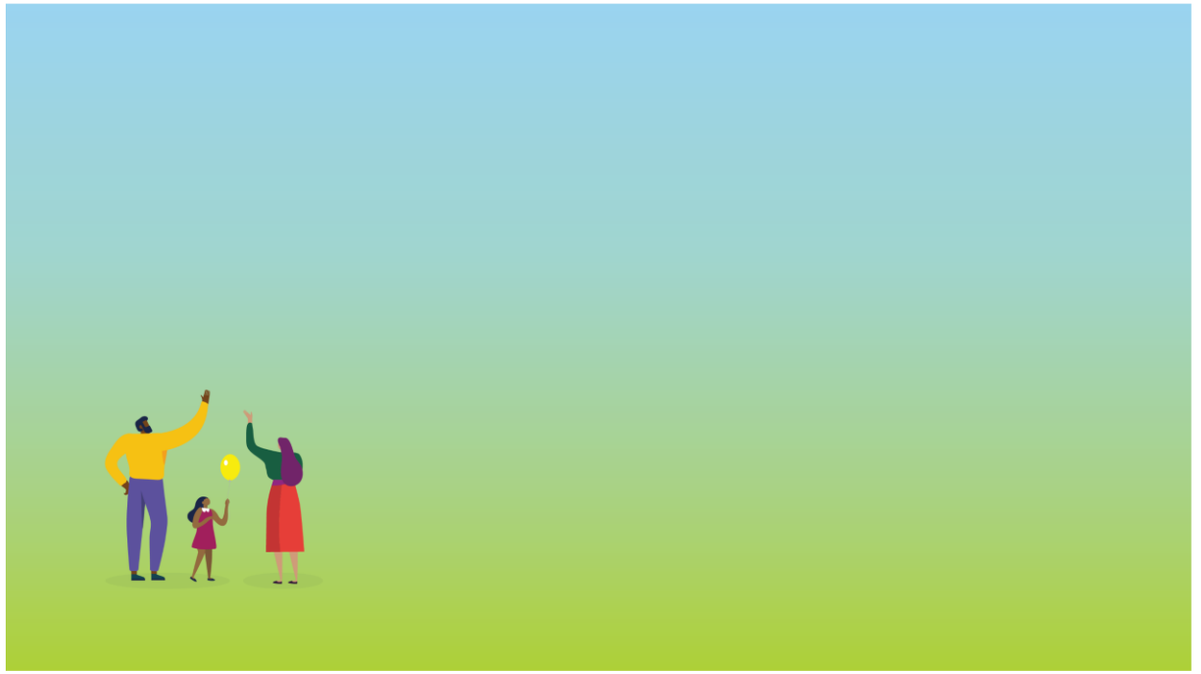
Destination 3:

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



HORIZON-CL4-2026-04-DATA-02 Open Internet Stack Sovereign Solutions (RIA)

Expected outcomes 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 made in Europe, easily deployable, interoperable.

Is there anything we do NOT want? Proprietary, experimental, outside the 3 technology areas mentioned

Topic evolution

Open Internet Stack is a new initiative starting from WP25, that intends to leverage the strong and active communities of European Open Source innovators which were supported in previous NGI topics.

… and links to other topics

- Applicants should detail their plan to creating synergies with other topics such as those in the WP25 **Open Internet Stack**, **3C**, **Virtual Worlds/Web4.0**

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

Which existing projects are relevant?

- Some of cascading NGI projects are active in the targeted areas of this call and may be relevant
- All the information on current NGI third party projects is available at: https://ngi.eu/discover-ngi-innovations/?
- Examples:

Network and Transport technologies: https://ngi.eu/discover-ngi-innovations/?&project_category=1319

Operating systems and firmware: https://ngi.eu/discover-ngi-innovations/?&project_category=1321

Which types of stakeholders are mainly addressed?

- Stakeholders familiar with Open Source solutions and demonstrating capabilities to move projects to deployment level in use cases
- Deployers of technologies

- If opting for FSTP (max 80%):

[Applicants] *should primarily target calls towards internet innovators and adopters of Open Source technologies*

Are there additional background documents or other relevant information?

…

What are relevant upcoming events?

Horizon Europe Cluster 4 Info Days: 29-30 January 2026

Are there any future trends / emerging initiatives that proposers should be aware of?

Digital Commons

Are there plans for follow-up funding?

Not planned for 2027

HORIZON-CL4-2026-04-DATA-03 Open Internet Stack Support for Scale (CSA)

Expected outcomes

- 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 and maintenance models including business and foundation
- A common branding, marketing, training and communication plan ensuring consistent perception and scale-up.
- A close interleave with policy development through a dedicated policy sandbox.

Is there anything we do NOT want?

- Generic communication/support proposal

Topic evolution

New topic

… nad links to other topics
“Open Internet Stack”

Which existing projects are relevant?

Projects stemming from WP2025 “Open Internet Stack” and “Web4.0” topics – to be announced

Which types of stakeholders are mainly addressed?

Stakeholders with knowledge in:

- Cataloguing solutions
- Performing security and accessibility audits
- Open Source communities, projects & initiatives
- Open Source sustainability models
- For advising on standardisation, licencing, localization/internationalisation
- Branding, marketing, training, and communication
- Sandbox for policy/regulation alignment

Are there additional background documents or other relevant information?

…

What are relevant upcoming events?

Horizon Europe Cluster 4 Info Days: 29-30 January 2026

Are there any future trends / emerging initiatives that proposers should be aware of?

Digital Commons

Are there plans for follow-up funding?

Not planned for 2027

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

Expected outcomes

- Improved availability, accuracy, privacy and interoperability of data
- AI-driven compliance technologies and regulatory tools that reduce administrative burdens, promote regulatory efficiency
- Agile regulatory processes, cross-border compliance and interoperability, transparency and trust
- Enhance competitiveness, digital sovereignty, better public services through better (real/synthetic) data for AI

Scope areas: *Proposals should clearly indicate their main focus area!*

- 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.
- Secure, scalable, and adaptive data management systems that automate key data processes; high-quality synthetic data

Is there anything we do NOT want?

- repetition of actions that previous projects already covered
- theoretic/research projects, or anything targeting lower than TRL level 8 at the end of the project
- Lack of focus: addressing both topic areas and all expected outcomes “just in case” hoping to score better in evaluation

Topic evolution

- HORIZON-CL4-2025-03-DATA-13: Fostering Innovative and Compliant Data Ecosystems (IA)
- DIGITAL-2025-AI-08-COMPLIANCE: Digital solutions for regulatory compliance through data
- HORIZON-CL4-2024-DATA-01-01: AI-driven data operations and compliance technologies (IA)
- HORIZON-CL4-2021-DATA-01-01: Technologies and solutions for compliance, privacy preservation, green and responsible data operations (RIA) *(projects ending/ended in 2025)*

Which existing projects are relevant?

