Horizon Europe – Cluster 4: Digital, Industry and Space

What is Horizon Europe?

Horizon Europe is the EU's key funding programme for research and innovation (R&I) with a budget of €95.5 billion for the period 2021-2027. It tackles climate change, helps to achieve the UN's Sustainable Development Goals and boosts Europe's competitiveness and growth.

The programme facilitates collaboration and strengthens the impact of R&I in developing, supporting and implementing EU policies while tackling global challenges. It supports the creation and better sharing of knowledge and technologies.

It also creates jobs, fully engages Europe's talent pool, boosts economic growth, promotes industrial competitiveness and optimises investment impact within a strengthened European Research Area.

For information on UK participation in the programme see UKRO's **dedicated factsheet**.

What are Clusters in Horizon Europe?

The 'Global Challenges and European Industrial Competitiveness' pillar of Horizon Europe takes forward the current societal challenges and industrial technologies in a more 'top-down' approach, addressing EU and global policy challenges. These challenges and opportunities are integrated into six Clusters - each with a number of specific intervention areas - designed to incentivise cross-disciplinary, cross-sectoral, cross-policy and international collaboration. In terms of addressing global political priorities, each Cluster contributes towards several Sustainable Development Goals (SDG) and many SDGs will be supported by more than one Cluster.

The Clusters and their intervention areas are expected to achieve greater impact when compared to the societal challenges of Horizon 2020 since they cut across classical boundaries between disciplines and address different types of challenges. The integrated Clusters of activities derive from the **First Strategic Plan for Horizon Europe 2021-24** and the **Second Strategic Plan for Horizon Europe (2025-2027)** and form the basis for support to collaborative R&I projects under the 'Global Challenges and European Industrial Competitiveness' pillar.

What is funded under Cluster 4?

Cluster 4 has an overall budget of €15.349 billion. With this funding, it aims to bring together activities on digital technologies, key enabling industrial and space technologies and the sustainable supply of raw materials, to enable a faster and more profound digital and industrial transformation across Europe. Activities funded under this Cluster ensure that Europe is at the forefront of the next industrial and digital revolution.

By investing in the development, demonstration and deployment of key enabling technologies and ensuring a secure, sustainable and affordable supply of raw and advanced materials, Cluster 4 will help the EU secure its strategic autonomy and support European industry in significantly reducing its environmental footprint.
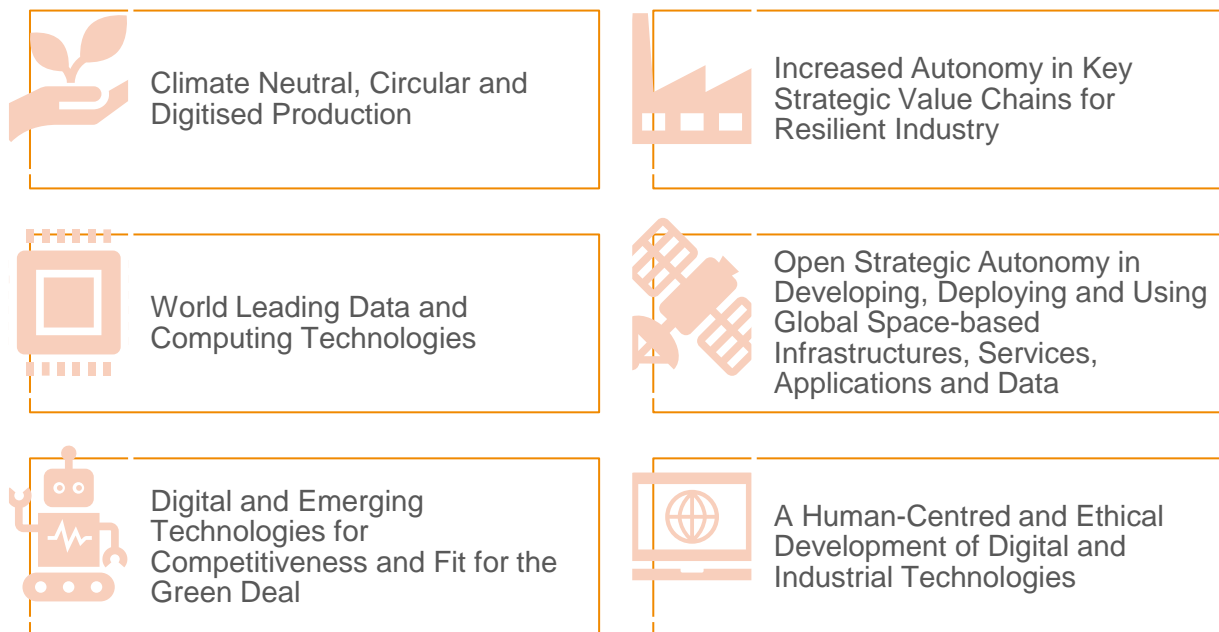
Areas of intervention

