



HORIZON EUROPE

A large 3D illustration of the words "HORIZON" and "EUROPE" in white, blocky letters. Various stylized human figures are interacting with the letters: one person is climbing a gear on the letter 'O' of "HORIZON", another is holding a paper airplane near the letter 'E' of "EUROPE", and others are sitting on a bench, pushing a stroller, or talking to each other in the foreground.

THE EU RESEARCH & INNOVATION PROGRAMME

2021 – 2027

Horizon Europe Information Days – Cluster 4

11-12 October 2023

**Destination 5: Strategic autonomy in
developing, deploying and using global
space-based infrastructures, services,
applications and data**



Welcome & Introduction

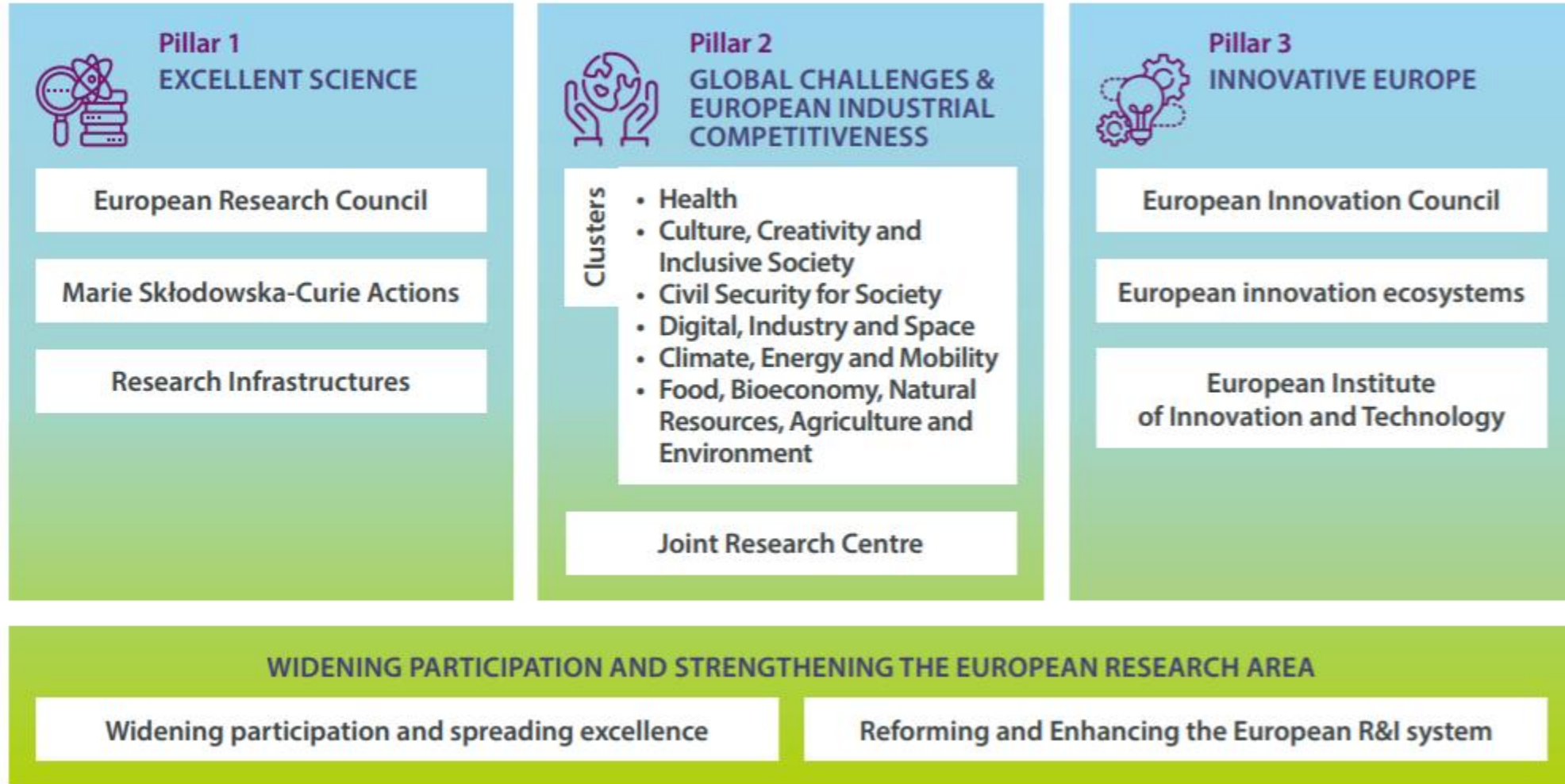


Guillaume de La Brosse

Head of Unit,
DG DEFIS B2,
European Commission



Structure of Horizon Europe



CLUSTER 4 – 6 Destinations

Destination 1: Climate neutral, circular, and digitised production

Destination 2: A digitised, resource-efficient and resilient industry

Destination 3: World leading data and computing technologies

Destination 4: Digital and emerging technologies for competitiveness and fit for the green deal

