The value of EIT Manufacturing pan EU ecosystem driving sustainability and energy transition in European manufacturing

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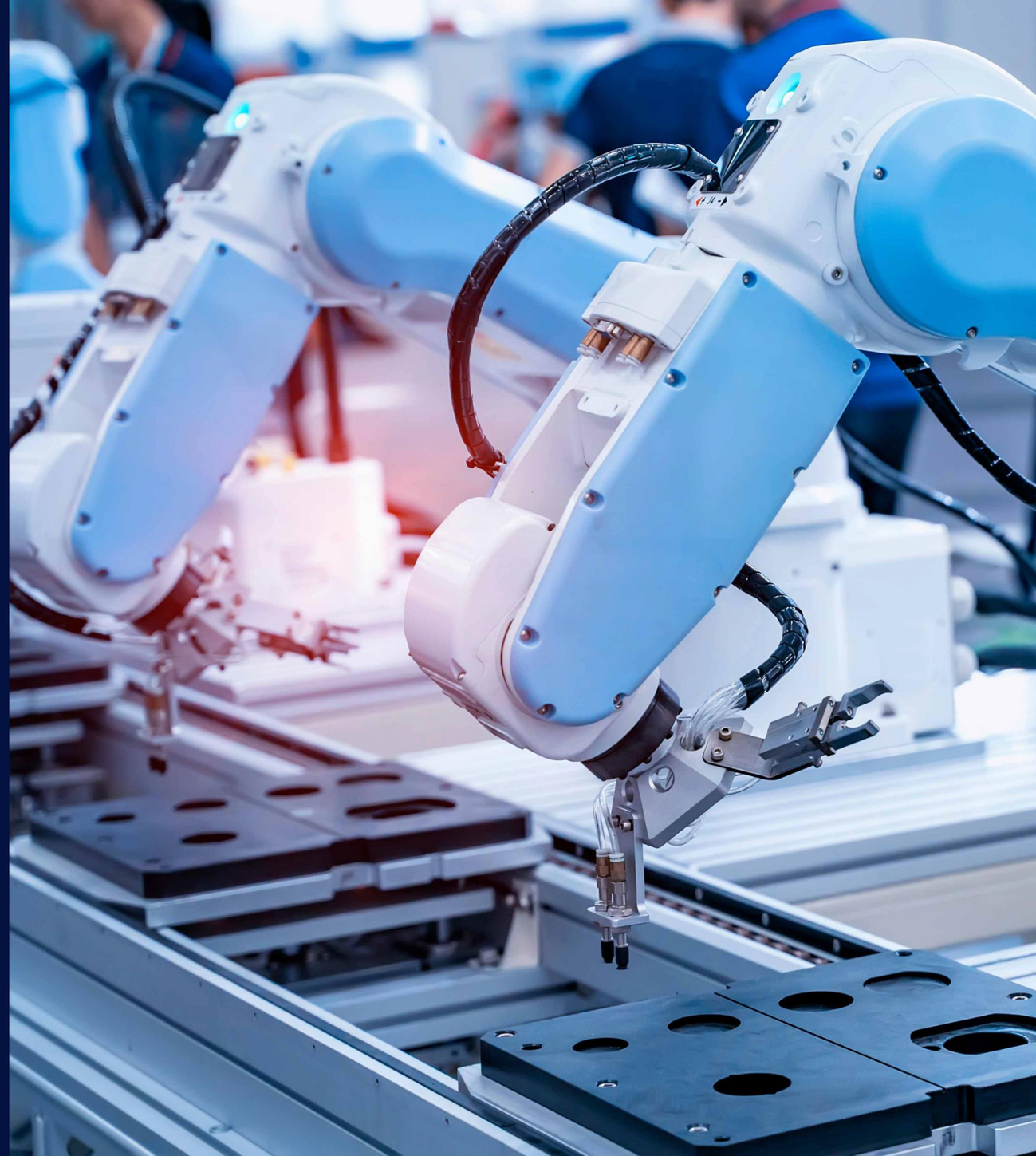


