



Horizon Europe Cluster 4 – A focus on Industry

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Structure of Horizon Europe



Structure of Cluster 4

6 Destinations

Destination 1	Achieving global leadership in climate-neutral, circular and digitised industrial and digital value chains
Destination 2	Achieving technological leadership for Europe's open strategic autonomy in raw materials, chemicals and innovative materials
Destination 3	Developing an agile and secure single market and infrastructure for data-services and trustworthy artificial intelligence services
Destination 4	Achieving open strategic autonomy in digital and emerging enabling technologies
Destination 5	Open Strategic Autonomy in Developing, Deploying and Using Global Space-Based Infrastructure, Services, Applications and Data
Destination 6	Digital and industrial technologies driving human-centric innovation



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Destination 1

Goals:

- Transition towards a green and sustainable society
 - Support for net-zero and less polluting industries
 - ‘Servitisation’: transformation from selling physical products to providing services
 - Circular economy as a key pillar for energy-intensive industries
- Europe to become the first climate-neutral continent by 2050

Destination 1

Challenges:

- Improvement in circularity technologies applicable to different value chains: e.g. in product design, re-use, disassembly, remanufacturing/upgrading, recycling, and 'Zero-X' (zero defects, zero breakdowns and zero waste)
- Combination of green and recycling technologies enabled by leveraging the data available in the industrial environment
- Upcycling of secondary raw material and waste (also in Destination 2) and the development of sustainable and resource-efficient industrial processes
- Energy-intensive industries: many tools for reduction emissions are still at an early stage; more effective transfer to first-of-a-kind demonstrators needed

Destination 1

Sections:

- 1.1 Manufacturing (112M Euro)
- 1.2 Construction (13M Euro)
- 1.3 Energy-intensive Industries – Decarbonisation and Energy Efficiency (128M Euro)
- 1.4 Energy-intensive Industries – Circularity and Zero Pollution (76M Euro)
- 1.5 Social Circular Enterprises (10M Euro)

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Destination 2

Goals:

- EU Open Strategic Autonomy by strengthening critical raw materials capacities along all stages of the value chain
- Innovative, strong European R&I ecosystem for circular chemicals and materials, working across different technology readiness levels
- Development of new chemicals and materials using the 'safe and sustainable by design' framework
- New business models, e.g. product-as-a-service, on-demand manufacturing

Destination 2

Challenges:

- Improve energy and process efficiency of extractive and processing activities and minimise their environmental impact
- Replacing critical raw materials with other (advanced) materials
- Safety, sustainability and circularity across the life cycle of a chemical and material
- Establishing new material flows, recovery, recycling and upcycling of materials from waste

Destination 2

Sections

2.1 Raw Materials (123M Euro)

2.2 Innovative Advanced Materials (107M Euro)

2.3 Safe and Sustainable by Design (45M Euro)

2.4 Textiles (10M Euro)

Average composition of consortia

(2023 CI4-D1/D2-Calls)