- HORIZON-CL4-2024-DATA-01-01 AI-driven data operations and compliance technologies (IA)

- HORIZON-CL4-2021-DATA-01-01 Technologies and solutions for compliance, privacy preservation, green and responsible data operations (RIA) *(projects ending/ended in 2025)*

- Data Spaces Support Centre (DSSC)

Which types of stakeholders are mainly addressed?

- data technology developers, data providers, data brokers, data users, data subjects (citizens)

- this topic implements the co-programmed European Partnership on Artificial Intelligence, Data and Robotics (ADRA, BDVA)

- participation is limited to legal entities established in Member States, Iceland and Norway, associated countries and OECD countries. Entities cannot be controlled directly or indirectly by a non-eligible country or by a non-eligible country entity.

Are there additional background documents or other relevant information?

Data Union Strategy of 19 November 2025

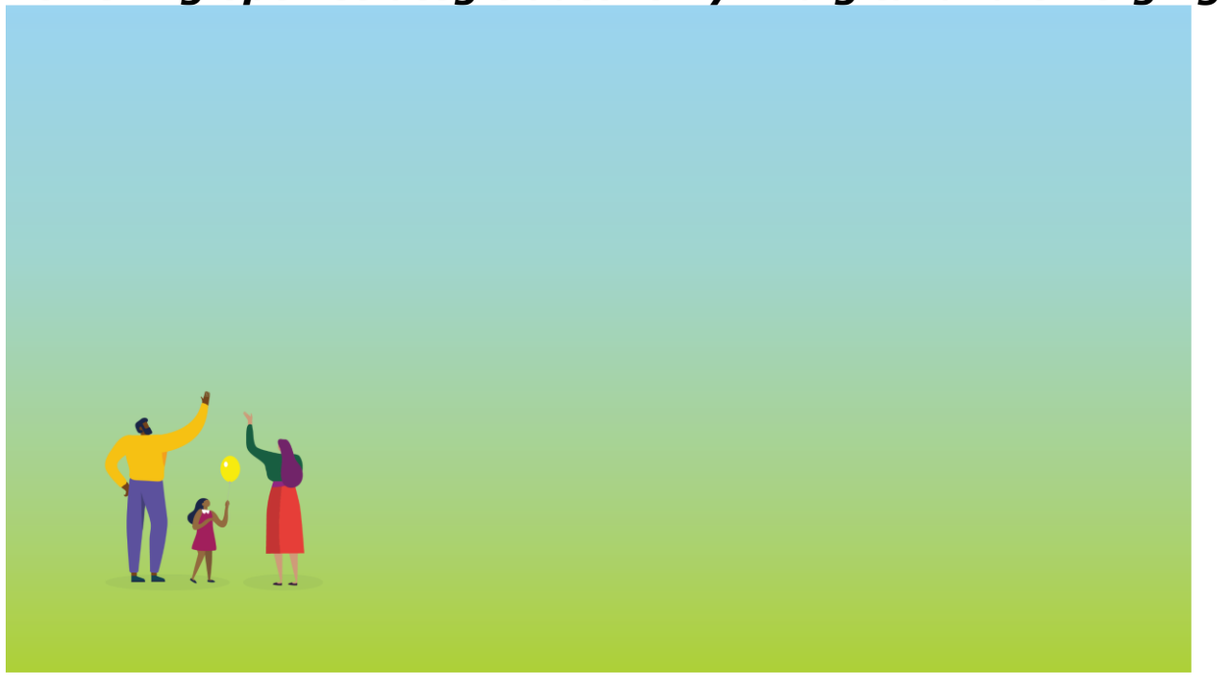
What are relevant upcoming events?
Data Spaces Symposium 10-11 Feb 2026, Madrid
Data Week 5-6 May 2026, Oslo

Are there any future trends/ emerging initiatives that proposers should be aware of?
/

Are there plans for follow-up funding?

Forthcoming FP10 and ECF projects from 2028 onwards will build on HE & DEP project results (e.g. availability of high-quality data for AI, Data Labs… see the Data Union strategy)

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



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

Context:

- Photonics Partnership
- EU Chips Act and Chips Act 2.0
- The CSA should reach out to photonics stakeholders and contribute to the EU R&I strategy.

Expected Outcome

- 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, nationalplatformsand end-user sectors.
- Improved **alignment** of regional,nationaland European R&I **agendas**, enhancing coherence andimpact 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, industrialcompetitivenessand 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,growthand scale-up.

Scope

- 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 toidentifysynergies and improve access to innovation financing.

Which types of stakeholders are mainly addressed?

- Clusters, associations, networks active in photonics, in particular integrated photonics
- R&I stakeholders: universities, RTOs, research-intensive companies

Which existing initiatives are relevant?

- Photonics Partnership
- Chips Joint Undertaking - SRIA Roadmap
- Running CSA project Phorwards21

HORIZON-CL4-2026-04-DIGITAL-EMERGING-15: “Strengthening the cooperation of semiconductor-intensive EU regions” (CSA)

Context:

- **Chips Act and Chips Act 2.0**
- 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 semiconductors, help creating regional ecosystems around big fabs and contribute to structuring clusters of actors across the value chain.

Expected outcomes

- 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** online platform exchanging information on capabilities and best practices, guiding potential investors and supporting new entrants intending to specialise in semiconductor.

Scope

- Identifying key local actors in the semiconductor supply chain and their common needs
- Developing a joint strategy to strengthen the cooperation of EU semiconductor intensive regions
- Exploring cooperation with the Chips competence centers established under the Chips JU
- Evidence gathering on obstacles to semiconductor production investments related to framework conditions such as permitting
- Collecting best practices on overcoming such obstacles and preparing guidelines and their dissemination to the respective regional and national public authorities for accelerating the construction of semiconductor production infrastructures in Europe.

Which types of stakeholders are mainly addressed?

- Regional governments
- Regional industrial clusters active in the semiconductor value chain, insofar as they support the institutional actors
- Clusters, associations, networks or regions and clusters

- National entities and national clusters could be eligible for small Member States (if National level has relevant competencies that usually reside with regions)

Which existing initiatives are relevant?

