies relevant for EU space missions;
- Developing or regaining capacity to operate independently in space by developing resilient critical space equipment and related technologies supply chains, relying on EU supply chains and/or trustable and reliable supply chains not affected by non-EU export restrictions;
- Enhancing competitiveness by developing products and capabilities reaching equivalent or superior performance level than those from outside the EU and compete at worldwide level;
- Opening new opportunities for manufacturers by reducing dependency on non-EU export restricted technologies.

Scope: Unrestricted access to state-of-art space equipment and related technologies is a pre-requisite for the EU space industry responding to EU space missions. However, especially for some families of equipment, the available solutions in EU do not meet the current high-performance space requirements and alternative products, sourced from outside EU, are either affected by non-EU export control with extra territorial applicability, that limit the access, re-

export or raise challenges in terms of trustable supply chains for the implementation of EU space missions with a security dimension.

Within the frame of this topic it is expected to finance and implement development projects aiming at maturing critical space equipment with the final goal of lowering the dependency from outside EU, establish a long-term sustainable supply chain and support EU strategic autonomy in the space sector. The selection of the supply chains shall reflect this objective. Therefore, the supply chain shall preferably be built fully based in EU and when this can only be achieved partially (i.e. because of lack of current EU capabilities that cannot be developed within the project), services procured from outside EU shall nevertheless ensure that the overall supply chain will remain trustable and not affected by non-EU export control. The latest scenario is subject to the approval of the granting authority.

Below, the list of space equipment and related technologies relevant for this Call. It has been identified based on needs related to strategic institutional programs, inputs from relevant European stakeholders and the EU Observatory of Critical Technologies.

- XXX [Target final TRL X]

The above list cannot be drawn at the point of finalizing this work programme. It will be proposed and validated with the HE delegations at a later stage and formalized either through a Guidance document or through an amendment to the work programme. Context information and technical requirements are provided in the Technical Requirements Guidance document published on the Funding & Tenders Portal outlining all relevant information for each of the above-mentioned development lines.

A proposal should address only one technology area and clearly identify the area being addressed.

Space is a low volume market affected by a dynamic industrial landscape compared to the terrestrial market therefore, technological spin in and/or bilateral collaborations should be enhanced between European non-space and space industries. Furthermore, proposed activities should be complementary to national activities and European space agencies. Complementary activities should be clearly identified, described and the proposal should report how the complementarity is ensured.

Heading 9 - Boosting Space through innovative space technologies

Section to be revisedHeading 10 - Boosting Space through IOD/IOV opportunities

For a description of topics related to the IOD & IOV opportunities, please refer to please refer to "Indirectly managed actions by ESA" in the section "Other Actions" of this work programme.

Heading 11 - Boosting Space through support to entrepreneurship

For a description of topics related to Cassini Entrepreneurship, please refer to “Public Procurement” in the section “Other Actions” of this work programme.

Heading 12 : Boosting Space through support to the Space Act and cybersecurity

For a description of topics related to the Space Act and to cybersecurity, please refer to “Public Procurement” in the section “Other Actions” of this work programme.

Other actions not subject to calls for proposals

Public procurements

Space

1. Heading 11 of Space - Boosting Space through support to entrepreneurship - CASSINI activities

The CASSINI Space Entrepreneurship Initiative will continue to provide support to space startup companies to enable their commercial growth. CASSINI enables Europe-wide business networks and innovation-friendly ecosystems, creating stronger links between space companies and customers on various markets. The objectives are to accelerate commercial growth and make companies investment-ready. With convincing growth plans and direct links to private investors, they are able to raise more venture capital. Synergies with the InvestEU programme and the EU Space programme are pursued.

In 2026, we will launch a new multi-year contract for the CASSINI Business Accelerator.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative budget: EUR 10.00 million from the 2026 budget

2. Space events, Studies and Platforms

Events, studies and online platforms are needed on specific activities in order to assemble, maintain and evolve the EU Space ecosystem. These include:

- Events and publications (e.g., information, communication, dissemination etc.).
- Studies including trends, market and impact analysis.
- Online platforms gathering activities of the EU Space ecosystem, supporting networking, exchange of best practices, analysis for policy-making, etc.

These activities will be carried out either through the use of existing Framework Contracts, or the launch of open tenders. Details will be provided in the texts of those tenders.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative budget: EUR 0.50 million from the 2026 budget and EUR 0.50 million from the 2027 budget

3. Boosting Space through support to the Space Act and cybersecurity

The interinstitutional negotiations for the adoption of an EU Space Act will start as soon as the Commission has to issue its proposal still in 2025. Once the proposal is adopted, it will be important to foresee some studies and assimilated activities to support its implementation. The same goes for the area of cybersecurity which has become extremely important also in the space domain. We will need trainings, also related to certification, and activities to stimulate demand for cybersecurity and certification services.

