MANUFUTURE 2030

Vision, Strategy and Action Plan

ASSURING THE FUTURE OF A COMPETITIVE, SUSTAINABLE AND RESILIENT EUROPEAN MANUFACTURING

Maurizio Gattiglio
Chairman MANU*FUTURE ETP* High Level Group

Importance of Manufacturing Industry for Europe as a guarantor for prosperity, innovation and jobs

Manufacturing plays a central role in Europe's economy
Production of goods combined with high-quality services

EU Manufacturing
€7 trillion turnover

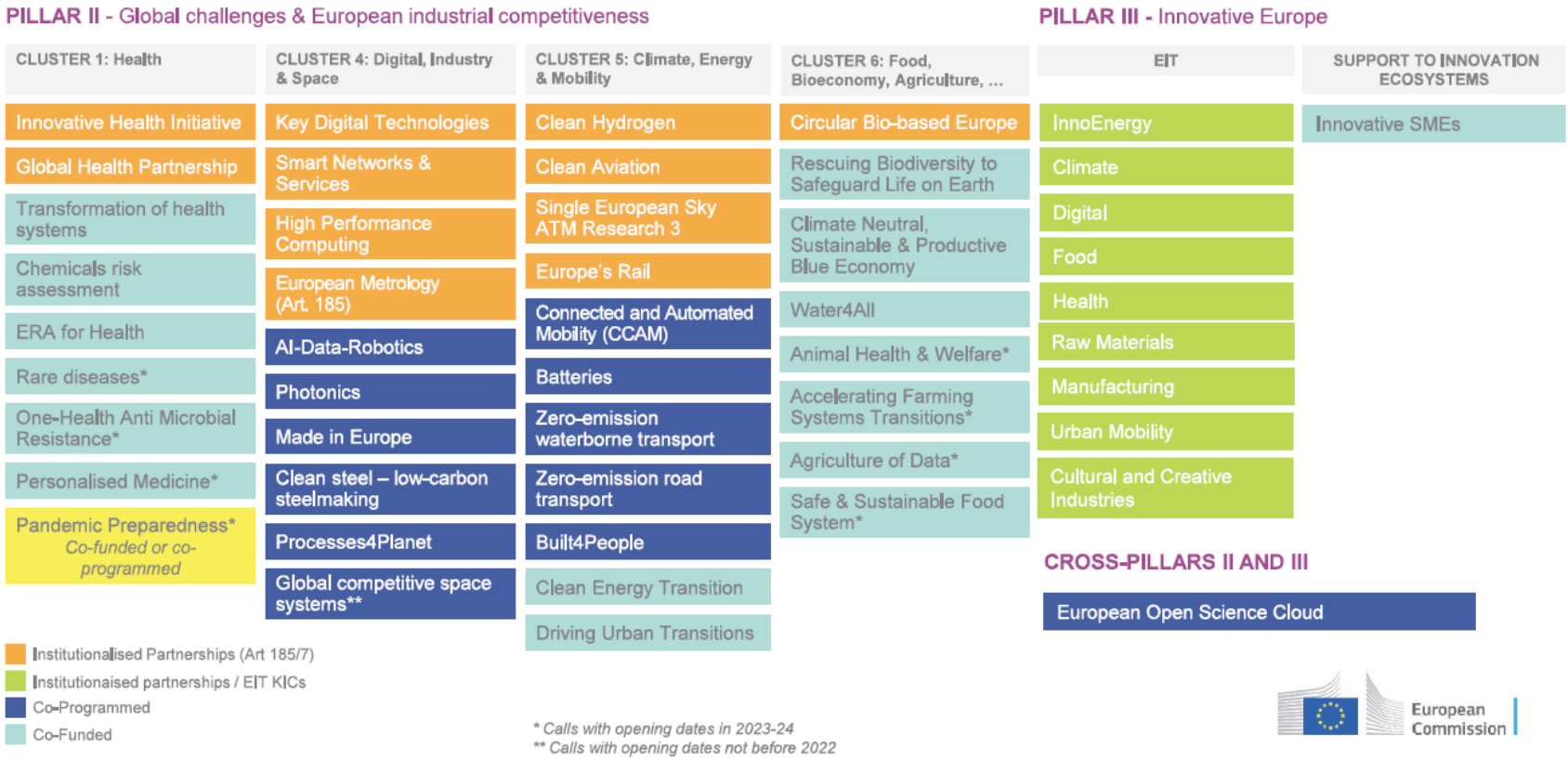
30 million direct jobs

60 million indirect jobs

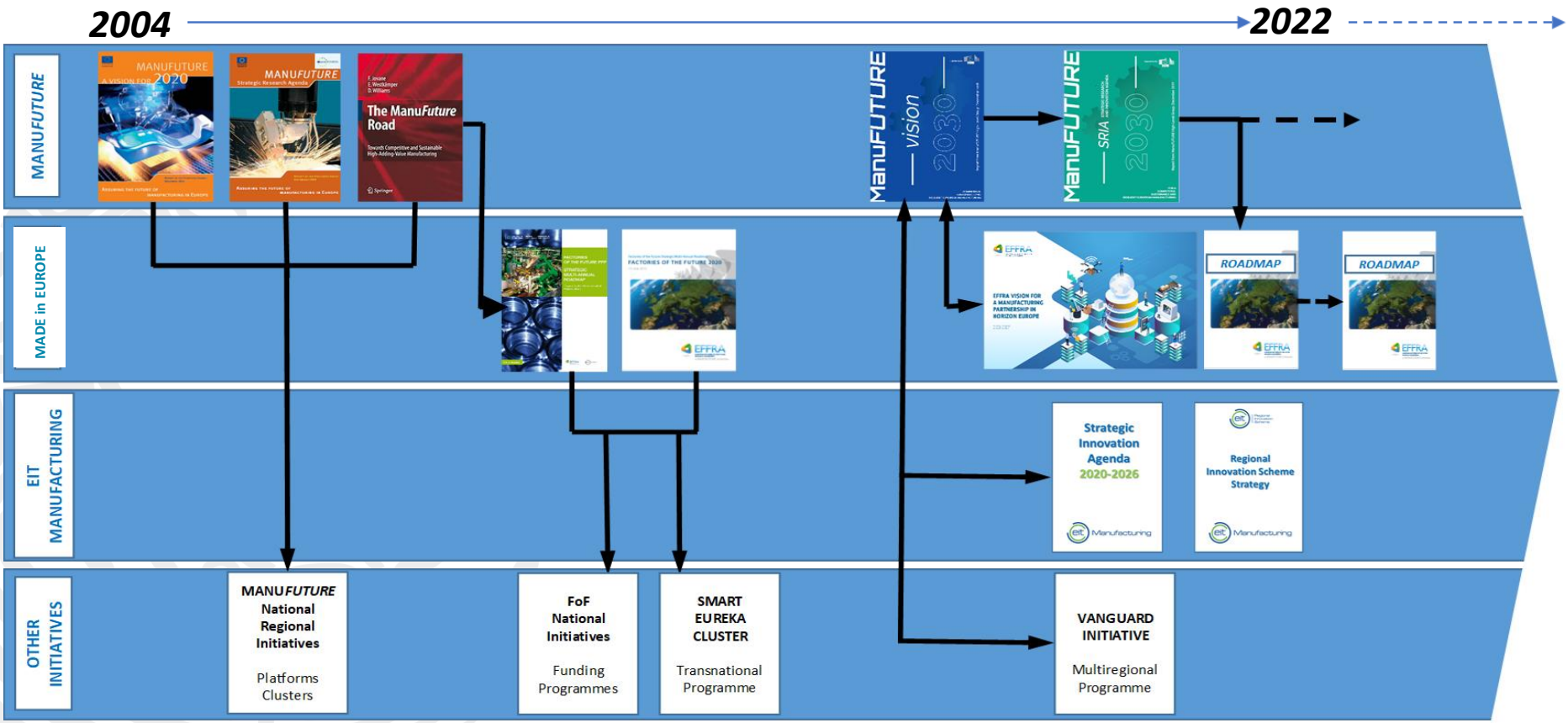
80% of total EU exports