Introducing EIT Manufacturing

- EIT Manufacturing is an initiative of the European Institute of Innovation and Technology (EIT), a body of the European Union
- We are the leading pan-European community focused on fostering innovation in manufacturing through our unique active ecosystem
- This network brings together 170+ partners including 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

The European manufacturing industry faces five main challenges

Skill gaps

- Urgent need to reskill, upskill and reimagine traditional roles
- Challenge caused by **aging demographic** evolution in Europe, coupled with a **shift in skillset requirements**

Lack of diversity

- Manufacturing is one of the sectors with the **lowest share of women** employees
- A diversified workforce is a key **lever to unlock innovative thinking**
- To attract tomorrow's talents from **across the spectrum of diversity**, manufacturing work environment must improve

Linear production models

- Current production and consumption systems rely on **non-reusable or non-recycled raw materials**
- **Linear models** generate persistent waste and perpetuate the demand for virgin resources
- Shift need towards **circular production** to **reduce overreliance** on unsustainable materials and **cut waste**

High GHG emissions

- **Regulation is too slow**, despite the European Green Deal and its Net Zero Industry Act or Corporate Sustainability Reporting Directive
- Need to prioritize **sustainable products** and practices to meet climate-neutral goals and unlock opportunity

Insufficient resilience

- Europe **depends** on specific raw materials and critical components
- **Importance of a resilient** European manufacturing shown through COVID-19 pandemic and Ukrainian war
- Europe is **lagging behind in digital platforms** which pose an opportunity to increase competitiveness

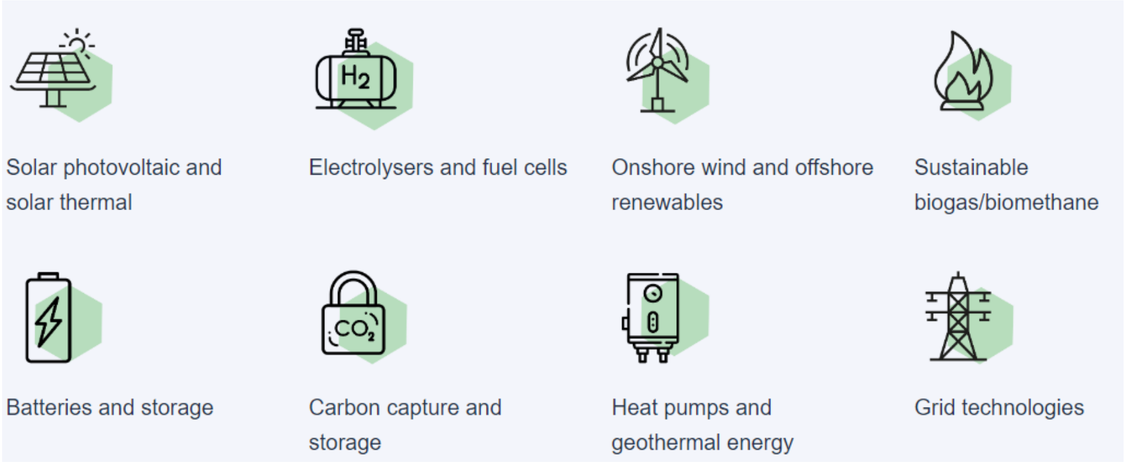
Net-Zero Industry Act

Motivation: Make the EU the home of clean technologies manufacturing and green jobs

- Green Deal Industrial Plan: Enhancing the competitiveness of Europe's zero-emission industry (4 Pillars: Regulatory Environment, **Finance, Skills**, Trade)
- Net-Zero Industry Act: Part of the Green Deal Industrial Plan to scale up clean technology manufacturing in the EU.
- Clean Energy Transition: Increase in manufacturing capacity for technologies aiding the clean energy transition with low to negative emissions.
- Investment and Market Access: The Act aims to attract investments and improve market conditions for clean tech in the EU.

Why Net Zero is important for companies?