The exact scope of those activities will be defined later on and discussed and aligned with the HE delegations.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative budget: EUR 1.00 million from the 2027 budget

Other budget implementation instruments

1. Project monitoring and use of individual experts (space)

This action will support the use of appointed independent experts by DEFIS and HADEA for the monitoring of running actions (grant agreement, grant decision, public procurement actions, financial instruments) funded under Horizon Europe and previous Framework Programmes for Research and Innovation, and where appropriate include ethics and gender equality checks.

Form of Funding: Other budget implementation instruments

Type of Action: Expert contract action

Indicative budget: EUR 1.00 million from the 2026 budget and EUR 1.00 million from the 2027 budget

Grants to identified beneficiaries

Heading 7 of Space - Monitoring Space

1. SST Sensors and Processing

Expected outcome

Projects developed under this topic are expected to contribute to the following outcomes:

- Increase the resilience of EU SST capabilities and the Union’s strategic autonomy in the SST domain.
- Strengthen European cooperation and interoperability among institutional actors contributing to the delivery of SST public services while contributing to the global challenge of spaceflight safety.

- Improvement of efficient EU SST operational capabilities and of detection sensitivity by supporting space-tracking infrastructure located in and outside continental Europe.

Scope

The following sensors and data processing R&I activities should be addressed to tackle the above expected outcomes:

- To support the development or the upgrade of institutional Sensors & Processing capacities.

- To improve the efficiency of EU SST system architecture (accelerate sensors integration, improve real time monitoring of the network, ConOps etc) through necessary sensors upgrades.

- To improve sensors performances (e.g. measurements quality (noise; bias; measurements rates ...); tracks accuracy (track noise; track duration...)).

- To develop new techniques and technologies enhancing detection sensitivity of EU SST sensors (e.g. less than 10 cm at 1000 km cm in LEO, less than 30 cm in MEO/GEO). Note: Priority should be given to projects focusing on LEO detection even though preeminent proposals in other orbit regimes will be considered.

- To enhance the integration and combined analysis of data from multiple sources (including ground based) to improve detection accuracy, operational efficiency, and real-time data management, contributing to the EU's strategic autonomy and interoperability among institutional actors.

The selected proposal is expected to reach TRL 8 by the end of the project. The reference TRL (Technology Readiness Level) definition is the ISO 16290:2013 applicable to the space sector.

The selected proposal should explore synergies and be complementary to already funded actions in the context of technology development at component level. In particular, it is expected that proposals make use of existing European technologies and/or building blocks at component level contributing to European non-dependence and strengthen competitiveness. Furthermore, proposed activities should be complementary to national activities and activities funded by the European Space Agency (ESA).

Specific conditions

- In order to achieve the expected outcomes, and safeguard the Union’s strategic assets, interests, autonomy, or security, namely avoiding a situation of technological dependency on a non-EU source, in a global context that requires the EU to build on its strengths and to carefully assess and address strategic weaknesses, vulnerabilities and high-risk dependencies, participation is limited to legal entities established in Member States. Proposals including entities established in countries outside the scope specified in the call/topic/action will be ineligible.

- For the duly justified and exceptional reasons listed in the paragraph above, in order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, may not participate in the action unless it can be demonstrated, by means of guarantees positively assessed by their eligible country of establishment, that their participation to the action would not negatively impact the Union's strategic, assets, interests, autonomy, or security. Entities assessed as high-risk suppliers of mobile network communication equipment within the meaning of 'restrictions for the protection of European communication networks' (or entities fully or partially owned or controlled by a high-risk supplier) cannot submit guarantees."[29]

- This is an Innovation Action (IA) with reduced funding rate (45%).

- The evaluation committee can be partially composed by representatives of EU institutions.

Indicative timetable: in quarter Q4 of year 2027.

Legal entities:

EUSST Partnership

Form of Funding: Grants not subject to calls for proposals

Type of Action: Grant awarded without call for proposals according to Financial Regulation Article 198 (f)

The general conditions, including admissibility conditions, eligibility conditions, award criteria, evaluation and award procedure, legal and financial set-up for grants, financial and operational capacity and exclusion, and procedure are provided in parts A to G of the General Annexes

