

# Industry 5.0 – EU perspective

A human hand and a robotic hand are shown holding a globe of the Earth. The globe is the central focus, with the text 'INDUSTRY 5.0' written across it in white, bold, capital letters. The human hand is on the left, and the robotic hand is on the right. The background is a soft, out-of-focus green, suggesting a natural or industrial setting. The overall image conveys a message of human-robot collaboration and sustainable industry.

INDUSTRY 5.0

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# Recent decades and years...

- a remarkable **surge in technological advancements**, leading to transformative shifts across various industries;
- **BUT** the ongoing twin transition point to significant challenges of the rapid implementation of advanced technologies in industry,
- as well as **uncertainties** with regard to technological trajectories and **effects on workers and society at large, global competitiveness, technology sovereignty, and the climate change pressures.**



# Industry 5.0

- **Industry 5.0** represents a **forward-looking industrial paradigm** that goes beyond mere efficiency and productivity,
- emphasizing **the societal role and environmental impact of industry**
- through **human-centricity, sustainability, and resilience**.
- It prioritizes **investment in skills, fostering talent, diversity, and empowerment**, thereby helping industries in navigating the green and digital transitions.
- **Industry 5.0** contributes to the long-term sustainable competitiveness of EU industry.

## INDUSTRY 5.0



Human-  
centric



Sustainable



Resilient

Not a revolution

## Industry 5.0 ...



**HUMAN-CENTRIC**

... promotes talents, diversity and empowerment



**RESILIENT**

... is agile and resilient with flexible and adaptable technologies



**SUSTAINABLE**

... leads action on sustainability and respects planetary boundaries

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From shareholder to stakeholder value  
**INDUSTRY 5.0**  
human-centric, sustainable and resilient

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#Industry5.0

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Rather than representing a technological leap forward, **Industry 5.0** nests the Industry 4.0 approach in a broader context and provides a **holistic approach to the challenges of the twin transition.**

# From awareness-raising to implementation (2023-2024)

- ERA Industrial **Technologies Roadmap on Human-centric enabling technologies** and organisational innovations for industry (July 2024)
- Funding of **Horizon Europe projects** for Industry 5.0
- **Industry 5.0 Community of Practice** (Nov 2023)



# ERA industrial technologies roadmap on human-centric R&I for the manufacturing sector

- The roadmap shows how industrial stakeholders can take a leading role in achieving **human-centric outcomes in technology development and adoption**, such as improving workers' safety and wellbeing, upskilling or learning.
- There are significant **opportunities to capture the transformative potential of ground-breaking technologies** like artificial intelligence and virtual worlds **through more human-centric and user-driven design approaches**.



# ERA industrial technologies roadmap on human-centric R&I for the manufacturing sector

## Examples of policy recommendations:

- Broadening and **upgrade of human-centric design concepts and practices** are needed to include more purpose-driven and systemic design considerations.
- More active role of policy-makers in **advancing the development of technologies with human-centric approaches** and promoting human-centricity at the organisational level.
- Anticipating the **needed key skills for the future of manufacturing, facilitate knowledge exchange** and dissemination between ecosystem enablers and actors. Facilitate **open innovation and collaborative approaches** between industry, research, education and social sectors
- Bringing together **diverse actors of different backgrounds** to integrate expertise and knowledge for developing technologies that address the needs and challenges of diverse stakeholders. Supporting **technology foresight** to identify opportunities in this fast developing emerging field.
- **Integrating HC in certifications and standards for business** to design and develop human centric technologies and practices. Provide guidance for organisations for integrating HC in their practices, especially in the design and technology development.

# Horizon Europe – examples of projects (SME transformation)

- **Prospects 5.0:** to promote the adoption of Industry 5.0 principles, and facilitate the transition to Industry 5.0 for SMEs, start-ups, and scale-ups in various industries.
- **Bridges 5.0:** to build workforce skills for Industry 5.0
- **SEISMEC:** to empower skilled workforces with human-centric solutions, address challenges tied to advanced workplace technologies and foster innovation through evidence-based recommendations.
- **AI Redgio 5.0:** to implement a competitive AI-at-the-Edge Digital Transformation of Industry 5.0 Manufacturing Small and Medium Enterprises.
- **SURE 5.0:** to support European SMEs, advance in their digital transformation process while becoming more human-centric, sustainable and resilient.

