

Advanced material Industrial competitiveness Sustainability and EU

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Advanced Materials, drivers for a sustainable future

Forecast for global growth

5-8% to 2034

CAGR

An advanced material can be defined as any new or significantly improved material that provides a distinct advantage in (physical or functional) performance when compared to conventional materials.

(PRIMA, Quebec)



Europe's decline as noted by the Economist a few years back,



The Economist

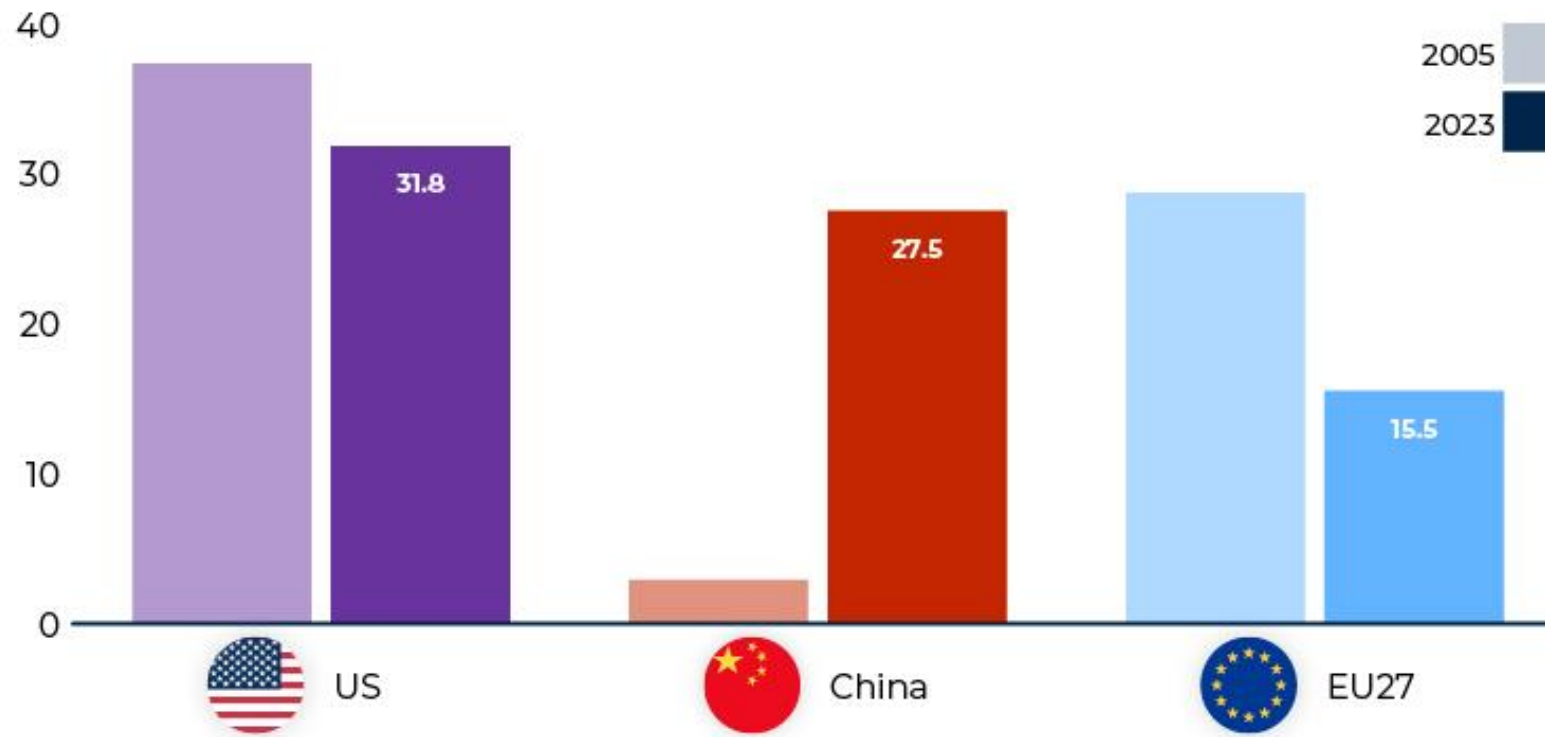


**Rebuilding Europe's business case,
working against the clock.**

[ERT-Competitiveness-and-Industry-Benchmarking-Report-2024.pdf](#)