Indicative budget: EUR 28.00 million from the 2027 budget

2. Consolidate commercial SST capabilities on sensors

Expected outcome

[29] *The guarantees shall in particular substantiate that, for the purpose of the action, measures are in place to ensure that: a) control over the applicant legal entity is not exercised in a manner that retrains or restricts its ability to carry out the action and to deliver results, that imposes restrictions concerning its infrastructure, facilities, assets, resources, intellectual property or know-how needed for the purpose of the action, or that undermines its capabilities and standards necessary to carry out the action; b) access by a non-eligible country or by a non-eligible country entity to sensitive information relating to the action is prevented; and the employees or other persons involved in the action have a national security clearance issued by an eligible country, where appropriate; c) ownership of the intellectual property arising from, and the results of, the action remain within the recipient during and after completion of the action, are not subject to control or restrictions by non-eligible countries or non-eligible country entity, and are not exported outside the eligible countries, nor is access to them from outside the eligible countries granted, without the approval of the eligible country in which the legal entity is established.*

Projects developed under this topic are expected to contribute to the following outcomes:

- To reinforce European strategic autonomy and resilience in space surveillance and tracking capabilities (sensors and associated data processing) by leveraging innovation and competitiveness of the European industry and start-ups.
- To develop and/or improve existing commercially available assets and SST-related technologies fostering competition and market development, allowing the European SST industry and start-ups to be competitive on global markets.
- To complement, as defined by EUSST Partnership's architecture studies, existing Member States patrimonial SST capacities with European privately-owned ones, assuring interoperability and adopting global standards.
- To improve European SST operational capabilities and detection sensitivity by supporting the extension of space-tracking infrastructure located outside continental Europe.
- To prepare EU industry to capture new SST markets in the domains by proposing competitive, cutting-edge sensors.

Scope

The following sensors and data processing R&I activities should be addressed to tackle the above expected outcomes:

- Novel, cost-effective sensor concepts and technologies capable of detecting, tracking and surveying objects in order to improve the state-of-the-art performance according to the target orbit regime (e.g. less than 10 cm at 1000 km cm in LEO, less than 30 cm in MEO/GEO). Note: Priority should be given to projects focusing on LEO detection even though preeminent proposals in other orbit regimes will be considered.
- Autonomous sensor concepts to increase operational robustness, to reduce response times, to reduce operation costs, amongst others.
- Tools, techniques, and technologies necessary to significantly improve the efficiency of future or existing commercial sensor's network by streamlining the scheduling and tasking of its sensors.
- State-of-the-art technologies and concepts improving sensors' tracking and surveillance performances (measurements quality (noise; bias; measurements rates ...), tracks accuracy (track noise; track duration...), sensors' field of view…
- Cost-effective tracking and/or surveillance sensor concepts expanding orbital coverage of Member States patrimonial SST capacities and/or meeting commercial market needs.
- Any promising technology for precise tracking and data processing.

The expected outcomes will be achieved, and the scope will be covered through the use of FSTP (Financial Support to Third Parties) by the beneficiary. A "Third Party", submitting a FSTP proposal, could be either an entity or a consortium of entities.

FSTP proposals are expected to start between TRL 4 and TRL 5 and reach at least TRL 7 by the end of the project. The reference TRL (Technology Readiness Level) definition is the ISO 16290:2013 applicable to the space sector.

FSTP proposals under this topic should explore synergies and be complementary to already funded actions in the context of technology development at component level. In particular, it is expected that FSTP proposals make use of existing European technologies and/or building blocks at component level contributing to European non-dependence and strengthen competitiveness. Furthermore, proposed activities should be complementary to national activities and activities funded by the European Space Agency (ESA).

Specific conditions

- In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, or security, namely avoiding a situation of technological dependency on a non-EU source, in a global context that requires the EU to build on its strengths and to carefully assess and address strategic weaknesses, vulnerabilities and high-risk dependencies, participation is limited to legal entities established in Member States. Proposals including entities established in countries outside the scope specified in the call/topic/action will be ineligible.
- For the duly justified and exceptional reasons listed in the paragraph above, in order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, may not participate in the action unless it can be demonstrated, by means of guarantees positively assessed by their eligible country of establishment, that their participation to the action would not negatively impact the Union's strategic, assets, interests, autonomy, or security. Entities assessed as high-risk suppliers of mobile network communication equipment within the meaning of 'restrictions for the protection of European communication networks' (or entities fully or partially owned or controlled by a high-risk supplier) cannot submit guarantees."[30]

[30] *The guarantees shall in particular substantiate that, for the purpose of the action, measures are in place to ensure that: a) control over the applicant legal entity is not exercised in a manner that retrains or restricts its ability to carry out the action and to deliver results, that imposes restrictions concerning its infrastructure, facilities, assets, resources, intellectual property or know-how needed for the purpose of the action, or that undermines its capabilities and standards necessary to carry out the action; b) access by a non-eligible country or by a non-eligible country entity to sensitive information relating to the action is prevented; and the employees or other persons involved in the action have a national security clearance issued by an eligible country, where appropriate; c) ownership of the intellectual property arising from, and the results of, the action remain within the recipient during and after completion of the action, are not subject to control or restrictions by non-eligible countries or non-eligible country entity, and are not*

