Horizon Europe Programme
The European Institute of Innovation & Technology (EIT) is not part of the Specific Programme.

**HORIZON EUROPE**

**SPECIFIC PROGRAMME IMPLEMENTING HORIZON EUROPE & EIT**

*Exclusive focus on civil applications*

**Pillar I**
**EXCELLENT SCIENCE**
- European Research Council
- Marie Skłodowska-Curie
- Research Infrastructures

**Pillar II**
**GLOBAL CHALLENGES & EUROPEAN INDUSTRIAL COMPETITIVENESS**
- Clusters: Health, Culture, Creativity & Inclusive Society, Civil Security for Society, Digital, Industry & Space, Climate, Energy & Mobility, Food, Bioeconomy, Natural Resources, Agriculture & Environment
- Joint Research Centre

**Pillar III**
**INNOVATIVE EUROPE**
- European Innovation Council
- European Innovation Ecosystems
- European Institute of Innovation & Technology

**WIDENING PARTICIPATION AND STRENGTHENING THE EUROPEAN RESEARCH AREA**
- Widening participation & spreading excellence
- Reforming & Enhancing the European R&I system

**EURATOM**

- Fusion
- Fission
- Joint Research Center

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Horizon Europe Budget: €95.5 billion (2021-2027)
(including €5.4 billion from NGEU – Next Generation Europe – programme of EU for Recovery from COVID-19 crisis)

Political agreement December 2020
€ billion in current prices

- Excellent Science: 25.0
- Global challenges and European ind. comp.: 53.5
- Innovative Europe: 13.6
- Widening Part and ERA: 3.4
<table>
<thead>
<tr>
<th>Lessons Learnt from Horizon 2020 Interim Evaluation</th>
<th>Key Novelties in Horizon Europe</th>
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<tbody>
<tr>
<td>Support breakthrough innovation</td>
<td>European Innovation Council</td>
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<td>Create more impact through mission-orientation and citizens' involvement</td>
<td>EU Missions</td>
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<tr>
<td>Rationalise partnerships’ landscape</td>
<td>New approach to partnerships</td>
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<td>Reinforce openness</td>
<td>Open science policy</td>
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<td>Strengthen international cooperation</td>
<td>Extended association possibilities</td>
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<td>Encourage participation</td>
<td>Spreading Excellence</td>
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</table>
CLIMATE, ENERGY AND MOBILITY

Cluster 5
Cluster 5 - overview

Cluster 5 “Climate, Energy and Mobility”

EUR 15.1 billion (2021-2027)

Cluster 5 work programme
(including co-funded and co-programmed European Partnerships)

Institutional Partnerships
(Clean Hydrogen; Rail; Clean Aviation; Air Traffic Management)

Missions
(e.g. on Cities; Climate Adaptation; Oceans)

Legal base
- Climate Science and Solutions
- Energy Supply
- Energy Systems and Grids
- Buildings and Industrial Facilities in Energy Transition
- Communities and Cities
- Industrial Competitiveness in Transport
- Clean, Safe and Accessible Transport and Mobility
- Smart Mobility
- Energy Storage

Implementation
Cluster 5 – Links to other clusters

Cluster 1
- Health impacts of climate change, energy production/consumption, transport emissions and mobility patterns

Cluster 2
- Societal dimension of transformation

Cluster 3
- Protection of critical infrastructure
- Cybersecurity
- Climate-related disaster risk management

Cluster 4
- Manufacturing
- Low-carbon, clean, circular industries
- Artificial Intelligence and Robotics
- Advanced Materials
- Space

Cluster 6
- Bioeconomy
- Circular economy
- Environmental observation
Cluster 5 Partnerships

**Institutional Partnerships**
- Transforming Europe's rail system
- Integrated Air Traffic Management
- Clean Aviation
- Clean Hydrogen

**Co-funded Partnerships**
- Driving urban transitions to a sustainable future (DUT)
- Clean Energy Transition

**Co-programmed Partnerships**
- Built4People | People-centric sustainable built environment
- Towards zero-emission road transport (2ZERO)
- Batteries: Towards a competitive European industrial battery value chain for stationary applications and e-mobility
- Zero-emission waterborne transport
- Connected, Cooperative and Automated Mobility (CCAM)
Cluster 5
Work programme 2021-2022
EU Policy priorities

**European Green Deal**
- Climate Action; Clean Energy; Sustainable Mobility; Eliminating pollution; Building and renovating; Biodiversity; Sustainable Industry

**A Europe fit for the digital age**
- Artificial Intelligence; European data strategy; European Industrial Strategy; Cybersecurity

**An economy that works for the people**
- Internal market; Jobs, Growth and investment

**Promoting our European way of life**
- European Security Union; European Health Union

**A stronger Europe in the world**
- International partnerships; Trade policy; EU Foreign policy

**A new push for European Democracy**
- Strategic foresight; Future of Europe

**Recent Commission initiatives:**

**Climate Action**
- EU Climate Law (EU climate neutral by 2050)
- 2030 Climate Target Plan (55% GHG reduction by 2030)
- Make sectoral legislation ‘fit for 55’
- EU Climate Adaptation Strategy
- Zero Pollution Action Plan

**Energy**
- EU Strategy for Energy System Integration
- Hydrogen strategy
- Renovation wave for Europe
- Offshore renewable energy