HORIZON EUROPE 100 B€ investments in R&I from 2021 to 2027

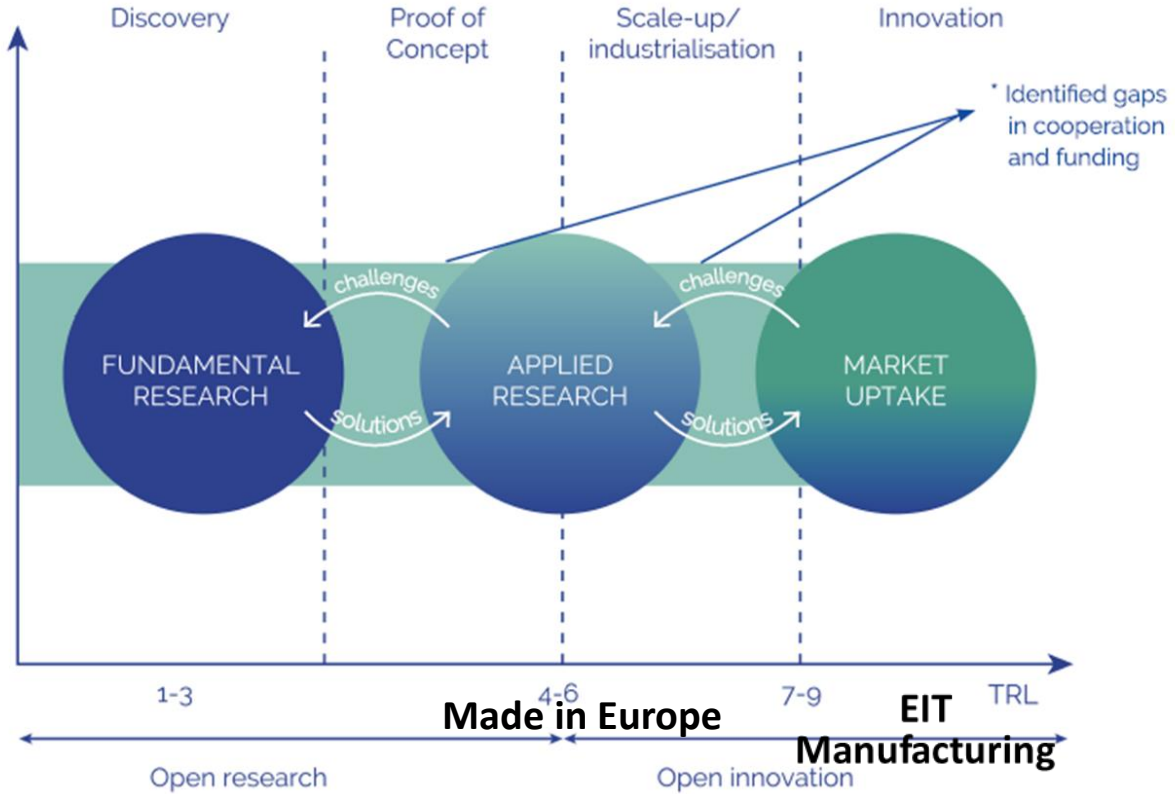
Overview of 49 European Partnerships



ManuF*UTURE* 18 Years of „Strategic Intelligence“



The Innovation Process



EIT Manufacturing vision

Global manufacturing innovation is led by Europe.