European Semiconductor Regions Alliance (ESRA)

Other inspirations:
For the impact and needs of stakeholders

- Network of Chips Competence Centres (aCCCess)
- Industrial cluster project (Silicon Eurocluster, etc)

For the focus on regional institutions

- European Automotive Regions Alliance
- European Chemical Regions Network

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

Expected outcomes

- Maximize the impact of EU-funded R&I in 2DM-based emerging and enabling technologies
- Reinforce the related R&I community in Europe

Is there anything we do NOT want?

Proposal with a single beneficiary, consortium's composition mainly involving external participants from existing initiatives

Topic evolution

Evolution from the Graphene: Europe in the Lead Coordination and Support Action (HORIZON-CL4-2022-DIGITAL-EMERGING-02-22)

… **and links to other topics**

Interaction with RIAs from ***Graphene: Europe in the Lead*** *call* (https://graphene-flagship.eu/) as well as synergies with *Innovative Advanced Materials Initiative* (https://www.iam-i.eu/), relevant projects on **innovative advanced materials** (to be)

selected for funding under Horizon Europe WP 2025 destination 2 ‘Achieving technological leadership for Europe's open strategic autonomy in raw materials, chemicals and innovative materials’ ….. ‘ (non exhaustive list)

Which existing projects are relevant?

Non exhaustive list:

- All projects including 2D materials for various applications e.g., photonics, optoelectronics, energy, composites, biomed devices … such as 2D-PL,
- RIAs from *Graphene: Europe in the Lead call ,*
- *ERC (*POL_2D_PHYSICS, 2D-OPTOSPIN….)
- ….

Which types of stakeholders are mainly addressed?

Academia, RTOs

Are there additional background documents or other relevant information?

- Graphene Flagship (https://graphene-flagship.eu/)

- IAM4EU SRIA (https://www.iam-i.eu/wp-content/uploads/2025/02/SRIA-Innovative-Advanced-Materials-for-Europe.pdf)

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

RAISE will be a virtual European institute that pools essential AI resources

Dual objectives:

- Science for AI: Supporting basic reserach to advance core AI capabilities
- AI in Science: Promoting the use of AI in different scientific disciplines

Topic Evolution: Networks of Excellence

Bringing together the best research teams in Europe:

- **Fostering AI talent.**
- Supporting **cutting-edge research**.

- Collaborating with **Startups**.

In total over **300 labs** and more than **1000 researchers** are involved, with over **1000 publications**.

- Indicative budget – **17 Million** EUR
- Expected EU contribution per project – **17 Million** EUR
- Type of Action – Research and Innovation
- TRL – Starting at TRL 2 and achieving TRL 4

Expected Outcomes

- 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 and support the development of a strategic research agenda for fundamental research in AI.
- Ensure that the network operates as a virtual institute across Europe, pooling resources and expertise.
- Develop synergies with the AI in science efforts in RAISE.
- Stimulate and support world-class research in AI, both fundamental and applied research.

Dedicated activities

- An ambitious strategic research agenda towards the next frontier in AI (in 5 years), including explicit targets and milestones;
- Coordination of the participating institutes and their research in AI. The defined programmes will guide collaborative efforts and ensure a cohesive approach to advancing fundamental AI. Collaboration will, among other, be reinforced by jointly supervised PhDs and Postdocs.
- The implementation of a world class AI research program, supporting PhDs and Postdocs as well as jointly agreed collaborative research projects, functioning as a distributed "European AI Institute," reflecting the RAISE initiative's long-term vision and enhancing collaboration.

Some Considerations

- To ensure openness, during the first year, the project will establish a call for expressions of interest to identify additional leading European AI research labs and individual experts that may collaborate with the project.
- This initiative will also work in close collaboration with other initiatives in the European AI landscape, such as existing Networks of Excellence, AI societies and associations.

- It should also collaborate with the fundamental research activities in AI taking place in the horizontal call HORIZON-RAISE.
- Proposals are expected to allocate tasks for cohesion activities with ADRA and the CSA HORIZON-CL4-2025-03-HUMAN-18: GenAI4EU central Hub.

Key actors

- The topic refers to European AI research institutes, this category includes multidisciplinary research institutions that host AI-focused branches.
- This project will significantly contribute to setting up RAISE.
- There is a need to ensure participants have sufficient operational capacity.
- **Need for additional award criteria**

Award criteria - Quality and Efficiency of Implementation

- **Size:** each participant should have at least ten distinct AI research groups.
- **Infrastructure**: each participant should possess dedicated premises and infrastructure necessary for high-quality AI research
- **Legal Structure**: each participant should have the requisite legal framework.
- **Scientific Excellence**: the scientific excellence of each participant will be assessed based on the scientific credentials of its senior AI researchers
- These elements are **not** to be understood as thresholds for exclusion but they will be used in scoring the Quality and Efficiency of Implementation.

A brokerage event organized by ADRA is planned for the 9th - 10th of February.

HORIZON-CL4-2026-05-DIGITAL-EMERGING-02 Next-Generation AI Agents for Real-World Applications in the Apply AI sectors

- While today's AI agents still have limited capabilities, advances in model architecture, memory, reasoning, and autonomous behaviour are paving the way to unlocking their potential across economic sectors.
- Goal: Pushing the boundaries of current Agent AI technology, improving its autonomy and reliability, and the use of multi-agent frameworks**.**

- Indicative budget – **38 Million** EUR
- Expected EU contribution per project – **19 Million** EUR
- Type of Action – Research and Innovation
- TRL – Starting at TRL 2 and achieving TRL 5
- Eligibility conditions: **Article 22.5**
    - MemberStatesand AssociatedCountries, Canada, Israel, Republic of Korea, New Zealand, Switzerland, and the United Kingdom

- Direct or indirect control restrictions

Expected Outcomes

- Improvement in the **autonomy, robustness and reliability** of AI agents through advanced planning, memory management, and reasoning capabilities.
- Innovative multi-agent frameworks and protocols demonstrating **effective collaboration among multiple AI agents**.

Potential Research Areas

- Enhancing AI agent autonomy through advanced self-planning and self-optimization capabilities.
- Memory-augmented AI agents to facilitate robust long-term reasoning and lifelong learning.
- Enhancing agent performance in tasks requiring accuracy and reliability through external tools.

- Developing advanced multi-agent frameworks specifically tailored for collaborative agents.
- Other innovative approaches.

Some Considerations

- Projects selected in this topic should 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) and will contribute to the Apply AI strategy.
- Proposals are expected to allocate tasks for cohesion activities with ADRA and the CSA HORIZON-CL4-2025-03-HUMAN-18: GenAI4EU central Hub.

Key actors

- This topic strongly encourages the formation of interdisciplinary teams combining the necessary technical expertise.