- The support to third parties can only be provided in the form of grants.
- In accordance with article 207 of the EU Financial Regulation the maximum amount to be granted to each third party can exceed EUR 60,000. This derogation is justified by the fact that the foreseen actions to be funded by FSTP (which may be mono-beneficiary or involve a consortium) will be incorporating breakthrough and disruptive techniques and technologies to improve SST sensors performance and/or operations.. Indeed, costly hardware (such as radar, optical…) development and implementation tests are sought on this topic.The minimum amount of each FSTP proposal is expected to be in the range of EUR 3 to 4 million.
- The funding rate for each FSTP grant is 65%. Third parties will finance the remaining 35% of the amount of the FSTP proposal.
- This is an Innovation Action (IA).
- The evaluation committee can be partially composed by representatives of EU institutions.

Indicative timetable: in quarter Q4 of year 2027.

Legal entities:

EU SST Partnership

Form of Funding: Grants not subject to calls for proposals

Type of Action: Grant awarded without call for proposals according to Financial Regulation Article 198 (f)

The general conditions, including admissibility conditions, eligibility conditions, award criteria, evaluation and award procedure, legal and financial set-up for grants, financial and operational capacity and exclusion, and procedure are provided in parts A to G of the General Annexes

Indicative budget: EUR 24.00 million from the 2027 budget

Heading 2 of Space - Acting in Space

1. ISOS4I Pilot Mission Integrated Ground Test and consolidation of space-compatible USI solutions

Expected outcome

The strategic objective of this topic is to develop capabilities to 'Act in Space' through demonstrating in space a pilot mission by 2030 related to ISOS. The envisaged ISOS pilot mission shall provide the necessary seed components for a future service infrastructure, available to the European in-space ecosystem (including the EU assets), driving the generation

exported outside the eligible countries, nor is access to them from outside the eligible countries granted, without the approval of the eligible country in which the legal entity is established.

of a new in-space economy, providing enhanced in-orbit technology demonstration and maximising EU technology non-dependence.

This pilot mission will largely contribute to ensure EU's freedom of action in space, increase the resilience and protection of EU assets in space and foster the development of the new in-space economy. A pioneering and a novel mission concept, which is unique compared to other initiatives among all space-faring nations is envisaged. The mission will build on previous R&I with an operational mission concept, focusing on application and service demonstration, with a concrete view to commercial and governmental usage. The detailed mission concept has been derived in close coordination with EU Member States and EEA countries through a dedicated Pilot Mission Advisory Group (PMAG).

This topic addresses the validation of the developed ISOS4I mission components in an integrated ground test. The setup will integrate all mission components in a suitable test environment, including necessary simulation and control of the engineering/qualification models. Furthermore, the topic will address the qualification and verification of the Universal Service Interface (USI) solution(s) identified through the consolidation work done in the CSA[31]. Moreover, the activity shall support public outreach activities for the ISOS4I pilot mission.

The project is expected to contribute to the following outcomes, in close and continuous coordination with the European Commission services and the EU Member States through the ISOS Expert Group[32]:

- An in-space economy, building on innovative technologies and concepts for a sustainable infrastructure and value-adding services in space, e.g. plug-and-play spacecraft functionality introducing recycling/re-use of spacecraft modules/functionalities, and satellite upgrades and payload exchange for mission adaptivity;
- ISOS4I pilot mission preparation up to detailed mission and system detail design, and ground demonstrator, as well as promotion of the mission to the wider public.
- Consolidated and space-verified USI solution(s) for European space actors

This topic will contribute to, in the medium to long term, developing, deploying global space-based services and contribute to fostering the European space sector competitiveness, as stated in the expected impact of this destination.

Scope

To tackle the above expected outcomes, the following R&I actions should be addressed taking into account the provided technical annex[33]:

- Supporting the ISOS Pilot mission detailed mission and system design, demonstrating in an integrated ground test the interoperability of the developed mission components ground

31 ISOS Pilot Mission Coordination and Support Action (HE CL4 Work Programme 2025)
32 Space Policy Expert Group - sub-group on ISOS
33 ISOS Pilot Mission Guidance Document

prototypes (i.e., Servicing, HOST, Logistic and satAPPs) with all applicable servicing interfaces and the baseline demonstration scenarios as defined in the technical annex;

- Final maturation, verification and qualification of the consolidated USI solution(s) resulted from ISOS Pilot Mission Coordination and Support Action, considering opportunities for IOD/V;

- Development of a ISOS4I promotion video and VR experience for dissemination purposes, showcasing the pilot mission concept with its baseline demonstration scenario and the evolution towards an in-space service infrastructure leading to manifold business opportunities as part of a wider in-space economy.

