



EMIRI General Assembly

Strategic Materials Agenda

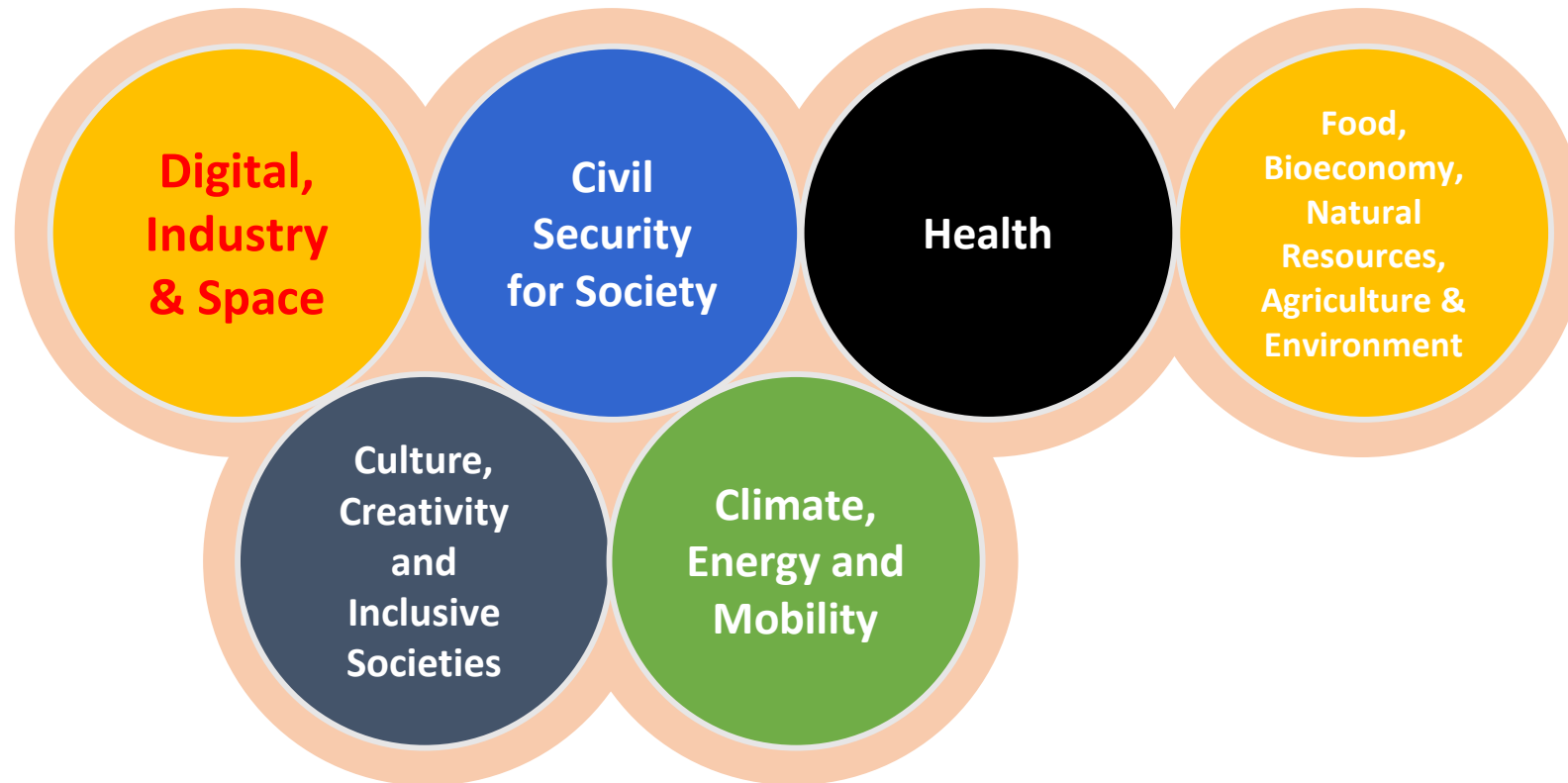
1st Dec. 2022

*Dr. Ulrich SCHMID
DG Research and Innovation
Head of Unit E3 Industrial Transformation*