**PROSPECTS**



**bridges** 5.0

**SURE5.0**



# CoP 5.0 – connecting the dots

- CoP 5.0 brings together **240+ European innovation ecosystem stakeholders** to **share good practices, co-create actions to accelerate implementation of Industry 5.0** and provide a platform for members to network and establish new collaborations.
- It facilitates an opportunity for **stakeholders to share ideas, foster synergies, and receive support in transforming traditional organisational models into more impactful ones.**

## Timeline:

16 November 2023: CoP 5.0 official launch

Dec 2023 – May 2024: CoP 5.0 piloting phase

16 October 2024: CoP 5.0 Plenary Session in Brussels

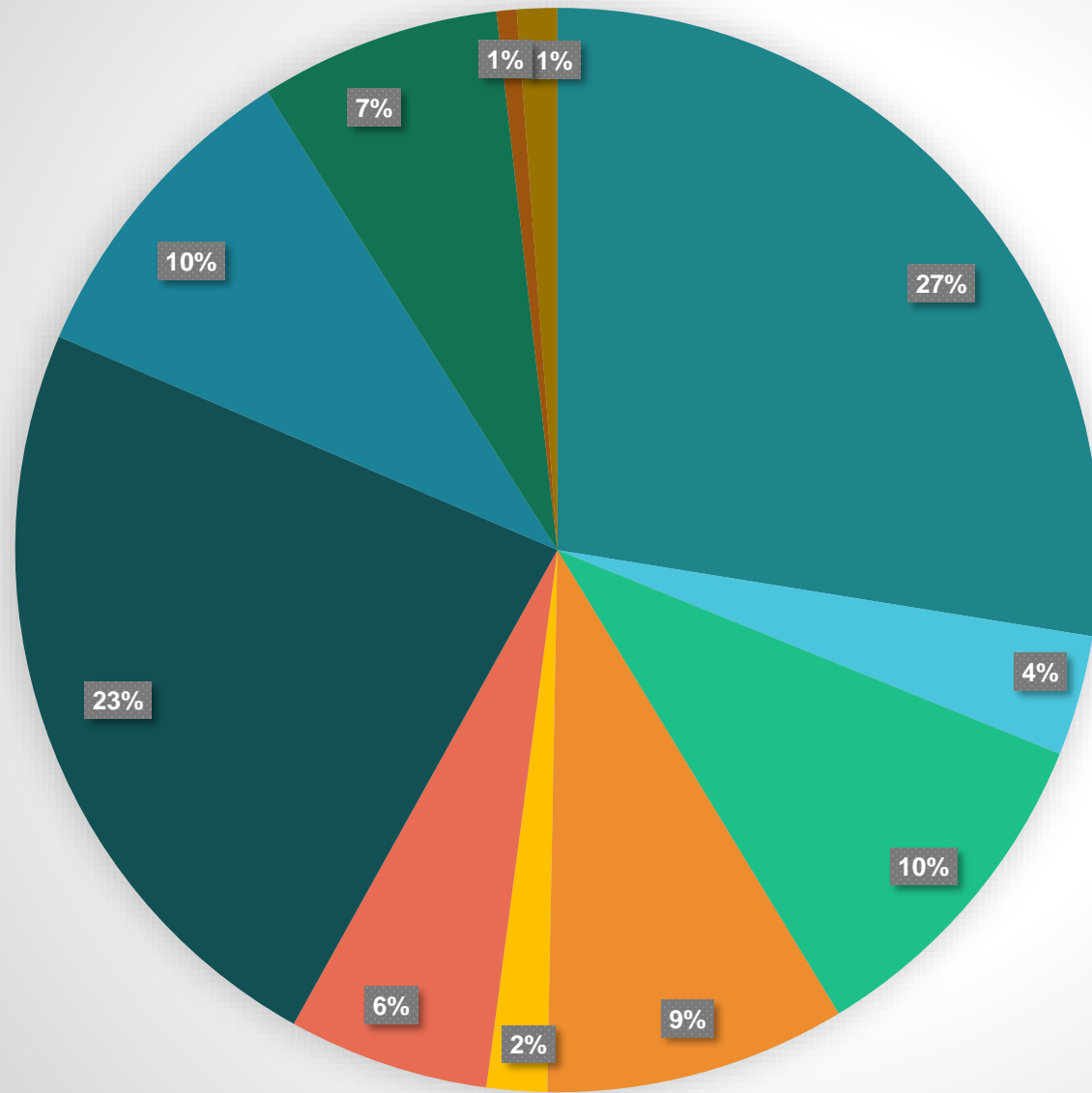
January 2025 onwards: full-fledged CoP 5.0