Destination 5: Strategic autonomy in developing, deploying and using global space-based infrastructures, services, applications and data

Destination 6: A human-centred and ethical development and industrial technologies

Importance of EU-funded space R&I

“This is not about closing the door to our partners. It is about developing and maintaining our infrastructures, technologies, skills, competences, and reducing critical dependencies on third countries, so we can rely on our own if necessary.”

*Commissioner Thierry Breton,
22 January 2020*

“Europe is already a major player in space. If we want to be stronger and more self-confident on the global landscape, we must also be stronger in space. [...] Developing our space sector will help us reinforce our strategic autonomy – goal number one of our generation, in my view.”

*Charles Michel, President of the European Council
13th European Space Conference 2021*



EU-funded space R&I focuses on



Fostering competitiveness
and technological non-
dependency of the EU space
sector

**Consolidating EU flagship
programmes** Copernicus, Galileo,
EGNOS, IRIS²

Developing **new downstream
applications** leveraging the synergies of
all EU Space Programme components

Assuring evolution of the existing
services of the EU Space Programme
and **enabling in-space operations &
services**

Providing independent European
Access to Space, including through the
emergence of new launch systems

Advancing future technologies
quantum technologies, robotics,
space weather and space science

WORK PROGRAMME 2023-2024 – Destination 5

“Strategic autonomy in developing, deploying and using global space-based infrastructures, services, applications and data”

There are two remaining calls:

- 1. HORIZON-CL4-2024-SPACE-01: managed by HaDEA, will open on 21 Nov 2023 with deadline **21 March 2024****
- 2. HORIZON-EUSPA-2023-SPACE: managed by EUSPA, should* open on 24 Oct 2023 with deadline 14 Feb 2024**

*pending finalization of the participation conditions to the GOVSATCOM use case topic

Copernicus topics

Copernicus Services

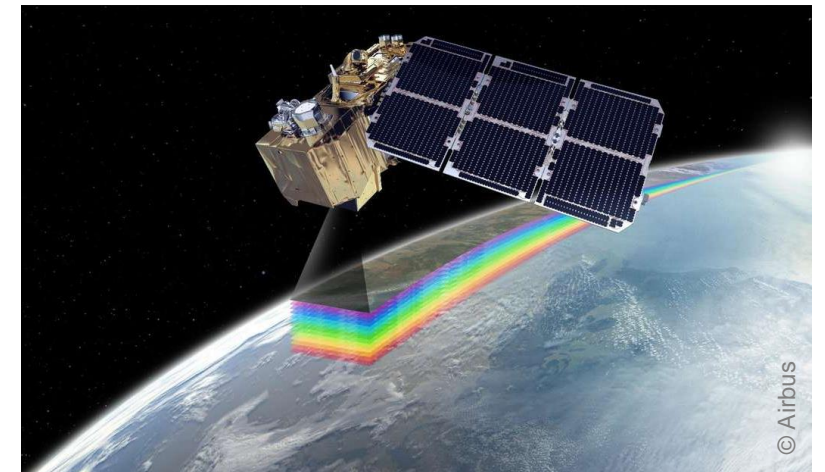
- Through Earth Observation (EO) satellites the **status of and changes in Earth's systems** can be monitored and assessed
- Copernicus serves as an independent and powerful European EO solution with services to **benefit all European citizens**
- Its own fleet of Earth observation satellites (Sentinels) **provides global data free of charge**
- Additionally, the commercial market demand for EO products is expected to grow quickly in the next years with a focus on
 - Advanced, very high-resolution satellite imagery and
 - Affordable, high-resolution, high-revisit products



Preparing the evolution and expansion of Copernicus to address EU policy and user needs



Underpin competitiveness and contribute to the integration of space into society and the economy



Copernicus Services

Monitoring the State of the Earth System Environment ...



