



European Union side events

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Energy-intensive industries: Innovative Technologies Toward Climate Neutrality

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Designing a set of deeply transformative policies



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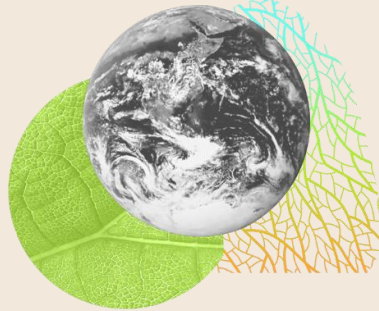
Energy intensive industries

- Industrial transition to climate neutrality is central to the EU Green Deal Industrial Plan (the Net Zero Industries Act and the Critical Raw Materials Act) and the “Fit for 55 Package”.
- IPCC Climate Mitigation 2022 report:
 - *Net-zero CO2 emissions from the industrial sector are challenging but possible.*
 - *Progressing towards net zero GHG emissions from industry will be enabled by the adoption of new production processes using low and zero GHG electricity, hydrogen, fuels, and carbon management.*
 - *For almost all basic materials – primary metals, building materials and chemicals – many low- to zero-GHG intensity production processes are at the pilot to near-commercial and in some cases commercial stage but not yet established industrial practice.*



Delivering on the 'Fit for 55' commitment

CLIMATE



TRANSPORT



ENERGY



TAXATION AND TRADE



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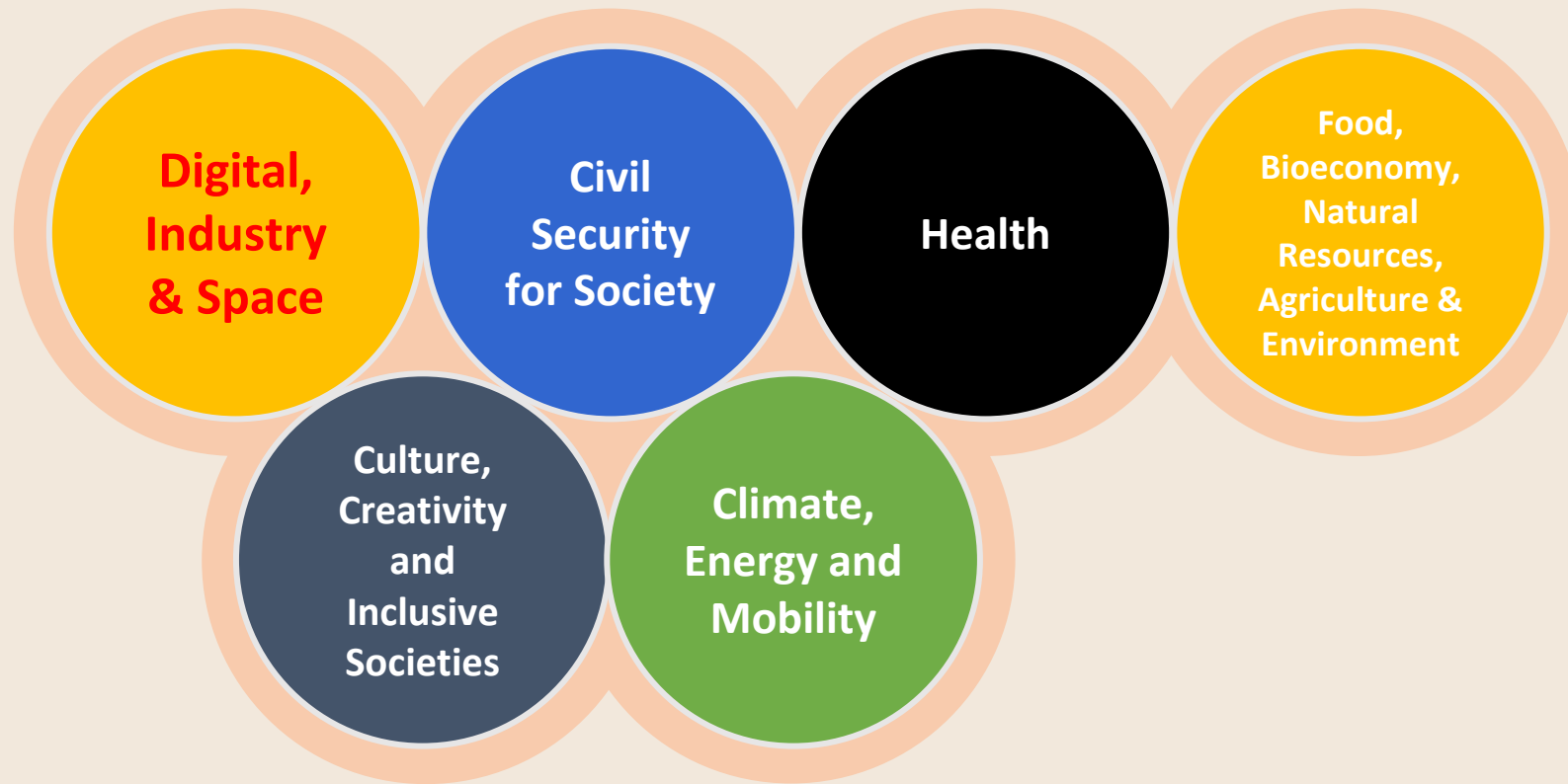


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Cluster Digital, Industry Space under Horizon Europe



European Partnership Processes4Planet

- “Transforming the European **energy intensive process industries** to make them **circular** and achieve overall **climate neutrality** at EU level by 2050, while enhancing their competitiveness.”
- **10 industry sectors:** cement, steel, ceramics, chemicals, engineering, minerals and ores, non-ferrous metals, water, refineries, pulp/paper.
- Budget of 2.6b EUR (1.3b EUR from Horizon Europe)

European Clean Steel Partnership

- For the steel sector, the Clean Steel partnership is supporting the transformation of the steel industry into a climate neutral sector while preserving the competitiveness and viability of the EU steel industry.
- A mechanism to pilot and demonstrate breakthrough technologies up to TRL 8 that can reduce CO2 emissions stemming from EU steel.
- Budget of 1.7bn EUR (350m EUR from Horizon Europe)

Demonstrators towards carbon-neutrality

- **Objective:** Mapping the existing EU funded industrial demonstrators to allow for identification and filling of innovation and investment gaps, acceleration of the demonstration of new technologies.
- **Outcome:**
 - *Report on the Scaling up innovative technologies for climate neutrality (June 2023)*
 - *Identified 184 co-funded projects from TRL 6 to 9*
 - *Prepares the grounds for further work to support the scaling up of the demonstrators and bringing them to commercial deployment.*

The Industrial Technology Roadmaps

- The Industrial Technology Roadmaps are a core action in the new European Research Area strategy. They are a tool brought forward by the Commission to accelerate transfer of research and innovation results into the market for the green and digital transformation of industries across the EU.
- The roadmaps address the way forward for research and innovation in the industry in key areas at European and national level, with a particular focus on closing the innovation divide between EU countries and better valorising research and innovation results.