

EN

Annex VII

Horizon Europe

Work Programme 2026-2027

7. Digital, Industry and Space

DISCLAIMER

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Table of contents

No table of contents entries found.

DRAFT

Calls

Call - INDUSTRY

HORIZON-CL4-2026-01

Overview of this call¹

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

Topics	Type of Action	Budgets (EUR million)		Expected EU contribution per project (EUR million) ²	Indicative number of projects expected to be funded
		2025	2026		
Opening: 06 Jan 2026 Deadline(s): 08 Apr 2026					
Destination: Leadership in materials and production for Europe					
HORIZON-CL4-2026-01-MATERIALS-PRODUCTION-21: New advanced materials and chemicals – reducing dependencies on CRM and substances of concern (IA) (IAM4EU and P4P partnerships)	IA		40.00	6.00 to 7.50	6
HORIZON-CL4-2026-01-MATERIALS-PRODUCTION-23: Accelerating the innovation process of chemicals and advanced materials through artificial intelligence and digitalisation (IA) (IAM4EU partnership)	IA		60.00	6.00 to 7.50	8

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 Europe - Work Programme 2026-2027
Digital, Industry and Space

HORIZON-CL4-2026-01-MATERIALS-PRODUCTION-01: Advanced manufacturing for high-tech products (including use of advanced or secondary raw materials) (IA) (Made in Europe and IAM4EU partnerships)	IA		70.00	6.00 to 8.00	9
HORIZON-CL4-2026-01-MATERIALS-PRODUCTION-04: Optimise the usage of resources in the production phase of the circular economy (RIA) (Processes4Planet and Clean Steel partnerships)	RIA		70.00	5.00 to 7.00	10
HORIZON-CL4-2026-01-MATERIALS-PRODUCTION-05: Circular advanced materials: facilitating the transition from design to markets (RIA) (IAM4EU and Made in Europe partnerships)	RIA		50.00	5.00 to 7.00	8
HORIZON-CL4-2026-01-MATERIALS-PRODUCTION-31: More efficient and/or scalable conversion processes for electrification (RIA) (Processes4Planet partnership)	RIA		70.00	5.00 to 7.00	10
HORIZON-CL4-2026-01-MATERIALS-PRODUCTION-X1: R&I in Support of the Clean Industrial Deal: Decarbonisation of energy intensive industries (Processes4Planet and IAM4EU partnership)	IA		125.00	20.00 to 25.00	5
HORIZON-CL4-2026-01-MATERIALS-PRODUCTION-Y1: Enhancing industry-academia knowledge exchange in Social Sciences and Humanities (SSH) (CSA)	CSA		2.00	Around 1.00	2
HORIZON-CL4-2026-01-MATERIALS-PRODUCTION-Y2:	CSA		2.00	Around	2

Horizon Europe - Work Programme 2026-2027
Digital, Industry and Space

Unlocking the potential of intellectual assets for industry, SMEs and startups (CSA)				1.00	
HORIZON-CL4-2026-01-MATERIALS-PRODUCTION-Y3: Breakthrough innovations in industrial technologies	CSA		20.00	Around 3.00	7
HORIZON-CL4-2026-01-MATERIALS-PRODUCTION-Y4: Integration of Technology Infrastructure capacities (CSA)	CSA		3.00	Around 3.00	1
HORIZON-CL4-2026-01-MATERIALS-PRODUCTION-Y5: Pilot access programme to Technology Infrastructures for European startups and scaleups (CSA)	CSA		3.00	Around 3.00	1
Raw Materials					
HORIZON-CL4-2026-01-MATERIALS-PRODUCTION-11: Innovative technologies and tools for exploration and modelling of critical raw materials (RIA)	RIA		20.00	5.00 to 7.00	3
HORIZON-CL4-2026-01-MATERIALS-PRODUCTION-12: Technologies for innovative extraction of raw materials (RIA)	RIA		20.00	5.00 to 7.00	3
HORIZON-CL4-2026-01-MATERIALS-PRODUCTION-13: Monitoring of secondary raw materials (CSA)	CSA		5.00	Around 2.50	2
HORIZON-CL4-2026-01-MATERIALS-PRODUCTION-14: Improving availability of secondary raw materials through recycling (IA)	IA		30.00	6.00 to 7.50	4
HORIZON-CL4-2026-01-MATERIALS-PRODUCTION-15: Technologies for innovative	RIA		25.00	Around 5.00	5

Horizon Europe - Work Programme 2026-2027
Digital, Industry and Space

processing and refining of raw materials (RIA)					
Destination 4: Achieving open strategic autonomy in digital and emerging enabling technologies					
HORIZON-CL4-2026-01-DIGITAL-EMERGING-61: Co-funded AI in Science Fellowships (RAISE pilot) (CO-FUND)	COFUND	30.00		Around 10.00	3
HORIZON-CL4-2026-01-DIGITAL-EMERGING-51: AI improved advanced manufacturing and production processes in factories (RIA) (Made in Europe and ADRA partnerships)	RIA		30.00	4.00 to 6.00	5
Overall indicative budget		30.00	645.00		

General conditions relating to this call

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

Call - INDUSTRY-two-stage

HORIZON-CL4-2026-02

Overview of this call³

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

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Indicative number of projects expected to be funded
Opening: 06 Jan 2026 Deadline(s): 08 Apr 2026, 27 Oct 2026				
Overall indicative budget				

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

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

Call - INDUSTRY

HORIZON-CL4-2027-01

Overview of this call⁴

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

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ⁵	Indicative number of projects expected to be funded
		2027		
Opening: 22 Sep 2026 Deadline(s): 02 Feb 2027				
Destination: Leadership in materials and production for Europe				
HORIZON-CL4-2027-01-MATERIALS-PRODUCTION-22: New advanced materials and chemicals – reducing dependencies on CRM and substances of concern (IA) (IAM4EU and P4P partnerships)	IA	40.00	6.00 to 7.50	6
HORIZON-CL4-2027-01-MATERIALS-PRODUCTION-02: Circular production - technologies, systems and business models (IA) (Made in Europe and Textiles for the Future partnerships)	IA	70.00	7.00 to 9.00	8
HORIZON-CL4-2027-01-MATERIALS-PRODUCTION-03: Factory processes and automation for de- and re-manufacturing (RIA) (Made in Europe partnership)	RIA	40.00	6.00 to 8.00	5
HORIZON-CL4-2027-01-MATERIALS-PRODUCTION-32: More efficient and/or	RIA	70.00	6.00 to 8.00	9

⁴ 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

⁵ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

Horizon Europe - Work Programme 2026-2027
Digital, Industry and Space

scalable conversion processes for capture, storage and use of green energy carriers and heat sources (RIA) (Processes4Planet and IAM4EU partnerships)				
HORIZON-CL4-2027-01-MATERIALS-PRODUCTION-X2: R&I in Support of the Clean Industrial Deal: Decarbonisation of energy intensive industries (Processes4Planet and IAM4EU partnership)	IA	125.00	20.00 to 25.00	2
Raw Materials				
HORIZON-CL4-2027-01-MATERIALS-PRODUCTION-16: Technologies for innovative processing of raw materials (IA)	IA	52.00	10.00 to 12.50	4
HORIZON-CL4-2027-01-MATERIALS-PRODUCTION-17: Expert network on Critical raw materials (CSA)	CSA	3.00	Around 3.00	1
Destination 4: Achieving open strategic autonomy in digital and emerging enabling technologies				
HORIZON-CL4-2027-01-DIGITAL-EMERGING-62: Scientific Laboratory Automation (RAISE pilot) (RIA)	RIA	30.00	Around 10.00	3
HORIZON-CL4-2027-01-DIGITAL-EMERGING-52: New approaches for Human/AI collaboration for the workforce of the future (RIA) (Made in Europe and ADRA partnerships)	RIA	30.00	4.00 to 6.00	5
Overall indicative budget		460.00		

General conditions relating to this call

<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.
<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.

<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

Call - INDUSTRY-two-stage

HORIZON-CL4-2027-02

Overview of this call⁶

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

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Indicative number of projects expected to be funded
<p style="text-align: center;">Opening: 22 Sep 2026</p> <p style="text-align: center;">Deadline(s): 02 Feb 2027 (First Stage), 02 Sep 2027 (Second Stage)</p>				
Overall indicative budget				

General conditions relating to this call

<i>Admissibility conditions</i>	The conditions are described in General Annex A.
<i>Eligibility conditions</i>	The conditions are described in General Annex B.

⁶ 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

<i>Financial and operational capacity and exclusion</i>	The criteria are described in General Annex C.
<i>Award criteria</i>	The criteria are described in General Annex D.
<i>Documents</i>	The documents are described in General Annex E.
<i>Procedure</i>	The procedure is described in General Annex F.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G.

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

HORIZON-CL4-SPACE-2026-03

Overview of this call⁷

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

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ⁸	Indicative number of projects expected to be funded
		2026		
Opening: 10 Mar 2026 Deadline(s): 03 Sep 2026				
Destination 5: Open Strategic Autonomy in Developing, Deploying and Using Global Space-Based Infrastructure, Services, Applications and Data				
HORIZON-CL4-2026-SPACE-03-11:	IA	38.00	10.00 to	2

⁷ 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.

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⁸ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

Horizon Europe - Work Programme 2026-2027
Digital, Industry and Space

Reinforcing EU autonomous access to space through EU-based spaceports			25.00	
HORIZON-CL4-2026-SPACE-03-31: Digital enablers and building-blocks for Earth Observation and Satellite telecommunication for Space solutions	RIA	12.00	2.00 to 8.00	2
HORIZON-CL4-2026-SPACE-03-32: Preparing demonstration missions for collaborative Earth Observation and Satellite telecommunication for Space solutions	IA	26.00	3.00 to 9.00	4
HORIZON-CL4-2026-SPACE-03-61: Scientific analysis and exploitation of space data	RIA	4.00	1.00 to 2.00	3
HORIZON-CL4-2026-SPACE-03-81: Space critical EEE components for EU non-dependence	RIA	10.00	1.00 to 2.00	6
HORIZON-CL4-2026-SPACE-03-82: Space critical equipment for EU non-dependence	RIA	10.00	1.00 to 2.00	6
Overall indicative budget		100.00		

General conditions relating to this call

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

<i>Agreements</i>	
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Call - Open Strategic Autonomy in Developing, Deploying and Using Global Space-Based Infrastructure, Services, Applications and Data

HORIZON-CL4-SPACE-2027-03

Overview of this call⁹

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

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ¹⁰	Indicative number of projects expected to be funded
		2027		
Opening: 09 Mar 2027 Deadline(s): 09 Sep 2027				
Destination 5: 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	IA	5.00	2.00 to 3.00	2
HORIZON-CL4-2027-SPACE-03-33: Digital enablers and building blocks for Earth Observation and Satellite telecommunications for Space solutions	RIA	4.00	1.00 to 2.00	3
HORIZON-CL4-2027-SPACE-03-34: Preparing demonstration missions for collaborative Earth Observation and Satellite	IA	26.00	3.00 to 9.00	4

⁹ 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.

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¹⁰ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

telecommunication for Space solutions				
HORIZON-CL4-2027-SPACE-03-83: Space critical EEE components for EU non-dependence	RIA	10.00	1.00 to 2.00	6
HORIZON-CL4-2027-SPACE-03-84: Space critical equipment for EU non-dependence	RIA	10.00	1.00 to 2.00	6
Overall indicative budget		55.00		

General conditions relating to this call

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

Call - DIGITAL

HORIZON-CL4-2026-04

Overview of this call¹¹

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

¹¹ 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.
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Horizon Europe - Work Programme 2026-2027
Digital, Industry and Space

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ¹²	Indicative number of projects expected to be funded
		2026		
Opening: 09 Dec 2025				
Raw Materials				
HORIZON-CL4-2026-04-MATERIALS-PRODUCTION-40: New or enhanced IAM-enabled sensing functionality	RIA	24.00	N/A	Not relevant
Destination 3: Developing an agile and secure single market and infrastructure for data-services and trustworthy artificial intelligence services				
HORIZON-CL4-2026-04-DATA-01: Demand-side 3C pilot demonstrators on converged Telco Edge Cloud Infrastructure	IA	38.00	Around 19.00	2
HORIZON-CL4-2026-04-DATA-02: Open Internet Stack Sovereign Solutions	RIA	22.00	Around 11.00	2
HORIZON-CL4-2026-04-DATA-03: Open Internet Stack Support for Scale	CSA	4.00	N/A	Not relevant
HORIZON-CL4-2026-04-DATA-04: New approaches for decentralized, federated and sustainable AI data processing	RIA	35.00	Around 17.50	2
HORIZON-CL4-2026-04-DATA-05: Energy efficiency and sustainability of AI data processing in Data	IA	39.00	N/A	Not relevant
HORIZON-CL4-2026-04-DATA-06: Efficient and compliant access to and use of data (AI, Data and Robotics partnership)	IA	50.00	10.00 to 25.00	3
Destination 4: Achieving open strategic autonomy in digital and emerging enabling technologies				
HORIZON-CL4-2026-04-DIGITAL-EMERGING-01: Pilot of the “Science for AI” Pillar of RAISE (“Resource in AI science in	RIA	17.00	Around 17.00	1

¹² Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

Horizon Europe - Work Programme 2026-2027
Digital, Industry and Space

Europe”)				
HORIZON-CL4-2026-04-DIGITAL-EMERGING-02: Fostering AI Adoption: Powerful AI solutions that are safe and computationally efficient	RIA	30.00	Around 15.00	2
HORIZON-CL4-2026-04-DIGITAL-EMERGING-03: Next-Generation AI Agents for Real-World Applications in the ApplyAI sectors	RIA	38.00	Around 19.00	2
HORIZON-CL4-2026-04-DIGITAL-EMERGING-04: Challenge-Driven AI Innovation Booster in Apply AI prioritised sectors	RIA	56.00	Around 14.00	4
HORIZON-CL4-2026-04-DIGITAL-EMERGING-05: AI-Driven Manufacturing Line Design and Optimization	RIA	15.00	Around 7.50	2
HORIZON-CL4-2026-04-DIGITAL-EMERGING-06: Next-Generation Agile and Intelligent Robotics Platforms for Industrial and Service Applications	RIA	25.00	N/A	Not relevant
HORIZON-CL4-2026-04-DIGITAL-EMERGING-07: AI-Driven Robotics for Industry: Enabling System Integration and Adoption	IA	18.00	Around 9.00	2
HORIZON-CL4-2026-04-DIGITAL-EMERGING-08: Robotics for Manufacturing: Advancing Core Skills through Technical Challenges	RIA	18.00	Around 9.00	2
HORIZON-CL4-2026-04-DIGITAL-EMERGING-09: Disaster relief and crisis management	IA	17.00	N/A	Not relevant
HORIZON-CL4-2026-04-DIGITAL-EMERGING-10: International cooperation in AI	IA	3.00	N/A	Not relevant
HORIZON-CL4-2026-04-DIGITAL-EMERGING-11: Quantum Sensors for Inertial Navigation	IA	30.00	N/A	Not relevant

Horizon Europe - Work Programme 2026-2027
Digital, Industry and Space

HORIZON-CL4-2026-04-DIGITAL-EMERGING-12: Standards for Quantum Technologies – Coordination and Support Action (CSA)	CSA	1.00	Around 1.00	1
HORIZON-CL4-2026-04-DIGITAL-EMERGING-13: Advanced integrated photonic devices for extended features and ultra-low power consumption	RIA	25.00	N/A	Not relevant
HORIZON-CL4-2026-04-DIGITAL-EMERGING-14: Networking and Future Photonics Strategy	CSA	3.00	N/A	Not relevant
HORIZON-CL4-2026-04-DIGITAL-EMERGING-15: Strengthening the cooperation of semiconductor-intensive EU regions	CSA	3.00	N/A	Not relevant
HORIZON-CL4-2026-04-DIGITAL-EMERGING-16: Horizon scanning and foresight in future enabling digital technologies	CSA	4.00	N/A	Not relevant
HORIZON-CL4-2026-04-DIGITAL-EMERGING-17: Fostering 2-Dimensional Materials (2DM) based emerging and enabling technologies (CSA)	CSA	1.00	N/A	Not relevant
Destination 6: Digital and industrial technologies driving human-centric innovation				
HORIZON-CL4-2026-04-HUMAN-01: Developing and demonstrating core technologies for Virtual Worlds and Web4.0 (Virtual worlds Partnership)	IA	30.00	N/A	Not relevant
HORIZON-CL4-2026-04-HUMAN-02: Web 4.0 architectural framework and Open Internet Stack applications for virtual worlds	RIA	18.00	N/A	Not relevant
HORIZON-CL4-2026-04-HUMAN-03: Facilitate the engagement of European stakeholders in international digital standardisation (CSA)	CSA	7.00	Around 7.00	1
Overall indicative budget		571.00		

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

Call - DIGITAL

HORIZON-CL4-2027-04

Overview of this call¹³

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

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million) ¹⁴	Indicative number of projects expected to be funded
		2027		
Opening: 09 Dec 2025				

¹³ 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

¹⁴ Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

Destination 6: Digital and industrial technologies driving human-centric innovation				
HORIZON-CL4-2027-04-HUMAN-01: Advanced and Innovative hardware components for Virtual Worlds (Virtual Worlds Partnership)	RIA	42.00	N/A	Not relevant
HORIZON-CL4-2027-04-HUMAN-02: Create A thriving and competitive Virtual Worlds and Web4.0 ecosystem (Virtual Worlds Partnership)	CSA	3.00	N/A	Not relevant
Overall indicative budget		45.00		

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

Destinations

Destination: Leadership in materials and production for Europe

Sustainable Advanced Materials, Raw Materials and Chemicals

Proposals are invited against the following topic(s):

HORIZON-CL4-2026-01-MATERIALS-PRODUCTION-21: New advanced materials and chemicals – reducing dependencies on CRM and substances of concern (IA) (IAM4EU and P4P partnerships)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 6.00 and 7.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 40.00 million.
<i>Type of Action</i>	Innovation Actions

Expected Outcome:

- Reducing dependencies of critical raw materials and substances of concern;
- Speeding up the innovation cycle within the value chain;
- Enhancing competitiveness of the industries by reducing regulatory risks, operational costs, while making supply chain more secure;
- Production processes, chemicals, materials and products that are inherently safer and more sustainable for a clean and autonomous economy; and
- Demonstrating how the SSbD framework guides innovation.

Scope: The focus of this topic is on alternatives for the substitution or more efficient use of critical raw materials as well as for substances of concern. Alternatives can take the shape of new chemicals or advanced materials. The design and development of these alternatives shall be done taking into account the full innovation cycle from the (re)design, development, to new production processes that lead to less emissions, avoidance of critical by-products or unwanted components, and the integration into products in manufacturing. Integrating the process and manufacturing industries' requirements as well as the necessary changes these

industries would need to produce and use the alternatives, early on in the innovation process, will be crucial for speeding up market access.

The approach should foster collaboration among stakeholders along the whole innovation chain and value networks to accelerate the development and adoption of synthesis, production and manufacturing solutions.

The SSbD framework is to be used to guide the innovation process towards safer and more sustainable chemicals and advanced materials.

Application case studies should support strategic policy interests e.g. alternatives of substances of concern or lean use or substitution of critical raw materials in the fields of energy, mobility, construction and electronics. The portfolio approach will be decided based on strategic decisions on the alternatives and application areas.

HORIZON-CL4-2027-01-MATERIALS-PRODUCTION-22: New advanced materials and chemicals – reducing dependencies on CRM and substances of concern (IA) (IAM4EU and P4P partnerships)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 6.00 and 7.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 40.00 million.
<i>Type of Action</i>	Innovation Actions

Expected Outcome:

- Reducing dependencies of critical raw materials and substances of concern;
- Speeding up the innovation cycle within the value chain;
- Enhancing competitiveness of the industries by reducing regulatory risks, operational costs, while making supply chain more secure;
- Production processes, chemicals, materials and products that are inherently safer and more sustainable for a clean and autonomous economy; and
- Demonstrating how the SSbD framework guides innovation.

Scope: The focus of this topic is on alternatives: for the substitution or more efficient use of critical raw materials as well as for substances of concern. Alternatives can take the shape of new chemicals or advanced materials. The design and development of these alternatives shall

be done taking into account the full innovation cycle from the (re)design, development, to new production processes that lead to less emissions, avoidance of critical by-products or unwanted components, and the integration into products in manufacturing. Integrating the process and manufacturing industries' requirements as well as the necessary changes these industries would need to produce and use the alternatives, early on in the innovation process, will be crucial for speeding up market access.

The approach should foster collaboration among stakeholders along the whole innovation chain and value networks to accelerate the development and adoption of synthesis, production and manufacturing solutions.

The SSbD framework is to be used to guide the innovation process towards safer and more sustainable chemicals and advanced materials.

Application case studies should support strategic policy interests e.g. alternatives of substances of concern or lean use or substitution of critical raw materials in the fields of energy, mobility, construction and electronics. The portfolio approach will be decided based on strategic decisions on the alternatives and application areas.

HORIZON-CL4-2026-01-MATERIALS-PRODUCTION-23: Accelerating the innovation process of chemicals and advanced materials through artificial intelligence and digitalisation (IA) (IAM4EU partnership)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 6.00 and 7.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 60.00 million.
<i>Type of Action</i>	Innovation Actions

Expected Outcome:

- Accelerating innovation for advanced materials and chemicals;
- Supporting operationalisation of the SSbD framework;
- Taking advantage of and contributing to the Materials Commons for Europe; and
- A step change in the risk assessment of chemicals and advanced materials in Europe.

Scope: Proposals should accelerate the pathway to market of new substances (chemicals or advanced materials) with superior or novel functionalities by making use of the Materials

Commons for Europe and new digital tools linking the design, development, production, manufacturing and end of life phases and supporting and facilitating the operationalisation and use of the SSbD framework. These tools should foster the use of artificial intelligence and support self-driving labs and their interconnection.

By doing so, new cutting-edge advanced materials with superior or novel functionalities and alternatives to substances of concern should be developed more rapidly in Europe. In addition, digital feedback loops ranging from requirements and information from production processes and scale-up, to manufacturing and integration into products, shall be developed to accelerate market uptake. Innovative digital methods to speed up risk assessment and thereby market access of chemicals and advanced materials will also be in the scope.