EIT Manufacturing mission

Bring together manufacturing actors across Europe to integrate innovation and education for an entrepreneurial and sustainable Europe.

eit Manufacturing

Co-funded by the European Union

EIT Manufacturing Unique approach: Innovation based on industry needs

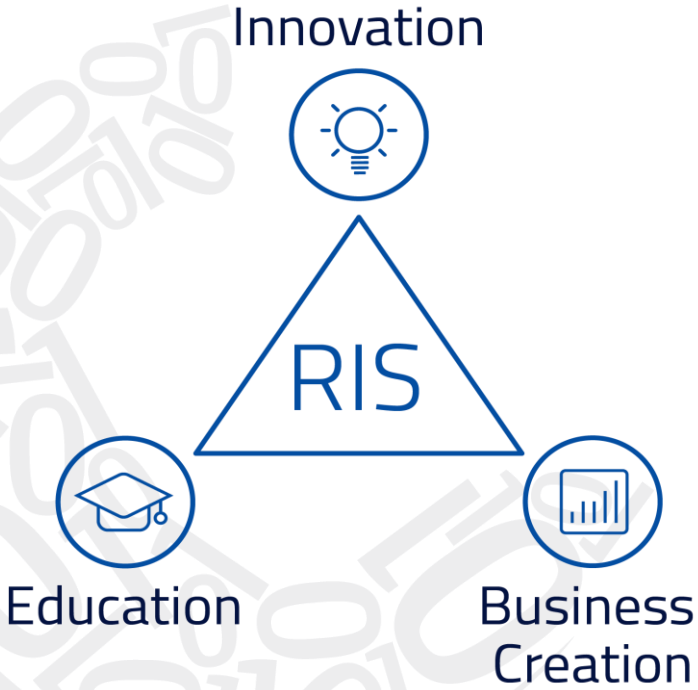
- European Public-private partnership
- A holistic, tested method
- Focus on solutions to high-value manufacturing challenges
- 80+ full members, 50+ activity partners: leading companies, universities and research organisations
- €400M budget until 2026

eit Manufacturing

Co-funded by the European Union

EIT Manufacturing – How We Do It

Our Approach



eit Manufacturing

Co-funded by the European Union

Our flagships – Four focus areas

Flexible production systems for competitive manufacturing

Low environmental footprint systems & circular economy for green manufacturing

Digital & collaborative solutions for innovative manufacturing ecosystems

Human-machine co-working for socially sustainable manufacturing

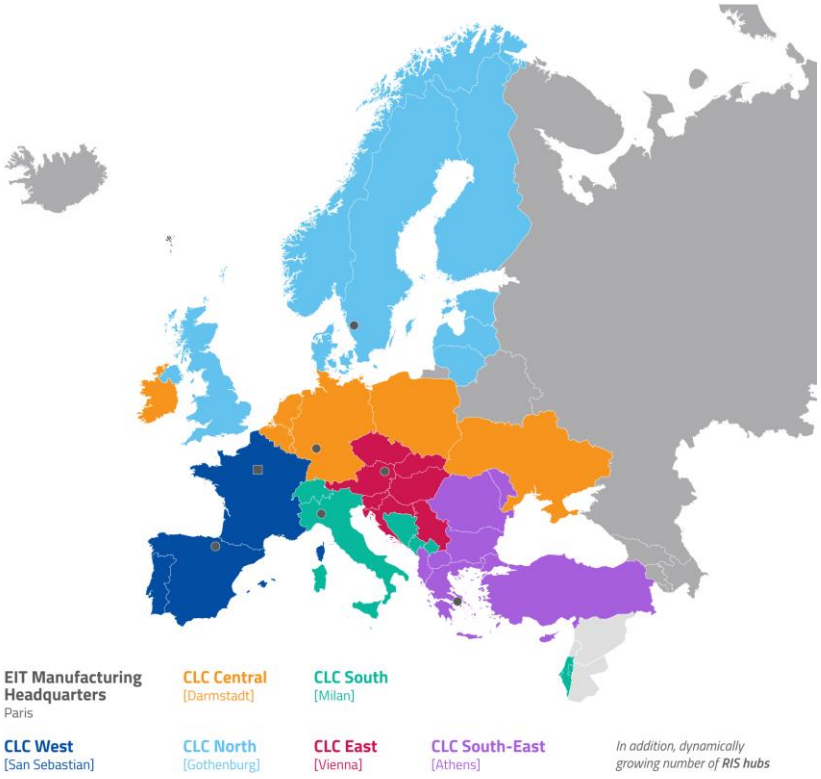
Locations: connecting key Manufacturing & Innovation Hubs

