DG RTD activities on Advanced Manufacturing and Advanced Materials and link with the EMN Advanced Manufacturing

EMN Advanced Manufacturing - Open Stakeholder Meeting
23 October 2024

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Advanced Manufacturing in Horizon Europe

European Commission

The Made in Europe Partnership

Co-Programmed Partnership on Advanced Manufacturing

EU Contribution: 900M EURO

Specific Objectives:

- Excellent, responsive and smart factories & supply chains
- Circular products & Climate-neutral manufacturing
- New integrated business, product-service and production approaches; new use models
- Human-centered and human-driven manufacturing innovation

The Made in Europe Partnership

How to get involved?

- All projects under the Partnership and its predecessors can be found here: EFFRA PORTAL
- Projects reaching their end may have new metrological needs – many demonstrators!
- Ensure a good cooperation with the private part of the Partnership (EFFRA)
- Next topics will be published in the Work Programme 2025 of Horizon Europe Cluster 4 (to be published in early 2025)

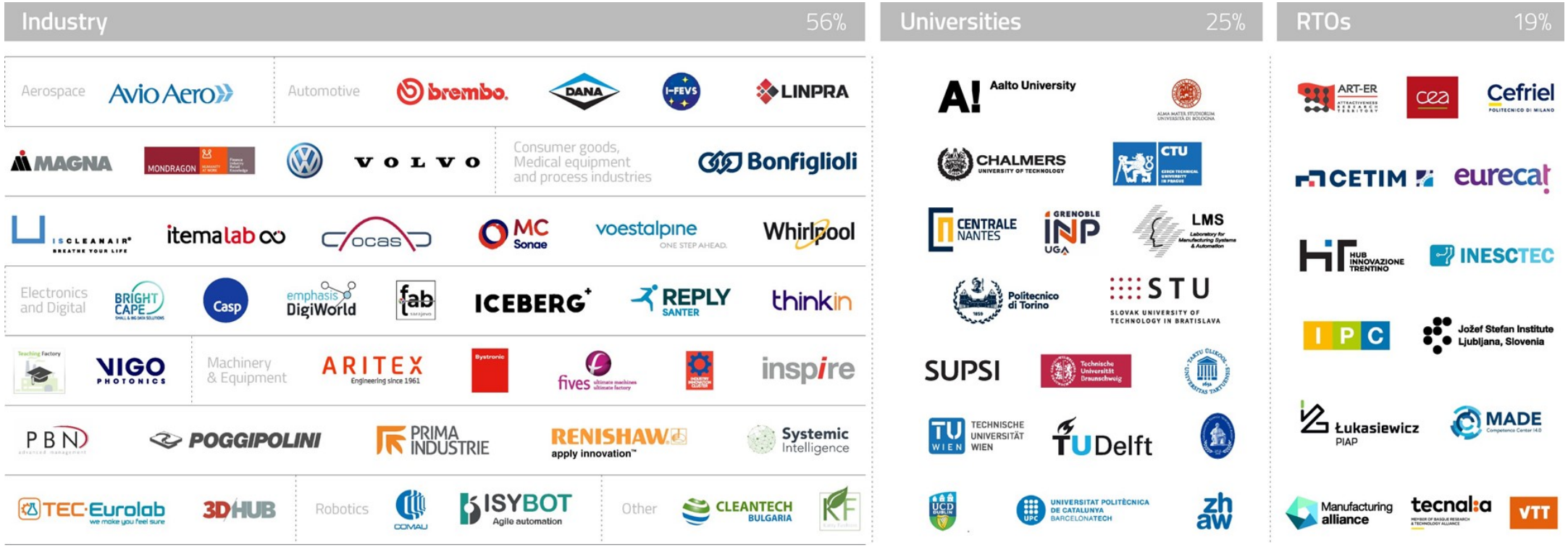
Introducing EIT Manufacturing

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- EIT Manufacturing is an initiative of the European Institute of Innovation and Technology (EIT), a body of the European Union
- A pan-European community focused on fostering innovation in manufacturing through our unique active ecosystem, bringing together industry leaders, connecting business, startups, academics and research institutions to make innovation happen
- Co-funding of EUR 400 million (2020-26) from the EIT makes this possible