Proposals are expected to promote cooperation between different actors (industry, SMEs and research institutions) and consider opportunities to quickly turn technological innovation into commercial use.

Proposals should clearly describe how previous and/or ongoing R&I of the mission components and any required additional technologies for the proposed ground test will be integrated. Moreover, proposals should clearly identify the test facility/ies to be used for the ground demonstrator. Finally, proposals should build on the outcome of the CSA activities on (1) "Proposal for an as much as possible integrated ground demonstrator bringing together the differ-ent mission components at the end of their detailed design phase" and (2) "Proposal for USIs consolidation, i.e., selection of a single USI European solution or approach allowing compatibility with multiple solutions (required for the HC)".

Activities are expected to achieve TRL 6 by the end of the project. The reference TRL definition is the ISO 16290:2013 applicable to the space sector.

Proposals are expected to consider and contribute to a balanced provision of Member States' and eligible Associated Countries' expertise and capabilities to the overall ISOS pilot mission, to support a successful introduction of the strategic capacity 'Act in Space'.

The project selected from this topic will be a Linked Action and is expected to closely collaborate with those selected under topics HORIZON-CL4-2025-02-SPACE-21, 22, 23, 24 and ISOS Pilot Mission Coordination and Support Action, in order to ensure interoperability and the necessary and sufficient documentation and information sharing for the implementation of the Pilot Mission, to make economies of scale in sharing best practices, defining common processes for addressing the different challenges, ensuring efficient monitoring and review, organising dissemination and communication activities, etc.

In this topic, the integration of the gender dimension (sex and gender analysis) in research and innovation content should be addressed only if relevant in relation to the objectives of the research effort.

Eligibility conditions

The conditions are described in General Annex B. The following exceptions apply:

In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, or security, namely avoiding a situation of technological dependency on a non-EU source, in a global context that requires the EU to build on its strengths and to carefully assess and address strategic weaknesses, vulnerabilities and high-risk dependencies, participation is limited to legal entities established in Member States, Norway and Iceland. Proposals including entities established in countries outside the scope specified in the call/topic/action will be ineligible.

For the duly justified and exceptional reasons listed in the paragraph above, in order to guarantee the protection of the strategic interests of the Union and its Member States, entities established in an eligible country listed above, but which are directly or indirectly controlled by a non-eligible country or by a non-eligible country entity, may not participate in the action unless it can be demonstrated, by means of guarantees positively assessed by their eligible country of establishment, that their participation to the action would not negatively impact the Union's strategic, assets, interests, autonomy, or security. Entities assessed as high-risk suppliers of mobile network communication equipment within the meaning of 'restrictions for the protection of European communication networks' (or entities fully or partially owned or controlled by a high-risk supplier) cannot submit guarantees."[34]

Other important information

- This is a Research and Innovation Action (RIA)
- The page limit of the application is 45 pages.
- In order to deliver the expected results, the beneficiaries may involve other entities part of the key technology and service provider group, as necessary.
- Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025) .
- Some activities resulting from this topic may involve using classified background and/or producing of security sensitive results (EUCI and SEN). Please refer to the related

[34] The guarantees shall in particular substantiate that, for the purpose of the action, measures are in place to ensure that: a) control over the applicant legal entity is not exercised in a manner that retrains or restricts its ability to carry out the action and to deliver results, that imposes restrictions concerning its infrastructure, facilities, assets, resources, intellectual property or know-how needed for the purpose of the action, or that undermines its capabilities and standards necessary to carry out the action; b) access by a non-eligible country or by a non-eligible country entity to sensitive information relating to the action is prevented; and the employees or other persons involved in the action have a national security clearance issued by an eligible country, where appropriate; c) ownership of the intellectual property arising from, and the results of, the action remain within the recipient during and after completion of the action, are not subject to control or restrictions by non-eligible countries or non-eligible country entity, and are not exported outside the eligible countries, nor is access to them from outside the eligible countries granted, without the approval of the eligible country in which the legal entity is established.

provisions in section B Security — EU classified and sensitive information of the General Annexes.

Indicative timetable: publication in Q3/4 of 2027.