Interoperability (in particular with the Materials Commons for Europe) should help to reduce the cost of the digital transition for industry with respect to circularity and safe and sustainable by design, e.g. by reducing the risk for adopters and vendors, and through modular tools that can be extended to new application domains without a major redesign. Tools should foster workflows in the Member States and Associated Countries that ensure high-quality, well-structured and documented primary FAIR data, enabling the re-use and/or streamlining of large data sets, facilitating academic and industrial collaborations and integrating AI technologies.

Fast-tracking Circularity

Proposals are invited against the following topic(s):

HORIZON-CL4-2026-01-MATERIALS-PRODUCTION-01: Advanced manufacturing for high-tech products (including use of advanced or secondary raw materials) (IA) (Made in Europe and IAM4EU partnerships)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 6.00 and 8.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 70.00 million.
<i>Type of Action</i>	Innovation Actions

Expected Outcome:

- Advanced manufacturing in Europe is adapted to produce high-tech products and high added value;

- Production becomes increasingly circular through the reuse of secondary raw materials;
- Resource efficiency in terms of materials and energy is increased significantly;
- Advanced materials are incorporated faster in manufactured products;
- Circularity and resilience of European industry is enhanced.

Scope: This topic addresses essential technologies (machinery) for advanced manufacturing, focusing on increasing circularity and resilience of manufacturing of high-tech products and high added value in the EU based on better use of advanced and secondary raw materials. The focus is on critical components and products (e.g. batteries) that are presently either manufactured mainly outside Europe or rely on raw materials or parts whose supply is mostly coming from outside Europe.

Proposals should develop processes and machinery to enable the manufacturing of these components with a minimal use of critical raw materials [reference to overall targets] or imported materials. This includes an increased use of secondary raw materials or revalorised components.

Where appropriate, or as an alternative, proposals should target the use of advanced materials (such as lightweight, functionalised or self-healing materials). In this case, the development of the advanced materials should not be the main focus of proposals, nevertheless the necessary steps to adapt such advanced materials to the needs of the manufacturing application may be included.

Examples of advanced manufacturing technologies include, but are not restricted to:

- Complex additive manufacturing;
- Polymer composite manufacturing;
- Advanced technologies for surface treatment and structuring, to tailor surface properties for specific applications;
- Manufacturing of components with lightweight materials; and
- Advanced joining processes.

[The portfolio approach may be used, to ensure that at least one proposal focusing on the automotive industry, e.g. the production of batteries, is funded.]

HORIZON-CL4-2027-01-MATERIALS-PRODUCTION-02: Circular production - technologies, systems and business models (IA) (Made in Europe and Textiles for the Future partnerships)

Call: INDUSTRY

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 7.00 and 9.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 70.00 million.
<i>Type of Action</i>	Innovation Actions

Expected Outcome:

- Production becomes increasingly circular along the entire value chain;
- Circularity is enabled through FAIR data and tools;
- Resource efficiency in terms of materials and energy is increased significantly;
- Business models for industry-wide best practices in circular economy become available;
- Circularity and resilience of European industry is enhanced.

Scope: Proposals should demonstrate circular production, manufacturing and recycling networks and use cases along (and optionally across) entire value chains, including the associated logistics.

Proposals need not develop all necessary elements of the value chain, however they should consider providers beyond the production and discrete manufacturing context, such as product designers, recyclers, remanufacturers or logistic agents. Proposals should carry out research and innovation to develop missing elements and achieve the necessary integration. Hence, synergies with, or using results from, other projects may be appropriate.

The mere integration of existing technologies or processes is outside the scope of this topic.

Proposals should create new FAIR data and tools (including AI) and propose solutions to enable their use, and address difficulties in integrating disparities in data sources across product lifecycles, due to their variable reliability, quality, frequency and associated technologies. Coherence between datasets provided by material producers, recyclers and product manufacturers should be ensured.

Proposals should address technologies and methodologies necessary to comply with associated requirements and standards (examples include Digital Product Passport deployment, LCA for circular economy, B2B circular data spaces, and users' behaviour). Hence, appropriate contributions of SSH specialists should be included.

The portfolio approach will be used, to ensure that at least two proposals focusing on **textiles** is funded, with the following scope:

Improving processability and the resulting product quality when utilizing recycled or alternative bio-based fibres instead of virgin conventional fibres is very important for textile manufacturing. Attributes such as recyclability and recycled material content are expected to be part of the textile-specific requirements under the Ecodesign for Sustainable Products Regulation.

The objective of the call is to develop innovative processing technologies to facilitate the efficient utilisation of recycled, regenerated and bio-based fibres in textile manufacturing, for example during spinning, weaving, knitting or dyeing.

HORIZON-CL4-2027-01-MATERIALS-PRODUCTION-03: Factory processes and automation for de- and re-manufacturing (RIA) (Made in Europe partnership)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 6.00 and 8.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 40.00 million.
<i>Type of Action</i>	Research and Innovation Actions

Expected Outcome:

- An industrial ecosystem for circularity in manufacturing industries emerges, enhancing both circularity and resilience;
- De-manufacturing technologies and practices become available, leading to a European de-manufacturing industry;
- Functions of products are retained, reused, upgraded or adapted through de-manufacturing and re-manufacturing; and
- Skills and standards relevant to remanufacturing are developed.

Scope: Proposals should focus on developing de-manufacturing and re-manufacturing technologies at the factory level, addressing at least two of the following:

- Technologies to efficiently analyse part condition, including for components of lower value, e.g. combining sensor data and AI with human inputs;
- AI and robotic-assisted technologies to de-manufacture products and components, including handling and sorting;

- Model-based systems, to allow de-manufacturing and re-manufacturing operators to use CAD data and digital twins related to the original parts;
- Solutions allowing local repair or re-manufacturing of high-added value components (applied to e.g. wind turbines, aircraft and vessels).

[The portfolio approach can be used in this topic to prioritise particular sectors.]

HORIZON-CL4-2026-01-MATERIALS-PRODUCTION-04: Optimise the usage of resources in the production phase of the circular economy (RIA) (Processes4Planet and Clean Steel partnerships)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 5.00 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.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 70.00 million.
<i>Type of Action</i>	Research and Innovation Actions

Expected Outcome:

- Material recycling / upgrading significantly enhanced through process optimisation;
- Reduce dependencies and increase yield through the optimisation of the recovery of critical / strategic raw materials and/or ferroalloys;
- Advance efficient technologies to reduce/replace use of water and recovery of water; and
- Advance understanding of the effect of impurities in materials produced for special applications and assess impact on the overall circular economy process.

Scope: The R&I will optimise efficiency in terms of materials, water and energy along the value chain, making production more competitive, safer and sustainable.

The continuity and high resource demand in term of materials and energy media of the industrial processes require a dependable availability of resources. This priority addresses the re-integration and valorization of industrial side-streams from materials processing (formerly called production waste) into the process industries as novel feedstock. Priority should be given to streams that contain critical and scarce raw materials as well as biomaterials. Hard to recycle, mixed, and impurified waste streams shall be considered as well as the elaboration and demonstration of suitable new, efficient, and competitive industrial scale processes. The developments must consider the real conditions of such re-integration with varying amounts

and compositions and the efficiency and cost of the processing to enhance the chance of deployment in industrial environments. Moreover, the limitations of water use should be optimised in these processes and the re-use of water vapor from cooling processes should be considered. Proposals should consider technologies for water saving and water management that should be driven towards implementation with additional support.

The call should aim at increasing the share of sustainable feed streams of the process industries and foster circular material flows avoiding thermal utilisation as well as disposal.

Digital technologies and data sharing should be developed where needed and applied to support such integration but are not targeted independent of the development and demonstration of the necessary process technologies. The reintegration can take place within one sector or across sectors (industrial symbiosis). Impacts of regulations must be considered and proposals for their modification should be made where required.

HORIZON-CL4-2026-01-MATERIALS-PRODUCTION-05: Circular advanced materials: facilitating the transition from design to markets (RIA) (IAM4EU and Made in Europe partnerships)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 5.00 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.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 50.00 million.
<i>Type of Action</i>	Research and Innovation Actions

Expected Outcome:

- Advanced materials designed for circularity, their production and technology uptake;
- Business models enhancing the use of circular advanced materials; and
- Resource efficiency is increased significantly (focus on circular advanced materials).

Scope: The focus of this topic is on enabling circularity through R&I in advanced materials, in particular recyclable polymers and composites and magnets, taking into account from the start the related production processes and technologies in which they should be integrated. Proposals should also develop business models considering the cost of changes needed along the life cycle of these new materials to facilitate their uptake.

The scope covers the full innovation cycle from the design, development scaleup, to industrial uptake and integration into products as well as the transfer of developed solutions to other applications or sectors.

The SSbD framework is to be used to guide the innovation process towards safer and more sustainable materials.

Best use of digital tools and FAIR data throughout the innovation process should support the circular transition for industry. This includes sharing FAIR and interoperable data and tools across value networks, to foster circularity, including data needed for materials and component development, production and circular product design.

The approach should foster collaboration among stakeholders along the innovation chain and value networks to accelerate the development and adoption of new circular solutions.

Proposals should support strategic policy interest in the fields of energy, mobility, construction and electronics and/or have major impact/leverage for the circular economy. The portfolio approach will be decided based on strategic decisions and application areas.

[Portfolio approach to focus on strategic priorities and/or major impact for circularity]

HORIZON-CL4-2027-01-MATERIALS-PRODUCTION-06: Circular advanced materials: facilitating the transition from design to markets (RIA) (IAM4EU and Made in Europe partnerships)

Expected Outcome:

- Advanced materials designed for circularity, their production and technology uptake;
- Business models enhancing the use of circular advanced materials; and
- Resource efficiency is increased significantly (focus on circular advanced materials).

Scope: The focus of this topic is on enabling circularity through R&I in advanced materials, in particular recyclable polymers and composites and magnets, taking into account from the start the related production processes and technologies in which they should be integrated. Proposals should also develop business models considering the cost of changes needed along the life cycle of these new materials to facilitate their uptake.

The scope covers the full innovation cycle from the design, development scaleup, to industrial uptake and integration into products as well as the transfer of developed solutions to other applications or sectors.

The SSbD framework is to be used to guide the innovation process towards safer and more sustainable materials.

Best use of digital tools and FAIR data throughout the innovation process should support the circular transition for industry. This includes sharing FAIR and interoperable data and tools

across value networks, to foster circularity, including data needed for materials and component development, production and circular product design.

The approach should foster collaboration among stakeholders along the innovation chain and value networks to accelerate the development and adoption of new circular solutions.

Proposals should support strategic policy interest in the fields of energy, mobility, construction and electronics and/or have major impact/leverage for the circular economy. The portfolio approach will be decided based on strategic decisions and application areas.

[Portfolio approach to focus on strategic priorities and/or major impact for circularity]

Disruptive technologies for green energy

Proposals are invited against the following topic(s):

HORIZON-CL4-2026-01-MATERIALS-PRODUCTION-31: More efficient and/or scalable conversion processes for electrification (RIA) (Processes4Planet partnership)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 5.00 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.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 70.00 million.
<i>Type of Action</i>	Research and Innovation Actions

Expected Outcome:

- Green energy usage is given a boost through new technologies for energy storage, carriers and management; and
- A reliable energy flow for a fluctuating energy demand is enable through improved management of a combination of energy sources.

Scope: R&I on resilient storage and management of green energy adapted to the need of the process industry including R&I on new advanced materials for membranes and carriers and storage (e.g. for batteries and hydrogen).

This topic focusses on boosting electrification by efficient and/or scalable energy conversion and storage processes. Research will develop targeted solutions for the needs of the energy intensive industries considering their different energy supply mechanisms, storage possibilities, as well as release requirements. Proposals should consider the most relevant gaps to focus on in the frame from materials design to technology deployment and ensure

adequate feedback loops between different steps to drive forward innovative solutions which can be easily deployed. Scalability and requirements from application/industry need to be considered early on in the innovation process.

The SSbD framework is to be used to guide the innovation process towards safer and more sustainable chemicals and advanced materials. The approach should accelerate cost-reduction and market uptake, as well as collaboration across the innovation chain, including end-users.

HORIZON-CL4-2027-01-MATERIALS-PRODUCTION-32: More efficient and/or scalable conversion processes for capture, storage and use of green energy carriers and heat sources (RIA) (Processes4Planet and IAM4EU partnerships)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 6.00 and 8.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 70.00 million.
<i>Type of Action</i>	Research and Innovation Actions

Expected Outcome:

- Green energy usage is given a boost through new technologies for heat capture, storage and usage;
- Heat dependent processes will become cleaner and greener and less costly due to better management of heat; and
- A significant increase of the efficiency and scalability of energy carrier conversion processes.

Scope: R&I on resilient capture, storage and management of heat energy adapted to the need of the process industry including R&I on new advanced materials.

This topic focusses on boosting the usage of green energy by efficient and/or scalable conversion processes for capture, storage and use of green heat sources. Research will develop solutions targeted at high temperature processes in energy intensive industries considering their heat production, storage capacities and heat release needs. Industrial symbiosis for heat recuperation can be envisaged. Proposals should consider the most relevant gaps to focus on in the frame from materials design to technology deployment and ensure adequate feedback loops between different steps to drive forward innovative solutions which can be easily deployed. Scalability and requirements from application/industry need to be considered early on in the innovation process.

The SSbD framework is to be used to guide the innovation process towards safer and more sustainable chemicals and advanced materials. The approach should accelerate market uptake, networking between academia and industry as well as collaboration across the innovation chain, including end-users.

Decarbonisation of Energy-intensive Industries (contribution to joint call supporting the Clean Industrial Deal)

Proposals are invited against the following topic(s):

HORIZON-CL4-2026-01-MATERIALS-PRODUCTION-X1: R&I in Support of the Clean Industrial Deal: Decarbonisation of energy intensive industries (Processes4Planet and IAM4EU partnership)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 20.00 and 25.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 125.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 7-8 by the end of the project.
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>To contribute to a balanced portfolio covering the three technology areas described in the scope below, proposals are encouraged to address in an integrated way a combination of the technology areas below, grants will be awarded to applications not only in order of ranking, but also in a manner to ensure that there is at least one proposal selected for funding for each technology area, provided that the applications attain all thresholds.</p>

Expected Outcome: Proposals are expected to contribute to **all** of the following expected outcomes:

- Accelerate the use of innovative processes to decarbonise industrial processes and bring to the market more cost-effective clean products to strengthen the competitiveness and resilience of EU industries (with quantifiable contribution).
- Create new innovative first-of-a-kind operational demonstrators and/or optimize newly installed industrial decarbonisation solutions in Europe.

Proposals are also expected to demonstrate the market readiness of the envisaged future clean products and their innovative processes via a credible business plan and an exploitation strategy for industrialisation, including market-tested use cases.

Scope: The **Clean Industrial Deal** aims to secure the EU as an attractive location for manufacturing, including for energy-intensive industries, and to promote clean tech and new circular business models in order to meet Europe's ambitious decarbonisation and climate neutrality targets. It focuses primarily on the competitive decarbonisation of EU industry and on the production of clean technologies in the EU.

The following three technology areas on energy intensive industries having a strong and promising growth potential in Europe are in scope of this call:

- Managing of carbon cycle (CCU and/or CCUS)
- Clean energy usage in production (electrification of the processes, integration of alternative green energy carriers, demand side management including more effective on-site renewable energy storage solutions)
- Resource efficiency (material, energy, water) of production processes

As part of bringing the above tech solutions closer to the market, proposals may also address step-change in relevant network and infrastructure deployment to facilitate scale up. Use of advanced materials, safe and sustainable materials and processes, and circularity are also to be addressed as part of the selected processes.

Applicants are **free to decide on the specific technological area they wish to strengthen** within an industrial sector, provided that it is innovative and can lead to low carbon solutions. The choice of the specific technologies addressed in the proposal is left to the project applicants who should include a thorough justification of the choices both in technological and business terms.

Proposals are expected to:

- demonstrate an **adequate integration of relevant technological solutions** in support of the Clean Industrial Deal, and to ensure a clear and quantifiable impact on competitiveness and reduction of GHG emissions. The integration can either be demonstrated in a direct (e.g. reduction of greenhouse emissions of a process) or an indirect (e.g. production of a new green/clean product) manner. The use of relevant

results of R&I projects previously funded at EU, national or regional level is encouraged.

- show **industrial leadership** in the deployment after the project. To this end, they must also put together an industry driven consortium composition to ensure a quantifiable impact on competitiveness. In view of future deployment and market readiness, the sizes of the consortia must be manageable, while still being able to ensure an adequate integration across the chosen specific technological approach. As an indicative figure, **consortia should not exceed ten participants**, and the size of the consortia should be justified. The participation of SMEs is encouraged.
- seek synergies with relevant existing projects, initiatives and structures, such as European Partnerships / Joint Undertakings.

Proposals are expected to provide a sound and convincing **business plan** and **market-readiness strategy** (cf. intro) on how to prepare and support the deployment of the proposed tech solution across relevant EU industrial sectors, and/or ensure a high potential for market uptake through further private/public investment (including relevant EU deployment programmes, such as the Innovation Fund). Proposals should include a sound analysis of the critical barriers (technological and non-technological) for the successful market deployment and the corresponding plan to address them.

Proposals are expected to include a clear **go/no go moment** ahead of the deployment phase of the demonstrator. Before this go/no-go moment, the proposal has to deliver a techno-economic assessment, a complete implementation plan (with all needed permits for the deployment of the project). The proposal is expected also to demonstrate how it will get a financial close for the whole action.

HORIZON-CL4-2027-01-MATERIALS-PRODUCTION-X2: R&I in Support of the Clean Industrial Deal: Decarbonisation of energy intensive industries (Processes4Planet and IAM4EU partnership)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 20.00 and 25.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 125.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Technology</i>	Activities are expected to achieve TRL 7-8 by the end of the project.

<i>Readiness Level</i>	
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>To contribute to a balanced portfolio covering the three technology areas described in the scope below, proposals are encouraged to address in an integrated way a combination of the technology areas below, grants will be awarded to applications not only in order of ranking, but also in a manner to ensure that there is at least one proposal selected for funding for each technology area, provided that the applications attain all thresholds.</p>

Expected Outcome: Proposals are expected to contribute to **all** of the following expected outcomes:

- Accelerate the use of innovative processes to decarbonise industrial processes and bring to the market more cost-effective clean products to strengthen the competitiveness and resilience of EU industries (with quantifiable contribution).
- Create new innovative first-of-a-kind operational demonstrators and/or optimize newly installed industrial decarbonisation solutions in Europe.

Proposals are also expected to demonstrate the market readiness of the envisaged future clean products and their innovative processes via a credible business plan and an exploitation strategy for industrialisation, including market-tested use cases.

Scope: The **Clean Industrial Deal** aims to secure the EU as an attractive location for manufacturing, including for energy-intensive industries, and to promote clean tech and new circular business models in order to meet Europe's ambitious decarbonisation and climate neutrality targets. It focuses primarily on the competitive decarbonisation of EU industry and on the production of clean technologies in the EU.

The following three technology areas on energy intensive industries having a strong and promising growth potential in Europe are in scope of this call:

- Managing of carbon cycle (CCU and/or CCUS)
- Clean energy usage in production (electrification of the processes, integration of alternative green energy carriers, demand side management including more effective on-site renewable energy storage solutions)
- Resource efficiency (material, energy, water) of production processes

As part of bringing the above tech solutions closer to the market, proposals may also address step-change in relevant network and infrastructure deployment to facilitate scale up. Use of

advanced materials, safe and sustainable materials and processes, and circularity are also to be addressed as part of the selected processes.

Applicants are **free to decide on the specific technological area they wish to strengthen** within an industrial sector, provided that it is innovative and can lead to low carbon solutions. The choice of the specific technologies addressed in the proposal is left to the project applicants who should include a thorough justification of the choices both in technological and business terms.

Proposals are expected to:

- demonstrate an **adequate integration of relevant technological solutions** in support of the Clean Industrial Deal, and to ensure a clear and quantifiable impact on competitiveness and reduction of GHG emissions. The integration can either be demonstrated in a direct (e.g. reduction of greenhouse emissions of a process) or an indirect (e.g. production of a new green/clean product) manner. The use of relevant results of R&I projects previously funded at EU, national or regional level is encouraged.
- show **industrial leadership** in the deployment after the project. To this end, they must also put together an industry driven consortium composition to ensure a quantifiable impact on competitiveness. In view of future deployment and market readiness, the sizes of the consortia must be manageable, while still being able to ensure an adequate integration across the chosen specific technological approach. As an indicative figure, **consortia should not exceed ten participants**, and the size of the consortia should be justified. The participation of SMEs is encouraged.
- seek synergies with relevant existing projects, initiatives and structures, such as European Partnerships / Joint Undertakings.

Proposals are expected to provide a sound and convincing **business plan** and **market-readiness strategy** (cf. intro) on how to prepare and support the deployment of the proposed tech solution across relevant EU industrial sectors, and/or ensure a high potential for market uptake through further private/public investment (including relevant EU deployment programmes, such as the Innovation Fund). Proposals should include a sound analysis of the critical barriers (technological and non-technological) for the successful market deployment and the corresponding plan to address them.

Proposals are expected to include a clear **go/no go moment** ahead of the deployment phase of the demonstrator. Before this go/no-go moment, the proposal has to deliver a techno-economic assessment, a complete implementation plan (with all needed permits for the deployment of the project). The proposal is expected also to demonstrate how it will get a financial close for the whole action.

Technology infrastructure, knowledge valorisation and support for scaleups and startups

Proposals are invited against the following topic(s):

HORIZON-CL4-2026-01-MATERIALS-PRODUCTION-Y1: Enhancing industry-academia knowledge exchange in Social Sciences and Humanities (SSH) (CSA)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 1.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 2.00 million.
<i>Type of Action</i>	Coordination and Support Actions

Expected Outcome:

- Increased innovation capabilities for industry by harnessing the potential of Social Sciences and Humanities, including the Arts, to provide effective solutions to companies' research and innovation challenges and organisational development.
- By facilitating industry exposure, SSH researchers' better understanding of industry needs and opportunities for collaboration.

Scope: This action aims to leverage the strengths of social sciences, humanities and arts (SSH) to address companies' specific needs, fostering a dynamic and productive industry-academia co-creation for knowledge valorisation. This action will support SSH–industry co-creation (hackathons, team-based approaches etc) focussing on specific challenges from industry and SMEs including, but not limited to understanding the socio-technical implications of new technologies and innovations, broadening the perspectives of companies' strategic actions, creating a deeper understanding of customer requirements, developing new ideas and innovations and contributing to organisational development, sustainability and long-term profitability.