Legal Entity **France**

Headquarters **Paris**

6 Co-location Centers (CLCs)

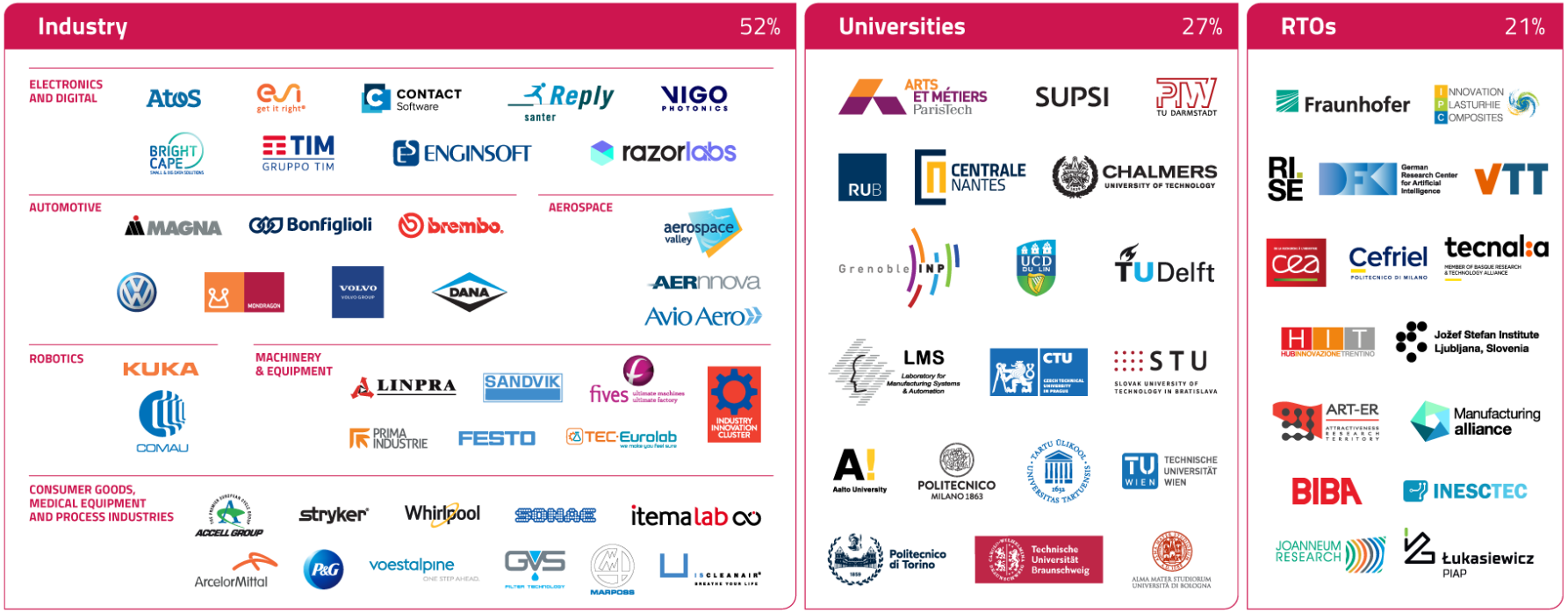
- **San Sebastian** Spain
- **Gothenburg** Sweden
- **Darmstadt** Germany
- **Milan** Italy
- **Vienna** Austria
- **Athens** Greece