- Strengthen brand reputation
- Increase competitiveness
- Reduce costs through wastage
- Protect the business from over-reliance on fluctuating fossil fuel-based energy supplies
- Create opportunities for new growth



Strategic Net-Zero Technologies

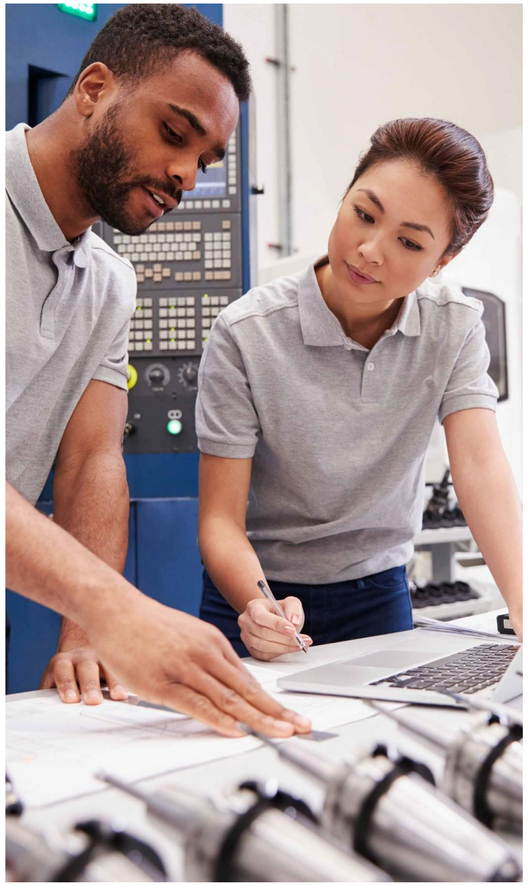
[Source: https://horizoneuropencpportal.eu/news/green-deal-industrial-plan]

We accelerate innovation within European manufacturing through our unique ecosystem

Our mission

Connect manufacturing players by promoting talent and entrepreneurship to accelerate sustainable innovation in Europe.

Delivered through education and training, innovation and business creation.



Our strategic objectives

1. Put people at the center of manufacturing innovation
2. Accelerate green manufacturing
3. Foster sovereignty and competitiveness

Pan-European with local presence

Headquartered in Paris

Six regional offices covering all European countries:

- **Central Region** — Darmstadt
- **East Region** — Vienna
- **North Region** — Gothenburg
- **South Region** — Milan
- **South-East Region** — Athens
- **West Region** — San Sebastian

150+ employees

EIT Manufacturing South East

Regional office in Athens, Greece

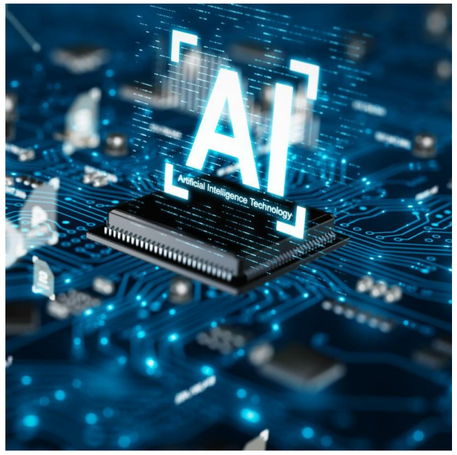
- Officially inaugurated in Oct 2022 in Athens, Greece
- Serving 9 countries of South East Europe: Albania, Bulgaria, Cyprus, Georgia, **Greece**, Moldova, North Macedonia, Romania, Türkiye
- LMS, University of Patras led the set up process
- Support letter from the Greek Prime Minister
- Support letter from 15 industries (Greece, Bulgaria, Romania)
- Communication node to all EIT Manufacturing regions

LMS
Laboratory for Manufacturing Systems & Automation

We focus on five key themes impacting the manufacturing industry

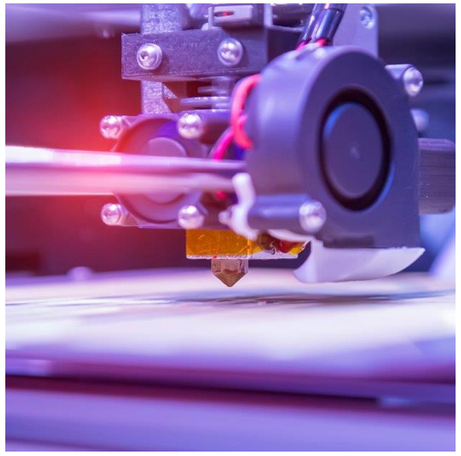
AI & data

Enhance competitiveness thanks to smart automation and virtualisation solutions



Industrial metaverse

Accelerate the setup of production lines or the training of operators



Circular economy

Unlock new business models addressing resource scarcity and environmental challenges