The action will cover the following activities:

- Developing a methodology for understanding how various needs from industry and SMEs can be addressed by knowledge exchanges with SSH researchers and students.
- Service to industry and SMEs including spinoffs and startups to support solving company challenges with international teams of SSH researchers and students.

- A study to tackle the key questions concerning the technical and conceptual feasibility of Industry-Academia knowledge exchange with SSH to improve innovation management and organisational development.

HORIZON-CL4-2026-01-MATERIALS-PRODUCTION-Y2: Unlocking the potential of intellectual assets for industry, SMEs and startups (CSA)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 1.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 2.00 million.
<i>Type of Action</i>	Coordination and Support Actions

Expected Outcome:

- Enhanced valorisation of intellectual assets, including dormant patents, from universities and public research organisations to support the adoption of green and digital technologies by industry, SMEs and start-ups/spinoffs.
- Development of entrepreneurial skills and increased involvement of students, researchers, and innovators in the valorisation of research results.
- Uptake of effective models and tools to facilitate valorisation of unused IP and intellectual assets and access by startups, SMEs, and innovative companies to this untapped knowledge in public research organisations.

Scope: Aligned with the European Union's policy priorities, this action will contribute to overcoming the innovation paradox by maximising the impact of public spending in R&I through improved knowledge valorisation practices, and facilitating the uptake of green and digital technologies by start-ups, spinoffs, and innovative SMEs. By unlocking the untapped potential of intellectual assets within universities and public research organisations, and leveraging the creativity of students, researchers, and innovators, the action seeks to improve value creation opportunities deriving from these assets and bolster the competitiveness of European industry.

The action should explore strategies and implement pilots for actively involving students and researchers (including those in social sciences and humanities) in valorising academic IP and intellectual assets. These should include hackathons, workshops and larger-scale “summer camp” programmes, and foresee the involvement of interested industry partners than can be potential adopters.

The action should also identify and test models and tools for easier IP access and utilisation by startups and SMEs. These should cover innovative licensing and other valorisation approaches, especially tackling the issue of unused academic patents, as well as the use of AI to manage and valorise research results and IP.

The action should exploit synergies with other EU-funded projects covering intellectual assets management, entrepreneurship, and AI for knowledge valorisation.

HORIZON-CL4-2026-01-MATERIALS-PRODUCTION-Y3: Breakthrough innovations in industrial technologies

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 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.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 20.00 million.
<i>Type of Action</i>	Coordination and Support Actions

Expected Outcome:

- Enable open-ended breakthrough innovations in industrial technologies, feeding the pipeline of knowledge

Scope: This is an open topic, intended to cover breakthrough innovations within the scope of the strategic research agendas of the partnerships Made in Europe, Process4Planet, Clean Steel, Innovative Advanced Materials (IAM4EU) and Textiles.

It will be implemented using the Fast Track to Innovation instrument.

HORIZON-CL4-2026-01-MATERIALS-PRODUCTION-Y4: Integration of Technology Infrastructure capacities (CSA)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 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.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 3.00 million.

<i>Type of Action</i>	Coordination and Support Actions
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HORIZON-CL4-2026-01-MATERIALS-PRODUCTION-Y5: Pilot access programme to Technology Infrastructures for European startups and scaleups (CSA)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 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.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 3.00 million.
<i>Type of Action</i>	Coordination and Support Actions

Raw Materials

Proposals are invited against the following topic(s):

HORIZON-CL4-2026-01-MATERIALS-PRODUCTION-11: Innovative technologies and tools for exploration and modelling of critical raw materials (RIA)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 5.00 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.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 20.00 million.
<i>Type of Action</i>	Research and Innovation Actions

Expected Outcome:

- Increased information on the European Union critical raw material occurrences, while contributing to the implementation of the National exploration programmes (article 19 of the Critical Raw Materials Regulation);
- Improved knowledge base of EU critical raw materials to identify new areas for exploration and resource estimation;

- Accelerated development of EU domestic raw materials exploration projects integrating innovative technologies that can form the basis for new EU SMEs;
- Develop innovative exploration data processing and modelling and mineral system analysis for identification of critical raw materials deposits in the EU;
- Increase the knowledge of critical raw materials and carrier minerals of critical raw materials within the EU, including primary mineral deposits;
- Strengthen EU Geological Surveys capacities and skills to implement the National Exploration programmes as defined in the Critical Raw Materials Act;
- Accelerate development of EU domestic critical raw materials exploration projects by junior mining / exploration companies.

Scope: Actions should develop and deploy advanced geological modelling and mineral system analysis using multi-source data (geological, geophysical, and geochemical) from ground-based and remote-sensing techniques to develop high-resolution 3D models of CRM deposits. The integration of new (AI and machine learning) and conventional methods will be necessary to predict with the greatest accuracy the location of mineral deposits of critical raw materials and their carrier minerals.

Actions should develop new knowledge and conceptual models, supported by innovative technologies to strengthen and secure the EU's supply of primary raw materials by:

- Generating better geological understanding (i.e. characterization, modelling, mapping) of known mineral deposits to identify critical minerals resources and inform discovery of new resources
- Developing new genetic models for ore deposit types that host critical minerals in order to identify areas for exploration, especially in previously overlooked regions
- Advancing mineral prospectivity modelling processes
- Facilitate the integration of existing multi-datasets newly acquired data.

HORIZON-CL4-2026-01-MATERIALS-PRODUCTION-12: Technologies for innovative extraction of raw materials (RIA)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 5.00 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.

<i>Indicative budget</i>	The total indicative budget for the topic is EUR 20.00 million.
<i>Type of Action</i>	Research and Innovation Actions

Expected Outcome:

- Developed innovative and cost-effective technologies for extraction of raw materials in the European Union;
- Increased domestic EU sourcing of raw materials;
- Improved responsible supply of raw materials to the EU in line with the EU principles for sustainable raw materials;
- Substantially reduced the Green House Gases (GHGs) emissions intensity of extraction per ton of the material (metal, metal content, concentrate, mineral).

Scope: Actions should develop new sustainable concepts and technological solutions, including alternative approaches, for mining of complex or difficult to access mineral deposits, including abandoned mining sites, particularly addressing the challenges of accessibility, industrial viability, safety and environmental impacts, including water use and GHG intensity of extraction.

Actions should be driven by industry and raw materials users. The actions should duly justify the relevance of all targeted minerals and metals. Priority are the EU critical raw materials. Sea mining is excluded from this topic.

Actions should envisage clustering activities with other relevant selected projects for cross-projects co-operation, consultations and joint activities on cross-cutting issues and share of results as well as participating in joint meetings and communication events. To this end proposals should foresee a dedicated work package and/or task, and earmark the appropriate resources accordingly.

Proposals submitted under this topic should include a business case and exploitation strategy, as outlined in the introduction to this Destination.

International cooperation is encouraged with countries with which the EU has signed Strategic Partnerships on raw materials, especially with Ukraine.¹⁵

HORIZON-CL4-2026-01-MATERIALS-PRODUCTION-13: Monitoring of secondary raw materials (CSA)

Call: INDUSTRY

Specific conditions

¹⁵ https://single-market-economy.ec.europa.eu/sectors/raw-materials/areas-specific-interest/raw-materials-diplomacy_en

<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 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.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 5.00 million.
<i>Type of Action</i>	Coordination and Support Actions

Expected Outcome:

- Improved knowledge base of EU and third country secondary raw materials (potential, resource estimation, production and refining);
- Accelerated commercial exploitation development of EU secondary resource recovery projects EU;
- Developed reports on future trends in raw materials markets.
- Identified supply and demand bottlenecks of future secondary raw materials supply;
- Improved EU raw materials intelligence, strategic planning and foresight capacity.

Scope: A successful transition to a climate-neutral, circular and digitised EU economy relies heavily on a secure supply of raw materials. In order to strengthen EU autonomy and reduce over-dependency, we must boost domestic sourcing, both for primary and secondary raw materials.

Actions should be based on a common understanding of relevant terms and codes, and develop an understanding of anthropogenic resources and derive the needed aspects for classification of recovery projects and to develop criteria for a transparent, consistent and objective classification, needed to establish a comprehensive resource classification approach.

Actions should acquire new data on secondary raw materials via in situ sampling from different regions across the EU, collect existing data and present in a harmonised UNFC format. The action should build on and advance further the work of UNECE – UNFC expert group on Anthropogenic resources regarding the classification of secondary raw materials and the work of Horizon Europe project FUTURAM regarding collection of data and information on secondary raw materials. The action should develop a proposal for EU statistics for secondary raw materials.

The action should focus on the following streams of secondary raw materials, with particular attention to critical raw materials: waste batteries, WEEE, mining waste, slags and ashes, and construction and demolition waste.

All the data and information generated through these actions should be shared in open formats on a free of charge basis with the European Commission, for its own use and for publication.

The action should envisage clustering activities with other relevant selected projects for cross-projects co-operation, consultations and joint activities on cross-cutting issues and share of results as well as participating in joint meetings and communication events. To this end proposals should foresee a dedicated work package and/or task, and earmark the appropriate resources accordingly.

International cooperation is encouraged with countries with which the EU has signed Strategic Partnerships on raw materials, especially with Ukraine.¹⁶

HORIZON-CL4-2026-01-MATERIALS-PRODUCTION-14: Improving availability of secondary raw materials through recycling (IA)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 6.00 and 7.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 30.00 million.
<i>Type of Action</i>	Innovation Actions

Expected Outcome:

- Developed raw materials recycling and re-use of components and/or products from end-of-life products technologies and urban mines, including cost-effective and efficient sorting technologies for separation and recycling and the sustainable embedment of the process regarding energy, resource and water efficiency.
- Improved responsible supply of raw materials to Europe in line with the EU principles for sustainable raw materials.

Scope: Actions should demonstrate new or improved systems located in the EU developing material efficient high-quality recycling of raw materials.

Actions should focus on the whole chain of recycling processes and procedures - from collection, logistics, characterisation, sorting, cleaning, refining and purification of secondary raw materials and quality of produced outputs.

Recycling and re-use where the recycled material is of lower quality and functionality than the original material (downcycling), is not in the scope of the topic.

¹⁶ https://single-market-economy.ec.europa.eu/sectors/raw-materials/areas-specific-interest/raw-materials-diplomacy_en

Actions should envisage clustering activities with other projects aiming at second life, re-use, repurposing, remanufacturing of products and/or components relevant selected projects for cross-projects co-operation, consultations and joint activities on cross-cutting issues and share of results as well as participating in joint meetings and communication events. To this end proposals should foresee a dedicated work package and/or task, and earmark the appropriate resources accordingly.

Proposals submitted under this topic should include a business case and exploitation strategy, as outlined in the introduction to this Destination. For TRLs 6-7, a credible strategy to achieve future full-scale deployment in the EU is expected, indicating the commitments of the industrial partners after the end of the project.

International cooperation is encouraged with countries with which the EU has signed Strategic Partnerships on raw materials, especially with Ukraine.¹⁷

HORIZON-CL4-2026-01-MATERIALS-PRODUCTION-15: Technologies for innovative processing and refining of raw materials (RIA)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 25.00 million.
<i>Type of Action</i>	Research and Innovation Actions

Expected Outcome:

- Increased recovery rates of valuable raw materials, particularly critical raw materials from low grade or complex ores and/or from extractive waste;
- Increased economic performance in terms of higher material-, water-, energy- and cost-efficiency and flexibility in minerals processing and metallurgical processes;
- Improved the health, safety and environmental performance of the operations throughout the whole life cycle which is considered, including a reduction in waste, wastewater and emissions generation and a better recovery of resources from generated waste;

Scope: Actions should demonstrate new or improved systems located in the EU integrating relevant processing and refining technologies for better recovery of raw materials from low

¹⁷ https://single-market-economy.ec.europa.eu/sectors/raw-materials/areas-specific-interest/raw-materials-diplomacy_en

grade and/or complex ores from extractive wastes, reduction of waste, higher energy efficiency. The action can also reduce the content of toxic elements or compounds in the resulting material products. The actions should target minerals and metals, particularly critical raw materials.

The solution proposed should be flexible enough to adapt to different or variable ore grades and extractive waste streams and should be supported by efficient and robust process control. Where relevant, any solution proposed for the reduction of the content of toxic elements or compounds in the resulting materials should also include the appropriate management of the hazardous substances removed.

Actions should develop intelligent and innovative production systems which better utilise natural resources by minimising losses during waste-rock separation in an optimised and energy-efficient process and by minimising use of water.

Recycling of end-of-life products is excluded from this topic, though joint processing of waste streams originating from end-of-life products recycling could be included and has to be duly justified.

Actions should envisage clustering activities with other relevant selected projects for cross-projects co-operation, consultations and joint activities on cross-cutting issues and share of results as well as participating in joint meetings and communication events. To this end proposals should foresee a dedicated work package and/or task, and earmark the appropriate resources accordingly.

Proposals submitted under this topic should include a business case and exploitation strategy, as outlined in the introduction to this Destination.

International cooperation is encouraged with countries with which the EU has signed Strategic Partnerships on raw materials, especially with Ukraine.¹⁸

HORIZON-CL4-2027-01-MATERIALS-PRODUCTION-16: Technologies for innovative processing of raw materials (IA)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 10.00 and 12.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 52.00 million.

¹⁸ https://single-market-economy.ec.europa.eu/sectors/raw-materials/areas-specific-interest/raw-materials-diplomacy_en

Type of Action	Innovation Actions
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Expected Outcome:

- Increased recovery rates of valuable raw materials, particularly critical raw materials from low grade or complex ores and/or from extractive waste;
- Increased economic performance in terms of higher material-, water-, energy- and cost-efficiency and flexibility in minerals processing and metallurgical processes;
- Improved the health, safety and environmental performance of the operations throughout the whole life cycle which is considered, including a reduction in waste, wastewater and emissions generation and a better recovery of resources from generated waste;

Scope: Actions should demonstrate new or improved systems located in the EU integrating relevant processing and refining technologies for better recovery of raw materials from low grade and/or complex ores from extractive wastes, reduction of waste, higher energy efficiency. The action can also reduce the content of toxic elements or compounds in the resulting material products. The actions should target minerals and metals, particularly critical raw materials.

The solution proposed should be flexible enough to adapt to different or variable ore grades and extractive waste streams and should be supported by efficient and robust process control. Where relevant, any solution proposed for the reduction of the content of toxic elements or compounds in the resulting materials should also include the appropriate management of the hazardous substances removed.

Actions should develop intelligent and innovative production systems which better utilise natural resources by minimising losses during waste-rock separation in an optimised and energy-efficient process and by minimising use of water.

Recycling of end-of-life products is excluded from this topic, though joint processing of waste streams originating from end-of-life products recycling could be included and has to be duly justified.

Actions should envisage clustering activities with other relevant selected projects for cross-projects co-operation, consultations and joint activities on cross-cutting issues and share of results as well as participating in joint meetings and communication events. To this end proposals should foresee a dedicated work package and/or task, and earmark the appropriate resources accordingly.

Actions should facilitate the market uptake of solutions developed through industrially- and user-driven multidisciplinary consortia covering the relevant value chain and should consider standardisation aspects when relevant. The action should also include the analysis of financial opportunities ensuring the market exploitation and replication of the circular business model behind the developed solutions as new processes, products and/or services.

Proposals submitted under this topic should include a business case and exploitation strategy, as outlined in the introduction to this Destination.

International cooperation is encouraged with countries with which the EU has signed Strategic Partnerships on raw materials, especially with Ukraine.¹⁹

HORIZON-CL4-2027-01-MATERIALS-PRODUCTION-17: Expert network on Critical raw materials (CSA)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 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.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 3.00 million.
<i>Type of Action</i>	Coordination and Support Actions

Expected Outcome:

- Strengthening the expert capacity in the EU in a wide range of raw materials along the whole value chain;
- Better informed and more effective decision-making by the EU and National policy makers and the producers and users of raw materials regarding the supply and demand of raw materials and the associated environmental and social aspects;
- Improved EU official statistics and building the EU knowledge base of primary and secondary raw materials.

Scope: Actions should strengthen an EU expert network and community covering all raw materials screened in the CRM assessment of 2027. Flexibility in screening additional raw materials will be an added value.

The consortium should build the EU expert community covering each screened raw material with expertise on primary and secondary resources; production, including exploration, mining, processing, recycling and refining; substitution of CRMs; raw materials markets; future demand and supply; supply risk management and stress tests; materials flows; raw materials standardisation; socio-economic analysis, and strategic value chains and end-use sectors, including batteries, e-mobility, renewable energy, electronics, security and aerospace.

¹⁹ https://single-market-economy.ec.europa.eu/sectors/raw-materials/areas-specific-interest/raw-materials-diplomacy_en

The actions should flexibly support the Commission in policy making related to Critical Raw Materials in general or linked to specific applications or sectors; as well in the relevant events organised by the Commission.

The actions should also improve data and knowledge on all screened raw materials; and support the Commission in the analysis of the future supply and demand of raw materials, technology gaps and innovation potential along the raw materials value chains.

The action should update the data and information fact sheets from the previous criticality exercise for all screened raw materials, and ensure their quality by relevant raw material experts. Factsheets are to be finalised by the end of 2029, and could be fine-tuned before publication expected in 2030.

The action is expected to organise two expert validation workshops in 2029 to support the EU criticality assessment, and validate draft factsheets for all screened materials. On request of the Commission, organise in-depth workshops on several strategic metals (agreed with the Commission) for renewable energy, e-mobility and security with recognised commodity experts from industry and other organisations.

The action should provide policy briefs and analyses based on requests from the Commission and proposed work shall be coordinated with the Commission's work and relevance reviewed in the light of policy development and needs.

The action should envisage clustering activities with other relevant selected projects for cross-projects co-operation, consultations and joint activities on cross-cutting issues and share of results as well as participating in joint meetings and communication events. To this end proposals should foresee a dedicated work package and/or task, and earmark the appropriate resources accordingly.

Innovative Advanced Materials

Proposals are invited against the following topic(s):

HORIZON-CL4-2026-04-MATERIALS-PRODUCTION-40: New or enhanced IAM-enabled sensing functionality

Call: DIGITAL	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR N/A million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 24.00 million.

<i>Type of Action</i>	Research and Innovation Actions
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Expected Outcome:

- New technological solutions with improved performance and reduced energy consumption providing significant advances towards the emergence of competitive value chains in IAM-based sensing components in Europe.
- Widespread adoption of low-cost IAM-based sensing solutions in e.g. environmental monitoring, industrial safety, and next-generation smart sensing applications.

Scope: Proposals should address at least one of the following two areas.

A. IAM-enabled multifunctional surfaces able to detect and respond to environmental changes, like temperature, pH, moisture, and converting these signals into measurable outputs. Such surfaces should demonstrate high performance in terms of sensitivity, selectivity, response time, durability and cost-effectiveness. Proposals should target applications in e.g. environmental and chemical sensing, touch and pressure sensing.

B. The development of enhanced IAM-based sensor demonstrators, that enable miniaturization and integration into application systems e.g. into portable IoT devices. These sensors must meet key performance requirements, e.g. compatibility with silicon technology, operation at ambient conditions with low power consumption, high sensitivity (low limit of detection), high selectivity and fast detection speed.

Proposals should integrate the value chain and incorporate the relevant manufacturing technologies needed to bring the developed devices towards the market.

Proposals should include activities aiming at facilitating future exploitation of results.

Compliance with the safe and sustainable by design framework will boost the confidence of industry and end-users and enhance the Innovative Advanced Materials ecosystem and uptake.

Cooperation with the activities funded under the Chips Joint Undertaking and photonics partnership are encouraged as well as other related application initiatives.

Destination 3: Developing an agile and secure single market and infrastructure for data-services and trustworthy artificial intelligence services

Telco-Edge-Cloud continuum/ 3C Network (Connected Collaborative Computing) and Open Internet Stack

Proposals are invited against the following topic(s):

HORIZON-CL4-2026-04-DATA-01: Demand-side 3C pilot demonstrators on converged Telco Edge Cloud Infrastructure

Call: DIGITAL	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 19.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 38.00 million.
<i>Type of Action</i>	Innovation Actions

Expected Outcome:

- Validation in real environments of open orchestration platforms across the telco-cloud edge continuum unlocking the transformative value of AI for European businesses, driving business growth in multiple industries strategic for Europe.
- Enabling the path towards sustainability and competitiveness of key vertical sectors in the EU, exploiting the innovative features of 3C/ telco-edge-cloud, including network features such as API (Application Program Interface) aggregation, slicing, automation, latency, security, ISAC (Integrated Sensing and Communication), reconfigurability, to significantly improve quality of service, resilience, sustainability and other performance parameters of digital communications.
- The demand pilots will have a clear sector relevance, with one pilot addressing the future of smart mobility including the automotive sector.
- A vibrant ecosystem around 3C/telco-edge-cloud infrastructure, targeting SMEs and start-ups to develop innovative services and new business models for infrastructure investments.

Scope: The term “Connected, Collaborative, Computing (3C) Network” refers to a telco-edge-cloud, secure multi-provider and multi-technology, communication system that hosts network functions and workloads for and beyond connectivity (e.g. 6G, AI Storage/Compute, networking, Security ISAC , and any other application or capability) as a service (aaS). Key

features of the 3C/ telco-edge-cloud network include programmability, fast service creation, security and privacy, mobility, and service continuity across inter-domain deployments. 3C/ telco-edge-cloud networks enable innovative use cases for an EU Digital Market that integrate communication, collaboration and computing capabilities in competitive and sustainable business models that will reinforce EU competitiveness and contribute to digital sovereignty, in particular through the use of Open Internet Stack components.

The 3C Network large-scale pilot funded under *topic HORIZON-CL4-2025-03-DATA-08: Large-scale pilots for supply end-to-end infrastructures integrating device, network computing and communication capabilities for Telco Edge Cloud deployments, as a basis for Connected Collaborative Computing Networks (3C networks) (RIA)* is setting up end-to-end integrated infrastructures and platforms, bringing together players from different segments of the connectivity and compute value chain and beyond. The main target is to research and validate the integration of device, network, cloud and edge computing, and communication capabilities for telco edge cloud deployments to realize a ubiquitous mesh of computing and communication resources. As a main outcome the supply side pilot establishes an open orchestration platform across the telco-cloud-edge continuum, exploits the transformative value of AI and builds on the integration of solutions developed by the Open Euro Stack.