... Six cross-cutting Thematic Services

Copernicus Services

6 Sentinel Expansion missions are being studied

- **CHIME:** Copernicus Hyperspectral Imaging Mission for the Environment
- **CIMR:** Copernicus Imaging Microwave Radiometer
- **C02M:** Copernicus Anthropogenic Carbon Dioxide Monitoring
- **CRISTAL:** Copernicus Polar Ice and Snow Topography Altimeter
- **LSTM:** Copernicus Land Surface Temperature Monitoring
- **ROSE-L:** Copernicus L-band Synthetic Aperture Radar



€50.7 million of H2020 funds between 2014-2020



HI-SIDE aims to develop & demonstrate satellite data-chain technologies

- ✓ To advance onboard data handling & support high-speed data transfer



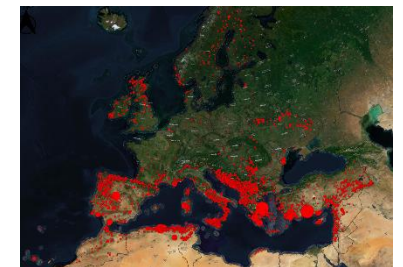
LEMON developed a Lidar emitter for space applications

- ✓ To monitor greenhouse gases and water vapour



REDDCopernicus assessed a future Copernicus EO service

- ✓ To support sustainable forest monitoring



Copernicus Services

- ~~HORIZON-CL4-2023-SPACE-01-31: Copernicus for Atmosphere and Climate Change, including CO2~~
- ~~HORIZON-CL4-2023-SPACE-01-32: Copernicus for Emergency Management~~
- ~~HORIZON-CL4-2023-SPACE-01-33: Copernicus in-situ component~~
- ~~HORIZON-CL4-2023-SPACE-01-34: Copernicus for Marine Environment Monitoring~~
- **HORIZON-CL4-2024-SPACE-01-35: Copernicus for Land and Water**
- **HORIZON-CL4-2024-SPACE-01-36: Copernicus for Security**

HORIZON-CL4-2024-SPACE-01-35: Copernicus for Land and Water

Expected Outcomes

- Enhanced quality and efficiency of the Copernicus Land Monitoring Service (Green Deal, user requirements, mission 'Climate neutral and smart cities, technology developments)
- Efficient and reliable new products, new data fusion, processing and visualisation
- Land use planning and hydrological monitoring and forecasting combining continental and global products (Copernicus Emergency Management Service, Copernicus Climate Change Service) serving various applications (agriculture, navigation, energy, flood prevention, etc)
- New algorithms and processing to prepare for new Sentinels and contributing missions

Scope

- Innovative methods to integrate the current land products into land surface, land use and cover change and added value when integrated/assimilated in models
- Integrated product provision system using new and innovative methods and observations (e.g.; SWOT mission) to improve the portfolio of the current inland and coastal/shore hydrological satellite in support of water related applications

Note

- Proposals should address only one area which must be clearly identified
- Activities should contribute to GEO and results should also be promoted through GEOSS
- Transfer of research results to possible operations should receive active attention: interactions with Entrusted Entities, IPR
- See **Guidance Document** for further details

Budget - € million	Per project - € million	# of projects	Type of action	TRL by end of project	Financial set-up	Country restriction
4	1.5-2	2-3	RIA	5-6	Lum-sum	Annex B, JRC

HORIZON-CL4-2024-SPACE-01-36: Copernicus for Security

Expected Outcomes

- Enhanced services towards policy, user requirements, complementary elements and extended user communities
- Enhancement in detection capabilities, timely access to data or delivery of information, narrowing the gap between capabilities and the more stringent security observation requirements
- Integration of non-space data along end-user intelligence supply chains (regional/local levels, support to field campaigns)
- Address increasing volume of satellite data: new paradigms in data fusion, processing, automation, added-value, access and visualisation
- Integration of the Geospatial Artificial Intelligence (GeoAI) and Earth Observation data analytics: IOT, crowd-sourced data, social media

Scope

- Innovative methods and technologies to explore new and enlarged data sets and the development of applications addressing requirements not currently tackled by the current services.
- Evolution and scope of the security services, namely increasing user reach, responding to specific regional needs and increasing service added value in user operational scenarios.