Net Zero industry

Achieve emission reduction targets through innovative solutions

Renewable energy

Local grid integration to limit fluctuating energy prices and stay competitive

Growing a powerful network of 170+ partners

Including 70+ core partners

Industry 56%

Aerospace

Automotive

Consumer goods, Medical equipment and process industries

Electronics and Digital

Machinery & Equipment

Robotics

Other

Universities 25%

RTOs 19%

Last update: April 2024

Challenges for New Innovations on Net Zero Industry

Challenge 1: Digital Production and Supply Chain Tracking

Digital Technologies Implementation:

Utilize Digital Twin, IoT, and process control integration to enhance production processes for efficiency and transparency.

Regulatory Mandates:

Regulations in specific sectors necessitate the integration of tracking technologies like digital passports for upstream or downstream production.

Challenge 2: Decarbonisation Strategies and Circular Manufacturing

Circular Business Models:

Shift manufacturing towards circularity, focusing on waste minimization, water management, emission reduction, and cleaner energy adoption.

Competitive Products:

Develop circular strategies (reduce, reuse, remanufacture, recycle) while ensuring competitiveness in product manufacturing.

Challenge 3: Green and Affordable Energy

Renewable Energy Transition:

Transition to renewable energy sources while optimizing energy management to streamline operations.

Economic and Environmental Benefits:

Energy savings are critical for unlocking economic and environmental advantages while achieving decarbonization goals in manufacturing.

Challenges for Skills development on Net Zero Industry

Priority 1: Optimization & Process Control

Training Needs

- Trainings on energy efficiency control, interoperability, and data-driven strategies.
- Cover technical and economic implications.

Impact and Benefits

- Reduced operating costs and improved resource efficiency.
- Emissions reduction and waste conservation.

Priority 2: Digitalization and Data Analytics Monitoring

Training Needs

- Focus on AI, IIoT, sensors, and data analysis.
- Skills in predictive maintenance and cybersecurity.

Impact and Benefits

- Enhanced resource efficiency and cost savings.
- Reduced production downtime and improved sustainability.

Priority 3: Methodologies and Tools for CO2 Emissions

Training Needs

- Training on LCA, PCF, and CO2eq emission methodologies.
- Develop skills for conducting analyses and carbon reduction strategies.

Impact and Benefits

- Accurate measurement and monitoring of carbon emissions.
- Targeted reduction initiatives and regulatory compliance.

This is how we support your innovation and funding needs

01

Broadening network and collaboration

- Networking & community building
- Finding commercial and technology partners
- Learning Expeditions across Europe

02

Boosting viable innovation

- Funding of Innovation projects
- Support to Commercialisation
- Tech Radar & Business Intelligence
- Corporate Innovation Challenge

03

Expanding skills and competences

- Customised professional trainings
- Digital learning platform
- Teaching and Learning Factories
- Access to international talent
- Dissemination of innovation

04

Accelerating sustainable growth

- Innovation Funding Catalyst
- Access to other funding programmes

Innovation Project

“TRACE02” – Traceability for reduced environmental footprint within the metallic value chain

- **Scope**: launching a **European lighthouse initiative** that empowers **secure** and **efficient Product Carbon Footprint (PCF) accounting practices** supporting the needs and characteristics of the steel industry.

- **Impact:** The project addresses the critical challenge of **decarbonizing the steel industry**, which is responsible for about 8% of global emissions and faces significant hurdles due to the long lifespan and high replacement costs of steel production assets, as well as the necessity for renewable energy sources.

Business Owner:

ChainTraced

End Users:

voestalpine
ONE STEP AHEAD.

SIDENOR
STEEL PRODUCTS MANUFACTURING COMPANY S.A.