Overview

- Strengthening the impact of research under Horizon Europe
- Materials 2030 Manifesto and Roadmap – initiative by stakeholders
- Draft work programme 2023/2024 (adoption/publication end of the year)

Strengthening the impact of research under Horizon Europe



Strengthening the impact of research under Horizon Europe – Cluster Digital, Industry, Space



European Green Deal Energy- and Resource-efficient Industries (Manufacturing, Process, Digital Industries)

A Europe Fit for the Digital Age Digital Transformation for Industry and People



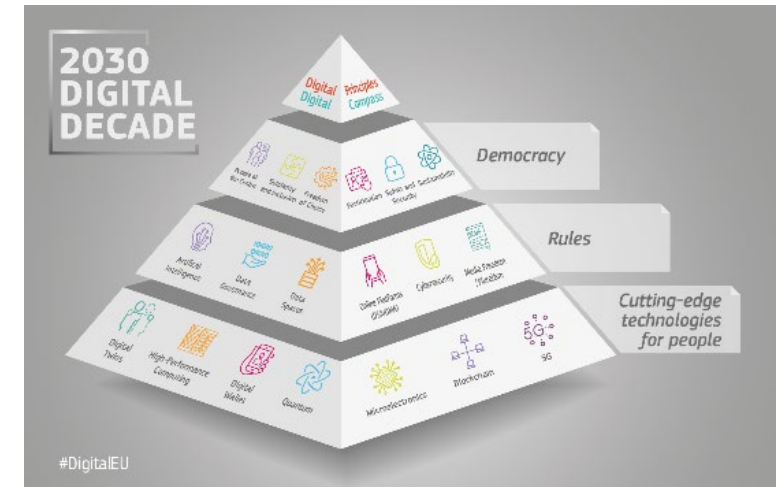
Recovery Plan for Europe:
R&I for fair green and digital transitions,
1.35 bn € from NextGenerationEU
in Cluster 4 2021-27

Cluster 4 'Digital, Industry and Space' – Strategies

EU Chemicals Strategy:
boosting innovation for safe and sustainable chemicals by design



European Industrial Strategy Update: more sustainable, digital, resilient and competitive industry



2030 Digital Decade: human-centric digital technologies and digital transformation of businesses



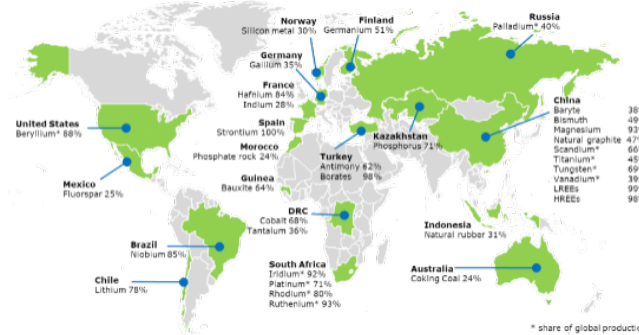
Space Strategy for Europe: R&I for Competitive space industry
New services and infrastructure

Cluster 4 'Digital, Industry and Space' – Action Plans



Zero Pollution:

