

HORIZON EUROPE Calls

Das Programm der EU für Forschung und Innovation

Informationen zu HORIZON EUROPE:



https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe_en

Programmdauer

2021-2027

Cluster 4

Digital, Industry and Space

Federführende Generaldirektion

[Forschung und Innovation](#)

Vorläuferprogramm

Horizon 2020

HORIZON-CL4-2023-TWIN-TRANSITION-01-02

Working Programm

Digital, Industry and Space

Topic

- › High-precision OR complex product manufacturing – potentially including the use of photonics (Made in Europe and Photonics Partnerships)

Proposals should address the following

- › Advancement and demonstration of significant improvements in smart production technologies to manufacture complex products such as additive manufacturing, multiprocess manufacturing, injection manufacturing, functional printing, intelligent and autonomous handling, shaping, joining, coating, and assembly technologies;

OR

- › Advancement in high-precision manufacturing technologies, including for example mechanical machining, super-polishing, surface texturing, thin film coating, etching and electrochemical machining, handling and assembly processes, to achieve new product functionalities.

OR

- › highly customised laser-based production including new and advanced methods, for example schemes of adapting laser beams and processes to provide a highly precise distribution of photons at the right place and at the right time.

Specific conditions

- › Deadline Call: 20.04.2023
- › Budget per project: 6.000.000€
- › Number of proposals granted: 8
- › Type of Action: Innovation Action
- › TRL: Activities are expected to start at TRL 5 and achieve TRL 7 by the end of the project.
- › The funding rate is up to 60% of the eligible costs as a way to increase the contribution of industry to this co-programmed partnership. This funding rate applies to both members and nonmembers of the partnership, except for non-profit legal entities, where the funding rate is up to 100% of the total eligible costs.

Link to Call

https://sciencebusiness.net/sites/default/files/inline-files/HORIZON-CL4-2023-2024_09_26_2022_0.pdf

HORIZON-CL4-2023-TWIN-TRANSITION-01-04

Working Programm

Digital, Industry and Space

Topic

- › Factory-level and value chain approaches for re-manufacturing (Made in Europe Partnership)

Proposals should address technologies within specific industrial sectors or across industrial sectors

- › Develop cutting-edge remanufacturing approaches (design, technologies, business cases) and their integration into value chains;
- › Demonstrate remanufacturing processes that retain components functionality in at least three user cases;
- › The introduction of traceability aspects, quality control and a regulatory validation need to be considered;
- › Repurposing of components into a variety of industrial sectors. Introduce flexible production concepts, advanced machinery, smart mechatronics, interactive and collaborative machines, robots and systems enabling efficient factory operation and re-configuration;
- › Consider operational and economic viability while also the environmental impact of the proposed approach.

Specific conditions

- › Deadline Call: 20.04.2023
- › Budget per project: 7.600.000€
- › Number of proposals granted: 5
- › Type of Action: Innovation Action
- › TRL: Activities are expected to start at TRL 5 and achieve TRL 7 by the end of the project.

Link to Call

https://sciencebusiness.net/sites/default/files/inline-files/HORIZON-CL4-2023-2024_09_26_2022_0.pdf

HORIZON-CL4-2023-TWIN-TRANSITION-01-31

Working Programm

Digital, Industry and Space

Topic

- › Energy efficiency breakthroughs in the process industries (Processes4Planet partnership)

Proposals under this topic should:

- › Focus on the development of highly efficient technological breakthroughs for the innovation of the most energy intensive parts of specific processes;
- › Demonstrate the decrease in energy intensity of output level (intermediate, final product);
- › Integrate novel digital technologies from the fields of distributed process control and data driven AI based optimisation;
- › Demonstrate and evaluate energy efficiency gains, where relevant in optimal interaction with energy flexibility and integration of renewables.

Specific conditions

- › Deadline Call: 20.04.2023
- › Budget per project: 10.666.666,67€
- › Number of proposals granted: 3
- › Type of Action: Research and Innovation Actions
- › TRL: Activities are expected to start at TRL 4 and achieve TRL 6 by the end of the project.