Growing a powerful network of 170+ partners, Including 70+ core partners



EIT Manufacturing new strategic agenda

	Strategic initiatives	Societal & Environmental impact
Put people at the centre of manufacturing innovation	• **Reskilling and Upskilling** • **Manufacturing Industry attractiveness**	▼ Skills Gap ▲ Attractiveness of manufacturing workspaces
Accelerate green manufacturing	• **Promote circularity** principle with servitization modelling • **Accelerate Net-Zero emissions** principle with a value-chain decarbonisation approach	▲ Resources efficiency ▼ CO2 emission
Fostering sovereignty and competitiveness	• **Use data spaces and AI** as enabler for sovereignty • **Scale up innovations** in strategic manufacturing industries	▲ Revenue Growth in Manufacturing

Other opportunities for synergies

Within Horizon Europe:

- Industry 5.0 - AI aspects
- European Research Council
- EU Partnerships:
  - AI/DATA/ROBOTICS (*Now members of the EPM Steering Group*),
  - Chips Joint Undertaking,

Beyond Horizon Europe:

- MANUFUTURE – See next presentation
- AIM-NET – A network on AI applied to Advanced Manufacturing - AIM-NET
- Digital Innovation Hubs – Part of the Digital Europe Programme
  - Support to SMEs by providing platforms to test before investing in new digital technologies
  - Many hubs on additive manufacturing
  - https://european-digital-innovation-hubs.ec.europa.eu/home

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Trends in Advanced Manufacturing R&I
- Report published in Nov 2023

- The “Trends in Advanced Manufacturing R&I” report looks at, and draws conclusions from, the rich portfolio of EU projects supporting advanced manufacturing, mostly under the Factories of the Future and Made in Europe partnerships.
- The report concludes with an analysis of the trends in manufacturing industry and the vision of the various stakeholders.
- Inputs from several sources: DGs R&I and CNECT, HaDEA, ERCEA; interviews with project coordinators and ERC principal investigators; EFFRA; EIT Manufacturing; Manufuture

Link to download: Trends in advanced manufacturing R&I - Publications Office of the EU (europa.eu)

Advanced Materials for Industrial Leadership

European Commission

Policy Context









- Advanced materials offer a wealth of **solutions**
  - **Key enablers & innovation drivers** for the **Green Deal** & **Digital Transition**
  - **Many application areas across sectors, e.g.:**
    - clean energy technologies for the **Net-Zero Industry Act**
    - **potential to substitute** Critical Raw Materials (CRMs) for the **CRM Act**
    - **Clean Industrial Deal**





- **Increasing demand** expected for advanced materials

  e.g. for renewable energy, batteries, zero-emission buildings, semiconductors…
  - Improved **efficiency** and **performance**
  - Customer demand for **circular**, **safe and sustainable** products

European Commission

Advanced Materials for Industrial Leadership

To strengthen the EU's **resilience** and **open strategic autonomy** and to deliver on the **Green Deal and Digital Transition**, Europe must :

- **accelerate** its advanced materials research & technology development
- **scale up** its innovation and manufacturing capacity and
- **step up** the industrial uptake of advanced materials

Commission Communication COM(2024) 98 final – 27.02.2024

- Setting out 14 distinct actions for 2024 and 2025
- https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=COM%3A2024%3A98%3AFIN

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Actions in the Communication relevant for EMN Advanced Manufacturing

- **Horizon Europe partnership «Innovative Advanced Materials for EU IAM4EU»**
  - Planned co-programmed partnership with industry under discussion
- **Improve standards** in collaboration with CEN/CENELEC/ETSI & ISO – Study planned
- **Identification of R&I needs** for the substitution of critical raw materials with advanced materials – JRC action starting in Q3 2024
- **Material Commons**
  - European Digital Infrastructure for advanced materials R&I in WP 2025

Contact us to get involved!

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Advanced Materials for Industrial Leadership

Link between EMN Adv. Manufacturing and the Communication:

- Important to create synergies with the upcoming Partnership on Advanced Materials, especially on the area of characterisation
- Identify ongoing activities done by National Metrology Institutes in the field of characterisation of advanced materials to understand potential gaps

European Commission

Thank you

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