- This topic implements the co-programmed European Partnership on AI, data and robotics.

A brokerage event organized by ADRA is planned for the 9th - 10th of February.

HORIZON-CL4-2026-04-DIGITAL-EMERGING-19: Challenge-Driven GenAI4EU Booster

Indicative Budget: 45M€ // **3 Project @ ~15M€**

Type of Action: Research and Innovation Action (RIA) // TRL: From TRL 3 to TRL 6

Expected outcomes

- Significant technology progress and innovation through challenge-driven approach in the fields of **aerospace**, **pharma/drug development** or **telecommunication networks**.

- Increased **competitivity** and **visibility of the Generative AI community in Europe**, in demonstrating their capability to **achieve challenging tasks** within the aerospace, pharma/drug development or telecommunication sectors.

- **Increased adoption of Generative AI** in aerospace, pharma/drug development or telecommunication networks through **tangible progress** and achievement demonstrated via the challenge-driven process.

Key Areas of Research & Innovation

- Development of powerful sector-driven GenAI use cases

- GenAI for aerospace: e.g. optimize aircraft design, streamline manufacturing processes

- GenAI for pharma: e.g. molecule design, drug discovery

- GenAI for telecom: e.g. network management, network optimization, network slicing

THE PROJECTS WILL HAVE TO Design multi-stage competitions:

Definition, support, and execution of challenges

What we do NOT want?

- Generic GenAI projects with no clear sectoral focus or real-world challenge

- Lack of industry backing or no access to relevant data for model fine-tuning
- Weak dissemination plans, or limited visibility and outreach
- Proposals without a structured, competitive, and support-rich multi-stage approach
- **LACK OF AMBITION! Lack of end-user industry drive**

Topic evolution

•This topic was included in HE WP2025: HORIZON-CL4-2025-03-DIGITAL-EMERGING-09, the procedure was cancelled.

•This topic is part of the GenAI4EU initiative and contribute to the Apply AI strategy.

•It applies challenge-driven schemes involving **FSTP multi-stage competitions**

Change wrt cancelled call:

1)Instead of entering the consortium, participants selected for stage 3 receive FSTP

2)Simplified procedure for OCA

Cross links

- ADRA Partnership (AI, data & robotics)
- CSA HORIZON-CL4-2025-03-HUMAN-18: GenAI4EU central Hub.
- AI Factories including Data Labs.
- Testing & Experimentation Facilities (TEFs).

- European Digital Innovation Hubs (EDIHs).
- AI on Demand platform

Which types of stakeholders are mainly addressed?

- **Sector-leading companies** (pharma, aerospace, telecom) providing use cases and real data. Each consortium should involve **several leading companies in the field**
- **FSTP beneficiaries: GenAI developers**, SMEs, startups, and technical experts in model training (single SME or small team around SME)
- Challenge organizers, or organisations with experience in FSTP and competitions
- Entities with expertise in evaluation, and exploitation
- Partners able to support **visibility, exploitation, impact maximization**, and international outreach

Other relevant information

- Eligibility – Art 22.5: Member States & Iceland, Norway and Canada, Israel, Republic of Korea, New Zealand, Switzerland, and the United Kingdom

- Excludes entities established in eligible countries but controlled by non-eligible countries for strategic autonomy and security reasons (unless guarantee provided by the eligible country)

- High-risk suppliers (e.g., for mobile networks) are excluded

- FSTP recipients must be established in eligible countries

OCA

- OCA of beneficiaries will be performed by the EC
- OCA of the FSTP recipients - WAIVED for SME or private entities – replaced by simplified checks by Beneficiaries (only ensure that such entities are not directly majority-owned (i.e., more than 50% of the capital) by entities established in non-eligible countries.)

Relevant upcoming events

- Horizon Europe Info Days (29–30 January 2026)
- ADRA Brokerage Event (9–10 February 2026, exact date tbc)

HORIZON-CL4-2026-05-DIGITAL-EMERGING-03: Apply AI: Next-Generation Agile and Intelligent Robotics Platforms for Industrial and Service Applications

Budget: 25M€ - 2 projects of 12-13M€

Type of Action: Research and Innovation Action (RIA)

TRL: From TRL 2 to TRL 5

Expected outcomes

- Novel **robot design** technique, **materials** and **control** techniques for **flexible and meticulous manipulation of robots in unstructured environment**, with high autonomy and in collaboration with humans.

- New generation of **flexible and safe robot** systems **validated in key application sectors** defined in the Apply AI strategy , developed with a human-centric approach.

BUILDING BLOCS OF ACCELERATION PIPELINES FOR AI-POWERED ROBOTICS ADOPTION [APPLY AI]

Key Areas of Research & Innovation

- Agile, cost-effective, intelligent, and modular robot platforms for dynamic industrial & service environments

- Advanced design methods using non-rigid structures, composite materials & innovative actuation

- High-speed, precise, reliable operation with minimal integration effort

- Enhanced mobility, autonomy & simplified control for safe, flexible workflows

- Integration of advanced multi-modal sensing (touch, proximity, vision) for safe human–robot interaction

- Interoperable communication protocols enabling deployment across multi-agent and digital environments

→ **PROJECTS MUST BE DRIVEN BY INDUSTRIAL NEEDS** & demonstrate reconfigurability, adaptability

What we do NOT want?

- Pure technology push – disconnected from Industry needs Lack of **clear industrial or service relevance**
- Lack of **industrially relevant / real-world validation**
- Designs that cannot be adapted, reconfigured, or scaled across different sectors
- Lack of strong **industry/end-user engagement**
- Lack of **demonstration of improvements** in speed, precision, or reliability

Topic evolution

- Contributes to the Apply AI Strategy by fostering deployment pipelines for AI-powered robotics and strengthening continuity from research to real-world uptake

- Complements soft robotics developments (coordination encouraged with HORIZON-CL4-2025-04-DIGITAL-EMERGING-05)

Cross links

- ADRA Partnership (AI, data & robotics)
- HORIZON-CL4-2025-04-DIGITAL-EMERGING-05 (soft robotics)
- AIonDemand platform - all relevant EU-funded projects
- euRobin
- Testing & Experimentation Facilities (TEFs)
- European Digital Innovation Hubs (EDIHs)

Which types of stakeholders are mainly addressed?