Legal entities:

The beneficiaries will be the eligible coordinators of the awarded proposals from topics HORIZON-CL4-2025-02-SPACE-21, 22, 23, 24

Form of Funding: Grants not subject to calls for proposals

Type of Action: Grant awarded without call for proposals according to Financial Regulation Article 198 (f)

The general conditions, including admissibility conditions, eligibility conditions, award criteria, evaluation and award procedure, legal and financial set-up for grants, financial and operational capacity and exclusion, and procedure are provided in parts A to G of the General Annexes

Indicative budget: EUR 1.00 million from the 2027 budget

Indirectly managed actions

1. ESA.1 - Heading 5 of Space - Using Space on Earth - Satellite navigation - EGNSS Evolution : Technology and infrastructure-related R&I activities

Actions under this area will address upstream R&D activities. They will cover the maturing of the existing technologies and the development of new and emerging technologies , the engineering activities for the further evolution of Galileo and EGNOS existing systems including LEOPNT, technical studies for the assessment of exploratory system concepts and/or responding to new mission needs (e.g. RFI monitoring) and a changing environment, the development and maintenance of state-of-art system tools and technical test-beds, the implementation of actions agreed at Programme level to reduce the dependence of the supply chain on non-EU markets (e.g. ground clocks), and others.

These activities will be implemented by ESA under the Contribution Agreement between the Commission and ESA. The procurement actions under this section will affect the essential security interests of the Union, and will therefore require restricted participation that will be established in the tender specifications. In such case, participation should in principle be open only to entities established in the EU Member States. Participation of entities established in Horizon Europe associated countries or in third countries will be decided on a case-by-case basis with the approval of the annual work plan submitted to Commission under the Financial Framework Partnership Agreement (FFPA).

Form of Funding: Indirectly managed actions

Type of Action: Indirectly managed action

Indicative budget: EUR 30.00 million from the 2026 budget and EUR 30.00 million from the 2027 budget

2. ESA.2 - Heading 3 of Space - Using Space on Earth - Telecommunications - IRIS2 infrastructure: Development and Validation

The Commission has adopted a regulation[35] for establishing the EU Secure Connectivity Programme in 2023, which will lead to the development and deployment of the IRIS^2 constellation. The future IRIS² system – Infrastructure for Resilience, Interconnectivity and Security by Satellites – should build upon the GOVSATCOM component of the EU Space Programme, which should also take advantage of additional national and European capacities and develop further the European Quantum Communication Infrastructure (EuroQCI) initiative. The concession contract for the public-private partnership that will implement the IRIS² system has been signed with the SpaceRISE consortium in December 2024.

This action should enable and support the development and validation actions for the construction of the initial space and ground infrastructure required for the provision of governmental services.

These activities have been entrusted to ESA under a dedicated Contribution Agreement between the Commission and ESA. In particular, ESA will perform infrastructure development and validation activities as required to achieve full validation activities (including performances) of IRIS^2, that will be implemented by the future Concessionaire.

IRIS² implementation will include system architecture tasks, engineering and design of non-recurring items, development, manufacturing, security and technology EU non-dependence aspects and all necessary qualification and tests of space and ground segments. It will also include all the new developments that are needed to achieve the programme's objectives, as well as all the early validations deemed as necessary for an early elimination of the technical risks (e.g., interface and functional testing between blocks).

The detailed perimeter of activities for the Entrusted Tasks industrial activities are based on the selected contractors' final proposal.

The procurement actions under this section will affect the essential security interests of the Union, and will therefore require restricted participation that will be established on a case-by-case basis in the tender specifications. In such case, participation should in principle be open only to entities established in the EU Member States and other Secure Connectivity/IRIS^2 participating states pursuant to the international agreement concluded with those states. Participation of entities established in Horizon Europe associated countries or in third countries will be decided on a case-by-case basis.

Proposals under this topic, aiming or contributing to technology development for EU non-dependence are expected to be complementary and in synergies with already funded actions directly manged by the Commission, in the context of critical space technology for EU non-

[35] Regulation (EU) 2023/588

dependence developments. In particular, the topics related to Critical Space Technologies for EU non-dependence HORIZON-CL4-2021-SPACE-01-81, HORIZON-CL4-2022-SPACE-01-82, HORIZON-CL4-2023-SPACE-01-72, HORIZON-CL4-2024-SPACE-01-73, HORIZON-CL4-2025-02-SPACE-71, HORIZON-CL4-2025-02-SPACE-72, HORIZON-CL4-2025-02-SPACE-73 and HORIZON-CL4-2025-02-SPACE-74.

In order to deliver the expected results, the beneficiaries may involve other entities part of the key technology and service provider group as necessary. Entities assessed as high-risk suppliers of mobile network communication equipment within the meaning of 'restrictions for the protection of European communication networks' (or entities fully or partially owned or controlled by a high-risk supplier) are not eligible.

Form of Funding: Indirectly managed actions

Type of Action: Indirectly managed action

Indicative budget: EUR 108.10 million from the 2026 budget and EUR 162.40 million from the 2027 budget

3. ESA.3 - Heading 10 of Space - Boosting Space through IOD/IOV opportunities - IOV-IOD service

To ensure EU non-dependence and competitiveness in technologies, there is a clear need for a regular, sustainable, cost-effective and responsive In Orbit Demonstration/Validation (IOD/IOV) service in the EU. Space flight heritage in real conditions and environment is often required to de-risk new technologies, products, concepts, architectures, services and operations techniques be that for unique or recurrent, institutional or commercial missions.