Tech. Providers:

Teaching Factory

CHALMERS INDUSTRITEKNIK

Education Project

“MFAC” – A MetaFold academy for green industrial transformation in metal forming sector

- **Scope:** deliver **a progressive, modular training program,** that addresses **Green Industrial Transformation**
- **250 engineers** and **designers** in the automotive, aerospace, energy and other industries will gain **technical, innovation** and **entrepreneurial competences** and be exposed to the latest innovation and sustainable best practices in the metal forming sector
- **MetaFold Academy** will integrate the latest developments in **teaching** and **learning methodologies & ICT tools** and create a supporting network of training centers offering **hands-on training** and **accreditation**

Teaching Factory

VOLVO

MADE
Competence Center I4.0

PBN
advanced management

STILRIDE

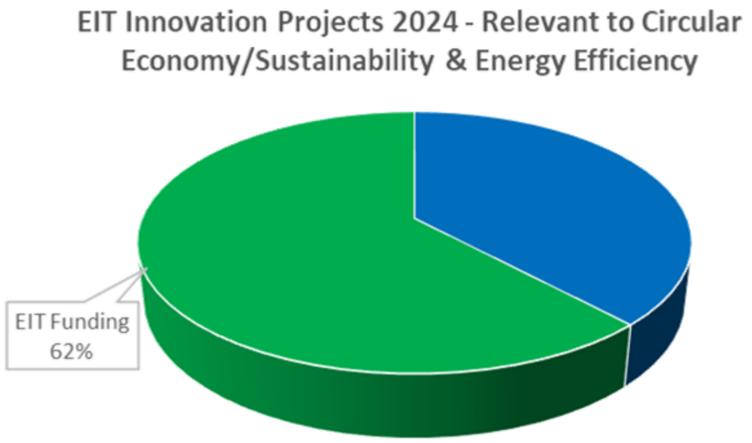
Adecco Training

EIT Manufacturing South East supported projects

Infographics on the projects where partners from South East Europe participate

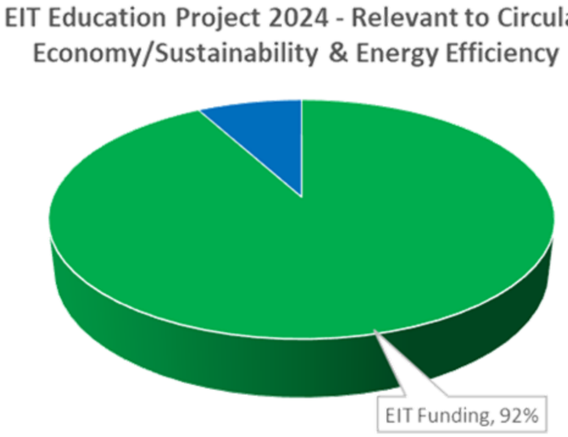
Innovation Projects 2024

- No. of projects relevant to Circular Economy, Sustainability & Energy Efficiency: **3**
- Total Cost: **€ 3,714,787.00**
- EIT Funding: **€ 2,302,716.00**



Education Projects 2024

- No. of projects relevant to Circular Economy, Sustainability & Energy Efficiency: **6**
- Total Cost: **€ 1,955,088.00**
- EIT Funding: **€ 1,789,575.00**



Open Call for proposals 2025

Open Calls open:
April 29th 2024, 00:00 CEST

Open Calls close:
July 8th 2024, 00:00 CEST

Innovation Open Call

11.000.000 Euros total budget

- Solutions TRL 6/7
- 12-month project lifetime
- Market reached within 1 year

Consortium
- ✓ *1 Business Owner*
- ✓ *2 End Users*
- ✓ *3 Countries*
- ✓ *2 ICs*

Education Open Call

2.100.000 Euros total budget

- Learning programmes on specific topics
- 12-month project lifetime

Consortium
- ✓ *3 Partners*
- ✓ *3 Countries*
- ✓ *2 ICs*

RIS Open Call

2.000.000 Euros total budget

- RIS Innovation
- 12-month project lifetime
- Up-skilling and re-skilling workforce

Consortium
- ✓ *1 Business Owner*
- ✓ *1 End Users*
- ✓ *3 Countries*
- ✓ *2 ICs*

Thank you!

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