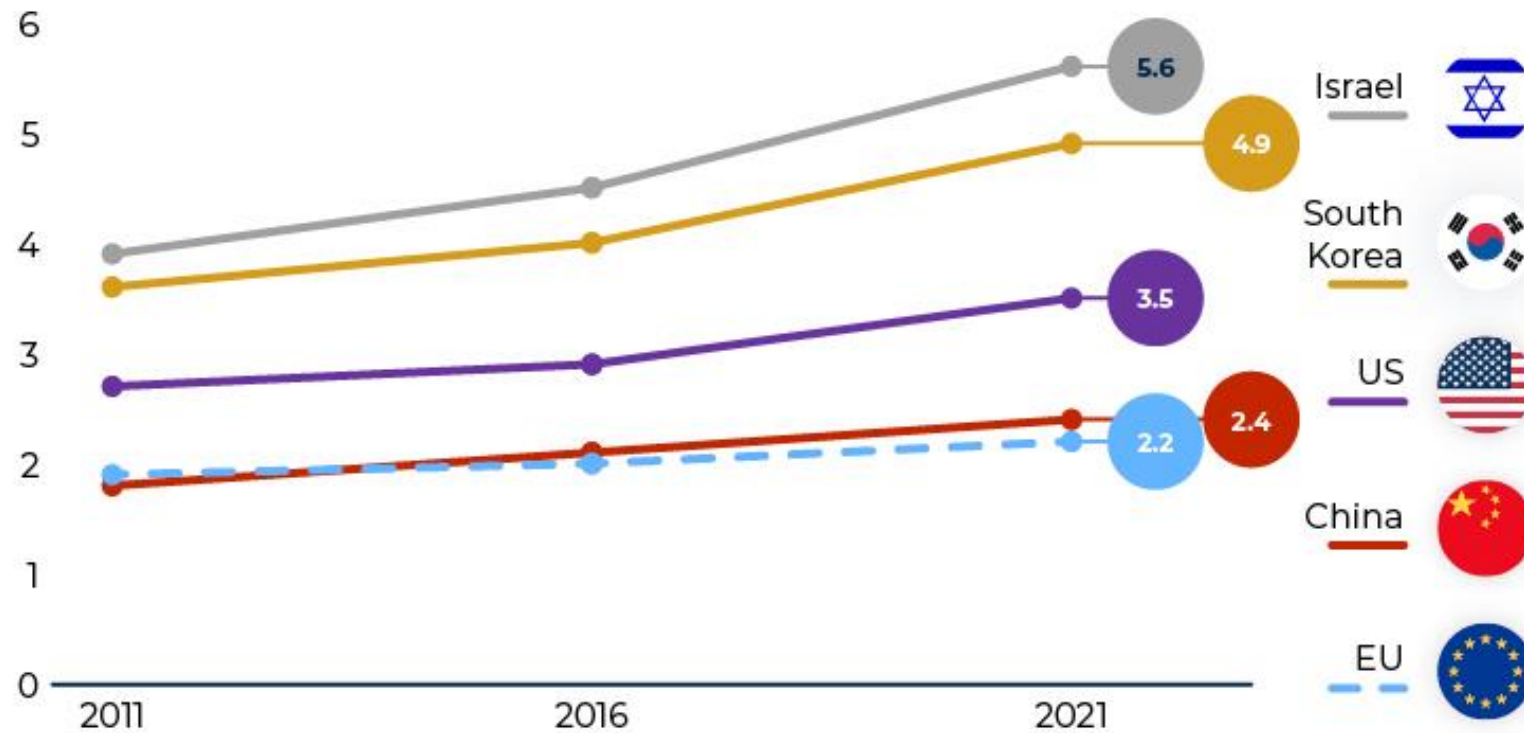
**COMPETITIVENESS AND INDUSTRY
BENCHMARKING REPORT 2024**