eit Manufacturing

Co-funded by the European Union

Powerful partnership: 80+ partners from 18 countries



As of March 2022

European Commission
&
Member States

EFFRA
EUROPEAN FACTORIES OF THE FUTURE RESEARCH ASSOCIATION

European Factories of the Future Research Association

FoF
Factories of the Future
Public Private Partnership
2010-2020

MADE IN EUROPE
2021-2027

900 M€ program in 7 year

MIE General objectives

Manufacturing competitiveness

Leadership & manufacturing excellence, generating new products and new markets

European Green Deal

Circular and climate-neutral manufacturing

An Economy that Works for People and SMEs

Attractive added value manufacturing jobs

A Europe Fit for the Digital Age

Digital transformation of manufacturing industry, trusted and robust

MIE 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**

MADE IN EUROPE

MiE Key Technologies and Enablers

- **Advanced and smart material processing technologies and process chains, including recycling and remanufacturing**
- **Smart mechatronics, robotics and logistic technologies**
- **Data analytics and (cognitive) artificial intelligence; Simulation and modelling, digital twins**
- **Digital platforms and data sharing solutions, robust and secure industrial communication technologies**
- **New business models, manufacturing organisation approaches and human-centred science and innovation approaches**
- **Standards**

Made in Europe Partnership: New Call Topics (official end of November 2022)
Work Programme 2023-2024

+ One additional call topic not under Made in Europe, but co-shaped by EFFRA:
HORIZON-CL4-2023-HUMAN-01-53: Localised and Urban Manufacturing, supporting creativity and the New European Bauhaus

2023 **Deadline: 20th April 2023**	HORIZON-CL4-2023-TWIN-TRANSITION-01-02: **High-precision OR complex product manufacturing – potentially including the use of photonics (IA)**
	HORIZON-CL4-2023-TWIN-TRANSITION-01-04: **Factory-level and value chain approaches for remanufacturing (IA)**
	HORIZON-CL4-2023-TWIN-TRANSITION-01-07: **Achieving resiliency in value networks through modelling and Manufacturing as a Service (RIA)**
	HORIZON-CL4-2023-TWIN-TRANSITION-01-08: **Foresight and technology transfer for Manufacturing As A Service (CSA)**
2024 **Deadline: 7th February 2024**	HORIZON-CL4-2024-TWIN-TRANSITION-01-03: **Manufacturing as a Service: Technologies for customised, flexible, and decentralised production on demand (RIA)**
	HORIZON-CL4-2024-TWIN-TRANSITION-01-05: **Technologies/solutions to support circularity for manufacturing (RIA)**
2024 (Two Stage Call) **First deadline: 7th February 2024** **Second deadline: 24th September 2024**	HORIZON-CL4-2024-TWIN-TRANSITION-01-01 (Two stages): **Bio-intelligent manufacturing industries (RIA)**

EFFRA
EUROPEAN FACTORIES OF THE FUTURE RESEARCH ASSOCIATION

MAIN FIGURES

(Applicable only to draft Made In Europe calls)

2023	2024	2024 Two Stages
4 Call Topics	2 Call Topics	1 Call Topic
Deadline: 20th April 2023	Deadline: 7th February 2024	First deadline: 7th February 2024 Second deadline: 24th September 2024
Total budget: 102 million	Total budget: 71 million	Total budget: 25 million
Total number of projects to be funded: 20	Total number of projects to be funded: 11	Total number of projects to be funded: 5

+ One additional call topic not under Made in Europe, but co-shaped by EFFRA – HORIZON-CL4-2023-HUMAN-01-53: Localised and Urban Manufacturing, supporting creativity and the New European Bauhaus – Budget: 10 Million – Deadline 28th March 2023