The specific areas of intervention in Cluster 4 include:

- Manufacturing technologies
- Advanced materials
- Next Generation Internet

- Circular industries

- Space, including Earth observation

- Emerging enabling technologies

- Key digital technologies, including quantum technologies

- Artificial Intelligence and robotics

- Advanced computing and big data

- Low-carbon and clean industry

As Europe works towards a more resilient, green, and digital future, the EU needs to maintain a strong industrial and technological presence in key parts of digital (and other) supply chains, as well as retain continued access to critical raw materials, technologies and services that are safe and secure for European industry, all while safeguarding its ability to access and operate safely in space.

Therefore, following on from 2023 and 2024, in 2025 the actions under this Cluster will support key enabling technologies that are strategically important for Europe's industrial future, and deliver on the relevant impacts from the Strategic Plan, through the following six destinations – each with several dedicated calls for proposals:

Climate Neutral, Circular and Digitised Production	Increased Autonomy in Key Strategic Value Chains for Resilient Industry
World Leading Data and Computing Technologies	Open Strategic Autonomy in Developing, Deploying and Using Global Space-based Infrastructures, Services, Applications and Data
Digital and Emerging Technologies for Competitiveness and Fit for the Green Deal	A Human-Centred and Ethical Development of Digital and Industrial Technologies

Call timings and requirements

The 2023 and 2024 deadlines for Cluster 4 have now closed.

The 2025 single-stage calls have deadlines in either September or October 2025.

The 2025 two-stage calls have deadlines in September 2025 and April 2026.

Please note that some topics have specific eligibility criteria, listed under eligibility and admissibility conditions, such as the obligation to include legal entities established in the target country/region.

Applicants are advised to check the work programme for details relating to their topics of interest.

The **UK National Contact Points (NCPs)** can provide further advice and guidance to potential applicants.

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Restrictions on participation

While the collaborative calls for proposals in Horizon Europe are characterised by general openness (allowing, in principle, organisations from any country to participate), there might be some restrictions on participation, stemming from the programme's legal basis. These restrictions might be particularly important for calls for proposals launched under Cluster 4:

- **Restrictions on the participation of organisations based in certain Associated Countries** - The legal basis of Horizon Europe allows the Commission to exclude organisations based in Associated Countries from certain calls for proposals to protect the Union's strategic assets, interests, autonomy or security. This is exceptional and allowed only in duly justified cases.

- **Restrictions on the participation of organisations based in EU Member States/Associated Countries but controlled by other countries** - to protect the Union's strategic assets, interests, autonomy and/or security, the Work Programme may also exclude from individual calls proposals from organisations based in EU Member States or Associated Countries if they are directly or indirectly controlled by third countries, or by legal entities from such third countries.

- **Participation in specific calls related to rare materials or quantum technology might be limited to legal entities established in the following countries:** EU Member States, Associated Countries, African Union Member States, 'Mercado Común del Sur' (MERCOSUR) countries, CARIFORUM countries, Andean Community, countries associated with the 'Organisation for Economic Co-operation and Development' (OECD), and countries with which the EU has concluded strategic partnerships on raw materials.