Intended results of the action is to provide a service for regular aggregation (if needed), launch and operations in orbit for IOD/IOV experiments; the objective is to have at least one opportunity every year during the Horizon Europe implementation period. This will contribute to reduce the time to market or operational use of new technologies, products, concepts, architectures, and operations techniques.

The IOD/IOV activities intend to provide a regular and cost-effective service and solution for common flight ticket actions (management, spacecraft design including reuse of existing solutions, assembly, integration and tests, launch and operations) based on EU solutions both for the spacecraft (i.e. platform, experiments aggregation, operations in orbit including preparation and associated Ground Segment) and for the launch services.

The scope of the activities may include mission design, integration and implementation, for all the necessary tasks to prepare, provide and operate spacecraft(s), together with the related ground segment, which accommodates the selected IOD/IOV experiments as well as the associated launch services.

For the aggregation and operations, the activities include:

- System studies, at ground and space level, including the compatibility with the available launchers;
- Input to the launch mission analysis performed by the launch service provider;
- Selection, assembly, integration and testing of the spacecraft(s) and related ground segment;
- Management of interfaces with and between the different IOD/IOV experiments, between the spacecraft and the launcher and between the spacecraft and the ground segment;
- Preparation of the spacecraft(s) for the flight;
- In-orbit testing and operations including data provision.

Concerning launch aspects, IOD/IOV activities should support the European launcher exploitation policy, therefore relying as far as possible on EU manufactured launcher solutions launched from the EU territory. The actions will include the provision of flight opportunities with EU manufactured launchers which encompass the mission analysis, the verification of interfaces between the spacecraft and the launcher, the preparation of launch campaign and the flight up to the injection of the spacecraft(s) on the required orbit(s).

These activities and associated procurement actions will be implemented by ESA in line with the Contribution Agreement between the Commission and ESA.

Form of Funding: Indirectly managed actions

Type of Action: Indirectly managed action

Indicative budget: EUR 8.00 million from the 2026 budget and EUR 2.00 million from the 2027 budget

4. EUSPA.1 - Applications for EGNSS and for Copernicus

We need to make the best use of EGNSS and Copernicus capacities for EU citizens, companies and society. Research and innovation will foster the development of EGNSS and Copernicus downstream applications and promote their adoption in the EU and worldwide. A call for proposals under this area will address downstream R&D activities to be launched by the European Union Space Programme Agency (EUSPA) in accordance with the specification included in Appendix below.

Legal entities:

European Union Agency for the Space Programme (EUSPA), Janovského 438/2 170 00 Prague 7 – Holesovice Czech Republic

Form of Funding: Indirectly managed actions

Type of Action: Indirectly managed action

Indicative budget: EUR 1.00 million from the 2027 budget

Appendix to EUSPA.1

HORIZON-CL4-2027-EUSPA-SPACE

Proposals are invited against the following topic(s):

HORIZON-2027-EUSPA-SPACE-51: Galileo and Copernicus contribution to the EU Preparedness Union Strategy

Specific conditions	
Expected EU contribution per project	The Commission estimates that an EU contribution of between EUR 0.8 and 1.0 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
Indicative budget	The total indicative budget for the topic is EUR 1.0 million.
Type of Action	Innovation Actions
Eligibility conditions	If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used). The following additional eligibility criteria apply: This topic requires participation, as beneficiaries, of at least two crisis or security practitioner[36] organisations or agencies, established in at least two different EU Member States or Associated Countries. For participants with practitioner status, applicants must fill in the table "Information about security practitioners" in the application form with all the requested information, following the template provided in the submission IT tool.
Technology Readiness Level	Activities are expected to achieve TRL 7-9 by the end of the project. The reference TRL definition is the ISO 16290:2013 applicable to the space sector. Activities may start at any TRL.
Legal and financial set-up of	Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions

[36] Crisis or security practitioners has the meaning of organisations or agencies actively engaged in crisis or security operations, involved in e.g., law enforcement, customs, environmental crime management, smuggling and trafficking fighting and counter-terrorism, border and maritime surveillance, critical infrastructure operators, public safety, fundamental rights, disaster first/second responders, civil protection authorities, humanitarian aid etc.

the Grant Agreements	under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025).

Expected Outcome:

This topic aims to support activities that contribute to one or more key objectives and actions set by the EU Preparedness Union Strategy, leveraging the European GNSS services and differentiators (e.g., OSNMA[37], EWSS[38], SAS[39], HAS[40], etc.) and/or Copernicus data and services.