## Joining CoP 5.0:

[https://research-and-innovation.ec.europa.eu/research-area/industrial-research-and-innovation/industry-50\\_en](https://research-and-innovation.ec.europa.eu/research-area/industrial-research-and-innovation/industry-50_en)



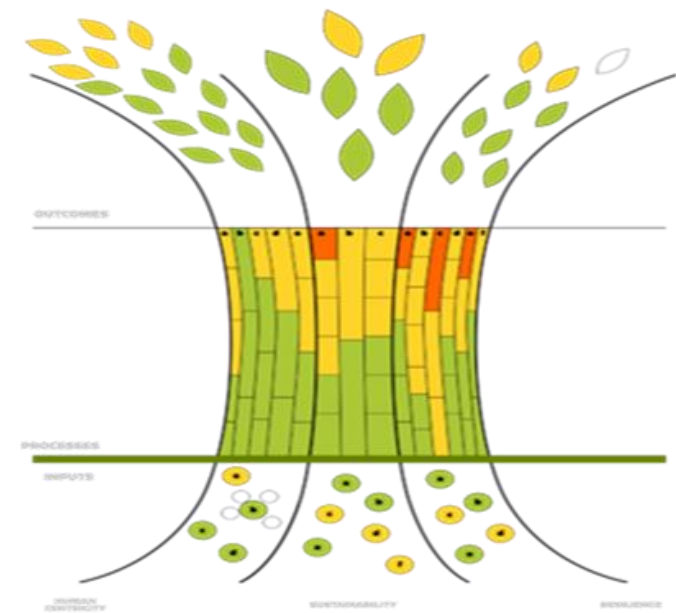
## CoP 5.0 Members



- SMEs
- Large companies
- Public Research Organisations
- Private Research Organisations
- National organisations
- Regional and local organisations
- Universities
- CSOs
- Umbrella organisations
- Investors
- Others

# Prototype Industry 5.0 learning and assessment tool (company level)

- Encourage companies/organisations to **check their performance against human-centricity, sustainability and resilience** at different stages of the production process;
- Inspire organisations (in particular start-ups) to **design impact-driven organisational models** aligned with green, digital and social transformation;
- Provide an **overview of company's impact-driven performance for policy-makers and investors.**



# CoP 5.0 Platform

Futurium

## Industry 5.0 Community of Practice

Group actions ▼

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Horizon Europe Industry 5.0 driven projects

News

- Central hub for knowledge exchange and interaction among CoP 5.0 Members and a wider audience of stakeholders interested in Industry 5.0.
- Featuring interactive components such as chats, best practice sharing, event listings, document repositories, commenting functionalities, news updates, and sub-groups, the platform fosters communication both within the CoP 5.0 community and with external stakeholders. Additionally, it serves as a bridge to connect CoP 5.0 activities with other Industry 5.0-related projects and initiatives, including those under the Horizon Europe programme.
- All CoP 5.0 Members are automatically granted access to the platform and its content.

# Industry 5.0 in 2025



- **CoP 5.0:** Workplan 2025 with two new WGs (Business Case 5.0 for sustainable competitiveness and HUBS 5.0), Plenary Session in BXL in Q4 2025
- **Implementing Industry 5.0 related actions from Horizon Europe Strategic Plan 2025-2027 in HE WP 2025-2027** (Cluster 4 Digital, Industry and Space)
- Aiming at integrating Industry 5.0 principles/methodology in new **initiatives/communications at EU level**

## Find out more



[https://ec.europa.eu/info/research-and-innovation/research-area/industrial-research-and-innovation/industry-50\\_en](https://ec.europa.eu/info/research-and-innovation/research-area/industrial-research-and-innovation/industry-50_en)



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