Demand- side pilot demonstrators called in this topic will build on the above supply side large-scale pilot and integrate future domain-specific applications and services with an emerging European 3Cs/ telco-edge-cloud infrastructure, leveraging different network features. Key features will include security and privacy offering resilience to emerging quantum threats, mobility, and service continuity across inter-domain and multi-cloud deployments and ecosystems.

Up to two pilot demonstrators on specific verticals are expected.

- One pilot demonstrator focusing on **Mobility** covering specific areas of transport, logistics and the Automotive industry. The pilot should work towards implementing the Connected and Automated Vehicle Alliance identified in the [Automotive Action plan](#), in particular Pillars 3 (AI models) and 5 (Large-scale testing), which will be launched in 2025.
- One pilot demonstrator focusing on another vertical sector such as energy, smart communities, industrial virtual worlds, agrifood or manufacturing.

They would be driven by a consortium including partners both from the demand (user) and infrastructure supply side. The pilot demonstrators should take advantage of open application interfaces, explore the possibilities of AI, “virtual worlds”, and other innovative technologies for practical implementation in the referred vertical domains. They should leverage combined investments in network infrastructure, computing and connectivity infrastructure as an enabler for more extensive set of digital innovation, with cognitive cloud computing and swarm intelligence, generative AI and LLM, as well as on-boarding of XR/AR technologies, being ranked most important.

Pilot demonstrators should demonstrate the evolution from virtualised and cloud-native network functions towards automated network operations enabling agile and green IoT-edge computing solutions and decentralised intelligence. They should also demonstrate benefits for infrastructure providers to operate networks more efficiently and move beyond traditional connectivity-service models to higher value-added services.

Demonstrations will respond to the ever more demanding processing power of AI through integration on-device level and radical changes triggered by GenAI affecting global communication infrastructures. Orchestration of workloads across the telco-cloud-edge continuum from distributed sensors and actuators to the edge and cloud is a crucial part of innovation as AI becomes more resource-intensive.

The pilot demonstrators should take into consideration the recommendations on user requirements from the advisory group of end users, as well as liaise with the collaboration and support action (CSA) funded under WP25 to bridge between the 3C/ telco-edge-cloud supply pilot funded under WP25 and the demand pilots funded under WP26-27.

The pilots should exploit in particular open APIs and open-source components as developed by the supply side pilot, e.g. including the use of capabilities to implement specific communication management services (e.g. Open RAN security, RIC VNF...), up-take of existing standards and relevant open-source projects (e.g., Sylva, ANUKET, Nephio, CAMARA, etc.).

The pilot demonstrators should include testing, validation and demonstration of prototypes of agile virtualised network functions combined with ubiquitous mesh of integrated devices, computing and communication resources in operational environments, ensuring high level of security and privacy, energy efficiency, transparency and control of the ecological footprint, as well as sustainable artificial intelligence services.

The pilot demonstrators are expected to re-use as far as possible existing open-source frameworks, i.e. open-source software governed by communities of contributors, that will provide key technology components for the operation of the 3C/ telco-edge-cloud supply-side large scale pilot. These open-source frameworks should be made available to the Open Internet Stack Support for Scale.

The proposals should ensure a high degree of participation of stakeholders from the relevant vertical sectors, with a particular attention to the involvement of SMEs, scale-ups and start-ups.

The pilots should establish a high degree of relations and collaborate with complementary EU funded research activities, like the Smart Networks and Systems Joint Undertaking (SNS JU) projects, the “Empowering AI across the continuum” and the “Sovereign edge/cloud infrastructure” R&I areas, the PPP virtual worlds, CCAM partnership as well as support of SDVSW-defined vehicle under the Chips JU.

HORIZON-CL4-2026-04-DATA-02: Open Internet Stack Sovereign Solutions

Call: DIGITAL	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 11.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 22.00 million.
<i>Type of Action</i>	Research and Innovation Actions

Expected Outcome: The overall outcome will be a large selection of Open-Source solutions that will be organised under the Open Internet Stack framework built under WP 2025. This will address the needs of both supply and demand side of the rich and diverse eco-system of 3C European providers and verticals. This topic will stimulate the emergence at European and global scale of solutions that are:

- Open source and made in Europe, supporting trust, and sovereignty, and delivering credible alternative choices for citizens, governments and companies including start-ups and SMEs.
- Paced for easy deployment by the rich European eco-systems of providers, integrators and verticals.
- Interoperable, standard-based, decentralised solutions for enabling network effect and low layer Open Source modules.

Scope: Proposals should address one or several of the following technology areas:

- Network and Transport technologies including routing and virtual private networks, survivable mesh technologies.
- Sovereign operating systems and firmware (including smartphones).
- Open Source software productivity and supply chain technologies such as federated forges, independent and cross-platform development framework.

Applicants should devise a plan for ensuring that the solutions are designed for efficient deployment, with pre-configured, modular components that facilitate integration by a wide range of users, including SMEs, public administrations, and service providers.

Applicants should detail development, integration, testing, deployment, uptake and operation activities. Focus will be on Open Source solutions and their integration and adoption in vertical use cases, to ensure replicability of the results and portability in different areas.

Proposals will have to demonstrate:

- That the proposed solution(s) has(ve) the technical maturity in terms of scalability, resiliency, advanced cryptographic protection, alignment with standards including for software and hardware supply chain and efficiency including environmental.
- That there is a community with critical mass that actively supports the development with or without associated business model.
- Evidence of use cases, interest and engagement from users and deployers of the solution.
- Credible path to be part of the Open Internet Stack in terms of cataloguing, searchability, availability through app-stores and alignment with EU regulation.

Applicants will detail any relevant previous projects on which the project will expand.

Applicants will detail their plan to creating synergies with other topics such as those in the WP25 Open Internet Stack, 3C, Virtual Worlds/Web4.0 as well as like-minded initiatives on the same solution perimeter.

Proposals should detail their strategy for maintenance, cataloguing, marketing, communication as well as the relationship with to the “Open Internet Stack Support for Scale” topic.

HORIZON-CL4-2026-04-DATA-03: Open Internet Stack Support for Scale

Call: DIGITAL	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR N/A million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 4.00 million.
<i>Type of Action</i>	Coordination and Support Actions

Expected Outcome: This topic will support the Open Internet Source Stack projects scale-up and maintenance ensuring:

- A common approach and hub for cataloguing, packaging, reviewing and validating Open Internet Stack components and projects.
- Long term viability by advising on Open Source sustainability models including business and foundation; Promotion of the EU as ideal location for Open Source Foundation sieges.

- A common branding, marketing, training and communication plan ensuring consistent perception.

A close interleave with policy development through a dedicated policy sandbox.

Scope:

- Applicants should devise a plan for: Cataloguing solutions in a structured and easy to discover way
- Performing security and accessibility audits on the selected solutions under the Open Internet Stack.
- Screening and selecting European funded Open Source projects, including by exploring the relevant Horizon Europe programmes, and devising a strategy for the Open Internet Stack to become a central hub for those solutions.
- Establishing links and mutual support with national, multi-country and pan-European initiatives supporting Open Source sovereign solutions.
- Advising on sustainability models (both for and non-for profit), on standardisation, licencing schemes, or localisation/internationalisation
- Elaborating a common branding with associated marketing and communication tool
- Developing training material on these solutions that stresses their value in terms of EU legislation compliance (GDPR, DSA/DMA, CRA...), security (e.g. reference to security audits, list of dependencies), use cases, funding/business model, deployment requirements (server side, user side), link to repository and community resource (maintainers, community manager, discussion board...). Training material will be tailored to each target audience: Operators of infrastructure, Integrators, Government & verticals IT, end users.
- Implementing measures to identify/attract technology adopters (e.g. services providers, integrators, OSPOs in governments/verticals) to become promoters of these technologies.
- Develop sandbox tools for ensuring smooth compliance-by-design of the Open Internet Stack with relevant existing or futures EU policies.
- Support the established Open Source awards ceremony including devising a sustainability scheme for the awards after the action is finished.

Achieving the end-to-end AI compute continuum

Proposals are invited against the following topic(s):

HORIZON-CL4-2026-04-DATA-04: New approaches for decentralized, federated and sustainable AI data processing

Call: DIGITAL	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 17.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 35.00 million.
<i>Type of Action</i>	Research and Innovation Actions

Expected Outcome: Developing new approaches, tools and techniques that overcome the obstacles of today's centralised AI compute techniques: limits in the availability of energy and AI compute capacity in centralised standalone environments, limited availability of types of AI chips, data quality and security and latency in AI data processing. The ultimate objective is to help overcome EU's AI compute capacity bottlenecks by offering alternative decentralised and sustainable AI compute models that enable exploitation of diverse hardware processing architectures and scaling approaches.

Scope: This topic focusses on technologies and techniques that enable AI data processing to leverage distributed compute resources across the cloud and edge computing continuum throughout the whole AI model lifecycle from data collection, training, fine-tuning, and deployment. To overpass today's state of the art in the area, the considered research areas include:

- To build distributed, decentralised, and federated “compute continuum” enabled AI architectures beyond federated learning and integrating model compression tools and new mechanisms to enable AI data processing to scale across multiple and diverse computing infrastructures.
- Development, deployment, and operation of AI workflows across heterogeneous and distributed infrastructures along the compute continuum (edge, cloud, HPC), including the possibility of incorporating innovative computing paradigms (neuromorphic and quantum computing) and hardware efficiency enhancements ((e.g., including in-memory computing, and hardware and software approximation).
- Novel methods and techniques to improve data availability for decentralised AI data processing. These consider tools to ensure data quality (e.g. prevention of data sets imbalance across distributed data sources), volume optimisation for data transfers across environments, and distributed data management, all while preserving data privacy and preventing data leaks (e.g. via advanced cryptographic protection with resilience to emerging quantum threats).

- New tools and mechanisms to measure, monitor and improve end-to-end energy efficiency and sustainability of AI data processing across the compute continuum, including the exploration of energy and sustainability implications of the heterogeneous AI processing architectures and their impact in the compute infrastructure design and long-term sustainability.

Successful project proposals should showcase proposed developments in at least two complementary use cases. These use cases should demonstrate the value gained and potential impact of project achievements in real-world situations, as well as address key applications and sectors critical to Europe's competitiveness. Use cases should provide compelling examples and scenarios and cater for the reproducibility of results' added value and impact in additional economic sectors.

HORIZON-CL4-2026-04-DATA-05: Energy efficiency and sustainability of AI data processing in Data

Call: DIGITAL	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR N/A million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 39.00 million.
<i>Type of Action</i>	Innovation Actions

Expected Outcome: Pilots for new technologies and a demonstration site which contribute to energy-efficient and sustainable AI data processing in data centres, reinforcing EU strategic autonomy and climate goals. Expected outcomes of projects include:

- Demonstrated innovations that substantially improve heat removal from high-power AI chips (e.g. direct on-chip cooling, advanced thermal interface materials, multi-scale thermal management), enabling higher performance without thermal throttling. This should lead to lower cooling energy needs and higher reliability for dense AI workloads.
- Prototypes of novel backup power systems (such as graphene-enhanced batteries) that operate with minimal cooling requirements, improving data centre resilience and enabling better use of renewable power.
- New methods and frameworks that optimise the entire data centre for energy-efficient AI processing. This includes intelligent workload scheduling and AI model optimisation techniques to reduce energy use (e.g. carbon-aware job scheduling and power capping to cut energy demand and peak temperatures), as well as designs for integrating on-site/off-site renewables and waste-heat reuse.

- As a result of all the above bullet points, a pilot demonstration site that allows for the testing and integration of the outcomes of these projects and serves as the European reference for showcasing the breakthroughs and cutting-edge technologies for energy-efficient and sustainable data centres developed under this topic. This site should serve as a model for technology uptake for the European data centre industry.

Outcomes should demonstrate potential for improved power usage effectiveness and utilisation of waste heat in external applications, aligned with European targets for carbon-neutral heating/cooling.

For bullets 1-3 pilots to showcase the efficiency and effectiveness of the developed technologies should be selected through open calls via FSTP ("Cascade funding"). Besides, the initiative that originates from bullet 4 should also make use of open calls through FSTP ("Cascade funding") to finance the integration, testing and demonstration of supplementary novel technologies as an extra means of including relevant breakthroughs in the pilot demonstration site.

Scope: For bullets 1-3 pilots to showcase the efficiency and effectiveness of the developed technologies should be selected through open calls.

1.

- i. Direct on-chip cooling and thermal management, including novel and innovative cooling techniques applied at chip and module level (direct liquid cooling, heat spreaders, thermal interface materials, and advanced packaging) and multi-scale thermal management techniques.
- ii. Energy-efficient power backup and storage systems: Innovations in early-stage energy storage concepts (graphene-enhanced batteries, supercapacitors, and other emerging battery chemistries) and approaches for net-zero backup.
- iii. Sustainable data centre architectures and AI workload optimization: addressing AI-driven workload scheduling, adaptive power management, dynamic resource allocation and integration of data centre heat capture and reuse.
- iv. Materials research for energy efficiency: Projects to make use of existing research in new materials and components supporting energy efficiency and thermal management, and to employ these for data centres benefit.
- v. Optimisation of data centre operation and functioning: explore AI solutions to optimize the Data centre functioning, computing architecture, and virtualization, minimizing its carbon and environmental footprint.
- vi. Integration of data centres into energy systems and the wider region: including solutions that integrate Data centres into energy system planning and operation.

At most one project will be selected in each of the above topics.

Aside from these, the pilot demonstration site must allow to combine the outcomes supplied by the other funded projects in the topic and enable for showcasing, benchmarking, and promoting their results across interested industrial stakeholders, including the European data centre and collocation industry, as well as other AI data centre operators, such as cloud and edge computing providers.

Data (under AI, Data and Robotics partnership)

Proposals are invited against the following topic(s):

HORIZON-CL4-2026-04-DATA-06: Efficient and compliant access to and use of data (AI, Data and Robotics partnership)

Call: DIGITAL	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 10.00 and 25.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 50.00 million.
<i>Type of Action</i>	Innovation Actions

Expected Outcome: The actions under this topic are expected to contribute to the following outcomes:

- Lead to the development of secure, compliant and adaptive systems that improve the availability, accuracy, privacy and interoperability of data across the Union.
- Deliver advanced, AI-driven compliance technologies and regulatory tools that reduce administrative burdens, promote regulatory efficiency, and facilitate the implementation of the Data Union Strategy, a Single Market for data, Common European Data Spaces, and the European Business Wallet.
- Enable more agile regulatory processes, foster mutual recognition of compliance efforts across Member States, and enhance transparency and trust. They will position the Union at the forefront of regulatory innovation, while strengthening the resilience, competitiveness, and digital leadership of the Single Market.
- Enhance the excellence and competitiveness of companies, professionals, and public administrations by providing innovative, automated solutions to navigate and comply with Union rules seamlessly across borders.

- Enhance public services and strengthen the competitiveness and digital sovereignty of the EU by improved availability and use of high-quality real and synthetic data to train AI systems more effectively.

Scope: The scope of this topic is to support the deployment of secure, interoperable, and scalable data management systems, ensuring seamless cross-sector data integration, automation of key processes, and compliance with EU frameworks.

The actions should deliver high-quality, well-structured, secure and compliant data, tailored to evolving societal, industrial, and public sector needs, underpinning key EU strategies, including the Data Union Strategy, the Apply AI Strategy, and the development of Common European Data Spaces, Data Labs and AI Factories. The developed methods, technologies and tools should ensure that data is effectively shared between sectors, disciplines, and Member States, and that the data is reliable, traceable, and fit for purpose.

The proposals should address one or both of the following areas:

1. Area 1: The actions under this area should support the development and deployment of ***advanced, AI-driven compliance technologies and solutions that automate data transactions and key regulatory processes, reduce administrative burdens, and facilitate seamless adherence to EU rules.*** This includes RegTech/GovTech applications such as digital tools offering real-time compliance guidance, automated rule-drafting assistants for policymakers, and multilingual chatbots providing regulatory support to businesses and professionals. Predictive analytics and risk-based approaches should allow tailored compliance pathways, while integration with national systems and the Single Digital Gateway should promote cross-border mutual recognition and application of the Once-Only Principle. Public administrations should be equipped with automated compliance assessment tools, real-time analytics dashboards, and interoperability frameworks to enhance and streamline regulatory oversight and cooperation.

The solutions should adhere to open technical standards, ensuring scalability, inclusiveness, and co-development with private and public stakeholders. Robust cybersecurity, trustworthy AI, trust safeguards, security and privacy cryptographic protection, including its advances for resilience against quantum threats, should be embedded, aligning with EU data protection and digital identity frameworks. Artificial intelligence and machine learning models should be harnessed to enable data-driven feedback loops that support continuous policy learning, allowing regulators to monitor rule implementation, identify unnecessary burdens, and simplify legislation based on real-time evidence. Where appropriate, the actions under this Area should build on and integrate the privacy-enhancing (including anonymization) technologies developed under earlier topics in the Horizon Europe programme.

1. Area 2: The actions under this area should focus on the ***design and deployment of secure, scalable, and adaptive data management systems that automate key data processes,*** such as data curation, metadata tagging, ontology discovery, labelling, annotation, and quality control, developing and adapting appropriate AI methods and

tools for these specific tasks. These systems should facilitate seamless integration and sharing of data across sectors and disciplines, ensuring interoperability, data provenance, data privacy and handling secured against emerging quantum threats, and compliance with applicable EU legal frameworks. Special emphasis is on enhancing data accuracy, representativeness, and relevance, particularly for use cases in industry, public services, citizen engagement, and the development of trustworthy AI applications. The development of such high-quality, semantically rich datasets will be essential to unlock the full potential of AI across domains.

Furthermore, the actions under area 2 may also support the generation and use of high-quality synthetic data, including spatial synthetic data, to complement real-world datasets while preserving data privacy via advanced, state-of-the-art cryptographic protection. This may include, among others, the use of AI-enabled **generative graphics pipelines** to automate the creation of large-scale simulated environments and the application of **parallelised computing techniques** to train AI models and artificial agents efficiently.

The actions under both areas should take into account the work of the Data Spaces Support Centre, particularly the blueprint for common European data spaces, and build synergies with related Union initiatives such as AI Factories, European Blockchain Services infrastructure, and the European Business Wallet, as well as with sector-specific Common European Data Spaces, and EU Digital Identity Wallet large scale pilots. Close collaboration with relevant European Partnerships, stakeholders, including industry, public administrations, and research organisations, will ensure that the systems meet the practical needs of data users while fostering innovation, competitiveness, and digital sovereignty within the Single Market.

The Commission estimates that an EU contribution of EUR 20-25 million for Area 1 and EUR 10-13 million for Area 2 would allow these areas to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting different amounts.

Destination 4: Achieving open strategic autonomy in digital and emerging enabling technologies

AI Continent

AI SCIENCE

Proposals are invited against the following topic(s):

HORIZON-CL4-2026-04-DIGITAL-EMERGING-01: Pilot of the “Science for AI” Pillar of RAISE (“Resource in AI science in Europe”)

Call: DIGITAL	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 17.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 17.00 million.
<i>Type of Action</i>	Research and Innovation Actions

Expected Outcome:

- Set up a network of excellent AI Labs in the EU and Associated Countries, raising visibility and strengthening collaboration in European AI research
- Establish a model of cooperation among these labs.
- Ensure that the network operates as a virtual institute across Europe, pooling resources and expertise.
- Stimulate world-class developments in AI, and attract collaboration with industry, building on Europe’s research strength, and attracting top-notch talent
- Develop synergies with the AI in science efforts in RAISE.

Scope: Ensuring Europe's open strategic autonomy in AI requires reinforcing and leveraging Europe's strengths, particularly its world-class AI research community.

The selected consortium will pilot a network of excellent European AI labs that will collaboratively address fundamental AI research topics, pushing the frontier of the domain. Participants will cooperate within a virtual institute, attracting talents, stimulating industrial initiatives, providing inputs for moonshot projects and developing research agendas for the ones retained by the EC.

The consortium structure should function as a distributed "European AI Institute," reflecting the RAISE initiative's long-term vision and enhancing collaboration.

This initiative will also work in close collaboration with the fundamental research activities in AI taking place in the EIC pathfinder initiatives, to be integrated in RAISE.

HORIZON-CL4-2026-04-DIGITAL-EMERGING-02: Fostering AI Adoption: Powerful AI solutions that are safe and computationally efficient

Call: DIGITAL	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 15.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 30.00 million.
<i>Type of Action</i>	Research and Innovation Actions

Expected Outcome:

- Strengthen capabilities in the development of frontier AI models by addressing safety and efficiency challenges.
- Enhance computational efficiency of large AI models, leading to reduced computational costs.
- Strengthen safety of advanced AI systems through the development and implementation of safe-by-design principles.

Scope: To advance developments in frontier models taking into account their growing energy footprint, current computational limitations, and their safety.

The approach of this topic is twofold. Firstly, it aims to develop comprehensive methods to reduce the computational demands of AI models. Secondly, it seeks to ensure the safety of advanced AI systems by addressing fundamental design questions (safe-by-design approaches) as well as technical methodologies such as automated testing and interpretability.

Projects selected in this topic will link to the resources offered by the AI Factories and the Data Labs.

AI in science

Proposals are invited against the following topic(s):

HORIZON-CL4-2026-01-DIGITAL-EMERGING-61: Co-funded AI in Science Fellowships (RAISE pilot) (CO-FUND)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 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.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 30.00 million.
<i>Type of Action</i>	Programme Co-fund Action

Expected Outcome:

- Scale up and improve national or regional fellowship programmes in AI in science (i.e. focused on application of AI in scientific research).
- Improve the recruitment process of AI and domain scientific talent via international and transparent peer review systems.
- Attract and retain AI talent to/in Europe and upgrade AI knowledge and skills of the scientific community.
- Provide international visibility to national and regional fellowship programmes and network these programs as part of a pilot for RAISE).
- Improve the global employability conditions for AI researchers.

Scope: Proposals should support new or existing doctoral or postdoctoral programmes in the field of artificial intelligence applied to scientific research, at regional, national, or international level. Selected programmes will be co-funded under this topic, allowing scientific talent from across Europe to join these programmes.