Link to Call

https://sciencebusiness.net/sites/default/files/inline-files/HORIZON-CL4-2023-2024_09_26_2022_0.pdf

HORIZON-CL4-2023-DIGITAL-EMERGING-01-01

Working Programm

Digital, Industry and Space

Topic

- › Industrial leadership in AI, Data and Robotics – advanced human robot interaction (AI Data and Robotics Partnership)

Proposals should address several of the following aspects of autonomy

- › Long-term, and where appropriate lifelong, autonomy of behaviour and energy (including frugality in terms of energy, lower environmental footprint, using new materials, designed to be recycled or easily repaired etc.)
- › The autonomous adaptation of behaviours in dynamic environments.
- › The development of robust and safe autonomy, including the development of risk averse systems or systems operating with low levels of communication or periods of communication denial.
- › The use of high-level sources of information such as semantic information or externally held knowledge of the working environment, to improve autonomy.
- › Mechanisms for advanced human interaction with systems capable of long-term autonomy.
- › The impact of physical self-reconfiguration on autonomy
- › The development of collective autonomy using multiple collaborative robots

Specific conditions

- › Deadline Call: 28.03.2023
- › Budget per project: 7.500.000,00 €
- › Number of proposals granted: 4
- › Type of Action: Research and Innovation Actions
- › TRL: Activities are expected to start at TRL 2-3 and achieve TRL 4-5 by the end of the project

Link to Call

https://sciencebusiness.net/sites/default/files/inline-files/HORIZON-CL4-2023-2024_09_26_2022_0.pdf

Working Programm

Digital, Industry and Space

Topic

- › Large Scale pilots on trustworthy AI data and robotics addressing key societal challenges

Projects are expected to contribute to the following outcomes

- › Strengthening EU's ecosystem of AI, Data and Robotics excellence and innovation in world class foundational and application-inspired and application-oriented research;
- › Technology progress in AI addressing major challenges hampering the deployment of AI, Data and Robotics technologies;
- › Wide uptake of AI, Data and Robotics technologies by industry and end-users towards the Digital Decade targets for 2030.
- › Robust and trustworthy AI, Data and Robotics technologies

Specific conditions

- › Deadline Call: 28.03.2023
- › Budget per project: 8.000.000,00 €
- › Number of proposals granted: 3
- › Type of Action: Innovation Actions
- › TRL: Activities are expected to start at TRL 3-5 and achieve TRL 6-7 by the end of the project.
- › The funding rate is up to 60% of the eligible costs. This funding rate applies both to members and non-members of the partnership, except for non-profit legal entities, where the funding rate is up to 100% of the total eligible costs.

Link to Call

https://sciencebusiness.net/sites/default/files/inline-files/HORIZON-CL4-2023-2024_09_26_2022_0.pdf

HORIZON-CL4-2023-HUMAN-01-22

Working Programm

Digital, Industry and Space

Topic

- › eXtended Reality for Industry 5.0

The following two types of innovation proposals are expected.

- › i. The development of XR applications to support companies in all industrial ecosystems, especially SMEs, to use innovative interactive and immersive technologies, increasing their competitiveness, productivity, efficiency and human-centricity. The applications should be robust, gender-neutral safe and trustworthy, especially in terms of cybersecurity, privacy and health issues. Proposals should exploit cross fertilisation between academics, industry representatives and end-users around well thought-out scenarios. Moreover, proposals should include activities to showcase the results, widely disseminating and exploiting the outcomes.
- › ii. The creation of a European reference platform aiming to develop and prototype advanced interoperable XR solutions to solve common challenges encountered by the industry (in areas such as assembly, maintenance, remote operation, training, design, logistics, etc.), placing the wellbeing of workers at the centre of the production process. The platform will be populated with third party-projects exploring a wide range of XR technologies and taking benefit of other emerging technologies (such as 5G/6G, IoT, data, artificial intelligence, edge and cloud computing, and microelectronics). In order to facilitate the integration with existing IT systems and policies, the EU XR platform for industry should prioritize XR content, tools and solutions based on open standards, such as OpenXR and WebXR. The solutions provided by the platform should aim to cover as many industry ecosystems as possible. Involvement of end-users is essential in defining specifications and testing.

At least one proposal of innovation Type I will be funded.

Only one proposal will be funded for innovation Type II.

Specific conditions

- › Deadline Call: 28.03.2023
- › Budget per project: 6.250.000,00 €
- › Number of proposals granted: 4
- › Type of Action: Innovation Actions
- › TRL: Activities are expected to start at TRL 4 and achieve TRL 7-8 by the end of the project.

Link to Call

https://sciencebusiness.net/sites/default/files/inline-files/HORIZON-CL4-2023-2024_09_26_2022_0.pdf