Note

- Actions aimed at service evolution to be developed in response to specific policy and user requirements at European, Regional or National level
- See **Strategic Research Agenda for Copernicus Security Services guidelines**; synergies with Cluster 3 “Civil security for society”
- Feasibility and cost/benefit analysis: timeline for deployment, proof-of-concept/prototype of the integration in the existing core service
- Attention should be paid to IPR and Entrusted Entities. Resulting products/software should be open licensed

Budget - € million	Per project - € million	# of projects	Type of action	TRL by end of project	Financial set-up	Country restriction
8	4	2	RIA	5-6	Lump-sum	Annex B, MS+NO+IS*

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Quantum topic

Quantum

- Quantum theory explains the nature and behaviour of matter and energy **on the atomic and subatomic levels**
- **“Atom interferometry”** can be used to make highly sensitive gravity detectors, accelerometers and gyroscopes
- A whole **range of applications has emerged** in science but also for our daily life like laser, electronics and medical imagery
- The EU must seize this opportunity and **make the best and most strategic use of quantum technologies for space**
- Promotion of developments for
 - Secure communication, time and frequency services
 - Earth sensing and observation
 - Use of quantum computing for space data processing and mission planning



Support the EU space policy and the EU Space Programme



Reinforce EU non-dependence for the development of EuroQCI (the EU Quantum Comm. Infrastructure)



Build a dynamic and innovative industrial ecosystem in Europe

“Europe should invest massively in quantum technologies. This is a matter of technological sovereignty. Quantum could have important applications in the space domain like in encryption or in the mapping from space of the underground landscape.”

*Commissioner T. Breton,
22 January 2020*

Quantum

Quantum Space Gravimetry

- Satellite gravity missions provide **unique observations** not covered by other Earth observation missions
- Quantum technology can be a **game-changer** for space applications and a key enabler for the evolution of Copernicus for applications in Earth science: climatology, geodesy, oceanography, hydrology, glaciology, etc)
- HE project CARIOQA develops an engineering model of the **quantum accelerometer** for a future mission

Quantum Key Distribution

- Technology used to deliver **crypto material** to end-users
- Satellites used to overcome the **limitations** of ground-based segments
- Objective is to mature the **new quantum technologies** (such as entanglement) and perform the qualification for space and ground segments

Quantum

- ~~HORIZON-CL4-2023-SPACE-01-62: Quantum Communication Technologies for space systems~~
- ~~HORIZON-CL4-2023-SPACE-01-63: Quantum Space Gravimetry Phase-A Study~~
- **HORIZON-CL4-2024-SPACE-01-64: Quantum Space Gravimetry Phase-B study & Technology Maturation**

HORIZON-CL4-2024-SPACE-01-64: Quantum Space Gravimetry Phase-B study & Technology Maturation

Expected Outcomes :

- Support the EU space policy and the EU Green Deal by providing the detailed definition of a quantum space gravimetry (QSG) pathfinder mission
- Ensure EU sovereignty and non-dependence for the development of capacities leading to the availability of quantum space gravimetry
- Enhance the TRL of the critical components necessary to build quantum gravimetry for space

Scope:

- The final objective of this call is to prepare the next phases of the implementation of a Quantum Space Gravimetry pathfinder mission. To achieve this objective, one proposal for a phase B study (up to PDR), as specified in ECSS-M-ST-10C, leading to a preliminary definition of a quantum space gravimetry pathfinder mission, will be selected.
- This activity will cover both the quantum space gravimetry payload and satellite platform. This activity will also include the implementation measures that will enhance the technological readiness of the critical components leading to TRL 6/7 at the end of the project.

Budget - € million	Per project - € million	# of projects	Type of action	TRL by end of project	Financial set-up	Country restriction
14,20	~14,00	1	RIA	6/7	N/A	Yes

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Technological non-dependence topic

Technological non-dependence

- Space increasingly represents an **invaluable asset in many sensitive and high-stakes matters**
- COVID-19 pandemic has shown the necessity to **strengthen Europe's industrial base**
- Space-grade electronic devices and other space systems are **often subject to restrictive trade rules**
- To be non-dependent with a resilient and flexible supply chain, Europe has to develop its **own domestic production of critical technologies**

Achieving strategic autonomy while preserving an open economy is a key objective of the EU and calls for developing EU autonomy in the space sector.