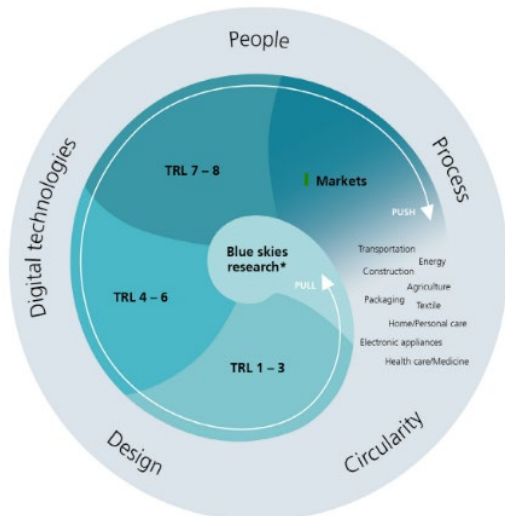
R&I for zero pollution from industry and chemicals for air, water and soil



Raw Materials Action Plan:
R&I for resilient value chains; less dependency on primary critical raw materials



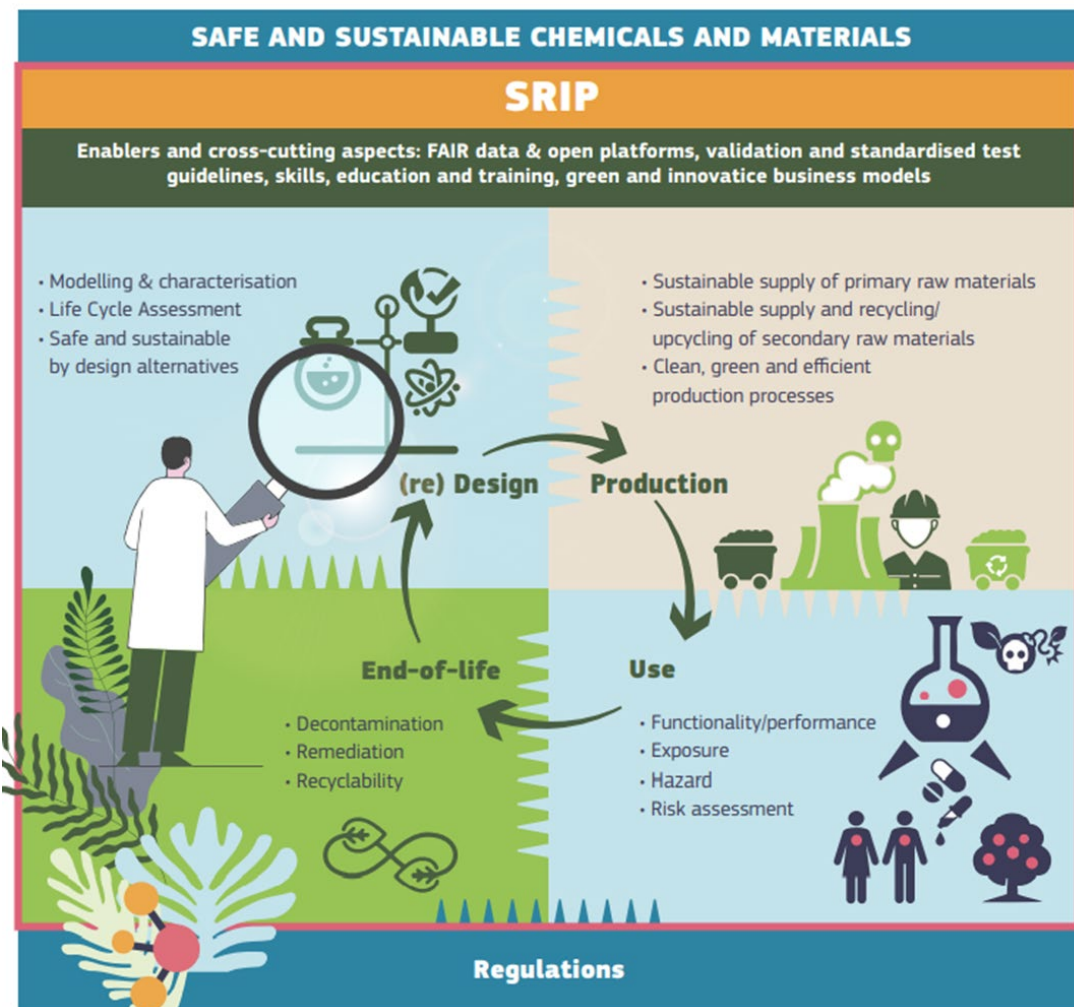
Circular Economy Action Plan:
R&I for circular industries; sustainable products; and no waste