- **Industrial end-users (manufacturing, logistics, service robotics) providing real-world environments to validate performance and applicability**

- **Robotics developers, SMEs, startups, and research organisations with expertise in robot design, advanced materials, actuation systems, sensing, mobility and autonomy**

- **Partners specialised in human–robot interaction (HRI), safety, and control architectures for flexible and reliable operation**

- Organisations capable of integrating robotics into industrial and service workflows, supporting real deployment and adoption

- Teams working on secure, efficient communication protocols and interoperability with digital frameworks or multi-agent systems

- Stakeholders supporting scalability, commercialisation, safety-product approaches, and end-user uptake

Other relevant information

- Eligibility – Art 22.5: Member States & Iceland, Norway and Canada, Israel, Republic of Korea, New Zealand, Switzerland, and the United Kingdom

- Excludes entities established in eligible countries but controlled by non-eligible countries for strategic autonomy and security reasons (unless guarantee provided by the eligible country)

- High-risk suppliers (e.g., for mobile networks) are excluded

- Coordination with soft robotics topic (HORIZON-CL4-2025-04) strongly encouraged

Relevant upcoming events

- Horizon Europe Info Days (29–30 January 2026)

- ADRA Brokerage Event (9–10 February 2026, exact date tbc)

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

Budget: 18M€ / 1 project

Type of Action: Research and Innovation Action (RIA) // TRL: From TRL 2 to TRL 5

Expected outcomes

- **Advanced robotics skills** (e.g. high precision autonomous pick and place manipulation, autonomous navigation in unstructured environments) **using robotics foundation models**, tailored for **manufacturing**. Creation of a comprehensive framework for general purpose and flexible 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

BUILDING BLOCS OF ACCELERATION PIPELINES FOR AI-POWERED ROBOTICS ADOPTION [APPLY AI]

Key Areas of Research & Innovation

- Development of advanced technical **robots' skills using next-generation AI** (incl. GenAI)

- Boost robot's skills for manufacturing, such as: High-precision autonomous pick & place, Autonomous navigation in unstructured environments, Human–robot collaboration

3 TECHNICAL CHALLENGES => INDUSTRY RELEVANT + HIGH IMPACT

- Robotics foundation models enabling adaptability, reconfigurability, and transfer across sectors

- Mandatory automotive use case (minimum) + others encouraged (transferability)

→ PROJECTS MUST design **multi-stage robotics challenges**: definition, support, execution

What we do NOT want?

- Generic robotics projects with no clear technical challenge or limited industrial relevance

- Proposals without user-industry partners (manufacturing / automotive) or without real data / test environments

- Weak visibility, poor dissemination or no ecosystem engagement

- Proposals without a structured multi-stage competition and clear evaluation methodology

- Robotics solutions not compatible with adaptability, modularity, or transferability across manufacturing settings

LACK OF AMBITION! Lack of connection to the End-users needs

Topic evolution

- Builds on the Challenge-Driven model / It applies challenge-driven schemes involving FSTP multi-stage competitions to foster innovation / push the limit of technology
- Supports the Apply AI Strategy goal of connecting research → deployment pipelines
- Reinforces EU efforts in robotics foundation models, flexible skills frameworks, and challenge-driven pipelines
- Emphasises automotive as a strategic use case in manufacturing while demonstrating industry-agnostic transferability

Cross links - Build on existing results/resources

- ADRA Partnership (AI, data & robotics)
- AI Factories including Data Labs

- Testing & Experimentation Facilities (TEFs)
- European Digital Innovation Hubs (EDIHs)
- Apply AI Strategy initiatives
- EuRobin
- Relevant ADRA project - AI on Demand Platform

Which types of stakeholders are mainly addressed?

- Leading user-industry companies from the manufacturing sector (including automotive + others encouraged) providing use cases, data, and validation environments
- Ideally SEVERAL companies (with similar needs – joining forces to scale) with genuine interest in the project
- Robotics developers, SMEs, research organisations, technical experts in robotics skills development

- Organisations with strong experience in challenge design, FSTP management, benchmarking & evaluation
- Partners experienced in robotics simulation, testing, and deployment
- Dissemination, communication and ecosystem-building partners to support **visibility** and **international outreach**

Other relevant information

- Eligibility – Art 22.5: Member States & Iceland, Norway and Canada, Israel, Republic of Korea, New Zealand, Switzerland, and the United Kingdom

- Excludes entities established in eligible countries but controlled by non-eligible countries for strategic autonomy and security reasons (unless guarantee provided by the eligible country)

- High-risk suppliers (e.g., for mobile networks) are excluded

- FSTP recipients must be established in eligible countries and not be directly majority-owned (>50%) by entities from non-eligible countries.
- OCA of beneficiaries will be performed by the EC

- **OCA** of the FSTP recipients - **WAIVED for SME or private entities – replaced by simplified checks by Beneficiaries** (only ensure that such entities are not directly majority-owned (i.e., more than 50% of the capital) by entities established in non-eligible countries.)

Relevant upcoming events

Horizon Europe Info Days (29–30 January 2026)

ADRA Brokerage Event (9–10 February 2026, exact date tbc)

HORIZON-CL4-2026-04-DIGITAL-EMERGING-09: Advanced Local Digital Twins using AI for Early Warning and Preparedness (IA)

Expected outcomes

- Innovative open AI models that can help predict, respond to, and mitigate impacts before a disaster occurs, enabling proactive decision-making and effective disaster management effectively.
- Interactive user interfaces that allow components to be exchanged, modified, and reconfigured to estimate flood damage under various urban planning and risk management scenarios — for example, assessing the feasibility of proposed or existing constructions in flood-prone zones and recommending targeted mitigation strategies.

Which existing projects are relevant?

The projects will leverage high-resolution climatic and meteorological models to assess extreme weather, while also drawing on relevant initiatives such as the Global Flood Awareness System and Destination Earth.

Which types of stakeholders are mainly addressed?
Urban planners and cities

Are there any future trends / emerging initiatives that proposers should be aware of?
Expertise of the European Commission's Joint Research Centre (JRC), particularly its experience in developing global systems for disaster and risk management and analyse the potential uptake of the project outcomes by the Copernicus Emergency Management Service.
Proposals should align with for the 2025 Mission call on Local Digital Twin for urban planning, ensuring interoperability and complementarity with related European initiatives

Which types of stakeholders are mainly addressed?
Living Labs within local innovation hubs in low-income countries, fostering co-creation spaces where community members, researchers, entrepreneurs, and policymakers can collaboratively tailor, enhance, test, and iterate AI-driven solutions

HORIZON-CL4-2026-DIGITAL-AI4GOOD-EMERGENCY: Emergency response and resources allocation

Expected outcomes

- Develop innovative AI models catering for an **open, modular, accessible, multi-hazard platform** by harnessing the potential of artificial intelligence (AI) to significantly enhance emergency response capabilities during natural disasters, supporting them with actionable data
- Enable innovative AI-based enhancements of multi-hazard platforms in European Preparedness **for the benefit of UCPM**, by adding disaster like floodings, and landslides

Which existing projects are relevant?