EU companies no longer lead in terms of revenues



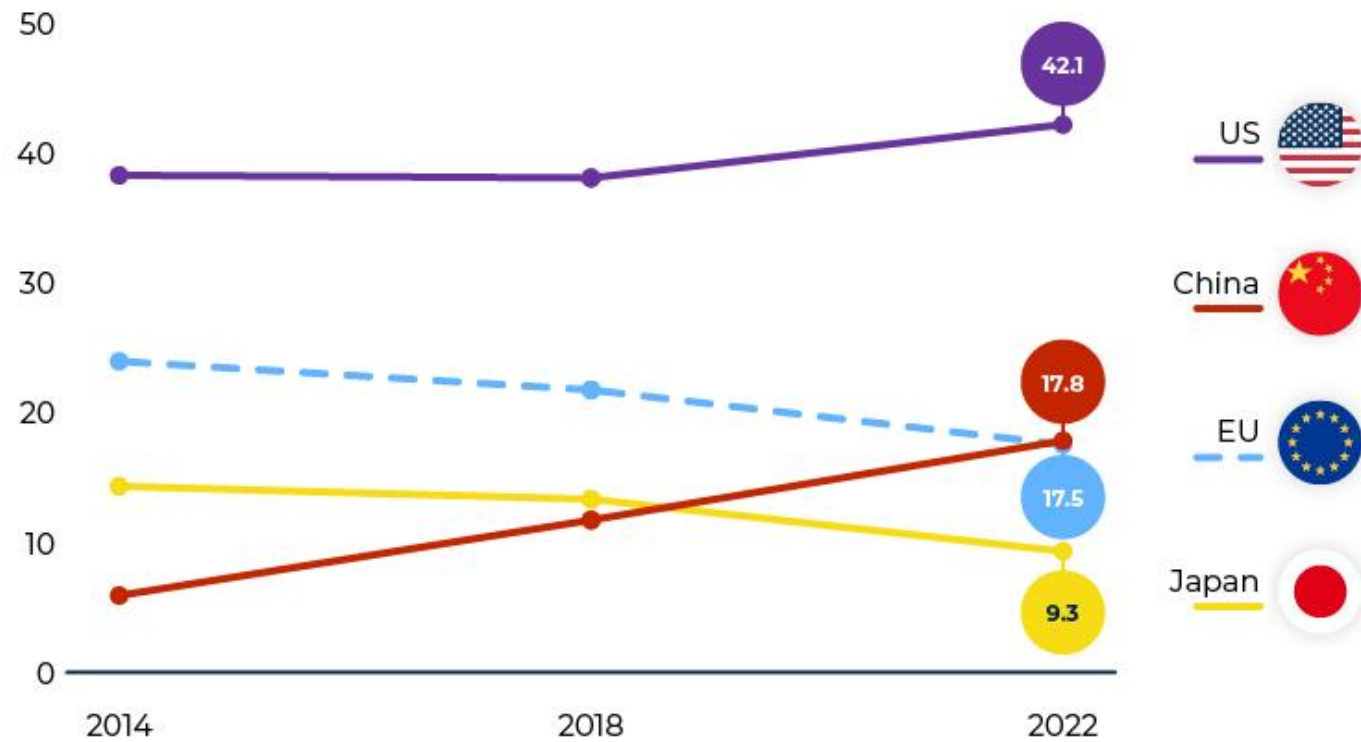
Share of companies in Fortune Global 500

Europe has to spend much more on technological leadership...