Materials 2030 Manifesto:
new opportunities for advanced materials in 9 strategic markets

* Research where „real-world“ applications are not immediately apparent

Strategic R&I Plan for chemicals and materials



- Published in October 22: <https://ec.europa.eu/assets/rtd/srip/2022/>
- Contributes to the transition to climate neutrality and the zero-pollution ambition
- Highlights the R&I areas crucial for making chemicals and materials safe and sustainable
- Input for different funding programmes (EU, national or industrial)
- Based on extensive consultations with different stakeholder groups – thanks for your contribution!

Cluster 4 - Vision

*Competitive technologies respecting the boundaries of our planet,
and reflecting human needs*

Green and digital 'twin' transitions

Industrial and digital transformation

- mastering technologies
- deploying technologies and technology infrastructures
- securing autonomy in strategic value chains



Climate-neutral, circular and clean industry

Major contribution to inclusiveness and resilience

- human-centred and ethical developments
- engagement with users, workers, citizens
- social innovation

Cluster 4 'Digital, Industry and Space' – Strategic Plan

Key Strategic Orientation in the Strategic Plan 2021 - 2024	Destinations for WP 2021/2022 and draft WP 2023/2024	Strategies
<p>C - Making Europe the first digitally enabled, circular, climate-neutral and sustainable economy</p>	<p>Climate neutral, circular and digitised production TWIN-TRANSITION</p>	<p>Fit for 55 Digital Decade Industrial Strategy REPowerEU: ~new investment for energy-independence</p>
<p>A - Promoting an open strategic autonomy by leading the development of key digital, and enabling and emerging technologies, sectors and value chains</p>	<p>A digitised, resource efficient, and resilient industry RESILIENCE</p>	<p>Fit for 55 Materials2030Roadmap and EU Chemical Strategy Industrial Strategy</p>
	<p>World-leading data and computing technologies DATA</p>	<p>Digital Decade Industrial Strategy</p>
	<p>Digital and emerging technologies DIGITAL-EMERGING</p>	
	<p>Open Strategic Autonomy in Space infrastructures, services, applications and data SPACE</p>	<p>EU Space Strategy</p>
<p>D - Creating a more resilient, inclusive and democratic European society</p>	<p>A human-centred and ethical development of digital and industrial technologies HUMAN</p>	<p>Digital Decade Industrial Strategy</p>

Materials 2030 Manifesto, Roadmap, and AMI

Feb 2022: Materials 2030 Manifesto

- Safeguarding Europe's technology leadership
- Reducing the environmental footprint
- Securing Europe's strategic autonomy



Climate neutrality

June 2022: Materials 2030 Roadmap

- Published at [IndTech](#) 2022 conference
- Engaging all advanced materials stakeholders



Zero pollution

Feb 2023: draft Strategic Materials Agenda

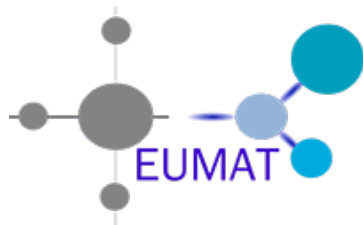
- Translating the Roadmap into an action plan
- Positioning the AMI2030 initiative in the EU landscape



Circular economy



Gathering 60 organisations developing innovative advanced materials solutions for clean and sustainable energy and mobility.



EU Materials Platform for academia, industry and other stakeholders. Processing R&D priorities.



Sustainable Chemistry Technology platform: Industry-Academia-Policy makers collaboration driven.