(EU Council conclusions, EUCO 13/20 Oct 2020)



Reduce the dependence on critical technologies and capabilities



Develop or regain in the medium term the EU capacity to **operate independently** in space



Enhance the technical capabilities and overall competitiveness of European space industry



Open new competition opportunities for European manufacturers



Improve the overall European space technology landscape and complement and create synergies

Examples of recent achievements in the area of EU technological non-dependence

€105 million have been provided under H2020 for critical space technologies

The first radiation hard fully European FPGA NG-MEDIUM

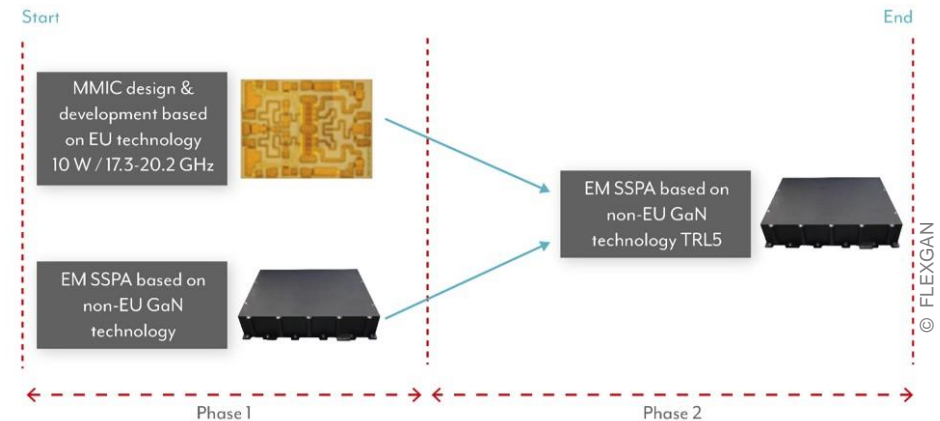
(Field Programmable Gate Array)

- ✓ Development of a supply chain covering different families of FPGAs in the EU
- ✓ Funded projects cover the design, manufacturing, validation and space qualification
- ✓ Used in multiple space missions, including Galileo



GaN power technology for space applications

- ✓ Development of EU based GaN technology for power applications, covering both low voltages (<50V) and high voltages of up to 650V
- ✓ Funded projects aimed at developing and space qualify the GaN foundry process leading to GaN devices space compatible



HORIZON-CL4-2024-SPACE-01-73: Space technologies for European non-dependence and competitiveness

Expected Outcomes :

- To reduce the dependence on critical technologies and capabilities from outside EU for the EU space programme components (i.e. Galileo/EGNOS, Copernicus, Govsatcom and SSA) and other space applications;
- To develop or regain in the mid-term the European capacity to operate independently in space and enhancing competitiveness by developing products/technical capabilities reaching equivalent or superior performance level than critical technologies and capabilities from outside EU;
- To open new competition opportunities for European manufacturers by reducing dependency on export restricted technologies that are of strategic importance to future European space efforts.

Scope:

- Low shock Non-Explosive Actuators (NEA) for smallsats [Target TRL 7]
- High data rate (12.5 to 28 Gbps or higher 56 Gbps), low consumption, short range links [Target TRL 7]
- Power laser sources in the eye-safe region [Target TRL 6]
- Enhanced performance and space qualified detectors – visible range [Target TRL 7-8]
- Ultra Deep Submicron technology for next generation space integrated circuits: ASICS, FPGA and microprocessors [Target TRL 5]
- Discrete power devices (200V normally-off GaN) [Target TRL 7]
- Photonics components [Target TRL 7]

Budget - € million	Per project - € million	# of projects	Type of action	TRL by end of project	Financial set-up	Country restriction
20.1	2-3		RIA	6-8		EU MS + Norway, Iceland

Specific Requirements

- This WP topic has a higher level of requirements. **Already in the proposal, applicants are asked to:**
 - **Describe the technologies and/or technology processes to be used and show that they are free of any non-EU legal export restrictions or limitations**, such as those established in the International Traffic in Arms Regulations (ITAR), Export Administration regulation (EAR) such as EAR99 or equivalent instruments applicable in other jurisdictions;
 - **Set up a suitable technology development process aiming at avoiding export restrictions of non-EU states** and assess vulnerabilities of the supply chain.
- Companies that have a multinational nature will be requested to provide guarantee of absence of foreign control through the **OCA procedure**.
- There is also a legal obligation that, for a period of up to 4 years after the end of the project, **access rights to the use of products and/or processes generated by the project** shall be given to European entities, in compliance with the signed Grant Agreement and with no legal restrictions and limitations stemming from International Traffic in Arms Regulations (ITAR), EAR99 or equivalent instruments applicable in other jurisdictions.