Proposed programmes can focus on any area within the broad field of artificial intelligence in science and should emphasise interdisciplinarity between domain and AI/computer scientists. Proposals are encouraged to align with existing European, national or regional research, where applicable.

Different elements relevant for AI in science could be addressed by the proposed programmes, including but not limited to talent development and attraction through fellowships or interdisciplinary training programmes, access to HPC (including HPC credits), and data curation activities.

HORIZON-CL4-2027-01-DIGITAL-EMERGING-62:
Automation (RAISE pilot) (RIA)

Scientific

Laboratory

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 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.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 30.00 million.
<i>Type of Action</i>	Research and Innovation Actions

Expected Outcome:

- Development of closed-loop scientific experimentation systems that integrate automation with AI-driven hypothesis formation and decision-making in existing laboratory environments;
- Accelerated scientific discovery with increased efficiency and reproducibility;
- Improved scientific productivity;
- Advancement of laboratory automation, including development of best practices, challenges, and opportunities for accelerating R&D;
- Prototype functional demonstrators that showcase the integration of automation with AI-driven decision-making, enabling the development of closed-loop scientific experimentation systems.

Scope: This topic addresses the automated real-world testing of AI-generated scientific hypotheses, by developing closed-loop scientific experimentation systems that integrate laboratory automation with AI-driven hypothesis-formation and decision-making. Funded projects will help scientific labs with an already advanced level of automation and digitalisation to design, develop, and test the intelligence layer that enables scientific instrumentation to semi- or fully autonomously plan, run, and analyse experiments, accelerating discovery in science and enhancing efficiency and reproducibility, without requiring a complete redesign of existing laboratory outfitting.

Proposals should demonstrate how an existing lab can be retrofitted with AI-driven software systems to plan, execute, and interpret experiments in a closed-loop fashion.

Possible research targets include (non-exhaustively):

- integrating agentic AI systems that connect with laboratory instruments and robotics and can autonomously plan, act, learn and adapt within a scientific environment,
- AI-systems that orchestrate the scientific process within a lab or among a network of labs,
- assistive and interactive AI-managed robotic systems that automate diverse experiments and can be applied to a diverse hardware setup.

The thematic focus of this topic can be expanded to include scientific disciplines and experimental settings of interest to collaborating clusters.

An initial focus on materials science is put forward (Cluster 4). Impact areas of automated experimentation in this field could include (non-exhaustively) drug discovery, battery technologies, photovoltaics, carbon capture/storage, water purification, soil remediation, environmentally friendly fertilizers, development of alternative protein sources in food production, sustainable fabrics/dyes.

HORIZON-CL4-2027-01-DIGITAL-EMERGING-63: Thematic Networks of Excellence for AI in Science (RAISE pilot) (RIA)

Expected Outcome:

- Scientific progress with the help of AI, addressing strategic scientific challenges in the thematic areas selected (areas pending interest from thematic clusters);
- Pilot networks of excellent labs to pool talent as part of a Resource for AI Science in Europe (RAISE);
- Reinforce the European AI in science community; spread excellence in AI in science;
- Pool and focus European use of AI in science.

Scope: The aim of this topic is to establish networks of excellent labs across Europe, dedicated to collaborative research using AI in strategic and promising scientific areas or domains, piloting RAISE.

Activities include:

- Carry out collaborative research to solve key strategic AI research challenges in specific scientific disciplines, reducing fragmentation and duplication of efforts and enabling faster progress.
- Build networks of excellence for the application of AI in a range of scientific disciplines, fostering interdisciplinary collaboration between leading research institutions in AI and in the selected scientific area or discipline.
- Develop talent and knowledge exchange schemes (e.g. fellowships, mobility schemes, summer schools, matchmaking events) and include partnering schemes with institutes

outside the excellence network to spread excellence across Europe. [To attract excellent talent, fellowships should be remunerated following MSCA rates.]

- Identify, expand, curate, integrate and share relevant datasets and AI models. Develop community-driven standards and benchmarks for AI models in the thematic scientific area or discipline.
- Develop collaborations with industry for uptake of scientific outcomes and AI-based research methodologies.
- Each network of excellence will be dedicated to the application of AI to scientific research in a specific thematic area or scientific discipline.
- A thematic network of excellence for AI in materials science is proposed (Cluster 4). Thematic areas for further networks of excellence are to be defined in collaboration with participating clusters, pending interest, and could include life sciences/biotech, rare diseases, space/satellite data use, sustainable chemistry, bioeconomy or circular economy.

Apply AI

Proposals are invited against the following topic(s):

HORIZON-CL4-2026-04-DIGITAL-EMERGING-03: Next-Generation AI Agents for Real-World Applications in the ApplyAI sectors

Call: DIGITAL	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 19.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 38.00 million.
<i>Type of Action</i>	Research and Innovation Actions

Expected Outcome:

- Significant improvements in the autonomy and reliability of AI agents through advanced planning mechanisms, memory management, and reasoning capabilities.
- Innovative multi-agent frameworks demonstrating effective decentralized coordination and collaboration among multiple AI agents beyond the capabilities of individual agents.

Scope: AI agents are autonomous systems powered by large language models (LLMs), that can plan, utilize tools and perform actions autonomously to achieve specified goals based on

high-level instructions. The LLM acts as the agent's "brain," capable of interpreting instructions, generating plans, and using tools. This capability enables agents to autonomously plan and adapt behaviour in real-time to accomplish complex, multi-step tasks. AI Agents hold significant promise in numerous applications areas such as data analytics and coding.

Effective LLM-powered AI agents require careful design, incorporating structured planning and reasoning methods to manage complex tasks. Multi-agent collaboration frameworks further enhance capabilities by enabling structured interactions among multiple agents.

The AI progress will be validated in use-cases prioritised by the ApplyAI strategy.

Projects selected in this topic will link to the resources offered by the AI Factories, including the Data Labs. The results may be validated in the Testing and Experiment Facilities and further deployed via the European Digital Innovation Hubs (EDIHs).

HORIZON-CL4-2026-04-DIGITAL-EMERGING-04: Challenge-Driven AI Innovation Booster in Apply AI prioritised sectors

Call: DIGITAL	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 14.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 56.00 million.
<i>Type of Action</i>	Research and Innovation Actions

Expected Outcome:

- Significant technological progress and innovation in Apply AI prioritised sectors driven by challenge-oriented, AI-powered solutions.
- Increase visibility of the relevant AI community within key application domains, fostering the ecosystem
- Increase adoption of AI technologies across key application domains, such as healthcare (early detection and autonomous robots), advanced manufacturing (including AI-powered robotics), autonomous driving.

Scope:

- The Challenge-Driven AI Innovation Booster aims to drive significant technological progress and innovation in Apply AI prioritised sectors through challenge-oriented, AI-powered solutions. This initiative seeks to boost Europe's developer community and the

adoption of powerful, trustworthy AI solutions in strategic domains such as healthcare (early diagnoses and advanced robots), advanced manufacturing (including AI-powered robotics), autonomous driving. The final selection will align with the prioritised use-cases from the upcoming ApplyAI strategy.

- Projects selected in this topic will link to the resources offered by the AI Factories, including the Data Labs. The results may be validated in the Testing and Experiment Facilities and further deployed via the European Digital Innovation Hubs (EDIHs).

HORIZON-CL4-2026-04-DIGITAL-EMERGING-05: AI-Driven Manufacturing Line Design and Optimization

Call: DIGITAL	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 7.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 15.00 million.
<i>Type of Action</i>	Research and Innovation Actions

Expected Outcome:

- Development of AI tools for design and adaptation of manufacturing lines in response to real-time data and changing production needs, ensuring flexibility and rapid adaptation to evolving industry demands.
- Implementation of AI models that drive continuous and real-time improvements in manufacturing processes, enhancing efficiency, reducing operational costs, and ensuring sustained performance.

Scope: The integration of next-generation AI, including general-purpose AI, will enable the design, re-design, and continuous optimization of manufacturing lines. This will lead to more adaptable, efficient, and cost-effective production systems, with the potential for future refinement based on real-time data and evolving industry needs.

Proposals should demonstrate the potential for AI-driven manufacturing line design and optimization to be applied in various industries, including but not limited to automotive, and provide examples of how the developed AI tools can be used to address specific industry challenges.

These challenges will take into account the priorities identified in the ApplyAI strategy.

Projects selected in this topic will link to the resources offered by the AI Factories, including the Data Labs. The results may be validated in the Testing and Experiment Facilities and further deployed via the European Digital Innovation Hubs (EDIHs).

Robotics

Proposals are invited against the following topic(s):

HORIZON-CL4-2026-04-DIGITAL-EMERGING-06: Next-Generation Agile and Intelligent Robotics Platforms for Industrial and Service Applications

Call: DIGITAL	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR N/A million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 25.00 million.
<i>Type of Action</i>	Research and Innovation Actions

Expected Outcome:

- Novel robot design technique, materials and control techniques for flexible and meticulous manipulation of robots in unstructured environment and in collaboration with human at high degree of autonomy.
- New generation of flexible and safe robot systems validated in key application sectors.

Scope: Dynamic real-world environments require a new generation of agile, cost-effective, and intelligent robot platforms able to interact in safe and effective manner with humans for several industrial and service applications. These platforms should involve new design methods for non-rigid structures and the means to actuate and sense position where this may no longer involve fixed rotational or linear links.

They also require establishing a range of advanced materials, including composite materials, suited to developing robotic systems, both as the main structure and of manipulators and end effectors.

Proposals should cover new robot systems with enhanced mobility, autonomy, and adaptability, and simplified control architectures for safe and effective deployment in industrial environments and improved human-robot interaction.

**HORIZON-CL4-2026-04-DIGITAL-EMERGING-07: AI-Driven Robotics for Industry:
Enabling System Integration and Adoption**

Call: DIGITAL	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 9.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 18.00 million.
<i>Type of Action</i>	Innovation Actions

Expected Outcome:

- Enhanced deployment of robotics, bridging the gap between technology providers and end-users.
- Development and implementation of integration frameworks and solutions, including standardized protocols for data, training and safety evaluation and validation of robotic solutions in key use cases
- Improved competitiveness of European industries, notably SMEs via the development of advanced robotics, control algorithms, and cutting-edge AI innovations

Scope: The project will address Europe's critical lack of integrators of Robotics solutions addressing the various needs of industries. The project will involve system integrators with a deep understanding of state-of-the-art robotics components, including both hardware and software, and expertise in addressing interoperability issues.

To maximise the impact and adaptability of deployed systems, the approach should consider the most suitable AI training and inference methodologies, ensuring scalability, robustness, and applicability in diverse industrial environments.

By bridging the gap between technology providers and end-users, these integrators will enable the creation of seamless and efficient robotics systems that can be easily adopted by industries, especially SMEs, thereby supporting more flexible and efficient production processes.

**HORIZON-CL4-2026-04-DIGITAL-EMERGING-08: Robotics for Manufacturing:
Advancing Core Skills through Technical Challenges**

Call: DIGITAL	
Specific conditions	

<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 9.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 18.00 million.
<i>Type of Action</i>	Research and Innovation Actions

Expected Outcome:

- Development of advanced robotics skills (e.g. high precision autonomous pick and place) using robotics foundation models , tailored for manufacturing. Creation of a comprehensive framework for robotics skills development with industry-relevant challenges, evaluation metrics and success criteria.
- Facilitation of widespread deployment of robotics in manufacturing especially SMEs, through modular, adaptable, and reconfigurable solutions built on robotics foundation models, to meet evolving production needs

Scope: The proposed project aims to significantly enhance robotics capabilities in manufacturing by developing advanced robotics skills (for example, task and environment aware autonomous pick and place with high precision and speed, human-robot collaboration, etc). The project will create a comprehensive framework for robotics skills development in manufacturing, including the definition of key technical challenges driven by industry needs, evaluation metrics, and success criteria. By leveraging the use of next-generation AI, including generative AI, to enable robots to better adapt to real-world environments and interact with human operators, and focusing on reconfigurability, the project will develop industry-agnostic solutions that can be easily adapted to different manufacturing environments. One of the key use cases for this project will be the automotive industry, where advanced robotics can significantly enhance production efficiency and adaptability.

AI4GOOD

Proposals are invited against the following topic(s):

HORIZON-CL4-2026-04-DIGITAL-EMERGING-09: Disaster relief and crisis management

Call: DIGITAL	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR N/A million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

<i>Indicative budget</i>	The total indicative budget for the topic is EUR 17.00 million.
<i>Type of Action</i>	Innovation Actions

Expected Outcome: Developing advanced AI algorithms to model both natural and human-made disasters.

These models can help predict, respond to, and mitigate impacts before, during, and after disasters, enabling proactive decision-making and effective disaster management.

- Protection of citizens from natural hazards through proactive measures, preparedness strategies, and urban resilience. planning.
- Support for the EU Civil Protection Mechanism, as well as national and regional authorities, in real-time disaster monitoring to assess severity, enhance crisis management, and accurately quantify resources for effective mitigation.
- Support reconstruction efforts by assessing the severity of damage and estimating the reconstruction costs of buildings and utilities based on envisioned scenarios, ensuring accountability and transparency.

The different areas to be covered within this topic will include a strong research component focused on developing tailored AI algorithms modelling the nature of several disasters.

Scope: Area 1 - **AI for Disaster preparedness**

Developing Local Digital Twins based AI algorithms to dynamically model impacts of extreme flooding and landslides.

The algorithms would allow urban planners to take necessary measures as regards planning of cities and other civic measures to alleviate the effects of such extreme incidents – modelled at micro (local) level to allow e.g moving a kindergarten or care home out of an area susceptible to a high-risk of extreme flooding in advance of an event materialising.

The Local Digital Twins will be anchored in both the building data sets containing high resolution and AI models under development in connection with the Local Digital Twin (LDT) for smart cities, in particular the LDT toolbox. The solution will aggregate meteorological and climatic data from the European Centre for Medium-Range Weather Forecasts and Destination Earth.

Area 2 - Emergency Response and resources allocation

Extend the AI-based multi-hazard platform under the EU Civil Protection Mechanism (currently being developed for forest fires) to add 2 new disasters: floods and landslides as part of the on-going cooperation with JRC and ECHO under an Administrative Arrangement. As with forest fires, the focus here is on real-time monitoring/tracking of the hazard and allocation of resources for disaster relief. Extreme weather forecasting models from Destination Earth will serve as one of the critical inputs for the platform.

The multihazard platform is designed for:

- Real-time monitoring of floods and landslides for resource allocation related to emergency response.
- Full development of AI-based flood and landslide models, testing and integration into the multi-hazard platform.
- Operationalisation in the EU under the European Civil Protection Mechanism, but also in low-income areas

Area 3 - Digital Twin for Reconstruction

To extend the productive version of the AI-based prototype for a Local Digital Twin for Reconstruction under WP25 beyond buildings to also include critical infrastructure utilities and electricity networks. Self-learning capabilities for effective assessment and expenditure control of reconstruction also to be developed.

HORIZON-CL4-2026-04-DIGITAL-EMERGING-10: International cooperation in AI

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

Expected Outcome:

- Tailoring and training of AI-based solutions to low-income countries based on local needs (“bottom-up” approach) and by reusing local data sources
- Transfer of AI-based technologies to local innovation hubs in low-income countries

Scope: Cooperation through EU initiatives to strengthen local AI ecosystems in African countries fostering responsible AI development, north-south digital cooperation on AI, and sustainable AI innovation.

This aligns with EU Initiatives under the Global Gateway, such as the Digital for Development Hub and leverages the European Commission initiatives in AI for Public Good. It also enables implementation of AI international initiatives, in particular the AI Hub for Sustainable Development (under G7 Italian Presidency), where the Commission is present in the Board (Executive Steering Group)

The action will support international developing on AI by:

- Support the gathering and access to local data in line with EU's data strategy for the training and optimisation of existing AI algorithms developed in initiatives like AI for Public Good and GenAI for Africa.
- Tailoring of AI-based solutions to low-income countries based on local needs (bottom-up approach)
- Fostering an enabling innovation environment with reinforced talent pipelines and technological transfer of AI algorithms and solutions to local innovation hub.

Capitalise from existing EU initiatives like the Global Gateway, and Smart Africa to up-scale the deployment of solutions in low-income countries.

Quantum

Proposals are invited against the following topic(s):

HORIZON-CL4-2026-04-DIGITAL-EMERGING-11: Quantum Sensors for Inertial Navigation

Call: DIGITAL	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR N/A million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 30.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: Art 22.5

Expected Outcome: This action will lead to the demonstration of quantum inertial sensing systems designed for operation in GNSS-denied or contested environments and fitting in one of the following two categories:

- **Category 1 (strategic-grade autonomous navigation)**: Quantum Inertial Navigation Systems (Q-INS) based on cold-atom interferometry (or other technology of at least equivalent performance) featuring long-term navigation accuracy due to reduced drift with respect to commercial Inertial Measurement Units (IMUs). These systems will be

co-developed with end-users and field-demonstrated in a ship and/or a plane for national security or maritime applications.

- **Category 2 (tactical-grade autonomous navigation):** Low C-SWAP Q-INS measuring acceleration, rotation rate, and/or magnetic field, aimed at the implementation of chip-scale sensors based on nitrogen vacancies in diamonds or on warm atomic vapours (including nuclear magnetic resonance), for applications e.g. in small satellites, UAVs, and autonomous transport.

Proposals should describe and present Q-INSs that have a plausible path to in-field demonstration by the end of Phase 2. Successful proposals will move to Phase 1.

Expected Outcomes of Phase 1 – Feasibility and System Design Projects should deliver (common to both Categories):

1. **Working prototype system.**
2. **Industrialisation roadmap** clearly defining scalable production and deployment milestones. The roadmap should include at least the following:
 - o Detailed Q-INS architecture based on quantum sensing techniques hybridised with classical IMUs.
 - o Feasibility assessment of SWaP, environmental resilience, and real-world integration.
 - o An initial assessment of dependencies on non-EU suppliers of critical components and proposal of effective mitigation measures in view of a sovereign value chain.
 - o Potential list of end-users to capture system requirements and use-case constraints.

Projects in Phase 1 will be assessed against the above deliverables for progression to Phase 2.

Expected Outcomes of Phase 2 – System Development, Integration, and Field Demonstration

Projects in **Category 1 (strategic-grade)** should deliver:

1. In-field-demonstration of low-drift Q-INS capable of strategic grade navigation with increased accuracy (<10 m/hour) over commercial IMUs for extended periods (at least one day) without GNSS correction.
2. Operational deployment and testing on mobile platforms (e.g. airborne, maritime), with demonstrated performance in real-world conditions.
3. Hybridisation with other classical or quantum sensors and ruggedisation for in-field operation also in adverse environmental conditions.

4. In-field-demonstration of improved drift rates over commercial IMUs and environmental resilience.

Projects in **Category 2 (tactical-grade)** should deliver:

1. Robust miniaturisation and ruggedisation of core quantum sensing components (e.g., nitrogen vacancies in diamond, warm atomic vapours, nuclear magnetic resonance, and enabling technologies thereof).
2. In-field demonstration of tactical grade Q-INS with navigation accuracy better than 10 km/h and improved long-term drift over commercial IMUs, possibly obtained by leveraging integration with other (classical or quantum) non-inertial sensing platforms.
3. Clear demonstration of a pathway towards mass-scale production with economy of scale.

Projects in both Categories should deliver:

1. Advancement of a European value chain for Q-INS, covering components, subsystems, and system integration.
2. Strengthening of Europe's technological sovereignty and industrial competitiveness in quantum sensing and navigation technologies.
3. Establishment of pathways for public-private financing and procurement, including engagement with EIB/EIF instruments (to be confirmed).

Scope: This action follows a two-phase competitive structure:

- **Phase 1**(6 months): EUR 2–3 million total, Feasibility, Early System Design and Prototype open exclusively to individual EU companies. Supports early system validation, prototype delivery (minimum TRL 4–5), and an industrialisation roadmap with clearly indicated major milestones. Up to 10 participants in total will be selected in this phase for both categories (see scope below).
- **Phase 2**(up to 48 months): EUR 27–28 million total, system development, integration and real-life demonstrators. This phase targets advanced system development, integration, validation and demonstration under realistic operational conditions at TRL 7–8, with end-user involvement. The selected companies from Phase 1 should form small consortia that should include at least two more partners from different Member States or Associated Countries comprising:
 - o One lead user from a relevant application domain,
 - o One system provider,
 - o Optionally, a system integrator.

Phase 1 – Feasibility and System Design

Focus on early-stage system architecture, performance modelling, and proof-of-concept validation. Activities must include:

- System-level design tailored to application-specific environments.
- Critical subsystem/component prototyping.
- Operational constraints, integration challenges, and environmental resilience assessments.
- Analysis of technological dependencies (including non-EU components/suppliers) and mitigation strategies thereof.
- Early end-user engagement defining relevant performance criteria.
- Participants must deliver a functional prototype and a structured industrialisation roadmap for eligibility into Phase 2.

Phase 2 – System Development, Integration, and Field Demonstration

Restricted to a maximum of three projects selected from Phase 1. Phase 2 will focus on pre-industrial development, with mandatory end-user participation from sectors such as national security, aviation, maritime, space or autonomous systems. Activities must include:

- Development and ruggedisation of Q-INS hardware meeting operational platform constraints.
- Full-system integration and environmental testing under simulated and real deployment conditions.
- Deployment on platforms such as UAVs, ships, planes or underground vehicles with extensive KPI-based validation.
- Co-design with end-users to ensure functional relevance and scalability.
- Engagement with certification, standardisation, and potential commercial pathways.
- Plans leveraging public-private financing (e.g., EIB/EIF) for industrial scale-up.
- Establishment of a resilient European value chain from component manufacturing to system integration.
- Promotion of European technological sovereignty and broader industrial adoption.

HORIZON-CL4-2026-04-DIGITAL-EMERGING-12: Standards for Quantum Technologies – Coordination and Support Action (CSA)

Call: DIGITAL

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 1.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 1.00 million.
<i>Type of Action</i>	Coordination and Support Actions

Expected Outcome: This action will support and accelerate the development and adoption of European and international standards for quantum technologies, enhancing interoperability, quality assurance, and trust in quantum systems. It will strengthen Europe's leadership in the global quantum standardisation landscape and ensure that European industrial and research priorities are well represented and integrated into emerging standards.