European Manufacturing Industry Platform. More than 100 stakeholders from industry, academia and RTOs.

The signatories of the Manifesto

Alessandro CREMONESI, Executive VP and Chief Innovation Officer STMicroelectronics N.V.

Nicole GROBERT, Professor, Associate Head of Department (Research), Department of Materials, University of Oxford, Chair of the Group of Chief Scientific Advisors

Peter GUMBSCH, Chairman of the Fraunhofer Group Materials, Fraunhofer-Gesellschaft zur Förderung der angewandten Forschung e.V.

Laurence PIKETTY, Deputy CEO, Commissariat à l'énergie atomique et aux énergies alternatives (CEA)

Lars MONTELIUS, Director-General of International Iberian Nanotechnology Laboratory (INL)

Kurt VANDEPUTTE, SVP Government Affairs Umicore NV / SA

Isabelle VÉRILHAC, President, The Bureau of European Design Associations (BEDA) and their respective member organisations



Contact them:

www.ami2030.eu info@ami2030.eu



Materials2030Roadmap – building blocks

Inclusive Governance - a new form of cooperation

Materials Digitalization

- New research and development methodologies
- Merging computational and experimental material science with data science

Materials Scaling Up

- Common manufacturing technologies & conditions for the production and processing of advanced materials

Materials Priority Areas

- The basis for the development of a novel European strategic materials agenda

Connecting “Blue Sky” research with market demands

Evidence-based policy recommendations

Materials2030Roadmap – Priority areas

Health Care



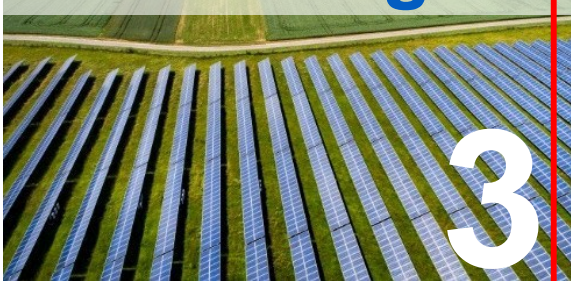
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Construction