**Mobility**
- Sustainable and Smart Mobility Strategy

**Research and Innovation**
- A new European Research Area
Cluster 5 – Expected impacts

Transition to a climate-neutral and resilient society and economy enabled through advanced climate science, pathways and responses to climate change (mitigation and adaptation)

More efficient, clean, sustainable, secure and competitive energy supply through new solutions for smart grids and energy systems based on more performant renewable energy solutions

Clean and sustainable transition of the energy and transport sectors towards climate neutrality facilitated by innovative cross-cutting solutions

Efficient and sustainable use of energy, accessible for all is ensured through a clean energy system and a just transition

Towards climate-neutral and environmental friendly mobility through clean solutions across all transport modes while increasing global competitiveness of the EU transport sector

Open strategic autonomy by leading the development of key digital, enabling and emerging technologies, sectors and value chains

Restoring Europe’s ecosystems and biodiversity, and managing sustainably natural resources

Making Europe the first digitally enabled circular, climate-neutral and sustainable economy

Creating a more resilient, inclusive and democratic European society

Safe, seamless, smart, inclusive, resilient, climate neutral and sustainable mobility systems for people and goods
Cluster 5 Work programme - overview

Destination 1 – Climate science
- Climate science
  - Batteries
  - Breakthrough technologies
  - Citizen and stakeholder engagement

Destination 2 – Cross-cutting solutions
- Climate science
  - Cross-cutting activities

Destination 3 – Energy supply
- Renewable energy
  - Energy system, grids and storage
  - CCUS

Destination 4 – Energy demand
- Buildings
- Industry

Destination 5 - Clean and competitive solutions for all transport modes
- Zero-emission road transport
  - Aviation
  - Waterborne transport
  - Transport-related health and environmental issues

Destination 6 - Transport and Smart Mobility services
- Connected, Cooperative and Automated Mobility
- Multimodal and sustainable transport systems for passengers and goods
- Safety and resilience

Multimodal and sustainable transport systems for passengers and goods
- Safety and resilience
Cluster 5 Work programme - overview

<table>
<thead>
<tr>
<th>Destination and type of action</th>
<th>Budget (Mio €)</th>
<th>Share of total</th>
<th>Number of topics</th>
<th>Share of total</th>
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<tr>
<td>Climate science</td>
<td>274.0</td>
<td>9%</td>
<td>17</td>
<td>9%</td>
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<td>Cross-sectorial solution</td>
<td>387.5</td>
<td>13%</td>
<td>25</td>
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<td>Energy supply</td>
<td>1226.3</td>
<td>40%</td>
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<td>Energy use</td>
<td>244.0</td>
<td>8%</td>
<td>18</td>
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<td>Clean and competitive transport modes</td>
<td>511.0</td>
<td>17%</td>
<td>31</td>
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<td>Smart mobility systems for people and goods</td>
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<td>13%</td>
<td>28</td>
<td>15%</td>
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<td><strong>TOTAL</strong></td>
<td><strong>3022.8</strong></td>
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<td><strong>186</strong></td>
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EU contribution per Destination and type of action (2021-2022, in Mio EUR)
Cluster 5 Work programme - budgets

57 out 186 topics (31% of all) implement European Partnerships (2021-2022)

**Co-funded Partnerships:**
- **Driving Urban Transition:** 1 topic (37 M€ for 2021-2022)
- **Clean Energy Transition:** 1 topic (70 M€ for 2021-2022)

**Co-programmed Partnerships:**
- **Batteries:** 17 topics (EUR 293 million)
- **Built4People:** 8 topics (EUR 124 million)
- **Towards Zero-Emission Road Transport:** 7 topics (EUR 197 million)
- **Zero-Emission Waterborne Transport:** 12 topics (EUR 167.5 million)
- **Connected, Cooperative and Automated Mobility:** 11 topics (EUR 162 million)

Total call budget: EUR 3023 million
Cross-cutting priorities

Contribution of cluster 5 topics to cross-cutting policy priorities
(percentage of total call budget; WP 2021-2022)

Budget share dedicated to climate action in other HE parts:
- Cluster 1: 300 M€ (17%)
- Cluster 2: 30 M€ (7%)
- Cluster 3: 40 M€ (10%)
- Cluster 4: 1235 M€ (41%)
- **Cluster 5: 2630 M€ (87%)**
- Cluster 6: 1345 M€ (72%)

Budget share dedicated to digital agenda in other HE parts:
- Cluster 1: 600 M€ (34%)
- Cluster 2: 95 M€ (22%)
- Cluster 3: 220 M€ (54%)
- Cluster 4: 1840 M€ (61%)
- **Cluster 5: 605 M€ (20%)**
- Cluster 6: 375 M€ (20%)
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<th>17/01/2022</th>
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Important websites

**Information event on cluster 5 – Horizon Europe Info Days**

**Funding & Tender Portal**
EU MISSIONS

Concrete solutions for our greatest challenges

#MissionClimate #EUMissions #HorizonEU
What are EU missions?

• EU missions are addressing the greatest challenges facing our world like fighting cancer, adapting to climate change, protecting our oceans, living in greener cities and ensuring soil health and food.

• Missions are solutions-oriented
Timeline

- **Horizon Europe** Work Programme (WP) for 2021 under discussion with Member States (MS)
- MS approval expected in October 2021
- Publication of WP foreseen by end December 2021
- Opening of First calls in January 2022 and closing by mid April 2022.
- Signature of First grants and start of projects by end 2022
Thank you!

#MissionClimate
EUmissions
#HorizonEU