- Global Wildfire Information System (GWIS)
- Decision Support System from the Copernicus Emergency Management
- Global Flood Awareness System
- Destination Earth

Which types of stakeholders are mainly addressed?

- EU CPM
- MS civil protection authorities
- rescEU platform for European preparedness and Crisis Coordination Hub.

Are there any future trends / emerging initiatives that proposers should be aware of?

Expertise of the European Commission's Joint Research Centre (JRC), particularly its experience in developing global systems for disaster and risk management and analyse the potential uptake of the project outcomes by the Copernicus Emergency Management Service.

HORIZON-CL4-2026-DIGITAL-DT-RECONSTRUCTION: AI Powered Digital Twin for reconstruction

Expected outcomes

- AI models to allow urban planners to simulate and evaluate potential rebuilding scenarios based on damage assessments and precise reconstruction costs.
- Innovative and state-of-the-art AI models to plan reconstruction beyond buildings to also include utility infrastructure such as water and electricity networks.
- Self-learning capabilities for effective assessment and expenditure control of reconstruction

Which existing projects are relevant?

- Mission call for 2025 focusing on Digital Twins for urban planning to ensure reusability of relevant results and common approaches
- Also efficient urban planning and reconstruction by using more environmentally friendly materials contributing to planet diversity and biodiversity

Which types of stakeholders are mainly addressed?
Crisis Coordination Hub

National and local authorities involved in the reconstruction of cities in the EU

Countries in need like Ukraine

Grand Challenge on Quantum Sensors for Inertial Navigation Coordination and Support Action (CSA) - HORIZON-CL4-2026-04-DIGITAL-EMERGING-11

Expected outcomes

This topic is the first phase of a two-phase competitive structure supported by Horizon Europe, implemented via a Coordination and Support Action (CSA) in close collaboration with the European Investment Bank (EIB):

- **Phase 1 (CSA)**: Feasibility and exploitation preparation through technical, industrial, and financial roadmaps, including investor-readiness and supply-chain analyses.

- **Phase 2 (EIB)**: After review, the strongest projects may be referred to InvestEU for potential funding, following their own application and due-diligence process.

Phase 1 projects must build a solid technical and financial roadmap and deliver evidence-based design and benchmarking for reduced-scale Q-INS systems in one of the following:

- **Category 1** – Cold-Atom Q-INS: Develop long-accuracy (<10 m/hour) cold-atom–based navigation systems, co-designed with end-users and demonstrated on ships or planes.

- **Category 2** – Chip-Scale Q-INS: Create low-C-SWAP chip-scale sensors using defect-center crystals or warm atomic vapours for applications such as satellites, UAVs, and autonomous transport.

Proposals should focus on systems mature enough to allow credible benchmarking and realistic industrial road-mapping.

Scope

- Phase 1 deliver technical, industrialisation, and financial roadmap covering investment readiness, bankability, risk, and scalability.

- The roadmap prepares projects for future InvestEU financing, supported by a Horizon Europe top-up.

- End-user Expressions of Interest are strongly encouraged to strengthen use-case relevance.

- EIB Advisory may provide tailored support for financial structuring ahead of Phase 2.

- Phase 1 lasts ~6 months with expected up to EUR 0.5M funding per project

Parameters

- ***Scope:*** *Phase 1 deliver technical, industrialisation, and financial roadmap*

- ***Budget: EUR 2 MILLION (expected 4 projects of EUR 0.5 million each)***

- ***Targeted stakeholders: QUANTUM START-UPS, SMEs***

- ***Kind of action: CSA (monobeneficiary)***

- ***Eligibility conditions****: participation is limited to legal entities established in Member States, Iceland, Norway, and Associated Countries: Canada, Israel, Republic of Korea, New Zealand, Switzerland, and the United Kingdom + Article 22.5*

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

Expected outcomes

Quantum standards development and adoption

- Strengthen EU and global leadership in quantum standardisation, boosting interoperability, reliability, and trust in quantum systems.
- Deliver EU-relevant pre-normative standards and technical specifications for quantum computing, communication, and sensing.
- Enable strong European participation (incl. SMEs & start-ups) in major international standards bodies (ISO/IEC, ITU-T, ETSI).
- Promote cross-sector interoperability through shared interfaces, protocols, reliability criteria, and benchmarking methods.
- Provide support tools such as guidelines, training, and best practices to accelerate adoption of quantum standards.

Scope

Build on EU standardisation roadmaps to standardise results from major EU-funded quantum projects. Foster an active industrial community to drive engagement and uptake of quantum standards across Europe.

- 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.

- Drafting and developing concrete standards or technical specifications, in cooperation with relevant standardisation bodies

Parameters

- ***Scope:****coordinate and support standardisation activities*
- ***Budget: EUR 1 million (1 project), lump sum***
- ***Targeted stakeholders: European standardisation organisations (ESOs) are encouraged to lead or be key partners in the consortium***
- ***Kind of action: CSA***

- ***Eligibility conditions****: participation is limited to legal entities established in Member States, Iceland, Norway, Associated Countries and OECD countries* + Article 22.5

Large-Scale Photonic Quantum Computing Platform Technologies Research and Innovation Action (RIA) - HORIZON-CL4-2026-04-DIGITAL-EMERGING-18

Expected outcomes

Establish a strategic European initiative to develop scalable, modular, and interoperable photonic quantum computing platforms.

Address and provide credible solutions to at least two major technical roadblocks currently limiting the advancement of photonic quantum computing such as:

- *The lack of deterministic, high-efficiency photonic entanglement and loss-tolerant architectures suitable for fault-tolerant scaling*
- *The absence of a standardised, integrated control stack combining photonic hardware, firmware, and system software with reliable benchmarking across platforms*

What is expected to be delivered:

- *By 2028: Demonstrate a ≥100-qubit photonic NISQ processor with deterministic sources, low-loss photonics, on-chip detectors, and full*

firmware stack, validated by hardware-agnostic benchmarks and hybrid photonic–HPC applications

- *By 2030: Deliver a full-stack, high-connectivity photonic quantum computer with modular scalability, fibre/on-chip interconnects, ≤10^{-3} gate errors, and an indicative 1,000-qubit target, enabling early demonstrations of quantum utility on industrial workloads*

- *Establish system-level interoperability and standards, including published specifications for packaging, APIs, compiler interfaces, and cloud protocols compatible with telecom wavelengths*