2

New Energies



3

Transport



4

Home & Personal Care



5

Packaging



6

Agriculture



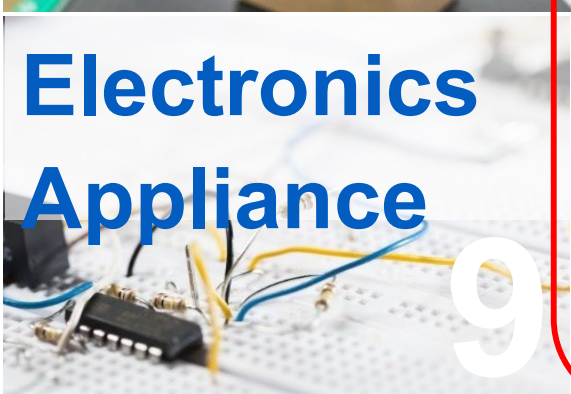
7

Textiles



8

Electronics
Appliance



9

People



Planet



Prosperity



The Advanced Materials 2030 Initiative

Overarching objectives



Planet

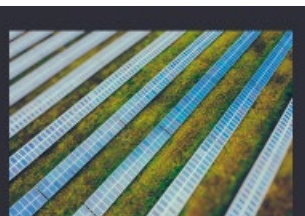


People



Prosperity

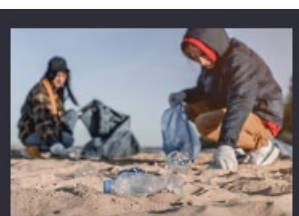
Green Deal targets



Climate neutral by
2050



Prevent resource
scarcity



Reduce environmental
pollution

Climate
contribution



Circularity of mat



Zero pollution &
non-harmful



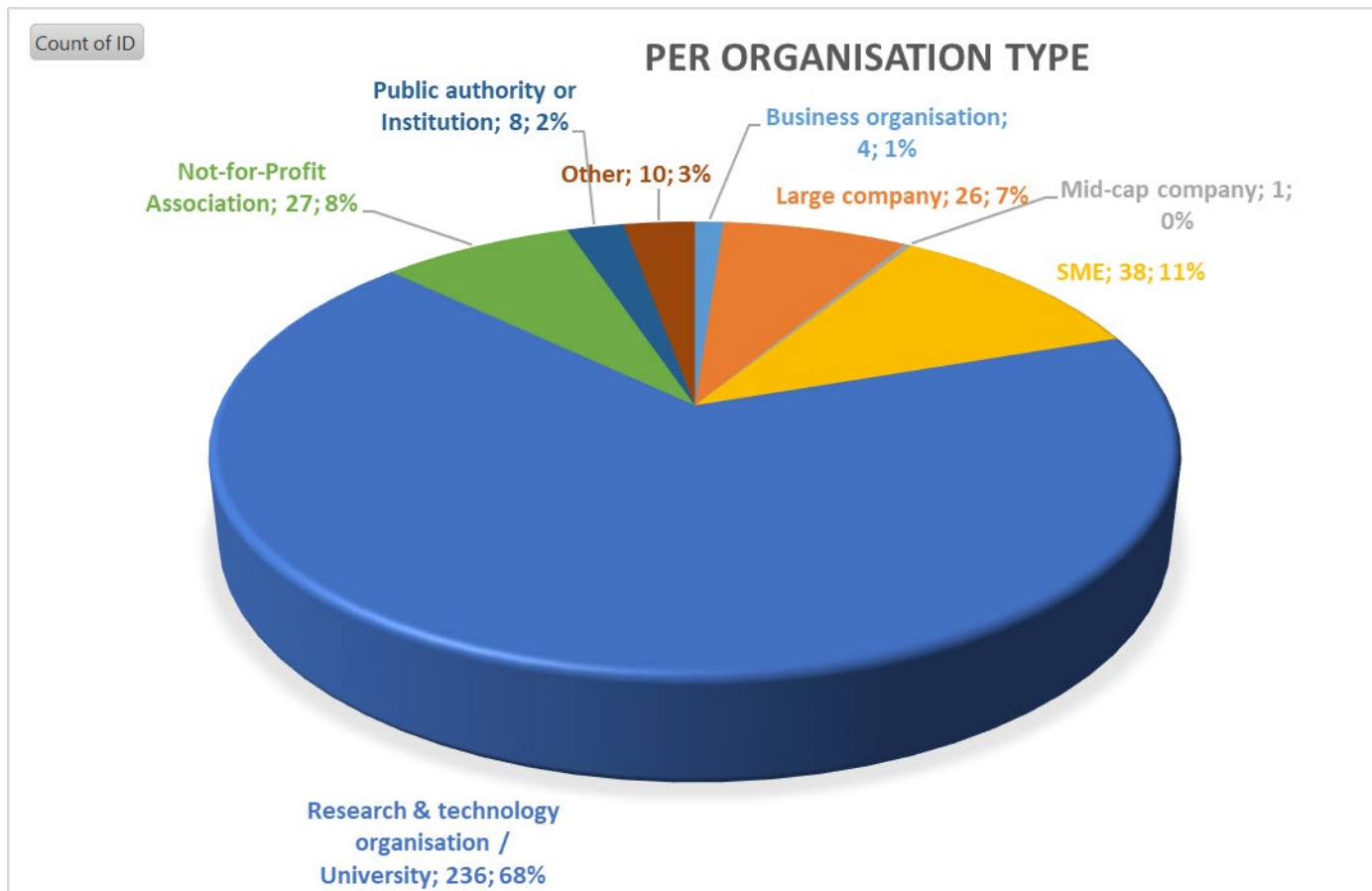
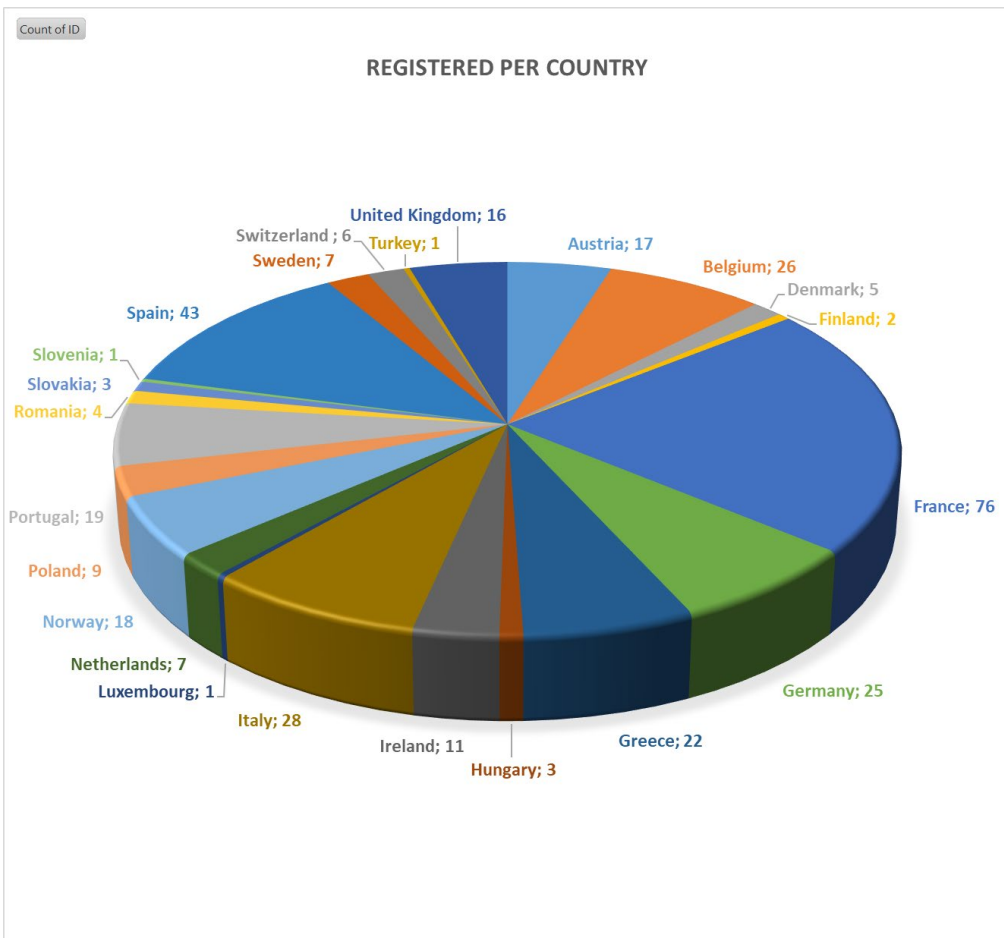
Other strategic targets

- Safeguarding Europe's technology leadership
- Reinforcing European industry competitiveness
- Securing Europe's strategic autonomy
- Supporting transformation of European society, including digital transition

Engagement

350 people registered on AMI2030 website (24/11/2022 18:00)

- more engagement from industries would be good – also some countries underrepresented



Draft work programme 2023/2024

- **Strategic innovation markets driven by advanced materials**
 - Bioinspired and biomimetic materials for sustainable **textiles**
 - Smart sensors for the **Electronic Appliances** market
 - Advanced (nano and bio-based) materials for Sustainable **Agriculture**
 - Biodegradable polymers for sustainable **packaging** materials
 - Advanced **biomaterials for the Health** Care
 - Advanced materials for magnets in New **Energies** Market



Thank you for your attention