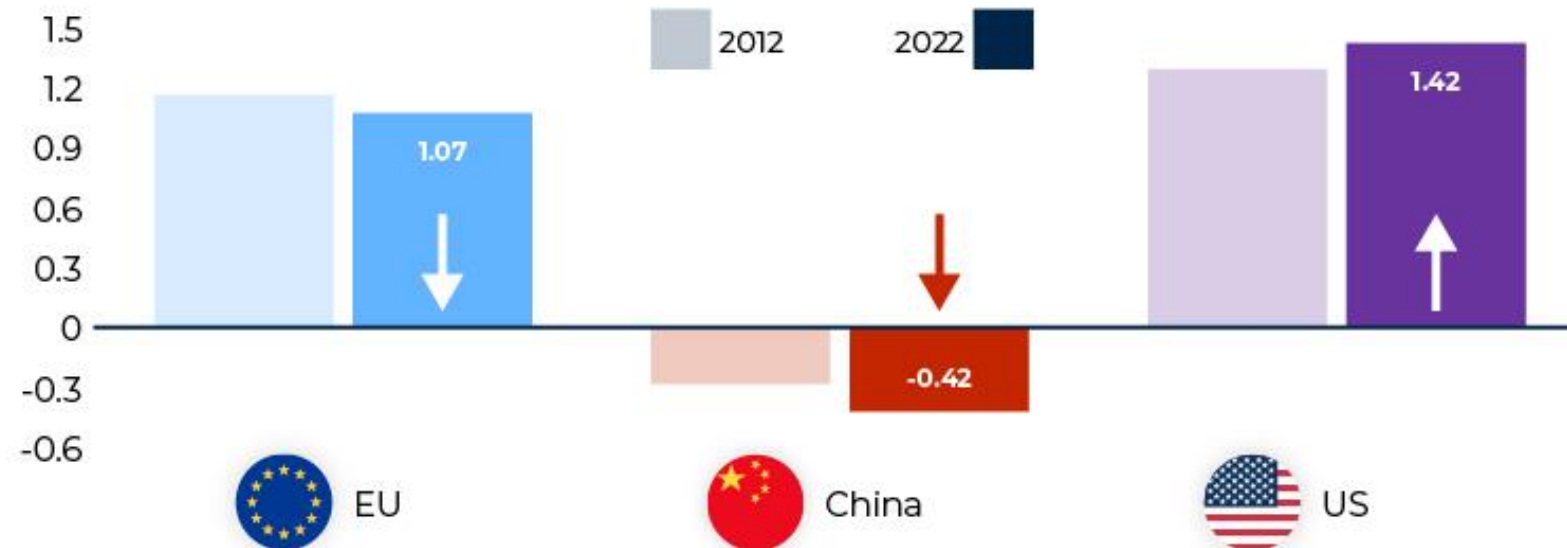
R&D spending as % of GDP

Industrial R&D investment among the world's 2500 largest companies



Global market share, %

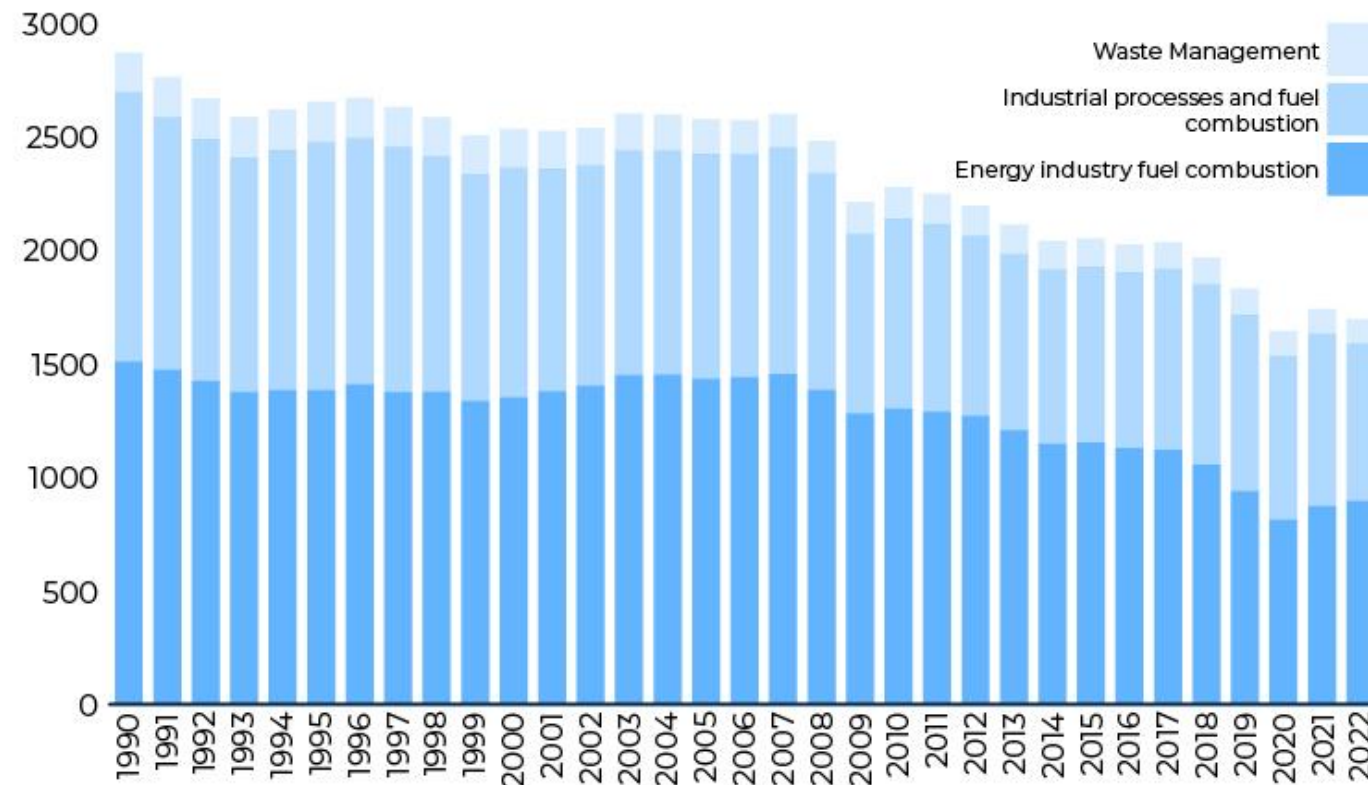
...and more pragmatic regulation.



