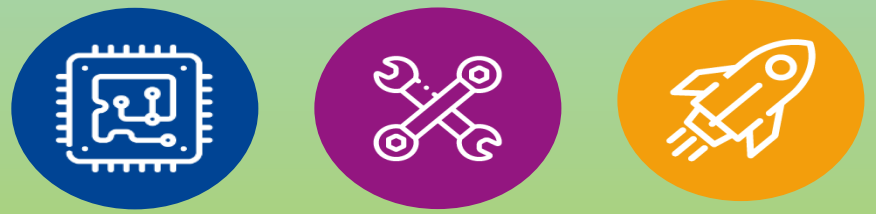
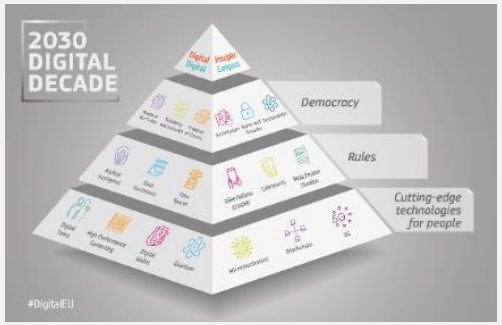
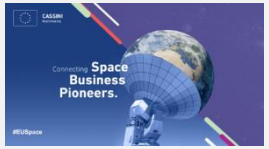
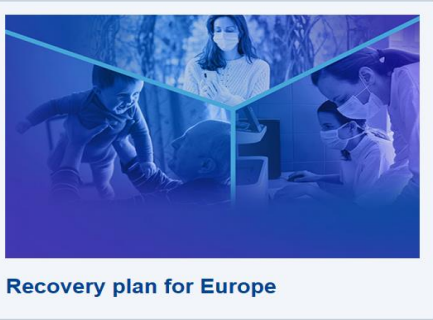
Cluster 4
Digital, Industry and Space
Overview + Industry



European Commission

Destination	Strategies	
Climate-neutral, Circular and Digitised production TWIN-TRANSITION – EUR 288M (2024) KSO C	Fit for 55 Digital Decade Industrial Strategy Update Climate Action: 42.8% of budget (2023-24) REPowerEU: ~EUR 250M of new investment for energy-independence	
A digitised, resource efficient, and resilient industry RESILIENCE – EUR 222M (2024) KSO A	Fit for 55 EU Chemical Strategy Industrial Strategy Update	
World-leading data and computing technologies DATA – EUR 85M (2024) KSO A	European Data Strategy Digital Decade Industrial Strategy Update A European approach to artificial intelligence Chips Act Digital Agenda: 50.5% of budget (2023-24)	
Digital and Emerging technologies DIGITAL-EMERGING – *EUR 250M* (2024) KSO A		
Open Strategic Autonomy in Space infrastructures, services, applications and data SPACE – EUR 202M (2024) KSO A	EU Space Strategy	 
A human-centred and ethical development of digital and industrial technologies HUMAN – *EUR 61M* (2024) KSO D	Digital Decade A European approach to artificial intelligence Industrial Strategy Update	

Cluster 4 ‘Digital, Industry and Space’ – Political Priorities



Action Plan on critical raw materials, Chemical Strategy for Sustainability, Circular Economy Action Plan – For a cleaner and more competitive Europe , European Space Strategy

European data strategy | European Commission (europa.eu)

A European approach to artificial intelligence | Shaping Europe’s digital future (europa.eu)

European Data Governance Act | Shaping Europe’s digital future (europa.eu)

Data Act | Shaping Europe’s digital future (europa.eu)

European Chips Act | European Commission (europa.eu)

Europe’s Digital Decade: digital targets for 2030 | European Commission (europa.eu)

European Commission

Destination 1 – Climate-neutral, circular and digitised production

- Manufacturing Industry - **Made in Europe** Partnership
  - Advanced manufacturing as a key enabling technology
  - From smart factories to regenerative factories, incl. bio-intelligent manufacturing
  - Systemic approach: from smart factories to smart value loops – e.g. support to digital product passport
  - Data-driven technologies, Manufacturing-As-A-Service
- Construction
  - Digitisation and circularity for buildings - synergies with Bauhaus, Built4People
- Energy-efficient and Climate-neutral Industries - **Processes 4 Planet** and **Clean Steel** Partnerships
  - Energy Efficiency and Climate Neutrality - **REPowerEU**
  - Circularity / Zero-pollution (air, soil and water)
  - Hubs for Circularity – place-based innovation between industry, regions and cities
  - Synergies with: Mission Innovation 2.0 / ETS Innovation Fund / Coal and Steel Fund

European Commission

Call - TWIN GREEN AND DIGITAL TRANSITION 2023

Manufacturing Industry

- HORIZON-CL4-2024-TWIN-TRANSITION-01-03: Manufacturing as a Service: Technologies for customised, flexible, and decentralised production on demand (Made in Europe Partnership) (RIA)
- HORIZON-CL4-2024-TWIN-TRANSITION-01-05: Technologies/solutions to support circularity for manufacturing (Made in Europe Partnership) (RIA)
- HORIZON-CL4-2024-TWIN-TRANSITION-01-01: Bio-intelligent manufacturing industries (Made in Europe Partnership) (RIA) [Two-stage call]