To that end, proposals under this topic should aim to deliver results that are tailored towards and contributing to fostering the development and preparing for the commercialization of innovative space-based solutions that enhance EU preparedness with respect to threats and crises, such as the ones caused by natural hazards, man-made or technological disasters (e.g., pandemics, technological failures, mass service blackouts, etc.) and hybrid threats, like cyber-attacks and sabotage of critical infrastructure. The proposals shall aim at enhancing the interoperability among practitioners in EU Member States and improve the capability of the Crisis Response Coordination bodies, to anticipate, prevent, prepare for, respond to, and recover from a variety of risks and threats.

Projects' results are expected to create new EU Space-based commercial opportunities for innovative businesses serving practitioner organisations, while contributing to at least one of the following outcomes:

- Foster the development and validation of innovative space-based capabilities to assess risks and threats, helping the prevention of crises events and the protection of essential services, such as hospitals, schools, transport, and telecommunications.
- Operationalize next-generation systems for monitoring and early warning, providing vital information by combining observations with models to offer increasingly accurate predictions.
- Improve the capability of crisis and security practitioners to respond in a timely and effective manner to crises; ensuring also more efficient recovery interventions.
- Develop processes, models and capabilities, which safeguard robust and reliable management of critical equipment, infrastructure, and materials.

Scope:

37 Galileo Open Service Navigation Message Authentication (OSNMA)
38 Galileo Emergency Warning Satellite Service (EWSS)
39 Galileo Signal Authentication Service (SAS, http://spcomnav.uab.es/docs/conferences/Terris_ION-GNSS_2024.pdf)
40 Galileo High Accuracy Service (HAS)

Proposals shall be built on the exploitation of the distinguishing features of Galileo and Copernicus (including its Contributing Missions) and seeking to deliver innovative and commercial space downstream capabilities to underpin the implementation of the European Preparedness Union Strategy.

Specific focus shall be given to one or more of the following key objectives and actions of the aforementioned strategy, based on technologies and solutions that:

- **[Foresight and anticipation**:] Exploit Galileo and/or Copernicus data and services to strengthen the EU's comprehensive risks and threats assessment, contribute to and advance "crisis dashboards" for decision makers, improve capabilities aiming to establish an EU Earth Observation Governmental Service (EOGS);

- **[Resilience of vital societal functions**:] Explore the use of Galileo and/or Copernicus to manage EU stockpiling, and equip and support the Union Civil Protection Mechanism and the Climate Adaptation Plan;

- **[Population preparedness**:] Improve the link between early warning systems and derived guidelines to be developed by the Commission with Member States, based on Copernicus Emergency Management Service and/or the upcoming Galileo EWSS; Explore ways to integrate EWSS into existing national alert systems; Seek to increase awareness about risks and threats at EU, MS, and regional level.

- **[Crisis response coordination**:] Improve central and cross-sectoral crisis response coordination.

In all cases, the proposals are expected to address cybersecurity threats in the description of the solution(s).

The proposals shall seek to engage and validate such technologies with crisis and security practitioners, through the realisation of large-scale demonstration and implementation activities.

Developed applications should have a clearly defined commercial potential and should respond to user needs. The solution(s) developed is/are expected to achieve TRL 7-9 by the end of the project.

Proposals shall leverage Galileo European GNSS differentiators, such as Galileo OSNMA and/or SAS, to improve preparedness against spoofing threats to strategic sectors and applications for the EU Preparedness Union Strategy, such as transport, telecommunications or critical infrastructure.

Proposals should deliver new innovative applications, identifying and addressing existing gaps, leveraging the existing relevant sectorial regulations and policies and exploring how the solutions implemented using space data and services can address these regulations and be commercialised. Proposals should also highlight the expected impact and define a clear market uptake strategy, presenting a credible post-project pathway to operations.

The developed solutions may integrate other non-space technologies like IoT, big data, artificial intelligence and machine learning (AI/ML), smart autonomous drones, augmented/mixed reality, 5G, etc.

For proposals under this topic:

- A Business Plan should be provided as part of the proposal, to evidence the user requirements, the sustainability of the project, and opportunities for wide adoption in Europe according to standards and operational needs;
- Participation of industry, in particular SMEs and midcaps, is encouraged;

Proposals addressing Galileo PRS (Public Regulated Service) related applications are not in the scope of this action.

Proposals should seek to leverage and/or create synergies with relevant projects and activities funded under Horizon Europe Cluster 3: Civil security for society, reinforcing the cross-fertilization of research and innovation in this domain.

In this topic, the integration of the gender dimension (sex and gender analysis) in research and innovation content should be addressed only if relevant in relation to the objectives of the research effort.