World Bank Regulatory quality index from -2.5 to 2.5 (2.5 being optimum)



...some parts are, however, moving in the right direction



Industry GHG emissions in the EU in million tonnes

If Europe was a company

Company Europe' urgently needs a turnaround.

'Company Europe' is in danger of losing its technological and competitive edge. It has fallen behind on constructing key infrastructure and created a regulatory environment that lacks coherence and incentives for investment.

A turnaround strategy to re-build its business case would:

'

Leverage and enhance our technology leadership culture:

Building on Europe's high-technology tradition and innovation DNA is a must.

Europe must better **incentivise investment in high technology innovation**. And it needs to do so across technologies, spanning from AI and quantum computing to dual-use innovation and **green technologies to advanced materials** and bioengineering.

Deepen the EU Single Market:

The EU Single Market is Europe's most valuable asset, because it creates prosperity and allows for economies of scale and vibrant competition.

Tackle Barriers Holding Europe Back:

Europe needs a regulatory environment that creates business cases, incentives and enablers for much needed corporate investment. The big task is to simplify and restore coherence of the EU's regulatory framework.





Draghi report

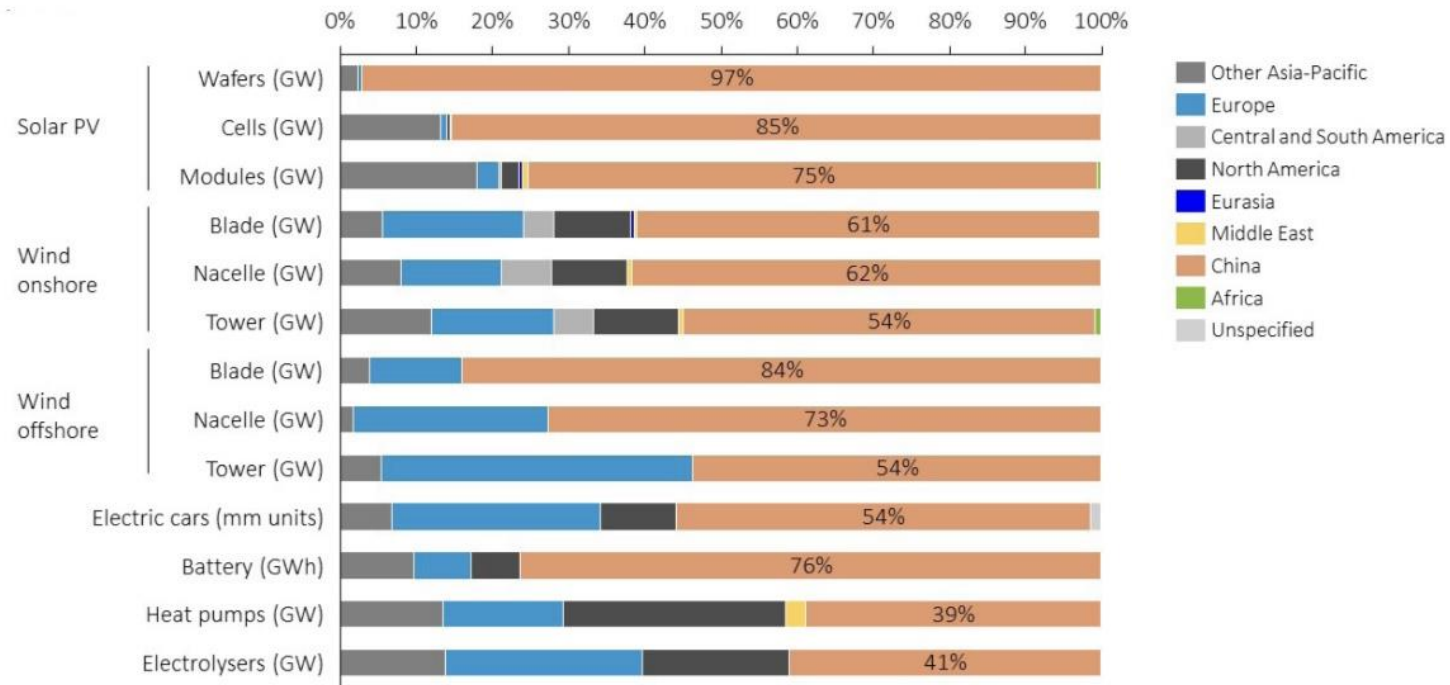
First – and most importantly

Europe must profoundly refocus its collective efforts on closing the innovation gap with the US and China, especially in advanced technologies.



European Union, 2024 – Mario Draghi at a press conference on European competitiveness, in Brussels, 9 September

FIGURE 4
Clean technology manufacturing capacity by region
 (% 2021)