Such restrictions will be explicitly mentioned in the 'Topic conditions and documents' section.

Legal entities established in China are not eligible to participate in Innovation Actions. Please refer to the Annex B of the General Annexes of the 2025 Work Programme for further details.

Restrictions on UK participation

UK researchers and businesses are **eligible to apply to all funding calls under quantum, AI and telecoms topics**, and most calls under **space topics**, in the 2025 Work Programme.

Some blanket restrictions still apply to all non-EU/EEA countries for a small number of Horizon Europe space technology projects focussed on In-Space Operations & Services and EEE components for EU non-dependence. These calls represent a very small proportion of the overall programme and no other non-EU/EEA countries currently have access to these calls.

All other space calls are open to the UK including those focussed on access to European spaceports and space transportation systems, and those that help to further exploit Copernicus data.

Below is the full list of restricted calls:

- **HORIZON-CL4-2025-02-SPACE-21:** ISOS Pilot Mission Detailed Design – Servicing component

- **HORIZON-CL4-2025-02-SPACE-22:** ISOS Pilot Mission Detailed Design – HOST component

- **HORIZON-CL4-2025-02-SPACE-71:** Space Critical EEE Components for EU non-dependence – RISC-V Microprocessor on 7nm

- **HORIZON-CL4-2025-02-SPACE-72:** Space Critical Equipment and Related Technologies for EU non-dependence – Chip Scale Atomic Clocks and Solar Cells

- **HORIZON-CL4-2025-02-SPACE-73:** Space Critical EEE Components for EU non-dependence – Connectors

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- **HORIZON-CL4-2025-02-SPACE-74:** Space Critical EEE Components for EU non-dependence – Advanced Packages and Memories

International cooperation

International cooperation is strongly sought across Horizon Europe.

Cluster 4 topic areas are also included in many high-level agreements for R&I cooperation like the **EU-AU Innovation Agenda**. Out of the 24 calls that will receive an additional €500.5 million under the **Africa III Initiative**, 5 are part of the Cluster 4 Work Programme:

- HORIZON-CL4-2025-04-HUMAN-08: **GenAI for Africa**

- HORIZON-CL4-INDUSTRY-2025-01-MATERIALS-61: **Technologies for critical raw materials and strategic raw materials from end-of-life products (IA)**

- HORIZON-CL4-INDUSTRY-2025-01-MATERIALS-62: **Strategic Partnerships for Raw Materials: Innovative Approaches for sustainable production of Critical Raw Materials (IA)**

- HORIZON-CL4-INDUSTRY-2025-01-MATERIALS-63: **Innovative solutions for the sustainable production for Semiconductor raw materials (IA)**

- HORIZON-CL4-INDUSTRY-2025-01-MATERIALS-64: **EU Co-funded Partnership on raw materials for the green and digital transition (Co-funded partnership Raw Materials for the Green and Digital Transition)**

Relevant EU policy areas and developments

This Work Programme part will contribute to the objectives of the **New Industrial Strategy for Europe**, the **European Green Deal** and the **Circular Economy Action Plan**. Furthermore, it will support the aims of the following EU digital strategies: **Shaping Europe's Digital Future**, **European Data Strategy**, **Artificial Intelligence White Paper**, **Digital Decade Communication**, as well as the **Space Strategy for Europe**. It will also contribute to the **twin digital and green transformation**.

More information

- **Horizon Europe website** and **Cluster 4 website**
- **2023-24 Work Programme for Cluster 4**
- **2025 Work Programme for Cluster 4**

Horizon Europe's legal basis:

- **Regulation establishing Horizon Europe**
- **Decision establishing the Specific Programme of Horizon Europe**
- **First Strategic Plan for Horizon Europe (2021-2024)**
- **Second Strategic Plan for Horizon Europe (2025-2027)**

UK resources

- **UKRO Portal**
- **UK National Contact Point (NCP) support services**

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