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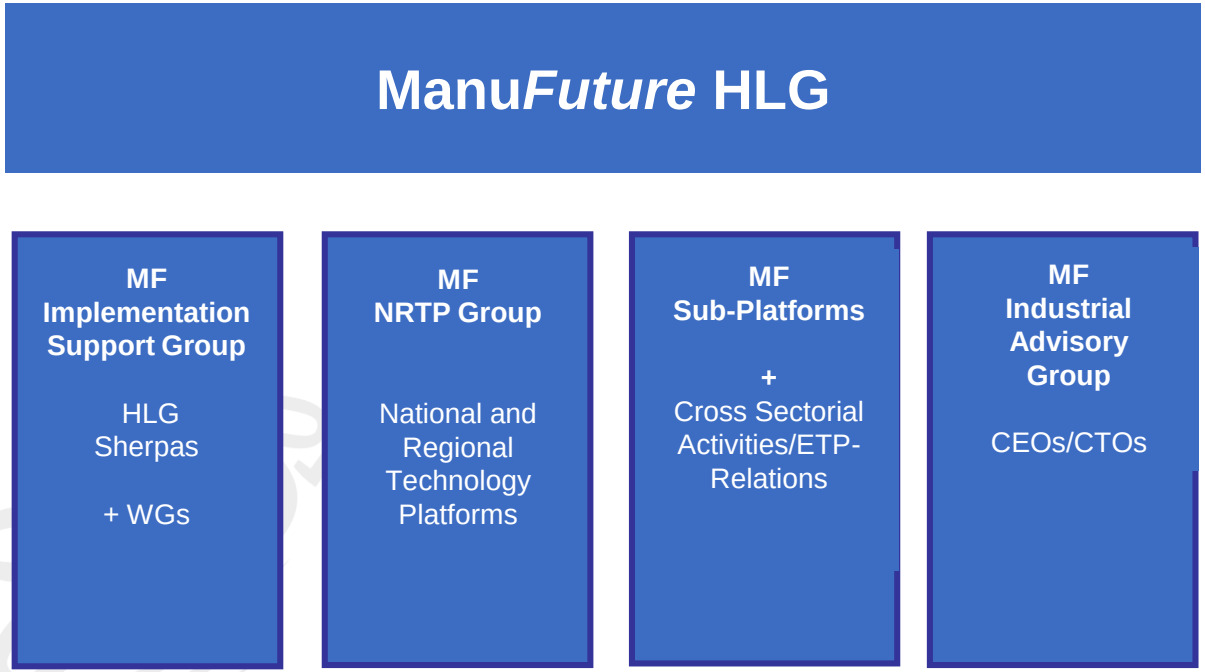
EUROPEAN FACTORIES OF THE FUTURE RESEARCH ASSOCIATION

Manu*FUTURE* Open organisation



Manu*FUTURE ETP* – *A provider of strategic intelligence*

- **Manu*FUTURE* HLG (High Level Group)**

  Discusses the results of Implementation Support Group proposals, and takes final decisions on next steps and how to move forward.

- **Manu*FUTURE* ISG (Implementation Support Group)**

  Develops the relevant topics for European Manufacturing on behalf of the HLG to the decision stage.

- **Manu*FUTURE* Sub-Platform and ETP Coordination**

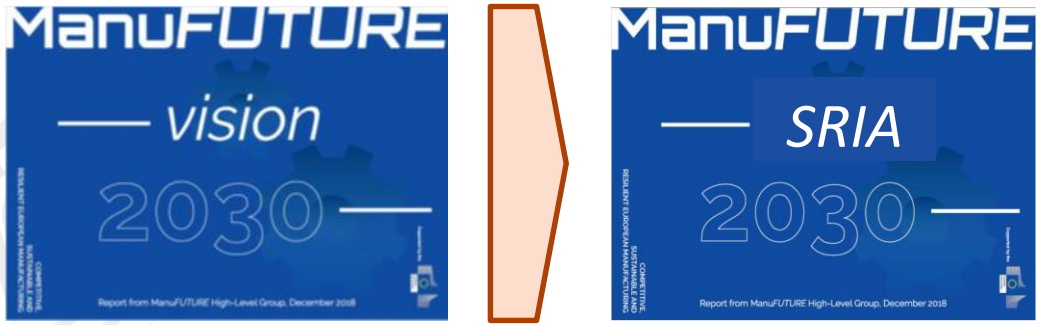
  Coordinates the contacts to the several thematic Sub-Platforms and other related ETPs.