Expected outcomes include:

- Delivery of concrete, EU-relevant pre-normative standards and technical specifications across quantum computing, communication, and sensing.
- Establishment of a structured, continuous dialogue between European stakeholders (industry, academia, national initiatives) to identify and prioritise standardisation needs.
- Increased representation and influence of European stakeholders in international standardisation bodies (e.g., ISO/IEC, ITU-T, ETSI), with alignment to EU industrial strategies.
- Promotion of cross-sectoral interoperability through standardised interfaces, control protocols, and benchmarking methodologies, reducing market fragmentation and technical barriers.
- Creation of practical support tools such as user guidelines, training modules, and best practices to accelerate the uptake and implementation of quantum standards.

Strengthened engagement from SMEs and start-ups in shaping and applying standards, fostering inclusivity and market access

Scope: The CSA will coordinate and support standardisation activities for quantum technologies in areas such as quantum computing, communication (non-cryptographic), sensing, and control. Proposals should include:

- Build on the roadmaps of European standardisation organisations to (i) standardise results from quantum projects funded under Horizon Europe, the Digital Europe Programme, and EuroHPC JU in line with stakeholder priorities, and (ii) foster an active industrial standardisation community to promote engagement and uptake within the European quantum industry.

- Enabling broad stakeholder participation in international standardisation activities (e.g. ISO/IEC, ITU-T, ETSI), promoting EU priorities.
- Support interoperability and integration of quantum systems through standardisation of interfaces, protocols, and benchmarking methodologies.
- Develop explanatory documentation and training material to facilitate adoption and implementation of the developed standards.
- Drafting concrete standards or technical specifications, in cooperation with relevant standardisation bodies, in areas such as:
 - o Hardware-software interfaces in quantum computing,
 - o Quantum sensing protocols and metrology methods,
 - o Control electronics and device modularity for quantum systems,
 - o Performance and benchmarking methodologies.
- Supporting the participation of quantum stakeholders in European and international standardisation organisations (e.g. CEN-CENELEC, ETSI, ISO/IEC, ITU-T)
- Coordination with existing European and international standardisation organisations to ensure alignment and avoid duplication.
- Development of support materials such as user guides, training modules, and best practices for the standards developed.
- Organisation of workshops and consultations with quantum stakeholders (including SMEs, start-ups, and large industry) to ensure inclusivity and consensus building.

The proposal must present a clear plan for stakeholder engagement, deliverables, and budget justification, including person-days per task and daily rates. A single proposal is expected. European standardisation organisations (ESOs) are encouraged to lead or be key partners in the consortium.

Photonics

Proposals are invited against the following topic(s):

HORIZON-CL4-2026-04-DIGITAL-EMERGING-13: Advanced integrated photonic devices for extended features and ultra-low power consumption

Call: DIGITAL	
Specific conditions	
<i>Expected EU</i>	The Commission estimates that an EU contribution of around EUR N/A

<i>contribution per project</i>	million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 25.00 million.
<i>Type of Action</i>	Research and Innovation Actions

Expected Outcome:

- Advanced integrated photonic devices and circuits with enhanced functionality and performance enabling wider application across multiple sectors including digital, automotive, industrial, health and security
- Reinforced competitiveness of EU photonics actors by demonstrating advancements in representative system configurations and validating real-world applicability
- Significantly improved power efficiency of electro-optic systems in digital applications such as communication, computing, data processing, AI supporting the introduction of photonic elements into such systems
- Low power consumption sensors with increased performance in application domains

Scope: R&I should enhance the functionality, efficiency, and integration of photonic devices and circuits with a focus on both power-efficient operation and extended system performance. Action should address at least one of the following aspects.

- Enhanced performance through improved spectral purity, wavelength coverage and noise characteristics.
- Increased modulation and detection speeds (100 GHz and beyond), improved data-processing capabilities, and integration of novel materials such as thin-film LiNbO₃, BTO, graphene, and TMDCs.
- Miniaturised, high-complexity photonic circuits (e.g. multilayer photonics, chiplets), scalable interconnects, and electronics-photonics integration (co-packaged, heterogeneous, or monolithic) to improve performance, reliability, and cost-efficiency.
- Reduction of power consumption through improved electrical-to-optical conversion, lower optical losses, devices operable at higher temperatures to reduce cooling needs, and low-power circuit actuation and control.

Proposals should consider system-level impact and demonstrate advancements in representative configurations relevant to one or more application domains.

HORIZON-CL4-2026-04-DIGITAL-EMERGING-14: Networking and Future Photonics Strategy

Call: DIGITAL	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR N/A million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 3.00 million.
<i>Type of Action</i>	Coordination and Support Actions

Expected Outcome: Projects are expected to contribute to the following outcomes:

- Continued coordination and strategic support to the broader European photonics ecosystem, fostering a transparent, inclusive governance model and bottom-up roadmap development.
- Strengthened engagement across the photonics ecosystem, including industry, academia, national platforms and end-user sectors.
- Improved alignment of regional, national and European R&I agendas, enhancing coherence and impact across funding instruments.
- Effective monitoring and steering of Partnership-funded projects towards the achievement of Key Performance Indicators.
- Increased visibility of photonics as a critical enabling technology for EU priorities such as the digital and green transitions, industrial competitiveness and technological sovereignty.
- Enhanced collaboration with other European Partnerships and strategic initiatives to maximise synergies and streamline efforts.
- Improved access to private and blended finance for photonics innovation, growth and scale-up.

Scope: Proposals should include:

- Development and regular updating of the European Photonics Strategic Research and Innovation Agenda (SRIA) and associated roadmaps
- Coordination and monitoring of Partnership-funded R&I and CSA projects, including tracking of Key Performance Indicators and recommending corrective actions where needed

- Outreach, advocacy, and stakeholder engagement, including alignment with national, regional, and European photonics strategies and input into broader EU policy initiatives
- Provision of a unified communication platform for the European photonics community and strengthened public communication on the impact of photonics
- Facilitation of collaboration with other European Partnerships, strategic initiatives, and financial institutions to identify synergies and improve access to innovation financing.

Semiconductors

Proposals are invited against the following topic(s):

HORIZON-CL4-2026-04-DIGITAL-EMERGING-15: Strengthening the cooperation of semiconductor-intensive EU regions

Call: DIGITAL	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR N/A million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 3.00 million.
<i>Type of Action</i>	Coordination and Support Actions

Expected Outcome: The topic addresses semiconductor-intensive regions and regional industrial semiconductor clusters which are explicitly supported by regional governments. The notion of semiconductors includes integrated circuits (chips) with electronic and photonic functionalities.

Regions have an essential role to play in the implementation of EU policies in the field of semiconductors. Within their remit they facilitate establishing industrial activities related to semiconductor production and services by providing for example construction permits, energy, water, infrastructure and often funding. They help creating regional ecosystems around big fabs and contribute to structuring clusters of actors across the value chain.

The expected outcomes are

- Stronger cooperation of EU regions (governments and linked industrial clusters) which are active across the semiconductor supply chain
- Contributions to the smart specialisation of regions in the semiconductor area

- Maps of regional semiconductor ecosystems across the value chain and their connections amongst each other and identification of common needs
- a joint strategy to link and strengthen regional semiconductor ecosystems which may possibly lead to increased effectiveness of the Competence Centers originating from the Chips for Europe initiative.
- A sustainable platform exchanging information on capabilities and best practices, guiding potential investors and supporting new entrants intending to specialise in semiconductors

Scope: The action should pursue its objectives by means of networking, workshops and drafting reports. It should take into account and rely on existing networks such as the *European Semiconductor Regions Alliance* (ESRA) and *Silicon Europe*. The consortium should strive to make the interregional cooperation self-sustained at the end of the project.

Other emerging technologies

Proposals are invited against the following topic(s):

HORIZON-CL4-2026-04-DIGITAL-EMERGING-16: Horizon scanning and foresight in future enabling digital technologies

Call: DIGITAL	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR N/A million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 4.00 million.
<i>Type of Action</i>	Coordination and Support Actions

Expected Outcome:

- European leadership in foresight activities on future enabling technologies and their transformational potential in industrial, societal and environmental terms.
- Increased collaboration between academia, industry players and other relevant stakeholders in iterative and multidisciplinary approaches for co-creating the enabling technologies of the future.
- Alignment with national or regional initiatives creating an expanding innovation ecosystem, anchored in local contexts across Europe, for selected emerging technologies.

Accelerating the pick-up of novel advanced technology by industry and society.

Scope: Proposals should establish a forum for emerging interdisciplinary areas and new technological visions.

Proposals should enable and support a broad range of participants (across disciplines in science and engineering, RTOs, industry sectors, stakeholders) to meet, mutually inspire, cooperate and develop together innovative ideas for future enabling digital technologies covering from fundamental research up to proof of concept.

Proposals should involve and be driven by representatives of the relevant actors of the field (e.g., academia, RTOs, industry including SMEs).

**HORIZON-CL4-2026-04-DIGITAL-EMERGING-17: Fostering 2-Dimensional
Materials (2DM) based emerging and enabling technologies (CSA)**

Call: DIGITAL	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR N/A million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 1.00 million.
<i>Type of Action</i>	Coordination and Support Actions

Expected Outcome: Maximize the impact of EU-funded R&I in 2DM-based emerging and enabling technologies.

Reinforce the related R&I community in Europe.

Scope: Proposals should provide key support functions fostering a dynamic R&I community in 2DM-based emerging and enabling technologies, fostering synergies and collaboration among enabling relevant EU-funded projects – including those of the Graphene Flagship - and associated entities.

Proposals should provide support to the relevant actors in R&I roadmapping, innovation, standardization activities in 2DM-based technologies

Proposals should establish and keep up-to-date European and global R&I and funding landscapes in 2DM-based technologies.

Proposals should relay and amplify communication and dissemination activities of the actors in the domain of graphene and 2D materials.

Proposals should foster interactions and synergies with national and regional initiatives, relevant Partnerships, projects and infrastructures in the domain.

AI for manufacturing

Proposals are invited against the following topic(s):

HORIZON-CL4-2026-01-DIGITAL-EMERGING-51: AI improved advanced manufacturing and production processes in factories (RIA) (Made in Europe and ADRA partnerships)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 4.00 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.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 30.00 million.
<i>Type of Action</i>	Research and Innovation Actions

Expected Outcome:

- Improved factory processes and operations leading to increased competitiveness and productivity of advanced manufacturing industries; and
- Optimised energy consumption leading to lower emissions.

Scope: AI approaches in manufacturing processes hold the potential to significantly enhance both the process and operational efficiency as well as sustainability of modern factories. Current state-of-the-art technologies have already paved the way for more streamlined operations, yet there remains immense untapped potential for improvement. With innovative AI approaches, manufacturers can not only optimise production lines and elevate product quality but also address environmental concerns. This dual focus on operational excellence and sustainability ensures that factories can maintain competitive advantage while also contributing to broader environmental goals.

Proposals should produce dedicated innovative AI based applications/solutions in advanced manufacturing for all of the following scopes:

- improve processes and operational efficiency of the production line in the factory through e.g. deep learning models and digital twins. Improvements should also focus on optimisation of energy and CO2-footprint through e.g. improved scheduling, power consumption predictability.

- detection and correction of defects in real time during the manufacturing process
- improve decision-making thanks to e.g. interconnected systems at factory level that provide real-time data analytics

[The portfolio approach may be used, to ensure that at least one proposal focusing on **textiles** is funded]

HORIZON-CL4-2027-01-DIGITAL-EMERGING-52: New approaches for Human/AI collaboration for the workforce of the future (RIA) (Made in Europe and ADRA partnerships)

Call: INDUSTRY	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 4.00 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.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 30.00 million.
<i>Type of Action</i>	Research and Innovation Actions

Expected Outcome:

- Industrial jobs are transformed through AI-based human-machine interactions which enhance flexibility, safety, well-being, up-skilling and knowledge sharing;
- More attractive jobs are created in the EU, attracting and retaining talents;
- Human-centric aspect of the Industry 5.0 model is fostered; and
- Increased competitiveness and sustainability of advanced manufacturing industries.

Scope: Innovative AI approaches are poised to revolutionise human-machine collaboration in factories by fostering an environment where technology and human expertise synergistically enhance each other. AI can facilitate knowledge sharing between senior professionals and newer employees by capturing and disseminating expert insights and best practices in real-time. This dynamic exchange supports up-skilling, enabling the workforce to adapt to evolving technological landscapes and meet emerging industry demands. Additionally, by leveraging AI's capabilities, engineers can be supported in product configuration and customization, potentially leading to increased sustainability. New AI approaches can also enhance human-machine teamwork by offering intuitive interfaces and real-time feedback, ensuring seamless collaboration. Proposals should produce dedicated innovative

AI approaches for human-machine collaboration in advanced manufacturing to be applied in the following fields:

- Innovative methods for product configuration and customisation (or potentially product design), including production and process planning (e.g. optimization of toolpath planning), also leading to increased sustainability.
- Human-AI Co-Learning to share competences, up-skill the workforce, support re-qualification and continuous training, leading to increased knowledge at factory level
- Human-AI teamwork thanks to e.g. standardized modules for Human-Digital Twin and innovative natural interaction models, enabling to control complexity in cognitive cooperating production systems, hence improving safety and well-being of workers.

Appropriate consideration should be given to gender aspects and contribution of social sciences and humanities (SSH).

Destination 5: 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 IRIS².
- 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, 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 IRIS² 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.

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, 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.

- **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.

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

It is key to exploit data coming from EU space missions and IOD/IOV activities. It is also important to lay the ground for future exploration missions, focusing on where the EU can add value with limited financial means.

- **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 geopolitical 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 IRIS². 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.

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

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: Open Strategic Autonomy in Developing, Deploying and Using Global Space-Based Infrastructure, Services, Applications and Data	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 10.00 and 25.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 38.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>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).</p> <p>In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, or security, namely [describe outcomes and policy justification that raises concerns for the Union's strategic assets, interests, autonomy, or security], 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.</p> <p><i>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</i></p>

	<i>European communication networks' (or entities fully or partially owned or controlled by a high-risk supplier) cannot submit guarantees.</i> ²⁰
<i>Technology Readiness Level</i>	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.
<i>Legal and financial set-up of the Grant Agreements</i>	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) ²¹ .

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;
- 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.

²⁰ *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 retracts 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.*

²¹ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) 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.

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) shall be part of the project consortium and be the ultimate users of the resulting facilities.

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

Call: Open Strategic Autonomy in Developing, Deploying and Using Global Space-Based Infrastructure, Services, Applications and Data	
Specific conditions	
<i>Expected EU contribution per project</i>	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.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 5.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>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).</p> <p>In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, or security, namely [describe outcomes and policy justification that raises concerns for the Union's strategic assets, interests, autonomy, or security], participation is limited</p>

	<p>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.</p> <p><i>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.'</i>²²</p>
Technology Readiness Level	<p>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.</p>
Legal and financial set-up of the Grant Agreements	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>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) ²³.</p>

²² 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 retracts 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.

²³ 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:

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** 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, as stated in the expected impact of this destination.

Scope: To tackle the above-mentioned expected outcomes, the following R&I is expected to be addressed:

- The maturation of disruptive/game changing technologies related to digitalisation.

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 in space.

Proposals under this topic should explore synergies and be complementary to already funded actions in the context of technology development at component level, while still enabling new entrants and new approaches. In particular the topics: HORIZON-CL4-2025-02-SPACE-31/-32, Critical Space Technologies for European non-dependence (HE H2020 SPACE-10-TEC-2018-2020, COMPET-1-2014-2015-2016-2017, HORIZON-CL4-2021-SPACE-01-81/ 2023-SPACE-01-72/ 2024-SPACE-01-73), satellite communication technologies (H2020 COMPET-2-2016, COMPET-3-2017, SPACE-15-TEC-2018, SPACE-29-TEC-2020, HORIZON-CL4-2021-SPACE-01-11), Earth Observation end-to-end technologies (HORIZON-CL4-2022-SPACE-01-13, HORIZON-CL4-2023-SPACE-01-11). 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 implements the co-programmed European Partnership on ‘Globally Competitive Space Systems’ (GCSS). As such, projects resulting from this topic will be expected to report on results to the European Partnership ‘Globally Competitive Space Systems’ (GCSS) in support of the monitoring of its KPIs.

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 IRIS², 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

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

Call: Open Strategic Autonomy in Developing, Deploying and Using Global Space-Based Infrastructure, Services, Applications and Data	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 2.00 and 8.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>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</p>

	<p>additionally be used).</p> <p>In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, or security, namely [describe outcomes and policy justification that raises concerns for 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.</p> <p><i>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.</i>"²⁴</p>
<i>Technology Readiness Level</i>	<p>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.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>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</p>

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 retracts 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) ²⁵ .
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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**²⁶ 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;
- Understanding environmental issues, and 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 payloads, technologies and processing means (on ground and in space);
- Security of SatCom and EO services, supporting advanced 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 and energy efficient connectivity and compatibility with 5G & 6G waveforms;

²⁵ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) 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

²⁶ Identified in the Space Partnership SRIA

- 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;
- 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.

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. To ensure a balanced portfolio covering the three areas described above, 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 area, provided that the applications attain all thresholds. For the purposes of the ranking the main area declared by the proposal will be considered.

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 in space.

Proposals under this topic should explore synergies and be complementary to already funded actions in the context of technology development at component level, while still enabling new entrants and new approaches. In particular the topics: HORIZON-CL4-2025-02-SPACE-31/-32, Critical Space Technologies for European non-dependence (HE H2020 SPACE-10-TEC-2018-2020, COMPET-1-2014-2015-2016-2017, HORIZON-CL4-2021-SPACE-01-81/ 2023-SPACE-01-72/ 2024-SPACE-01-73), satellite communication technologies (H2020 COMPET-2-2016, COMPET-3-2017, SPACE-15-TEC-2018, SPACE-29-TEC-2020, HORIZON-CL4-2021-SPACE-01-11), Earth Observation end-to-end technologies (HORIZON-CL4-2022-SPACE-01-13, HORIZON-CL4-2023-SPACE-01-11). 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 implements the co-programmed European Partnership on ‘Globally Competitive Space Systems’ (GCSS). As such, projects resulting from this topic will be expected to report on results to the European Partnership ‘Globally Competitive Space Systems’ (GCSS) in support of the monitoring of its KPIs.

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 collaborative Earth Observation and Satellite telecommunication for Space solutions

Call: Open Strategic Autonomy in Developing, Deploying and Using Global Space-Based Infrastructure, Services, Applications and Data	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 3.00 and 9.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 26.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>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).</p> <p>In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, or security, namely [describe outcomes and policy justification that raises concerns for 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.</p> <p><i>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</i></p>

	<i>European communication networks’ (or entities fully or partially owned or controlled by a high-risk supplier) cannot submit guarantees.’²⁷</i>
<i>Technology Readiness Level</i>	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.
<i>Legal and financial set-up of the Grant Agreements</i>	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) ²⁸ .

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**²⁹ required to strengthen competitiveness in these domains.

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

- Favouring a competitive and sustainable European Space Sector;

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 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.*

²⁸ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) 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

²⁹ Identified in the Space Partnership SRIA

- Enable the European Space Industry to maintain a significant share of the global connectivity market;
- Advanced Earth observation payloads, technologies and processing means (on ground and in space);
- Advanced EO and SatCom fostering AI across space system;
- 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, tip & cue demonstration combining RF and EO using inter-satellite links, 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, as well as data processing design based on fast data acquisition, 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 systems and missions, such as maturation of technologies and products improving system security and threats identification, RF and optical hybrid ground stations for advanced anchoring services, resources usage optimization, software functions to demonstrate reconfigurability of networks and mission flexibility, as well as on-board processing capabilities to distribute data and extracted information.

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 must be clearly and unambiguously identified in the proposal text. To ensure a balanced portfolio covering the three areas described above, 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 area, provided that the applications attain all thresholds. For the purposes of the ranking the main area declared by the proposal will be considered.

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 in space via e.g., on-ground relevant environment or in orbit demonstration.

Proposals under this topic should explore synergies and be complementary to already funded actions in the context of technology development at component level, while still enabling new entrants and new approaches. In particular the topics: HORIZON-CL4-2025-02-SPACE-31/-32, Critical Space Technologies for European non-dependence (HE H2020 SPACE-10-TEC-2018-2020, COMPET-1-2014-2015-2016-2017, HORIZON-CL4-2021-SPACE-01-81/ 2023-SPACE-01-72/ 2024-SPACE-01-73), satellite communication technologies and high speed data chain (H2020 COMPET-2-2016, COMPET-3-2017, SPACE-15-TEC-2018, SPACE-29-TEC-2020, HORIZON-CL4-2021-SPACE-01-11), Earth Observation end-to-end technologies (HORIZON-CL4-2022-SPACE-01-13, HORIZON-CL4-2023-SPACE-01-11). 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 implements the co-programmed European Partnership on ‘Globally Competitive Space Systems’ (GCSS). As such, projects resulting from this topic will be expected to report on results to the European Partnership ‘Globally Competitive Space Systems’ (GCSS) in support of the monitoring of its KPIs.

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 Earth Observation and Satellite telecommunications for Space solutions

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

Specific conditions

Expected EU contribution per project

The Commission estimates that an EU contribution of between EUR 1.00 and 2.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and

	selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 4.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	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).
<i>Technology Readiness Level</i>	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.
<i>Legal and financial set-up of the Grant Agreements</i>	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) ³⁰ .

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**³¹ 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 payloads, technologies and processing means (on ground and in space);

³⁰ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) 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

³¹ Identified in the Space Partnership SRIA

- Security of SatCom and EO services, supporting advanced 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 building blocks and processes common to EO and SatCom systems, such as on-board processing and security of services through quantum technologies (focussing on quantum entanglement).

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 in space.

Proposals under this topic should explore synergies and be complementary to already funded actions in the context of technology development at component level, while still enabling new entrants and new approaches. In particular the topics: HORIZON-CL4-2025-02-SPACE-31/-32, Critical Space Technologies for European non-dependence (HE H2020 SPACE-10-TEC-2018-2020, COMPET-1-2014-2015-2016-2017, HORIZON-CL4-2021-SPACE-01-81/ 2023-SPACE-01-72/ 2024-SPACE-01-73), satellite communication technologies (H2020 COMPET-2-2016, COMPET-3-2017, SPACE-15-TEC-2018, SPACE-29-TEC-2020, HORIZON-CL4-2021-SPACE-01-11), Earth Observation end-to-end technologies (HORIZON-CL4-2022-SPACE-01-13, HORIZON-CL4-2023-SPACE-01-11). 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 implements the co-programmed European Partnership on 'Globally Competitive Space Systems' (GCSS). As such, projects resulting from this topic will be expected to report on results to the European Partnership 'Globally Competitive Space Systems' (GCSS) in support of the monitoring of its KPIs.