Source: European Commission, 2024. Based on IEA, Bruegel, 2024.



EU-Commission: Competitiveness Compass (29 Jan 2025)

Three transformational imperatives and five horizontal enablers to boost competitiveness



Source: [EU Compass to regain competitiveness \(2025\)](#)

Examples of actions of direct relevance for WISE

Now

AI Factories Initiative

Clean Industrial Deal and an Action Plan on Affordable Energy

Union of Skills

Q3 2025

Sustainable Transport Investment Plan

Q4 2025

Industrial Decarbonisation Accelerator Act

Q4 2026

Circular Economy Act

2026

European Research Area Act

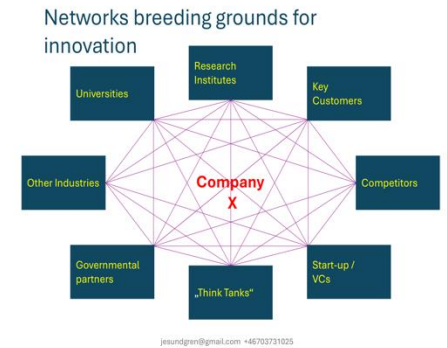
Advanced Materials Act



Advanced Materials is a Key for Sustainable Development

Five comments going forward

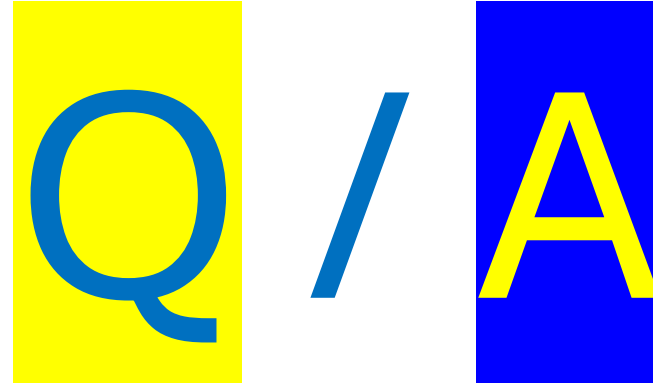
- Continue push for awareness
- Get people to meet
- Not only excellence in Research but also in Education
- Strong focus on Sustainability in several dimensions
- Speed; AI, HPC and adequate financing are keys



Quote from Derek Bok,
President Harvard University 1971-1991

If You think Education is Expensive

Try Ignorance



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BACK UP

Clean Industrial Deal and an Action Plan on Affordable Energy

Launched Feb 26

Affordable energy

Boosting demand for clean products

Financing the clean transition

The Clean Industrial Deal will mobilise over €100 billion to support EU-made clean manufacturing.

Launch a dedicated call under Horizon Europe to stimulate research and innovation in these areas

Circularity and access to materials

Critical raw materials are key for our industry.

Acting on a global scale

Skills and quality jobs

Erasmus+ will reinforce education and training programmes with up to €90 million in funding.