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European
Commission

Downstream applications topics

Applications for Galileo, EGNOS and Copernicus, including Galileo PRS & GOVSATCOM

- R&I is necessary to **strengthen and evolve** European space assets and value-added services using their synergies

- Activities target **innovative applications** in



Agriculture: Optimisation of fertiliser, fuel, pesticide and water use, assurance of food security and traceability



Security and emergency: Provision of crucial information and assistance in disaster mitigation, preparedness & recovery,



Digital innovation: Applications supporting smart cities, urban planning, smart waste management



Climate change: Monitoring Earth's changes and support the supply of clean, affordable and secure renewable energy



Health: Forecasting UV radiation or air pollution levels enable the use of autonomous robots in support of humans



Provide Europe with cutting-edge space-based services



Evolve and improve to continue responding to today's evolving challenges and market needs



Build a dynamic and innovative downstream ecosystem in Europe



Applications for Galileo, EGNOS and Copernicus, including Galileo PRS & GOVSATCOM

Project **SARA** developed a drone to be used for **Search and Rescue** (SAR) and **surveillance** purposes, for instance to retrieve people lost at sea

Use of **high accuracy** provided by Galileo

- ✓ For guidance, navigation and control of drones
- ✓ For target identification and localisation



ARCOS exploits AI to develop and implement an early-warning system to provide continuous **monitoring of the Arctic region**

Demonstration of **capabilities based on Copernicus**

- ✓ Monitoring of Arctic land and sea areas
- ✓ Vessel detection tailored to the region



Applications for Galileo, EGNOS and Copernicus, including Galileo GOVSATCOM

- **HORIZON-EUSPA-2023-SPACE-01-41:** EGNSS - Transition towards a green, smart and more secure post-pandemic society
- **HORIZON-EUSPA-2023-SPACE-01-42:** EGNSS - Closing the gaps in mature, regulated and long lead markets
- **HORIZON-EUSPA-2023-SPACE-01-43:** Copernicus-based applications for businesses and policy-making
- **HORIZON-EUSPA-2023-SPACE-01-46:** Designing space-based downstream application with international partners
- **HORIZON-EUSPA-2023-SPACE-01-61:** EU GOVSATCOM for a safer and more secure EU

HORIZON-EUSPA-2023-SPACE-01-41: EGNSS - Transition towards a green, smart and more secure post-pandemic society (1/2)

Expected Outcomes :

- Stimulate the development, validation and use of efficient & resilient commercial downstream solutions based on **synergies between the different EU space programme components** and cutting-edge digital technology
- Foster the development and validation of space technologies that **improve the quality of life in Europe**, toward environmentally-friendly and energetically-efficient communities
- Create new space-based commercial opportunities by **exploiting digitalisation and the adaptation of business processes in the post-pandemic environment** in order to improve prospects of businesses

Indicative budget: EUR 3.50 million

EU contribution per project: EUR 1.50 million to 2.50 million

Type of Action: Innovation actions

TRL: 7-9

HORIZON-EUSPA-2023-SPACE-01-41: EGNSS - Transition towards a green, smart and more secure post-pandemic society (2/2)

Scope:

Proposals should **leverage EGNSS services** including their differentiators (OSNMA, HAS, RLS, CAS, etc.) to develop technologies that focus on commercial exploitation in one of the following priority areas:

- Improving the **quality of life in cities** by addressing efficient mobility, energy efficiency and environmental friendliness, including the green, safe and digital transition of the construction industry. They can also cover solutions for personal assistance, healthcare, support to the elderly and city dashboards.
- Addressing the **challenge of higher reliance on existing infrastructure**, the increased use of remote resources and the associated cyber-threats. Proposals may cover applications for claims assessment (insurance), timestamping of transactions (finance), as well as commodities trading and risk assessment, including solutions for the certification of GNSS based timing equipment. Ideas from the energy sector could emphasise increasing the share of electricity from renewables (e.g. monitoring and forecasting of electricity generation from wind and solar power).
- In addition to synergies with EGNOS and Copernicus, applications may also consider the integration of future GOVSATCOM services into their commercial solutions and the use of data models for transforming the Galileo signal to a proper geodetic reference frame

HORIZON-EUSPA-2023-SPACE-01-42: EGNSS - Closing the gaps in mature, regulated and long lead markets (1/3)

Expected Outcomes :

- Broaden the reach of EGNSS by supporting its **adoption in long lead markets** including rail, maritime inland waterways, fisheries and aquaculture, road and automotive, and aviation
- Development of industry-accepted **certification and standardization schemes** that exploit the use of EGNSS and its differentiators for operational services