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

Call: Open Strategic Autonomy in Developing, Deploying and Using Global Space-

Based Infrastructure, Services, Applications and Data	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 3.00 and 9.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 26.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>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).</p> <p>In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, or security, namely [describe outcomes and policy justification that raises concerns for 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.</p> <p><i>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.</i>"³²</p>

³²

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 retracts 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

<i>Technology Readiness Level</i>	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.
<i>Legal and financial set-up of the Grant Agreements</i>	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) ³³ .

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**³⁴ required to strengthen competitiveness in these domains.

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 payloads, technologies and processing means (on ground and in space);
- Advanced EO and SatCom fostering AI across space system;

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.

³³ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) 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

³⁴ Identified in the Space Partnership SRIA

- 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, energy efficient connectivity and compatibility with 5G & 6G waveforms, radio-frequency payloads, secure satcom services and satellites as network nodes;
- R&I on Earth Observation equipment, subsystems, applications and services, improving data processing, data fusion, miniaturisation of instrument designs and EO ground segment interfaces;
- 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.

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. To ensure a balanced portfolio covering the three areas described above, 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 area, provided that the applications attain all thresholds. For the purposes of the ranking the main area declared by the proposal will be considered.

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 in space via e.g., on-ground relevant environment or in orbit demonstration.

Proposals under this topic should explore synergies and be complementary to already funded actions in the context of technology development at component level, while still enabling new entrants and new approaches. In particular the topics: HORIZON-CL4-2025-02-SPACE-31/-32, Critical Space Technologies for European non-dependence (HE H2020 SPACE-10-TEC-2018-2020, COMPET-1-2014-2015-2016-2017, HORIZON-CL4-2021-SPACE-01-81/ 2023-SPACE-01-72/ 2024-SPACE-01-73), satellite communication technologies (H2020 COMPET-2-2016, COMPET-3-2017, SPACE-15-TEC-2018, SPACE-29-TEC-2020, HORIZON-CL4-2021-SPACE-01-11), Earth Observation end-to-end technologies (HORIZON-CL4-2022-SPACE-01-13, HORIZON-CL4-2023-SPACE-01-11). 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 implements the co-programmed European Partnership on ‘Globally Competitive Space Systems’ (GCSS). As such, projects resulting from this topic will be expected to report on results to the European Partnership ‘Globally Competitive Space Systems’ (GCSS) in support of the monitoring of its KPIs.

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 to "Indirectly managed actions by ESA" 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: Open Strategic Autonomy in Developing, Deploying and Using Global Space-Based Infrastructure, Services, Applications and Data	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 1.00 and 2.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 4.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>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).</p>
<i>Technology</i>	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

<i>Readiness Level</i>	sector.
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>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) ³⁵.</p>

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

- Data analysis of European IOD/IOV experiments with a focus on space science and exploration
- Data exploitation of European missions (incl. low-cost/small satellite) and instruments, in conjunction, when relevant, with international missions.
- A higher number of scientific publications based on Europe's 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.
- European scientific excellence and development of leading-edge scientific research in Europe.

Scope: The aim of this topic is the analysis and exploitation of acquired and available data provided by scientific and exploration instruments and missions in their operative, post-operative or data exploitation phase ensuring complementarity with activities already supported by agencies during development phases. A growing amount of such data originates 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 such as HERA, CHEOPS, PROBA-3, HERMES Pathfinder) from ESA, national space agencies, research organisations and universities missions. This analysis may require advanced data processing techniques (e.g. using machine learning), as well as novel data (re)presentation and visualization assets.

³⁵ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) 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 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 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 and highlight the role of low-cost/small satellite missions and in-space validation of instruments for space and earth science.

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

Call: Open Strategic Autonomy in Developing, Deploying and Using Global Space-Based Infrastructure, Services, Applications and Data	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 1.00 and 2.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Admissibility conditions</i>	The conditions are described in General Annex A. The following exceptions apply:

	The page limit of the application is 80 pages.
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>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).</p> <p>In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, or security, namely [describe outcomes and policy justification that raises concerns for 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.</p> <p><i>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.</i>"³⁶</p>
<i>Technology Readiness Level</i>	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.

³⁶

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 retracts 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.

<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>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</p> <p>The evaluation committee will be composed partially by representatives of EU institutions.</p>
<i>Security Sensitive Topics</i>	<p>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.</p>

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-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]

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-CL4-2026-SPACE-03-82: Space critical equipment for EU non-dependence

Call: Open Strategic Autonomy in Developing, Deploying and Using Global Space-Based Infrastructure, Services, Applications and Data	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 1.00 and 2.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Admissibility conditions</i>	The conditions are described in General Annex A. The following exceptions apply: The page limit of the application is 80 pages.

<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>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).</p> <p>In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, or security, namely [describe outcomes and policy justification that raises concerns for 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.</p> <p><i>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.</i>"³⁷</p>
<i>Technology Readiness Level</i>	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.
<i>Procedure</i>	The procedure is described in General Annex F. The following exceptions

³⁷

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 retracts 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.

	<p>apply:</p> <p>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</p> <p>The evaluation committee will be composed partially by representatives of EU institutions.</p>
<i>Security Sensitive Topics</i>	<p>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.</p>

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 prerequisite 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]

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.

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

Call: Open Strategic Autonomy in Developing, Deploying and Using Global Space-Based Infrastructure, Services, Applications and Data	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 1.00 and 2.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Admissibility conditions</i>	The conditions are described in General Annex A. The following exceptions apply:

	The page limit of the application is 80 pages.
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>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).</p> <p>In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, or security, namely [describe outcomes and policy justification that raises concerns for 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.</p> <p><i>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.</i>"³⁸</p>
<i>Technology Readiness Level</i>	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.

³⁸

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 retracts 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.

<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>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.</p> <p>The evaluation committee will be composed partially by representatives of EU institutions.</p>
<i>Security Sensitive Topics</i>	<p>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.</p>

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-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]

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: Open Strategic Autonomy in Developing, Deploying and Using Global Space-Based Infrastructure, Services, Applications and Data	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 1.00 and 2.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Admissibility conditions</i>	The conditions are described in General Annex A. The following exceptions apply: The page limit of the application is 80 pages.

<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>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).</p> <p>In order to achieve the expected outcomes, and safeguard the Union's strategic assets, interests, autonomy, or security, namely [describe outcomes and policy justification that raises concerns for 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.</p> <p><i>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.</i>"³⁹</p>
<i>Technology Readiness Level</i>	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.
<i>Procedure</i>	The procedure is described in General Annex F. The following exceptions

³⁹

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 restrains 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.

	<p>apply:</p> <p>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.</p> <p>The evaluation committee will be composed partially by representatives of EU institutions.</p>
<i>Security Sensitive Topics</i>	<p>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.</p>

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 prerequisite 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]

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

For a description of actions related to innovative space technologies, please refer to “Indirectly managed actions by CNES” in the section “Other Actions” of this work programme.

Heading 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.

Destination 6: Digital and industrial technologies driving human-centric innovation

Virtual Worlds – WEB 4.0 (Partnership)

Proposals are invited against the following topic(s):

HORIZON-CL4-2026-04-HUMAN-01: Developing and demonstrating core technologies for Virtual Worlds and Web4.0 (Virtual worlds Partnership)

Call: DIGITAL	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR N/A million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 30.00 million.
<i>Type of Action</i>	Innovation Actions

Expected Outcome: Projects are expected to contribute to the following outcomes:

- eXtended Reality, immersive and interactive technologies that bring full integration of Virtual Worlds and Web4.0 technologies to the next level.
- The objective is to pave the way for the next generation of virtual worlds, enhancing immersive visualisation and interaction experience, immersing users at the centre of the Virtual Worlds applications, enabling seamless interaction and data exchange

The next generation of Virtual Worlds technologies will propose a deeper and closer-to-reality immersion, stimulating all senses to accurately capture and interpret user movements and environmental data, while providing realistic haptic and force-feedback, retroactions for engaging and lifelike experiences. Real-time user interactions should be favoured by minimizing latency, increasing responsiveness and naturalness of interactions. The developed technologies will also dynamically respond to users' inputs and environmental changes.

Scope: Proposals will focus on

- Asset and scene creation technology evolving in parallel to enable the generation of a human-centric, highly detailed and realistic environments to interact with,
- Use of Generative AI for more personalised and natural experiences,
- Visualisation and interaction through innovative immersive technologies to enhance the user experience through a seamless and immersive involvement,

- Full integration and interoperability of XR and immersive domains and applications (including e.g. Digital Twins),
- Integration of XR applications and components with Telco-Cloud-to-Edge Continuum components, addressing challenges related to resource availability and reliability, while also balancing the requirements of rapid response time, spatial computing, contextual awareness and smart network functions.

The proposals should also advance on the development of technological standards, common data formats and protocols that would enable real-time, seamless and intuitive user-interaction and exchange of information between different systems and platforms in the future, as stepping stones towards Web 4.0.

Proposals will include demonstrators of the developed technologies in real-world scenarios, illustrating the usefulness and efficiency of emerging technologies in Virtual Worlds in illustrative scenarios in the industrial and societal contexts, exploiting the Telco-Cloud-to-Edge Continuum and the 3C pilots on converged Telco Edge Cloud Infrastructure.

HORIZON-CL4-2026-04-HUMAN-02: Web 4.0 architectural framework and Open Internet Stack applications for virtual worlds

Call: DIGITAL	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR N/A million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 18.00 million.
<i>Type of Action</i>	Research and Innovation Actions

Expected Outcome: This topic will stimulate the emergence at European and global scale of Web 4.0 and virtual worlds solutions by delivering outcomes in the two following areas: 1/ an architectural framework for Web 4.0 and 2/ sovereign Open Source applications for virtual and extended reality technologies.

Expected outcome for the “Architectural Framework” area

- An emerging Web 4.0 architectural framework made of cross-platforms, interoperable, trustable and secure building blocks that rely on Open Source software
- A structured and agile eco-system of talented contributors driving the creation and evolution of commons based on Open Source software, open standards and open hardware and designs.

Expected outcome for the “Applications” area

- Open source and made in Europe, supporting trust and sovereignty, and delivering credible alternative choices for citizens, governments and companies including start-ups and SMEs.
- Interoperable, standards-based, decentralised solutions exploiting extended reality technologies.
- Compliant-by-design with EU rules and regulations. Paced for easy deployment by the rich European eco-systems of providers, integrators and verticals.

For both areas the outcome will bring synergies with actions under Virtual worlds, Open Internet Stack, 3C, as well as with other like-minded actions in Europe e.g. at Member States level and outside

Scope: Proposers should address one of the following areas.

1/ “Architectural Framework”

Develop a human-centric Web 4.0 architectural framework encompassing interoperable layers from open hardware, web, AI agents, up to immersive and decentralised applications, utilizing cross-platform digital commons developed by European innovators (SMEs, start-ups, academia). Proposals should demonstrate immersive multi-modal user interaction and should enhance trust, privacy, portability, and advanced identity management, facilitating deployment of the EU Wallet while optimizing the balance between decentralization, security, and energy efficiency.

2/ “Applications”

Proposals will cover the one or more of the following technologies:

- Alternative decentralised applications and services such as synchronous and asynchronous messaging, videoconferencing, collaboration and groupware or social media that can be exploited through Virtual Worlds technologies, including immersion and interaction.
- App-stores (incl. web-based) adapted for Virtual Worlds
- Shared, robust and trustworthy cross-technology Virtual Worlds for user and attribute management

Proposals will have to demonstrate (1) technical maturity in terms of scalability, resiliency, alignment with standards (2) critical mass of communities actively supporting the development (3) evidence of interest from users and deployers of the solutions.

Cross-cutting requirements for both areas:

Applicants should define the mechanisms for maturing building blocks e.g. security and accessibility audits, packaging of the software for easy deployment, localisation of the software in EU languages, documentation best practices and advising on licensing.

Applicants should detail the path to growth for building blocks e.g. by defining a clear standardisation strategy, actively animating communities, creating momentum among like-minded efforts, defining how projects will gain critical mass and what services will be provided for reaching such stage, and providing a coherent picture of the portfolio for adopters

Applicants should create the conditions for successful collaboration and synergies with other European initiatives such as the Virtual Worlds/Web4.0, 3C and Open Internet Stack initiatives as well as with like-minded funding efforts at national, European levels and beyond Europe such as Digital Commons initiatives.

Applicants should demonstrate their experience and understanding of Open Source communities and their expertise covering the full Open Source life cycle through proven track record including years of experience.

HORIZON-CL4-2027-04-HUMAN-01: Advanced and Innovative hardware components for Virtual Worlds (Virtual Worlds Partnership)

Call: DIGITAL	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR N/A million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 42.00 million.
<i>Type of Action</i>	Research and Innovation Actions

Expected Outcome: Projects are expected to contribute to the following outcomes:

- Innovative and advanced XR hardware, advanced headsets, screens, wearables and haptic components, sensors and actuators, advanced chips for a deeper and closer-to-reality immersion, stimulating all human senses.

Scope: in the recent years, hardware for Virtual Worlds made major breakthroughs, democratising headsets, sensors, actuators or haptic equipment. To keep this momentum and advancing further, new generation of XR equipment, wearable solutions and haptic components, as well as non invasive brain computer interfaces for handsfree interaction, hardware or technologies will put the users at the very centre of virtual experiences, for even greater and realistic immersion, aiming at blurring the lines between the real and digital

environments. To ensure this next generation of engaging and lifelike immersion, all senses must be stimulated (sight, hearing, feel, touch, smell), for a fully immersive close-to-reality experience. Users will be submerged with realistic sensations making the experience as immersive as possible.

Proposals should investigate novel scientific approaches or push the limit of existing ones to improve the synchronization and integration of the different modalities.

Proposals will integrate various components in fully tested devices, demonstrating the usefulness and efficiency of their system in illustrative scenarios in the industrial and societal contexts.

Proposals should focus on performant, reliable, miniaturised, interoperable advanced and innovative technologies, with energy consumption and energy efficiency at the centre of concerns.

HORIZON-CL4-2027-04-HUMAN-02: Create A thriving and competitive Virtual Worlds and Web4.0 ecosystem (Virtual Worlds Partnership)

Call: DIGITAL	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR N/A million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 3.00 million.
<i>Type of Action</i>	Coordination and Support Actions

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

1. A Strategic Research and Innovation Agenda (SRIA) for Virtual Worlds in Europe, for useful, open, interoperable, inclusive, sustainable and trustworthy virtual worlds systems and applications, ensuring these reflect EU values and principles.
2. AI Development and implementation of the European Virtual Worlds Partnership.
3. A strong and competitive ecosystem, with European companies playing a leading role in the adoption and acceptance, and in the development and deployment of Virtual Worlds technologies.
4. Reinforced links among initiatives in virtual worlds in Horizon Europe, Digital Europe Programme, and other programmes at EU, national and regional levels.
5. Widespread awareness and outreach programmes.

6. Increased adoption of virtual worlds that are open, accessible and inclusive, interdisciplinary, safe and respect ethical values and European legal framework, including regarding privacy, security in all Member States and Associated Countries.
7. Standardisation methods for virtual worlds technologies and in support of the EU regulatory framework.

This CSA should be prepared, managed and coordinated by the key stakeholders in this field and directly support the Virtual Worlds Partnership.

Scope: The objective of the CSA is to support the community in implementing the Virtual Worlds Partnership and its Strategic Research and Innovation Agenda for Virtual Worlds (SRIA). The CSA will also lay the grounds for a strong and inclusive network bringing together academia, industry, public actors and end-users, including major industrial European sectors and all relevant stakeholders. The CSA will ensure close coordination at regional, national and European level.

The CSA will also strongly promote the adoption of Virtual Worlds technologies and solutions in all Member States and Associated Countries, with particular emphasis on geographical aspect and across the value chain.

To this end, the CSA will develop and implement outreach programmes aiming at better understanding and raising awareness to create acceptance and trustworthiness of Virtual Worlds solutions.

The CSA will also support standardisation efforts to support the uptake of interoperable, open, trustworthy and ethical Virtual Worlds solution, by mobilising and bringing stakeholders together and, when needed, organising European representation in existing or new standardisation working groups in support of the Commission regulatory framework.

Proposals should involve and be driven by representatives of the relevant actors of the field (e.g., academia, RTOs, industry including SMEs).

STANDARDISATION – INTERNATIONAL

Proposals are invited against the following topic(s):

HORIZON-CL4-2026-04-HUMAN-03: Facilitate the engagement of European stakeholders in international digital standardisation (CSA)

Call: DIGITAL	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 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.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 7.00 million.
<i>Type of Action</i>	Coordination and Support Actions

Expected Outcome: Proposals are expected to contribute to the following outcomes:

-
- Increasing the participation and influence of European experts in digital standardisation to promote EU values and strategic interests, contributing to strengthen EU competitiveness in the digital field.
- Improvement of the skills of European experts, especially from SMEs and academia, to successfully contribute and lead in the development of digital standards.
- Development and update of standardisation landscapes and gap analyses of key digital technologies as outlined in the Rolling Plan for ICT Standardisation.
- Provision of foresight analyses regarding standardisation in new emerging technologies.
- More awareness of the benefits and competitive advantages of standardisation, in particular for SMEs and researchers, and more visibility of the European digital standardisation ecosystem.

Scope:

Contribute to the implementation of the EU Standardisation Strategy and other policy initiatives such as Europe's Digital Decade or the Competitiveness Compass, with an emphasis on supporting the EU's leading position in global standards-setting of key digital technologies.

The goals are inter alia to 1) strengthen the EU competitiveness in the digital domain; 2) contribute to EU tech sovereignty and 3) promote EU values and interests internationally, by empowering and financially supporting the active participation of European stakeholders in the development of digital international standards.

The objective is to reinforce the presence of experts from the EU and associated Horizon Europe countries in global digital standards setting, especially those coming from SMEs, R&I institutions, Open-Source community, Academia and societal stakeholders).

To achieve this objective, proposals under this topic should provide for:

-
- Setting up of a management facility to support contributions and leadership (e.g. chairing of technical committees, convenor positions) of European specialists in activities in relation to global digital standardisation

- When relevant, support financially the hosting of international standardisation meetings (e.g. 3GPP, ISO/IEC JTC1) and workshops in Europe to ease the participation of European experts
- Landscape and gap analysis of standardisation activities in key digital priority areas, as outlined in the Annual Union Work Programme and the Rolling Plan for ICT standardisation, including identification of new emerging technology areas.
- Promotion of the relevance and benefits of digital standardisation, especially for strengthening the competitiveness of EU industry, driving sustainability, achieving tech sovereignty, and promoting EU values. The proposal shall build synergies with other similar EU- and national-funded initiatives. It shall also include actions, including development of tools and materials, to promote education and skills on standardisation.

The proposal should take into account the previous activities carried out at least in terms of educational material and facilities for funding experts within the topics ICT-40-2017 (implemented by the StandICT.eu project), ICT-45-2020 (implemented under StandICT.eu2023 project), HORIZON-CL4-2022-RESILIENCE-01-21 (implemented under StandICT.eu 2026) and HORIZON-CL4-2024-HUMAN-03-04 (implemented under StandICT.eu 2029).

See website: <http://www.standict.eu>.

Other actions not subject to calls for proposals

Public procurements

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, for a value of €13.5 million.

In 2027, we will launch trainings related to cybersecurity and certification and look at ways to stimulate demand for cybersecurity and certification services. Those activities will have a budget of €3 million.

Form of Funding: Procurement

Type of Action: Public procurement

Indicative budget: EUR 13.50 million from the 2026 budget and EUR 3.00 million from the 2027 budget

2. Space events, Studies and Platforms

In addition to calls for proposals and delegated actions, events, studies and online platforms are needed on specific activities in order to assemble, maintain and evolve the EU Space R&I 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. Study on the societal benefits in the use of collaborative licensing models for intellectual assets management

Form of Funding: Procurement

Type of Action: Public procurement

Indicative budget: EUR 0.20 million from the 2026 budget

4. Comparative study on practices and tools for knowledge valorisation in five jurisdictions outside the EU

Form of Funding: Procurement

Type of Action: Public procurement

Indicative budget: EUR 0.15 million from the 2026 budget

5. Framework for effective licensing of intellectual assets stemming from publicly funded research

Form of Funding: Procurement

Type of Action: Public procurement

Indicative budget: EUR 0.20 million from the 2026 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 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

Quantum

1. Quantum Computing – Call for the 2nd SGA for the FPA on trapped-ions

Expected outcome

This action will advance Europe's leadership in trapped-ion quantum computing by achieving the following key outcomes:

- Establishment of a full-stack ion-trap quantum computer with more than 1000 qubits, fully integrated into high-performance computing (HPC) systems, and accessible via the cloud.
- Demonstration of quantum advantage for selected real-world applications, validated against benchmarks.
- Strengthened European capabilities to develop modular, interoperable, and scalable quantum computing architectures.
- Implementation and demonstration of advanced error correction and fault-tolerant quantum computing techniques.
- Integration of full-stack hardware-software systems with standardised and certified interfaces.
- Engagement with industry and academia through open access to quantum computing resources and co-design of applications.

Scope

The action will support the scale-up of European trapped-ion quantum computing platforms, aiming at technological maturity and usability for industrial and scientific applications. Proposals should:

- Develop a full-stack trapped-ion quantum computer with more than 1000 physical qubits, including:
 - Initialisation, manipulation, and readout fully integrated into the cryogenic setup.
 - Reduced system footprint via standardised interfaces and integrated waveguides.
- Advance scalable error correction and fault-tolerant computing:
 - Develop and benchmark error correction codes suitable for trapped-ion architectures.

