

Horizon Europe – Cluster 5: Climate, Energy and Mobility

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 will take forward the current societal challenges and industrial technologies in a 'top-down' approach, addressing EU and global policy challenges. These challenges and opportunities will be 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 will contribute 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 will cut across classical boundaries between disciplines and address different types of challenges. The integrated Clusters of activities will derive from the [First Strategic Plan for Horizon Europe 2021-24](#) and [Second Strategic Plan for Horizon Europe 2025-27](#) and will form the basis for support to collaborative R&I projects under the 'Global Challenges and European Industrial Competitiveness' pillar.

What is funded under Cluster 5?

Cluster 5 has an overall budget of €15.123 billion. With this funding, this Cluster aims to accelerate the twin green and digital transitions and help to achieve climate neutrality in Europe by 2050 by focusing specifically on fostering climate action, while at the same time improving the sustainability, security and competitiveness of the energy and transport industry. Actions funded under this Cluster provide the basis for systemic change as well as shaping the necessary technological, industrial economic and societal transformations to achieve climate neutrality in an inclusive and socially fair way.

The specific areas of intervention in Cluster 5 include:

- Advance climate science and solutions for a climate-neutral and resilient society.
- Cross-sectoral solutions for decarbonisation (includes Batteries).
- Sustainable, secure and competitive energy supply (includes fuels).
- Efficient, sustainable and inclusive energy use.
- Clean and competitive transport solutions across all modes.
- Safe, resilient transport accessible and smart mobility services for passengers and goods.

More specifically, Cluster 5 contributes to **six specific destinations** of the 2025 Work Programme as described below:

Destination 1: Climate sciences and responses for the transformation towards climate neutrality

- Enabling the transition to a climate-neutral and resilient society and economy through advancing Earth system science, understanding impacts and risks, climate adaptation solutions, supporting social science for climate, a just transition, and better understanding of climate-ecosystems interactions. This includes tools for policy decision-making for mitigation and adaptation including synergies and trade-offs with other policy objectives such as biodiversity or competitiveness.

Destination 2: Cross-sectoral solutions for the climate transition

- Covers thematic areas which are cross-cutting by nature and can provide key solutions for climate, energy and mobility applications such as ‘batteries’, hydrogen, communities and cities, early-stage breakthrough technologies as well as citizen engagement.

Destination 3: Sustainable, secure and competitive energy supply

- Aims to make EU’s energy supply cleaner, more secure, and competitive by boosting cost performance and reliability. Activities will underpin the modernisation of the energy networks (systems, grids and storage) to support energy system integration, including electrification of specific sectors and integration of other climate neutral, renewable energy carriers, such as clean hydrogen Carbon Capture Use and Storage (CCUS) and Carbon Direct Removal (CDR).

Destination 4: Efficient, sustainable and inclusive energy use

- Addresses activities targeting the energy demand side, notably a more efficient use of energy as regards buildings and industry. The key R&I breakthroughs are cost-effective renovation for energy-efficient, renewable-intensive and smart grid-friendly buildings; digitalisation of building energy; optimisation of energy usages in buildings. The energy efficiency of EU energy intensive industries is improved with reduced fossil fuel consumption, Greenhouse Gas Emissions and pollutants and increased competitiveness.

Destination 5: Clean and competitive solutions for all transport modes

- This Destination addresses activities that improve the climate and environmental footprint, as well as competitiveness, of different transport modes. The areas of rail and air traffic management will be addressed through dedicated Institutional European Partnerships. Zero emission road transport, aviation including infrastructure and Sustainable Aviation Fuels (SAFs), waterborne transport and transport environment and human health are included.

Destination 6: Safe, resilient transport and smart mobility services for passengers and goods

- Activities addressing safe and smart mobility services for passengers and goods Europe’s ageing (and not always sustainable) transport infrastructure, enabling cleaner, safer and smarter operations. This includes Connected Cooperative Automated Mobility, multi-modal and sustainable systems, and safety and resilience. Resilience should be built in the transport systems to prevent, mitigate and recover from disruptions. Research and innovation will underpin the three safety pillars: technologies, regulations and human factors.

Novelties in Cluster 5 in 2025

New for 2025 are **Societal Readiness Pilots** helping to improve the societal readiness of R&I results by covering social and cultural perspectives through the integration of Social Sciences & Humanities. In such Pilots SSH disciplines are needed to deliver R&I results with well-developed societal readiness in a holistic approach to:

- Facilitate the socio-technological interface.
- Enable the design of project objectives compatible with Societal Readiness related activities.

Integrating such pilots in Cluster 5 will support its overall contribution to sustaining quality of life and strengthening European societies and their social and economic model.

The Work Programme Introduction section provides more details.