Indicative budget: EUR 8 million

EU contribution per project: EUR 1.50 million to 2.50 million

Type of Action: Innovation Actions

TRL: 7-9

HORIZON-EUSPA-2023-SPACE-01-42: EGNSS - Closing the gaps in mature, regulated and long lead markets (2/3)

Scope:

- **Rail safety critical applications** that support the rail network efficiency and cost reduction, converging towards a pan-European EGNSS-based solution adoption. Addressed activities can include the amendment of the European Rail Traffic Management (ERTMS) technical specifications for interoperability to support the use of EGNSS, and synergy with Copernicus / GOVSATCOM / other sensors for infrastructure monitoring
- EGNSS-supported operations **in coastal, harbour and maritime areas** (including for energy production), inland waterways, fisheries and aquaculture, addressing potential standardization and certification bottlenecks and assisting a diverse pool of stakeholders
- Certification bottlenecks for the use of EGNSS for **road and automotive market** safety-related applications (e.g. connected and autonomous cars, emergency assistance), liability applications (e.g. insurance telematics) and fleet management systems. Areas requiring further consolidation: Galileo Emergency Warning System (WES), Galileo HAS in the deployment of 5G high accuracy networks, reduction of congestion charging in cities, road maintenance

HORIZON-EUSPA-2023-SPACE-01-42: EGNSS - Closing the gaps in mature, regulated and long lead markets (3/3)

Scope:

- **Aviation:** consolidation of standardization and certification for efficient and green operations supported by EGNSS, EGNSS timing for 4D trajectory operations, EGNSS timing for System Wide Information Management (SWIM), integration of Dual Frequency Multi-constellation (DFMC) SBAS in avionics/aircraft and integration of Copernicus data into current aviation systems, and supporting airport operations via DFMC and the Galileo ARAIM. Proposals may also include applications **for drones' urban air mobility**, e.g. urban air deliveries through EGNSS data and services for the navigation operations, supported by EO data with provision of meteorological data and obstacle information
- Proposals could explore **synergies with Copernicus and/or GOVSATCOM**, addressing the certification and regulatory aspects that their use might bring

HORIZON-EUSPA-2023-SPACE-01-43: Copernicus-based applications for businesses and policy-making (1/2)

Expected Outcomes :

- **Enhance existing applications or develop new applications and products relying on Copernicus** data and services, making an impact on users, businesses and/or answering needs from public authorities, e.g. support policy making and implementation such as for the Green Deal, Destination Earth or the Horizon Europe missions
- Increase the integration and uptake of Copernicus data, services and applications in the European economy, in particular the European data economy

Indicative budget: EUR 7 million

EU contribution per project: EUR 1.00 million to 2.00 million

Type of Action: Research and Innovation Actions

TRL: 5-7

HORIZON-EUSPA-2023-SPACE-01-43: Copernicus-based applications for businesses and policy-making (2/2)

Scope:

- **Emergency service** downstream applications for better preparedness to extreme events, geohazards, prediction insurances, resilience to climate change, local emergency management and short-term recovery
- **Security service** downstream applications or exploiting the combination of Sentinels with national missions or new space services to support resilience to major pan-European crises like pandemics
- **Marine service** downstream applications with special focus on biodiversity conservation, maritime spatial planning, local and demersal fisheries, coastal to shore services, new sources of pollution from land and blue carbon farming. The applications shall build on existing infrastructure and services
- **Climate change service** downstream applications, e.g. forecast and preparedness to counteract extreme climate events and/or Sentinel Data integration in decision-support systems
- **Land service** downstream applications for better land use and/or natural resources planning, as well as citizen awareness and reporting of environmental and biodiversity protection issues
- **Atmosphere monitoring service** downstream applications that tailor, refine and combine the products for serving users particularly in the areas of air quality, health, biodiversity, wildfires monitoring and greenhouse gases.
- A proposal should address **only one area**, which should be clearly indicated

HORIZON-EUSPA-2023-SPACE-01-46: Designing space-based downstream application with international partners (1/2)

Expected Outcomes :

- **Use of EGNSS and sharing of expertise** with public and/or private entities to introduce EU-space based solutions leveraging in particular Galileo differentiators and European know-how
- The **use of Copernicus data**, to develop jointly algorithms, services and/or products, which serve local user needs and/or enhance the Copernicus global product quality
- The **combined use of EGNSS and Copernicus** to develop innovative downstream applications
- *Legal entities established in countries that have signed an administrative cooperation arrangement on Copernicus data access and Earth observation data exchange are **exceptionally eligible for Union funding:** **United States, Australia, Ukraine, Chile, Colombia, Serbia, African Union member states, Canada, Panama, Japan, Philippines, India and Brazil***