- o Demonstrate error mitigation in noisy environments and real-life quantum information tasks.
- Enable real-life application testing:
 - o Select and implement at least two practical use cases (aligned with industrial or scientific challenges).
 - o Demonstrate computational advantage over classical simulations where possible or show progress towards it.
- Develop standards and modular interoperability:
 - o Establish interface specifications for both hardware and software layers, enabling integration across vendors and platforms.
 - o Align with European efforts on standardisation, benchmarking, and certification.
- Integrate with classical computing infrastructures:
 - o Ensure seamless operation alongside HPC resources, with remote access and hybrid quantum-classical workflows.
- Provide access and foster ecosystem participation:
 - o Support researchers and industry (including SMEs) with open, cloud-based access, comprehensive user documentation, and training resources.
- Contribute to a sustainable European supply chain:
 - o Address key technological components such as lasers, ion traps, control electronics, and packaging solutions, aiming for independent and robust sourcing

Form of Funding: Grants not subject to calls for proposals

Type of Action: Specific grant agreement awarded without call for proposals in relation to a Framework Partnership Agreement

Indicative budget: EUR 20.00 million from the 2026 budget

2. Quantum Computing – Call for the 2nd SGA for the OpenSuperQPlus FPA (superconducting)

Expected outcome

This action will consolidate Europe's position in superconducting quantum computing through:

- Establishment of a superconducting quantum computer with 1.000 qubits, operated as a full-stack system for both fault-tolerant and NISQ algorithms.

- Demonstration of quantum advantage on selected industrial use cases, validated through benchmarking with classical methods.
- Deployment of a cloud-accessible quantum system integrated with high-performance computing environments.
- Maturation of fault-tolerant quantum computing protocols, including effective quantum error correction and noise mitigation schemes.
- Delivery of a comprehensive, standardised software stack supporting system bring-up, calibration, control, benchmarking, and user access.
- Strengthened supply chains and industrial capacity in Europe for superconducting quantum technologies.

Scope

Proposals should contribute to the scale-up and practical deployment of superconducting quantum computing platforms and must include:

- Construction and demonstration of a modular superconducting quantum computer with high-fidelity gates and scalable architecture.
- Integration of all required layers: quantum hardware, cryogenic infrastructure, control electronics, and a full-stack software suite.
- Development and validation of advanced error correction and fault-tolerance schemes suited for superconducting qubits.
- Demonstration of real-life use cases (minimum of two) addressing relevant industrial challenges. Use cases should show quantum advantage or clear progression towards it, with validation against classical methods.
- Deployment of a full software stack to operate the system, including tools for calibration, control, performance verification, benchmarking, and interfacing with classical computing environments.
- Development of standardised interfaces and APIs for access, control, and hybrid workflows, ensuring interoperability with classical HPC systems and cloud-based platforms.
- Provision of remote access capabilities to enable wide use by academic, research, and industrial communities across Europe.
- Contribution to the creation of a robust and independent European supply chain for superconducting quantum technologies, including scalable cryogenics, high-fidelity readout and control electronics, and superconducting chip fabrication.

- Open access to the system for co-design and evaluation of algorithms, supported by training resources and documentation.

The action builds upon the foundations set by the OpenSuperQPlus FPA and aligns with the goals of the Strategic Research and Industry Agenda (SRIA 2030), contributing to Europe's strategic autonomy in quantum computing technologies.

Form of Funding: Grants not subject to calls for proposals

Type of Action: Specific grant agreement awarded without call for proposals in relation to a Framework Partnership Agreement

Indicative budget: EUR 20.00 million from the 2026 budget

3. Quantum Computing & Simulation – Call for the 2nd SGA for the PASQuanS2 FPA

Expected outcome

This action aims to establish European leadership in neutral-atom quantum simulation and digital quantum computing by delivering:

- Fully programmable industry-ready quantum simulators based on 10.000 neutral atoms in a scalable architecture, without loss of control and readout fidelity, accessible via cloud platforms, and with the possibility of integrating them into high-performance computing environments.
- Fully programmable platform for neutral-atom quantum computing capable of both digital-analogue quantum operations and gate-based computing with at least 1.000 qubits and a clear path to further scalability to 10.000 qubits.
- Demonstration of quantum simulation and/or computing operating beyond classical computability, validated through benchmarking with classical methods.
- New real-world applications across science and industry (at least two).
- The software stack for these applications, including enhanced software for verification, algorithm implementation, and user interfaces.
- Demonstration of the full quantum stack – including quantum control and verification of quantum simulation operating beyond regimes that are classically computable.
- User interfaces allowing non-expert users to apply these systems to their problem sets.
- Enhanced scalability, stability, and usability of the quantum simulation and computing platforms.
- Strengthened European industrial and technological capacity in quantum simulation/computing and associated hardware/software components.

Scope

Proposals should advance the maturity and usability of neutral-atom quantum platforms with a focus on practical applications. They should include:

- Development and deployment of scalable quantum simulation/computing platforms with individually addressable neutral atoms, supporting analogue simulation operation, hybrid analogue-digital techniques and gate-based quantum computing.
- Demonstration of real-world use cases (minimum two), addressing complex scientific or industrial problems (e.g., materials science, chemistry, optimization) that are intractable for classical simulation/computing. These should include benchmarking and verification strategies to assess quantum advantage.
- Development and integration of a complete simulation stack including quantum control systems, user interfaces, classical simulation support tools, and error-resilient operation protocols.
- Cloud-based access to the system, ensuring usability by researchers and industrial users across Europe. The system should allow for hybrid quantum-classical workflows with HPC environments and support non-expert users.
- Implementation of robust quantum error mitigation, error correction, error detection and quantification techniques adapted to neutral-atom platforms.
- Development of benchmarking and cross-platform validation tools to assess the performance of different simulation/computing approaches and support standardisation efforts.
- Pathways highlighting the use of quantum simulators as development platforms for future generations of quantum sensors and for the execution of quantum metrological protocols.
- Enhancement of the European supply chain through the development and integration of key quantum components for neutral-atom based computational platforms (e.g., trapping and control optics, laser systems, photonic interfaces).
- Training, documentation, and user engagement activities to foster adoption and ecosystem growth.

The action builds upon the foundations set by the PASQuanS2 FPA and aligns with the goals of the Strategic Research and Industry Agenda (SRIA 2030), contributing to Europe's strategic autonomy in quantum simulation and digital neutral-atom technologies.

Form of Funding: Grants not subject to calls for proposals

Type of Action: Specific grant agreement awarded without call for proposals in relation to a Framework Partnership Agreement

Indicative budget: EUR 20.00 million from the 2026 budget

4. Quantum Communication – Call for the 2nd SGA for the QSNP FPA (QKD)

Expected outcome

This action will strengthen Europe's strategic autonomy in quantum-secure communications by advancing core QKD technologies and integration capabilities. Expected results include:

- Development and demonstration of next-generation QKD systems with specific measurable improvements in key rates (>1 Mbps over metropolitan distances), fidelity (>98%), and operational link distances (>300 km for fibre-based QKD).
- Implementation of hybrid quantum-classical cryptographic frameworks combining QKD and post-quantum cryptography (PQC), tested on clearly defined real-world applications.
- Integration of quantum communication components with network equipment and orchestration systems (e.g., software-defined networking).
- Validation of QKD-based security in high-priority use cases beyond EuroQCI infrastructure, including:
 - Critical infrastructure monitoring (e.g., energy grid telemetry),
 - Long-term secure cloud storage,
 - Industrial control systems (e.g., transport, manufacturing),
 - Secure multi-site enterprise communications.
- Strengthened European supply chain through the development of certifiable, standardised, and scalable QKD components.

Scope

The action should support applied R&D in advanced QKD systems and their integration into future secure communication networks, avoiding overlap with EuroQCI deployment efforts. Proposals must include:

- Development and experimental validation of advanced QKD protocols and systems such as:
 - Continuous-variable QKD (CV-QKD),
 - Measurement-device-independent QKD (MDI-QKD),
 - Twin-field QKD (TF-QKD),
 - Device-independent QKD (DI-QKD).

- Design and implementation of QKD integration into classical and optical networking infrastructure:
 - Compatibility with existing network equipment (e.g., routers, switches),
 - Interface development for SDN/NFV orchestration platforms,
 - Secure key management compatible with enterprise-grade services.
- Demonstration of hybrid QKD-PQC frameworks in at least two realistic and demanding use cases, with demonstrable benefits over classical-only solutions.
- Validation of security performance through well-defined benchmarks and verification methods.
- Development of interoperable, scalable, and certifiable QKD hardware and software components (e.g., quantum random number generators, integrated photonic QKD modules).
- Provision of cloud-accessible interfaces to QKD resources to facilitate remote experimentation and integration testing.
- Establishment of at least one demonstrator involving end-users in a live operational setting, with KPIs for availability, key rate, and resilience under different network conditions.
- Contribution to standards and certification activities to support widespread adoption and regulatory compliance.
- Engagement with industry and national network operators to ensure compatibility with telecom-grade requirements and avoid duplication with EuroQCI infrastructures, focusing instead on advancing the technology readiness of next-generation systems.

This call builds on the QSNP Framework Partnership Agreement and aligns with the SRIA 2030, targeting technology readiness and practical deployment pathways for post-EuroQCI quantum-secure communications.

Form of Funding: Grants not subject to calls for proposals

Type of Action: Specific grant agreement awarded without call for proposals in relation to a Framework Partnership Agreement

Indicative budget: EUR 24.00 million from the 2026 budget

5. Quantum Testing Infrastructure – Call for the 2nd SGA for the Qu-Test FPA

Expected outcome

This action will establish a pan-European open-access testing and experimentation infrastructure for quantum technologies, enabling systematic validation and certification of quantum components and systems. Expected outcomes include:

- Deployment of distributed quantum testing facilities accessible across Europe, including remote access and standardized test protocols.
- Provision of certification services aligned with future standardisation efforts, ensuring trust, quality, and interoperability of quantum technologies.
- Support for SMEs, start-ups, and research institutions in validating quantum components and sub-systems.
- Strengthening of Europe's competitiveness by ensuring robust quality assurance mechanisms and accelerating the time-to-market of emerging quantum products.

Scope

Proposals should implement the testing-related part of the action plan established under the Framework Partnership Agreement for Qu-Test. The action must include:

- Expansion and interconnection of open-access testing facilities in multiple Member States, covering a range of quantum technologies (e.g., processors, sensors, photonics, control systems).
- Development and deployment of interoperable testing methodologies, benchmarking protocols, and certification procedures.
- Integration of metrological and validation capabilities into existing RTOs and academic infrastructures, focusing on TRL 4–7.
- Creation of a comprehensive digital platform supporting users in test planning, remote execution, and data reporting.
- Engagement with industry, especially start-ups and SMEs, to define user-driven requirements and access models.
- Establishment of feedback loops between testing and design/manufacturing entities to inform improvements and accelerate iterative development.
- Coordination with relevant European and international standardisation initiatives to prepare the ground for widespread adoption of certified quantum components.
- Alignment with SRIA 2030 objectives, focusing on ecosystem-wide support for quality, reliability, and reproducibility in quantum technology development.

Form of Funding: Grants not subject to calls for proposals

Type of Action: Specific grant agreement awarded without call for proposals in relation to a Framework Partnership Agreement

Indicative budget: EUR 20.00 million from the 2026 budget

6. Quantum Experimental Pilot Lines – Call for the 2nd SGA for the Qu-Pilot FPA

Expected outcome

This action will strengthen Europe's leadership and strategic autonomy in quantum technologies by advancing experimental pilot line capacities as a vital stepping stone toward future industrial-scale quantum hardware production. Qu-Pilot serves as the critical intermediary between academic research and the stable pilot lines under the Chips Joint Undertaking, offering a testbed for technological innovation, reproducibility, and manufacturability.

Expected outcomes include:

- Deployment of experimental quantum pilot lines addressing diverse platforms and materials, laying the groundwork for broader integration into Chips JU pilot lines.
- Establishment of scalable and reproducible quantum fabrication processes, advancing TRL 4–6 technologies and addressing early-stage certification, standardisation, and quality control.
- Reinforcement of a pan-European quantum hardware ecosystem through shared infrastructure and open-access models, fostering participation from SMEs, startups, and research institutes.
- Demonstrated ability to accelerate technology maturity and feed critical feedback loops into future Chips JU stability pilot lines.
- Enhanced synergies with testing infrastructures (e.g., Qu-Test), standardisation efforts, and industrialisation roadmaps, enabling horizontal integration across computing, communication, sensing, and enabling tech domains.

Scope

Proposals must implement the pilot production elements of the Qu-Pilot Framework Partnership Agreement. The action should advance the maturity of quantum hardware technologies in alignment with EU industrial strategy, emphasising flexibility, innovation, and scalability.

Proposals should address:

- Establishment or enhancement of experimental pilot production infrastructure for TRL 4–6 quantum hardware technologies, with strong R&D orientation.
- Development of pre-industrial processes for:

- o Quantum processors (e.g., superconducting, trapped ions, photonic),
- o Quantum sensors (e.g., NV centers),
- o Cryo-compatible packaging and interconnects.
- Integration of cleanroom capabilities with lithography, etching, and deposition tailored to quantum device requirements (e.g., silicon, diamond, III-Vs), ensuring convergence with Chips JU standards.
- Creation of collaborative fabrication access models (shared-cost basis) open to academic and industrial partners.
- Development of standardised workflows for yield analysis, reproducibility, and quality assurance, supporting component certification pathways.
- Continuous engagement with Qu-Test and other testbeds to enable rapid iteration cycles and technology validation.
- Active alignment with Chips JU's pilot line roadmap to enable seamless transfer of validated technologies once the stability pilot lines are operational.
- Contribution to a transversal European infrastructure serving multiple quantum domains (computing, sensing, communications), ensuring cross-domain integration and maximising synergies.

Form of Funding: Grants not subject to calls for proposals

Type of Action: Specific grant agreement awarded without call for proposals in relation to a Framework Partnership Agreement

Indicative budget: EUR 15.00 million from the 2026 budget

Heading 7 of Space - Monitoring Space

1. EU SST Sensors and Processing

Specific conditions		
<i>Expected contribution per project</i>	<i>EU</i>	The Commission estimates that an EU contribution of around EUR 28 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>		The total indicative budget for the topic is EUR 28 million.
<i>Type of Action</i>		Innovation Action (IA) with reduced funding rate (45%).

<i>Admissibility conditions</i>	<p>The conditions are described in General Annex A. The following exceptions apply:</p> <p>The page limit of the application is 100 pages.</p>
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>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.</p> <p><i>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.</i>⁴⁰</p> <p>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</p>

⁴⁰

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 retracts 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.

	additionally be used).
<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>The granting authority can fund a maximum of one project.</p> <p>The evaluation committee could be partially composed by representatives of EU institutions.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. As per Article 16.2 (Ownership of results) of the EU Grants: AGA — Annotated Grant Agreement (V1.0– 01.05.2024), the granting authority does not obtain ownership of the results produced under the action.

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 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 x cm in LEO, y cm in MEO/GEO).

The proposal is expected to 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.

The proposal 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).

Indicative timetable: in quarter Q4 of year 2027.

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.

Legal entities:

EUSST Partnership

Form of Funding: Grants not subject to calls for proposals

Type of Action: Grant to identified beneficiary according to Financial Regulation Article 198(e) - Programme co-fund action

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 European commercial SST capabilities on sensors

Specific conditions		
<i>Expected contribution project</i>	<i>EU per</i>	The Commission estimates that an EU contribution of around EUR 24 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>		The total indicative budget for the topic is EUR 24 million.
<i>Type of Action</i>		Innovation Action (IA)
<i>Admissibility conditions</i>		The conditions are described in General Annex A. The following exceptions apply:

	The page limit of the application is 50 pages.
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>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.</p> <p><i>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.</i>⁴¹</p> <p>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).</p>

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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 retracts 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.

<i>Procedure</i>	<p>The procedure is described in General Annex F. The following exceptions apply:</p> <p>The granting authority can fund a maximum of one project.</p> <p>The evaluation committee could be partially composed by representatives of EU institutions.</p>
<i>Legal and financial set-up of the Grant Agreements</i>	<p>The rules are described in General Annex G. The following exceptions apply:</p> <p>The beneficiaries may provide financial support to third parties (FSTP). The support to third parties can only be provided in the form of grants. Activities proposed by third parties (FSTP proposals) are to be selected according to selection criteria agreed between the granting authority and the beneficiaries.</p> <p>A “third party”, submitting a FSTP proposal, could be either an entity or a consortium of entities.</p> <p>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 carried out by third parties 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.</p> <p>The minimum amount of <u>each</u> FSTP proposal is expected to be in the range of EUR x million.</p> <p>The funding rate for each FSTP proposal is x%. Third parties shall be asked to co-finance x% of the total amount of each FSTP proposal.</p> <p>The total amount of the EU contribution supporting FSTP proposals is expected to be in the range of EUR 23,5 million.</p> <p>As per Article 16.2 (Ownership of results) of the EU Grants: AGA — Annotated Grant Agreement (V1.0– 01.05.2024), the granting authority does not obtain ownership of the results produced under the action. Similarly, the IPR generated in FSTP activities cannot be retained by the beneficiaries.</p>

Expected Outcome: 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, funded through FSTP, 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 in LEO, 50 cm in MEO/GEO). Note: Priority should be given to projects focusing on LEO detection even though preminent 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.

FSTP 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 in the space sector.

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).

Financial support to third parties is expected to start no later than 9 months after the start date of the grant.

Indicative timetable: in quarter Q4 of year 2027.

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.

Legal entities:

EU SST Partnership

Form of Funding: Grants not subject to calls for proposals

Type of Action: Grant to identified beneficiary according to Financial Regulation Article 198(e) - Programme co-fund action

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

Specific conditions		
<i>Expected contribution</i>	<i>EU per</i>	The Commission estimates that an EU contribution of between EUR 0.5 and 1.0 million would allow these outcomes to be addressed

<i>project</i>	appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 1.0 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Admissibility conditions</i>	<p>The conditions are described in General Annex A. The following exceptions apply:</p> <p>The page limit of the application is 45 pages.</p>
<i>Eligibility conditions</i>	<p>The conditions are described in General Annex B. The following exceptions apply:</p> <p>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.</p> <p>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."⁴²</p>

⁴²

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

	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).
<i>Technology Readiness Level</i>	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.
<i>Procedure</i>	The procedure is described in General Annex F. The following exceptions apply: The granting authority can fund a maximum of one project.
<i>Security Sensitive Topics</i>	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 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 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 ISOS Pilot Mission Expert Group (PMEG).

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. Moreover, the activity shall support **public outreach activities for the ISOS4I pilot mission**.

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 project is expected to contribute to the following outcomes, in close and continuous coordination with the European Commission services and the ISOS Pilot Mission Expert Group:

- 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.

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 annex⁴³:

- R&I to support the ISOS Pilot mission detailed mission and system design, demonstrating in an integrated ground test the interoperability of the developed mission components ground prototypes (i.e., Servicing, HOST, Logistic and satAPPs) and the baseline demonstration scenarios as defined in the technical annex;
- R&I on 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.

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

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

⁴³ ISOS Pilot Mission Guidance Document

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.

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 to identified beneficiary according to Financial Regulation Article 198(e) - Programme co-fund action

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 proposal for a Union Programme for Secure Connectivity. 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. 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 are due to be entrusted to ESA under a 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 IRIS², 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 will be 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. 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 managed by the Commission, in the context of critical space technology for EU non-

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.

Form of Funding: Indirectly managed actions

Type of Action: Indirectly managed action

Indicative budget: EUR 91.00 million from the 2026 budget and EUR 179.50 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 7.50 million from the 2027 budget

4. CNES.1 - Heading 9 of Space - Boosting Space through innovative space technologies - Quantum Space Gravimetry pathfinder mission development

Among quantum sensing technologies, quantum gravimetry is considered an area of major interest and a priority. Quantum gravity sensors, based on cold atom interferometry (CAI), will play an instrumental role compared with classic electrostatic gravimeters currently deployed and will offer superior long-term stability, higher sensitivity and more precise measurement of the gravitational field. The EU is already supporting the deployment of quantum gravity sensors on ground (HORIZON-CL4-2024-DIGITAL-EMERGING-02) and the next step is to deploy quantum gravity sensors in space. To reach this objective, the deployment of a Quantum Space Gravimetry (QSG) pathfinder mission to demonstrate the technology in orbit is of utmost importance and the European Commission will support the deployment of this pathfinder mission. The aim of this action is to support the development, deployment and in-orbit validation of the ground and space segments of the QSG pathfinder mission.

These activities will be implemented by CNES under a Contribution Agreement between the Commission and CNES. 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 will be open only to entities established in the EU Member States and effectively controlled by entities established in EU Member States.

The EU contribution is conditional to complementary funding from Member States.

Form of Funding: Indirectly managed actions

Type of Action: Indirectly managed action

Indicative budget: EUR 30.00 million from the 2026 budget

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Budget⁴⁴

	Budget line(s)	2025 Budget (EUR million)	2026 Budget (EUR million)	2027 Budget (EUR million)
Calls				
HORIZON-CL4-2026-01		30.00	645.00	
	<i>from 01.020240</i>	<i>30.00</i>	<i>645.00</i>	
HORIZON-CL4-2026-02				
HORIZON-CL4-2027-01				460.00
	<i>from 01.020240</i>			<i>460.00</i>
HORIZON-CL4-2027-02				
HORIZON-CL4-SPACE-2026-03			100.00	
	<i>from 01.020240</i>		<i>100.00</i>	
HORIZON-CL4-SPACE-2027-03				55.00
	<i>from 01.020240</i>			<i>55.00</i>
HORIZON-CL4-2026-04			571.00	
	<i>from 01.020240</i>		<i>571.00</i>	
HORIZON-CL4-2027-04				45.00
	<i>from 01.020240</i>			<i>45.00</i>
Other actions				
Public procurement			14.55	3.50

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The budget figures given in this table are rounded to two decimal places.
The budget amounts are subject to the availability of the appropriations provided for in the general budget of the Union for 2026 and 2027.

Horizon Europe - Work Programme 2026-2027
Digital, Industry and Space

	<i>from 01.020240</i>		<i>14.55</i>	<i>3.50</i>
Expert contract action			1.00	1.00
	<i>from 01.020240</i>		<i>1.00</i>	<i>1.00</i>
Specific grant agreement			119.00	
	<i>from 01.020240</i>		<i>119.00</i>	
Grant awarded without a call for proposals according to Financial Regulation Article 198(e)				53.00
	<i>from 01.020240</i>			<i>53.00</i>
Indirectly managed action			159.00	217.00
	<i>from 01.020240</i>		<i>159.00</i>	<i>217.00</i>
Estimated total budget		30.00	1609.55	834.50