Call - TWIN GREEN AND DIGITAL TRANSITION 2023

Energy efficient and climate-neutral process industries

- HORIZON-CL4-2024-TWIN-TRANSITION-01-32: Optimisation of thermal energy flows in the process industry (Processes4Planet partnership) (IA)
- HORIZON-CL4-2024-TWIN-TRANSITION-01-34: Renewable hydrogen used as feedstock in innovative production routes (Processes4Planet Partnership) (RIA)
- HORIZON-CL4-2024-TWIN-TRANSITION-01-35: Turning CO2 emissions from the process industry to feedstock (Processes4Planet partnership) (IA)

Call - TWIN GREEN AND DIGITAL TRANSITION 2023

Circularity and Zero Pollution in process industries

- HORIZON-CL4-2024-TWIN-TRANSITION-01-38: Hubs for circularity for industrialised urban peripheral areas (Processes4Planet partnership) (IA)
- HORIZON-CL4-2024-TWIN-TRANSITION-01-41: Breakthroughs to improve process industry resource efficiency (Processes4Planet partnership) (RIA)

Call - TWIN GREEN AND DIGITAL TRANSITION 2023

Clean Steel

- HORIZON-CL4-2024-TWIN-TRANSITION-01-44: Digital transformation and ensuring a better use of industrial data, which can optimise steel supply chains (Clean Steel Partnership) (IA)
- HORIZON-CL4-2024-TWIN-TRANSITION-01-46: CO2-neutral steel production with hydrogen, secondary carbon carriers and electricity OR innovative steel applications for low CO2 emissions (Clean Steel Partnership) (RIA)

A new way to build, accelerating disruptive change in construction

- HORIZON-CL4-2024-TWIN-TRANSITION-01-12: Enhanced assessment, intervention and repair of civil engineering infrastructure (RIA) [Two-stage call]

Destination 2 – Increased autonomy in key strategic value chains for resilient industry

- Raw Materials
  - Sustainable / responsible exploration, extraction, processing, refining + *recycling*
  - European Raw Materials Alliance – focusing on Critical Raw Materials, e.g. rare earths
- Safe and Sustainable by Design (SSbD)
  - Implementing SSbD and Strategic Research and Innovation Plan for Chemicals and Materials (Chemicals Strategy) - framework and criteria for assessing safety and sustainability of chemicals and materials)
  - Toolboxes for Safe and Sustainable by Design Policy
- Strategic Innovation Markets driven by Advanced Materials
  - Implementing Materials 2030 Manifesto – covering nine innovation markets

Materials Innovation Markets

- January 2022 – ‘Materials 2030 Manifesto’
- The Materials 2030 Roadmap:
  - presents detail of 9 Materials Innovation Markets, including prioritisation and socio-economic benefits;
  - calls for ‘*The Materials 2030 Initiative for planet, people, and prosperity*’

- President referred to advanced materials for industrial leadership in SOTEU speech 2023
- For Strategic Plan 2025-27, Commission is proposing a co-programmed partnership for advanced materials

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Strategic innovation markets driven by advanced materials

Call - RESILIENT VALUE CHAINS 2023

- HORIZON-CL4-2024-RESILIENCE-01-35: Biodegradable polymers for sustainable packaging materials (IA) [Two-stage call]
- HORIZON-CL4-2024-RESILIENCE-01-36: Advanced biomaterials for the Health Care (IA) [Two-stage call]

Safe and Sustainable by Design (SSbD) chemicals and materials

- HORIZON-CL4-2024-RESILIENCE-01-24: Development of safe and sustainable by design alternatives (IA)

Call – RESILIENT VALUE CHAINS 2023

Raw Materials

for EU open strategic autonomy and successful transition to a climate-neutral and circular economy

- HORIZON-CL4-2024-RESILIENCE-01-01: Exploration of critical raw materials in deep land deposits (RIA)
- HORIZON-CL4-2024-RESILIENCE-01-04: Technologies for processing and refining of critical raw materials (IA)
- HORIZON-CL4-2024-RESILIENCE-01-08: Rare Earth and magnets innovation hubs (IA)
- HORIZON-CL4-2024-RESILIENCE-01-10: Addressing due diligence requirements in raw materials supply chains. (CSA)
- HORIZON-CL4-2024-RESILIENCE-01-11: Technologies for extraction and processing of critical raw materials (IA)

Call – RESILIENT VALUE CHAINS 2023

Improving the resilience and preparedness of EU businesses, especially SMEs and Startups

- HORIZON-CL4-2024-RESILIENCE-01-41: 'Innovate to transform' support for SME's sustainability transition (CSA))

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Destination 6 – A human-centred and ethical development of digital and industrial technologies

(no industry-related topics in 2024)

- **Standardisation**
  - Pre-normative work ; Observatory on Standardisation; Funding experts; Education and training: Academy
- Systemic approaches for accelerating **uptake of technology and innovation**
  - Toolbox for efficient IP licensing for market uptake and societal value creation; Piloting communities of expert facilitators to improve industry-academia-public sector co-creation
- Research and Innovation for **Industry 5.0** – industry that works for people and the environment
  - Increased uptake of the Industry 5.0 principles and practices across industrial sectors

Thank you for your attention!

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HorizonEU

http://ec.europa.eu/horizon-europe

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