Indicative budget: EUR 6.00 million

EU contribution per project: EUR 0.80 million to 1.00 million

Type of Action: Research and Innovation Action

TRL: 3-4

HORIZON-EUSPA-2023-SPACE-01-46: Designing space-based downstream application with international partners (2/2)

Scope:

- Proposals should target one of the three expected outcomes
- Actions should focus on technical developments of EU-space based solutions, dissemination, awareness-raising, as well as provide **opportunities for the creation of business-oriented partnerships** between European industry and international partners in order to demonstrate the advantages of the differentiators
- It is important to **exploit the value-added of integration** of EO data (both satellite, airborne and ground-based) with positioning data and ICT (e.g. cloud computing) from international partner countries
- Proposals dealing with EGNSS are encouraged to **involve relevant organisations** on the European side (e.g. EASA, ESSP, EMSA)
- **When dealing with Copernicus-based applications, participation of at least one partner from a country that has signed a Copernicus Cooperation Arrangement is required**
- Proposals are encouraged to use the Copernicus DIAS and integrate third-party data

HORIZON-EUSPA-2023-SPACE-01-61: EU GOVSATCOM for a safer and more secure EU (1/2)

Expected Outcomes :

- Identification, assessment and development of one or more suitable use cases in the area of surveillance, crisis management and key infrastructure;
- Support the development and/or improvement of GOVSATCOM demonstration terminals enabling end-to-end validation of the first services provided by the GOVSATCOM HUB
- Elaborate the definition of the GOVSATCOM validation strategy and a user engagement plan
- Foster the identification/definition of GOVSATCOM tools required for the development of the GOVSATCOM terminals
- Develop the application necessary to enable end-to-end demonstration of the selected use case(s) using services provided by the EU GOVSATCOM Hub and operational terminals
- Perform extensive in-field activities and a final demonstration aimed at verifying the suitability of the solution, involving the relevant user communities

Indicative budget: EUR 10.00 million

EU contribution per project: EUR 3.00 million to 4.00 million

Type of Action: Innovation Actions

TRL: 7-9

Eligibility: at least one public entity must participate as member of the consortium selected for funding as the public entities are the main users of GOVSATCOM

HORIZON-EUSPA-2023-SPACE-01-61: EU GOVSATCOM for a safer and more secure EU (2/2)

Scope:

- Proposals should select at least one GOVSATCOM use case and support the adaptation of one or more existing SATCOM terminals in order to carry out the demonstration and ensure engagement of relevant user communities
- Proposals focusing on the following areas are encouraged:
 - Disaster response or Emergency services / ambulances (for Civil Protection)
 - Rail traffic management to improve the limitations linked to geographical barriers (e.g. valleys, cities)
 - Telemedicine for humanitarian aid
- The projects should improve one or more operational terminals to demonstrate the access of the respective users to an early EU GOVSATCOM service, showcasing the benefits and fostering users' uptake
- The equipment should support demonstration activities of the early developed services

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Other funding opportunities

Don't forget other funding opportunities

- **ESA:**
 - ✓ Under Cluster 4, we delegate the implementation of certain actions to the European Space Agency, linked to EGNSS (Galileo, EGNOS) infrastructure, GOVSATCOM infrastructure, Space Weather and Near Earth Objects and Secure Connectivity (IRIS²)
 - ✓ ESA publishes related tenders on ESA Star:
<https://doing-business.sso.esa.int/>
<https://esastar-publication-ext.sso.esa.int/ESATenderActions/details/62619>
- **EIC:** the European Innovation Council, under Pillar III, offers opportunities that are non-sectoral (Space is eligible) and sectoral: [EIC 2023 work programme \(europa.eu\)](https://eic.europa.eu/eic/work-programme)
- **Cassini:** opportunities for start-ups and SMEs: <https://www.cassini.eu/cassini-initiative>
- **IOD/IOV:** opportunities to gain flight heritage: https://defence-industry-space.ec.europa.eu/funding-and-grants/calls-proposals/orbit-demonstrationvalidation-20232026_en
- **InvestEU:** guarantees fund: https://investeu.europa.eu/index_en



Thank you for your attention and questions

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