- *Validate inter-module entanglement distribution via standard protocols and field tests of interconnected photonic quantum processors*

- *Accelerate industrialisation and commercialisation with a roadmap for pilot manufacturing, QA processes, and a sovereign European photonic-quantum supply chain*

- *Demonstrate project results through a major end-user use case, proving platform relevance and performance under real operational constraints.*

Scope

- *Topic led by a startup with demonstrated expertise*
- *Collaboration with relevant RTOs, industry and academia partners*
- *Include at least one major end-user*
- *Activities should include development of scalable quantum processors,validation of scalable architectures under realistic noise, loss, and control constraints and a complete software stackto demonstrate application-level quantum advantage and HPC interoperability*

Further expectations:

- *To build upon prior Quantum Flagship results*
- *Demonstrate capacity to contribute to the governance and coordination of the EU quantum ecosystem*
- *Develop synergies with STEP, Chips JU, IPCEI projects and EuroHPC*
- *Start at TRL 4 and achieve TRL 7 at the end of the project*

Parameters

- ***Scope: photonic quantum processing platforms***
- ***Budget: 10.0 M€ (1 project)***
- ***Targeted stakeholders: RTOs, industry, academia***
- ***Type of action: RIA***
- ***Eligibility conditions****: participation is limited to legal entities established in Member States, Iceland, Norway, and Israel + Article 22.5*
- ***Call opening****: 15 Jan 2026.* ***Deadline****: 15 April 2026*

Quantum Top-Up to InvestEU: Grand Challenge Phase 2 - Top Up to InvestEU (EIB) - HORIZON-CL4-DIGITAL-EIB-QUANTUM

Implementation via EIB & InvestEU

Quantum-dedicated Horizon Europe top-up to InvestEU in support of Phase 2 of the Grand Challenges in the quantum technology sector

Activities are carried out by the European Investment Bank (EIB) under the Quantum Top-Up Agreement with the European Commission.

The Top-Up framework reinforces EU interventions by complementing financing activities and increasing their overall impact.

Scope

- The top-up is necessary to improve bankability of quantum technology projects, ensuring technological maturity, financial viability, and alignment with market and end-user requirements.
- Support European quantum technology start-ups and SMEs to advance solutions with clear market perspectives.

- Proposals for financing in Phase 2 must be submitted to the EIB via its venture debt webpage (https://www.eib.org/en/products/equity/venture-debt/index).
    - Selected entities may receive up to EUR 30 million per project (two tranches ~EUR 15 million each, EIB venture debt financing): **initial high-risk tranche under the InvestEU Thematic Innovation Product (with top-up)**
    - **subsequent lower-risk tranche under the InvestEU General Debt Product.**

Parameters

- ***Scope:*** improve bankability of quantum technology projects
- ***Budget:*** EUR 100.00 million from the 2026 budget and EUR 28.00 million from the 2027 budget
- ***Targeted stakeholders: identified beneficiary EIB***
- ***Kind of action:*** Indirectly managed action
- ***Eligibility conditions****: n.a.*

QSNP Quantum Communication FPA (QKD) - Launching the second Specific Grant Agreement (SGA) Research and Innovation Action (RIA) - HORIZON-CL4-2026-04-SGA

Expected outcomes

- *Building on the achievements made by the SGA1*
- *Development and experimental validation of **advanced QKD protocols** and systems such as CV-QKD, Measurement-device-independent or device-independent QKD, Twin-field QKD (TF-QKD)*
- *Design and implementation of **QKD integration into classical and optical networking infrastructure***
- *Demonstration of hybrid QKD-PQC frameworks in at least **two realistic and demanding use cases**, with demonstrable benefits over classical-only solutions.*
- *Research and first-demonstration efforts on **novel quantum communication protocols** beyond QKD.*

- *Validation of **security performance** through well-defined benchmarks.*

- *Development of interoperable, scalable, and certifiable **QKD hardware** and software components supporting certification, in coordination with other specific EU programs, such as Euro-QCI.*

- *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.*

Parameters

- ***Scope: superconducting quantum computing***
- ***Budget: 24.0 M€ (1 project)***
- ***Targeted stakeholders: Grant to identified beneficiaries***

- ***Kind of action: RIA***
- ***Eligibility conditions****: participation is limited to legal entities established in Member States, Iceland, Norway, and Israel + Article 22.5*

OpenSuperQPlus - Quantum Computing FPA (superconducting) – Launching the second Specific Grant Agreement (SGA) Research and Innovation Action (RIA) - HORIZON-CL4-2026-02-SGA

Expected outcomes

- *Building on the achievements made by the SGA1*
- *Establishment of a **full-stack superconducting** quantum computer aiming at **1.000** physical qubits and **scalable** QPU architecture based on **chiplet** technology*
- *Demonstration of **quantum advantage** on selected **industrial use cases**!*
- ***Cloud** accessible and Integration with **HPC** systems!*
- *Deployment of a **full software stack***
- *Strengthened **supply chains** and industrial capacity in Europe*

! Grant to identified beneficiaries !

Parameters

- ***Scope: superconducting quantum computing***
- ***Budget: 20.0 M€ (1 project)***
- ***Targeted stakeholders: Grant to identified beneficiaries***
- ***Kind of action: RIA***
- ***Eligibility conditions****: participation is limited to legal entities established in Member States, Iceland, Norway, and Israel + Article 22.5*

PASQuanS2 - Quantum Simulation & Computing FPA
Launching the second Specific Grant Agreement (SGA)
Research and Innovation Action (RIA) - HORIZON-CL4-2026-03-SGA

Expected outcomes

- *Building on the achievements made by the SGA1*
- ***Fully programmable industry-ready*** *quantum* ***simulators*** *based on* ***10.000*** *neutral atoms in a* ***scalable*** *architecture*
- *Capable of* ***both analogue quantum operations and gate-based computing*** *with* ***1.000 physical qubits*** *and a clear path to further scalability to 10.000 physical qubits*
- *Demonstration of* ***quantum advantage*** *on selected industrial* ***use cases****!*
- ***Cloud*** *accessible and Integration with* ***HPC*** *systems!*
- *Deployment of a full* ***software stack***

- *Strengthened **supply chains** and industrial capacity in Europe*

! Grant to identified beneficiaries !

