

Horizon Europe : 2025 Digital, Industry & Space Work Programme

Background

As a benefit of association to Horizon Europe, Canada can now attend the meetings where the upcoming work programmes are developed. The European Commission is hosting a Programme Committee meeting to discuss details of the Cluster 4 – Digital, Industry & Space Work Programme. While we are unable to share the unredacted draft document with stakeholders, we are able to share a modified version to obtain your comments. This input will be essential in shaping Canada’s position on this important issue as well as other Horizon Europe work programmes.

Key Thematic Areas of the 2025 Cluster 4 Work Programme

The 2025 Digital, Industry & Space Work Programme is allocating a total budget of €1.5 billion to address six thematic areas or “destinations”. In general, the calls will open in June 2025 and will close on November 2025. The destinations are detailed below with the anticipated number of projects to be funded and the general topics of focus.

1. **Achieving global leadership in climate neutral, circular, and digitised industrial and digital value chains** (45 projects)
 - a. Topics of Focus: developing factory-level remanufacturing and augmentation technologies, increasing production capacity for clean technologies, improving logistics and operations at construction sites, decarbonizing energy intensive industries by the introduction and integration of electrically driven industrial processes, net zero technologies, low-carbon production processes for iron, promoting material upcycling with safe and clean processing technologies and products, as well as coordinating local and international research & innovation activities to decarbonize industries
2. **Achieving technological leadership for Europe’s open strategic autonomy in raw materials, chemicals and innovative materials** (34 projects)
 - a. Topics of Focus: optimizing the recovery and recycling of critical raw materials, growing semiconductor production in the EU, employing autonomous repair systems to extend the lifetime of construction materials, developing robust and fast curing sealants and coatings, supporting advanced materials research through the implementation of shared digital infrastructures for data and resource exchange such as the Materials Commons, developing photonics for low-power and ultra-broadband telecommunications, designing comfortable and flexible electronics, finding alternatives to per- and poly-fluoroalkyl substances, facilitating the uptake of life cycle assessments and Safe & Sustainable Design Principles, as well as, digitalizing textile product development processes
3. **Developing an agile and secure single market and infrastructure for data-services and trustworthy artificial intelligence services** (18 projects)

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- a. Topics of Focus: implementing large-scale pilots and aligning stakeholders to create integrated infrastructures and platforms with network computing and communication capabilities, developing an open-source framework that will provide technology components for the pilots, enabling technologies applicable to submarine connectivity, fostering data compliant ecosystems for AI and robotic applications, developing generic and AI-enabled cloud-edge technologies, and methods to reduce bias in AI algorithms
4. **Achieving open strategic autonomy in digital and emerging enabling technologies** (26 projects)
 - a. Topics of Focus: supporting software and tech developments for quantum and high-performance computing, developing advanced sensor technologies, assessing and validating general-purpose AI models, advancing soft robotics research and the integration of AI for industrial automation and manufacturing, and deploying AI for material design and discovery
 5. **Open strategic autonomy in developing, deploying and using global space-based infrastructure, services, applications and data** (25 projects)
 - a. Topics of Focus: facilitating access to European spaceports, improving space transportation systems and launcher sustainability, designing advanced technologies and digital sensors to identify structural damage on space crafts, crafting detailed design and logistics for the ISOS pilot mission, enhancing satellite-based communication technologies, integrating artificial intelligence and machine learning methods with satellite data to support Earth observation and environmental monitoring, and supporting European production of critical electrical, electronic and electromechanical (EEE) components for applications in space
 6. **Digital and industrial technologies driving human-centric innovation** (26 projects)
 - a. Topics of Focus: developing optics and photonics technology for multimodal or hybrid interaction, leveraging AI to develop safe and interactive virtual spaces, digital assistants and chatbots, driving the evolution of the internet towards open and interoperable platforms, establishing the GenAI4EU Central Hub, launching pilots for technology infrastructure and scale up solutions, as well as promoting international cooperation on semiconductors

Please Note: As the planning processes for the 2025 Digital, Industry and Space Work Programme are ongoing, the details are subject to change.

Questions

1. Are there any areas that align with your research? If so, what are they?

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2. What areas would you like to be included in future work programmes?
3. Are you planning to apply to any of these destinations? If so, which one(s)?