

EIT Manufacturing



EIT Manufacturing is supported by the EIT,
a body of the European Union

Prof. George Chryssolouris | Webinar - A holistic approach to circular manufacturing
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Vision and Mission

Our vision

Global manufacturing innovation is led by Europe.

Our mission

Bring the manufacturing actors of Europe together in innovation ecosystems that add unique value to European products, processes and services, while inspiring the creation of globally competitive and sustainable manufacturing.

Manufacturing matters!

The manufacturing industry is a global base for prosperity and key to Europe's economic, social and environmental sustainability. Manufacturing is a main driver of industrial innovation, job creation and growth for the European society.



Over 2.1 million manufacturing enterprises



16.1 % of the share of EU-28 GDP² (2016)



32 million jobs (16% of the total EU working population)



Total turnover of EUR 7.11 trillion³



Approx. 13 million jobs in the growing high-tech manufacturing industry¹

Strategic Approach

Our Strategic Objectives will be pursued through a diversified portfolio of Programmes

STRATEGIC OBJECTIVES

1. Excellent manufacturing skills and talents
2. Efficient manufacturing innovation ecosystems
3. Full digitalisation of manufacturing
4. Customer-driven manufacturing
5. Socially sustainable manufacturing
6. Environmentally sustainable manufacturing



EIT Manufacturing RIS

The **EIT Regional Innovation Scheme** enables the transfer of good practices and know-how and contributes to enhancing the innovation capacity of EIT RIS countries.

- **EIT RIS Strategy Design & Implementation**
- **Regional/National EIT Manufacturing Hubs**
- **Ecosystem Building**
- **Expansion & Growth**
- **Customised Projects at EIT RIS countries**
- **Cross-KIC EIT RIS Project(s)**
- **Long-term planning**
- **Decentralized approach**

Manufacturing for a Circular Economy

- Besides improving relevant manufacturing processes, such as **de- and re-manufacturing**, the KIC will focus on eco-friendly **product design**, since ~80% of a product's environmental impact is determined at design stage.
- Manufacturing firms in the EU spend around 40% on materials. Consequently, working towards **zero-waste manufacturing** and **closing material loops** will reduce costs and increase profitability. **Energy and material intensive processes** will also be addressed.
- **Technologies supporting circular and eco-friendly approaches** like virtual prototyping, digital twins, underlying mathematical models and algorithms, AR and VR are important.
- As part of the Business Creation pillar (“Transform” programme) the KIC will support the development of **circular business models**.

Impact

... addressing **sustainability** through our flagships

- ***“Additive Manufacturing for full flexibility”***

Producing in a successive digital process one customized piece enables full flexibility regarding products and operations

- ***“Zero Waste Manufacturing for a Circular Economy”***

Minimizing material scrap and energy waste in production systems and maximizing use of new technologies and business models enables circularity

- ***“Platforms for digitalized Value Networks”***

Digital platforms and networks enable companies to collaborate in efficient value-chains

- ***“People and Robots for Sustainable Work”***

Smart use of automation and robots enables great workplaces and sustainable human work

Impact

... Aiming to collaborate with regional/national authorities for contributing to the European Green Deal objectives, including Circular Economy

- minimising greenhouse gas emissions, environmental pollution, and energy consumption in manufacturing
- working towards zero-waste manufacturing and closing material loops
- expanding the current European leadership on green innovation and environmental entrepreneurship
- launching environmentally friendly initiatives in EIT RIS countries and sharing best practices
- promoting the Environmental Technology Verification (ETV) Programme

A Strong and Unique Partnership

- Full value chain and full product life cycle coverage
- Cross-fertilization
- World class shared facilities
- Extended network of facilitators
- Industry-driven Education
- Partners with global reach

49% Industry

Electronics and Digital

Atos esi get it right[®] SIEMENS

Automotive

VW MERCEDES VOLVO bremba MAGNA

Robotics

KUKA COMAU

Aerospace

ITP Aero Avio Aero AERnova aerospace valley

Machinery & Equipment

PRIMA INDUSTRIE SPINEA SANDVIK Ultimaker LINPRA FESTO fives ultimate machines ultimate factory

Consumers Goods, Medical Equipment and Process Industries

ACCELL GROUP stryker Whirlpool ArcelorMittal SONAE

32% Universities

ARTS ET MÉTIERS ParisTech SUPSI PW TU DARMSTADT

CENTRALE NANTES CHALMERS UNIVERSITY OF TECHNOLOGY

Grenoble INP UCD TU Delft

LMS Laboratory for Manufacturing Systems & Automation POLITECNICO MILANO 1863 Aalto University

STU SLOVAK UNIVERSITY OF TECHNOLOGY IN BRATISLAVA CTU CATHOLIC UNIVERSITY OF LIEGE

TU WIEN TECHNISCHE UNIVERSITÄT WIEN POLITECNICO DI TORINO

Technische Universität Braunschweig

19% RTOs

IK4 Research Alliance TWI

RI SE INNOVATION PLASTURHE COMPOSITES

cea BIBA

INESCTEC

tecnalia

DFK German Research Center for Artificial Intelligence

JOANNEUM RESEARCH

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