Parameters

- ***Scope**: neutral-atom quantum processing platforms*
- ***Budget: 20.0 M€ (1 project)***
- ***Targeted stakeholders: Grant to identified beneficiaries***
- ***Kind of action: RIA***
- ***Eligibility conditions**: participation is limited to legal entities established in Member States, Iceland, Norway, and Israel + Article 22.5*

Millenion - Quantum Computing FPA (trapped ions) Launching the second Specific Grant Agreement (SGA) Research and Innovation Action (RIA) - HORIZON-CL4-2026-01-SGA

Expected outcomes

- *Building on the achievements made by the**SGA1***

- *Establishment of a full-stack ion-trap quantum computer aiming at more than 1.000 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.*

Parameters

- ***Scope: trapped ions quantum processing platforms***
- ***Budget: 20.0 M€ (1 project)***
- ***Targeted stakeholders: Grant to identified beneficiaries***
- ***Type of action: RIA***
- ***Eligibility conditions****: participation is limited to legal entities established in Member States, Iceland, Norway, and Israel + Article 22.5*

QU-PILOT - Framework Partnership Agreements for open testing and experimentation and for pilot production capabilities for quantum technologies: Launching the second Specific Grant Agreement (SGA) Research and Innovation Action (RIA) - HORIZON-CL4-2026-06-SGA

Expected outcomes

Goal: Implement the second 3.5 years of the action plan

- 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

Goal: Implement the second 3.5 years of the action plan

- 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:**Quantum processors (e.g., superconducting, trapped ions, photonic),**

- **Quantum sensors (e.g., NV centers),**

- **Cryo-compatible packaging and interconnects.**

- Active alignment with Chips JU’s pilot line roadmap to enable seamless transfer of validated technologies once the stability pilot lines are operational

Parameters

- ***Scope:*** *advancing experimental pilot line capacities*
- ***Budget: EU 15 million (1 project)***
- ***Targeted stakeholders: Grant to identified beneficiaries***
- ***Kind of action: SGA - RIA***
- ***Eligibility conditions****: participation is limited to legal entities established in Member States, Iceland, Norway, and Israel + Article 22.5*

QU-TEST - Framework Partnership Agreements for open testing and experimentation and for pilot production capabilities for quantum technologies: Launching the second Specific Grant Agreement (SGA) Research and Innovation Action (RIA) - HORIZON-CL4-2026-05-SGA

Expected outcomes

Goal: Implement the second 3.5 years of the action plan

- Testing infrastructure for quantum technologies, enabling systematic validation and certification of quantum components and systems.
- 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

Goal: Implement the second 3.5 years of the action plan

- 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.

Parameters

- ***Scope****: establish a pan-European open-access testing and experimentation infrastructure for quantum technologies*
- ***Budget: EUR 20 million (1 project)***
- ***Targeted stakeholders: Grant to identified beneficiaries***
- ***Kind of action: SGA - RIA***
- ***Eligibility conditions****: participation is limited to legal entities established in Member States, Iceland, Norway, and Israel + Article 22.5*

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 Web 4.0 (IA) (Virtual Worlds Partnership)

Expected outcomes

- eXtended Reality (XR), immersive and interactive technologies that bring **full integration of Virtual Worlds and Web 4.0 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

- Budget: EUR 30 million - Project: EUR 4-5 million
- TRL: start at TRL 4 and achieve TRL 6 by the end of the project

Is there anything we do NOT want?

a) State-of-the-art applications

b) Non suitable, unethical or unsafe solutions
c) Research non-grounded into real world scenarios
d) Non-transdisciplinary research
e) Research that does not involve end-users

Topic evolution

Horizon Europe

XR calls under Pillar 2, Cluster 4

DESTINATION 6: A HUMAN-CENTRED AND ETHICAL DEVELOPMENT OF DIGITAL AND INDUSTRIAL TECHNOLOGIES

- 2021 -5 topics in XR (on innovation for media, haptics, modelling, collaborative telepresenceand Ethics, Interoperability and Impact)
- 2022 –XR Learning - Engage and Interact (IA)
- 2022 - eXtended Reality Technologies (RIA)
- 2023 - Next Generation eXtended Reality (RIA)
- 2023 - eXtended Reality for Industry 5.0 (IA)
- 2025 - GenAI4EU (IA)
- 2025 - Core technologies for virtual worlds (RIA)

Which existing projects are relevant?

Which types of stakeholders are mainly addressed?

- *Research institutions and universities*
- *SMEs and start-ups*
- *Targeted industries*
- *End-users*
- *XR Community in general*

Interdisciplinarity

Are there additional background documents or other relevant information?

Strategic Research and Innovation Agenda (SRIA) of the Virtual Worlds Partnership

https://www.virtualworldsassociation.eu/actions/strategic-research-innovation-agenda-virtual-worlds-eu

What are relevant upcoming events?
Horizon Europe Cluster4 INFO DAYS
29-30/01/2026

Are there any future trends / emerging initiatives that proposers should be aware of?

ARVR Industrial Coalition
Virtual Worlds partnership

Are there plans for follow-up funding?

Calls in WP27

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

The topic is structured in two separate areas: Architectural Framework and Applications

Expected outcomes

- Stimulate the emergence of Web 4.0 and virtual worlds solutions
- An emerging Web 4.0 ***architectural framework*** made of building blocks that rely on Open Source software. A structured and agile eco-system of contributors
- ***Applications***: Open source, delivering credible alternative choices. Interoperable, decentralised solutions exploiting extended reality technologies. Compliant-by-design with EU rules and regulations

Is there anything we do NOT want?

Proprietary, experimental, outside the 2 areas mentioned

Topic evolution

- This topic is new in terms of its scope, complements activities in HUMAN-16 of WP 2025.
- Can leverage the strong and active communities of European Open Source innovators which were supported in previous NGI topics

… **and links to other topics**

Applicants should create the conditions for successful collaboration and synergies with other European initiatives such as the Virtual Worlds/Web 4.0, 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.

Which existing projects are relevant?

- All the information on current NGI projects is available at: www.NGI.eu

- Some of these projects are active in the targeted areas of this call even though not necessarily in the context of Web 4.0 / Virtual Worlds

Which types of stakeholders are mainly addressed?

- As per WP text "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"

- Applicants should define the mechanisms for maturing building blocks … Also detail the path to growth for building blocks …

- If opting for FSTP (maximum of 70% (Architectural Framework) or 20% (Applications)):

[Applicants] should target calls towards European Open Source communities

- **Are there additional background documents or other relevant information?**

- **What are relevant upcoming events?**

- **Are there any future trends / emerging initiatives that proposers should be aware of?**
- EC information on Web 4.0 and Virtual Worlds: https://digital-strategy.ec.europa.eu/en/policies/virtual-worlds
- Horizon Europe Cluster 4 Info Days: 29 January 2026
- We do not have any background documents or any additional information elaborating the content of the call.

Are there plans for follow-up funding?

Not planned for 2027