Call timings and eligibility

The 2025 calls and two topics for 2026 are available in the current [Work Programme 2025 for Cluster 5](#), summarised below:

Call	Opening	Deadline(s)	Destination
HORIZON-CL5-2025-01-Two-Stage	06-May-25	02-Sep-25 (1st Stage) 31-Mar-26 (2nd Stage)	D2 & D3
HORIZON-CL5-2025-02	06-May-25	02-Sep-25	D2 & D3
HORIZON-CL5-2025-03-Two-Stage	06-May-25	04-Sep-25 (1st Stage) 14-Apr-26 (2nd Stage)	D5
HORIZON-CL5-2025-04	06-May-25	04-Sep-25	D5 & D6
HORIZON-CL5-2025-05-Two-Stage	06-May-25	04-Sep-25 (1st Stage) 31-Mar-26 (2nd Stage)	D1
HORIZON-CL5-2025-06	06-May-25	24-Sep-25	D1 & D2
HORIZON-CL5-2026-01	16-Sep-25	20-Jan-26	D2 & D6
HORIZON-CL5-2026-02	16-Sep-25	17-Feb-26	D3 & D4

Horizon Europe calls involve independent legal entities from at least 3 EU Member States or Associated Countries (one of which must be a Member State). **UK entities qualify as entities from an Associated Country.**

Any legal entity in the UK that qualifies under the call can bid including academia, companies, communities, local authorities. Please note that some topics have specific eligibility criteria, listed under eligibility and admissibility conditions. Applicants are advised to check the work programme for details relating to their topics of interest.

16 topics under the Work Programme for Cluster 5 in 2025 are open to third countries including coordinated calls with India. Applicants are advised to check the specific call text to identify these opportunities.

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.

The [UK National Contact Points \(NCPs\)](#) can provide further advice and guidance to potential applicants.

International cooperation

International cooperation is strongly sought across Horizon Europe.

Cluster 5 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](#), 4 are part of the Cluster 5 Work Programme:

- HORIZON-CL5-2025-02-D2-03: [Sustainable processing and refining of raw materials to produce battery grade Li-ion battery materials \(Batt4EU Partnership\)](#)
- HORIZON-CL5-2025-02-D3-15: [Building a Long-Term Africa Union \(AU\) and European Union \(EU\) Research and Innovation joint collaboration on Sustainable Renewable Energies](#)
- HORIZON-CL5-2025-06-D1-06: [Fostering equity and justice in climate policies – Societal Readiness Pilot](#)
- HORIZON-CL5-2025-06-D1-07: [Implementing the climate action pillar of the EU-African Union Partnership on Climate Change and Sustainable Energy](#)

Relevant EU policy areas and developments

This Work Programme supports the overall objectives of the [European Green Deal](#) to achieve climate neutrality in Europe by 2050. Activities encompass the green transition of the energy and mobility sectors by 2050, as required by the European Climate Law. This work programme part supports the [Paris Agreement](#) and the [United Nations Sustainable Development Goals](#).

The activities of this work programme support the [European Commission's Net-Zero Industry Act](#) and [Clean Industrial Deal](#), a more circular and resilient economy, as well as enhanced climate adaptation, preparedness and solidarity.

It may also be useful to consult the UKRO factsheets on [EU Missions](#), [Cluster 6](#) and the [New European Bauhaus](#) for more on EU green transition policy framing and R&I activities related to Cluster 5 within the wider Horizon Europe Programme. European Partnerships resonate strongly with Cluster 5, although are not included in the Work Programme itself.

Cluster 5 contributes also to the [Strategic Energy Technology Plan \(SET Plan\)](#) objectives and its domain-specific implementation plans.

Activities in this work programme will contribute to all Key Strategic Orientations (KSOs) of the Horizon Europe Strategic Plan:

- **The green transition:** Horizon Europe R&I activities must support Europe to become the world's first climate-neutral continent by 2050 and to tackle biodiversity loss and pollution. At least 35% of Horizon Europe's resources are committed to be spent on climate action and 10% for 2025-2027 on biodiversity action.
- **The digital transition:** Research to support the digital transition is key to Europe's competitiveness and open strategic autonomy, and to setting human-centred standards. It is also key to achieving the green transition. In 2021-2027, it is agreed to invest at least EUR 13 billion from Horizon Europe in core digital technologies.
- **A more resilient, competitive, inclusive and democratic Europe:** Europe's democratic values and principles need a strong foundation so they can be promoted globally. Horizon Europe research activities will help reinforce this foundation. This includes research on civil security, on a fair and environmentally friendly economic model, on health and wellbeing and on democratic participation.

Open strategic autonomy and securing Europe's capacity in developing and deploying critical technologies are overarching drivers that apply across all three key strategic orientations.

More information

- [Horizon Europe website](#) and [Cluster 5 website](#)
- [2025 Work Programme for Cluster 5](#)
- [Find your UK National Contact Point](#)
- [UK National Contact Point Newsletter](#)

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 \(2025-2027\)](#)

UKRO Portal

- [UKRO Portal](#)
- [UK National Contact Point webinar and slides on Cluster 5 Work Programme 2025 calls](#)

Other websites and resources

- [Clean Industrial Deal](#)
- [European Green Deal](#)
- [Strategic Energy Technology Plan \(SET Plan\)](#)
- [UN Sustainable Development Goals](#)
- [Paris Agreement](#)