- **Manu*FUTURE* NRTP Group** (NRTP = National and Regional Platforms)

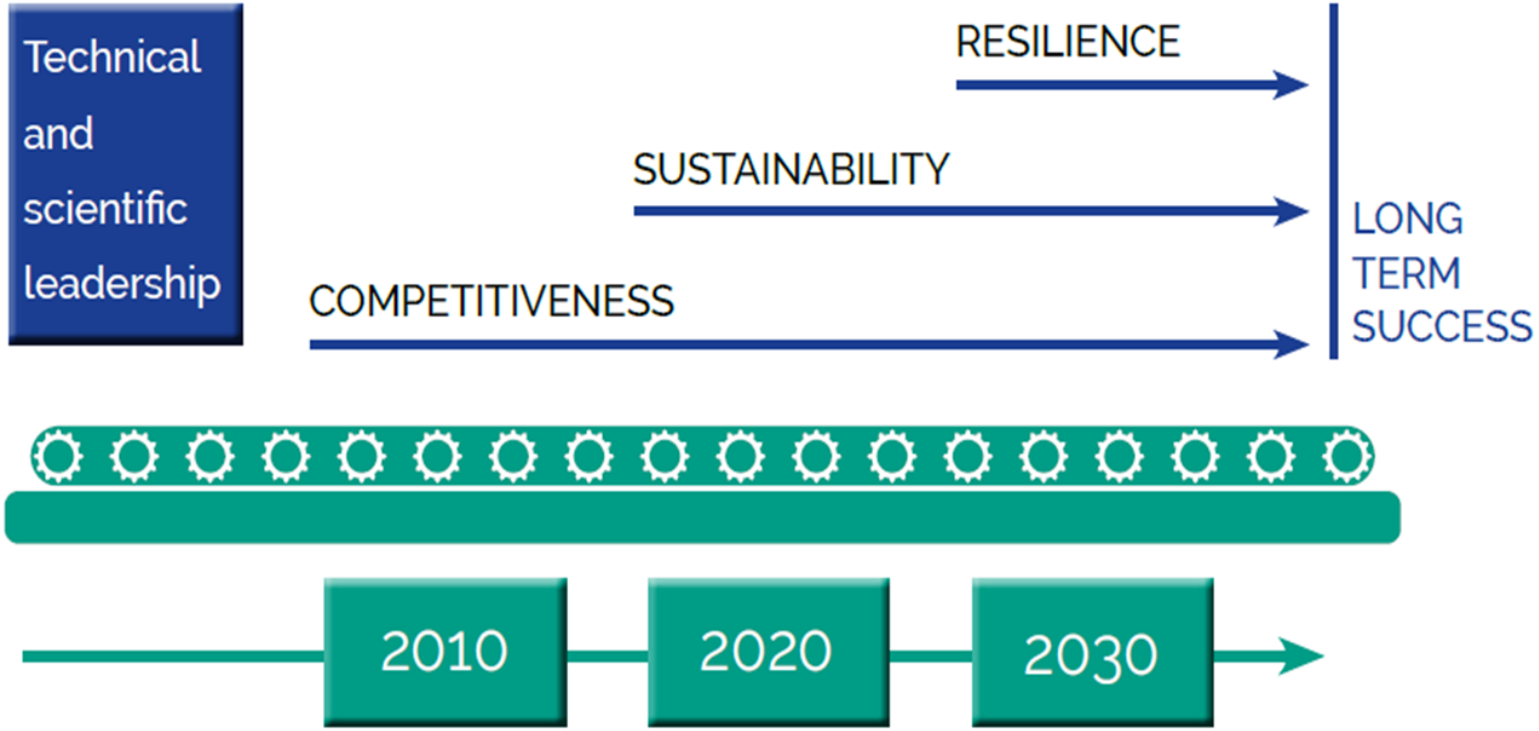
  Collects ideas of national and regional Manu*FUTURE* initiatives, and disseminates successful ideas across the membership (28 NRTPs).

ManuFUTURE European Technology Platform

ManuFUTURE from Vision 2030 via Strategic Research and Innovation Agenda 2030 (SRIA) to Implementation



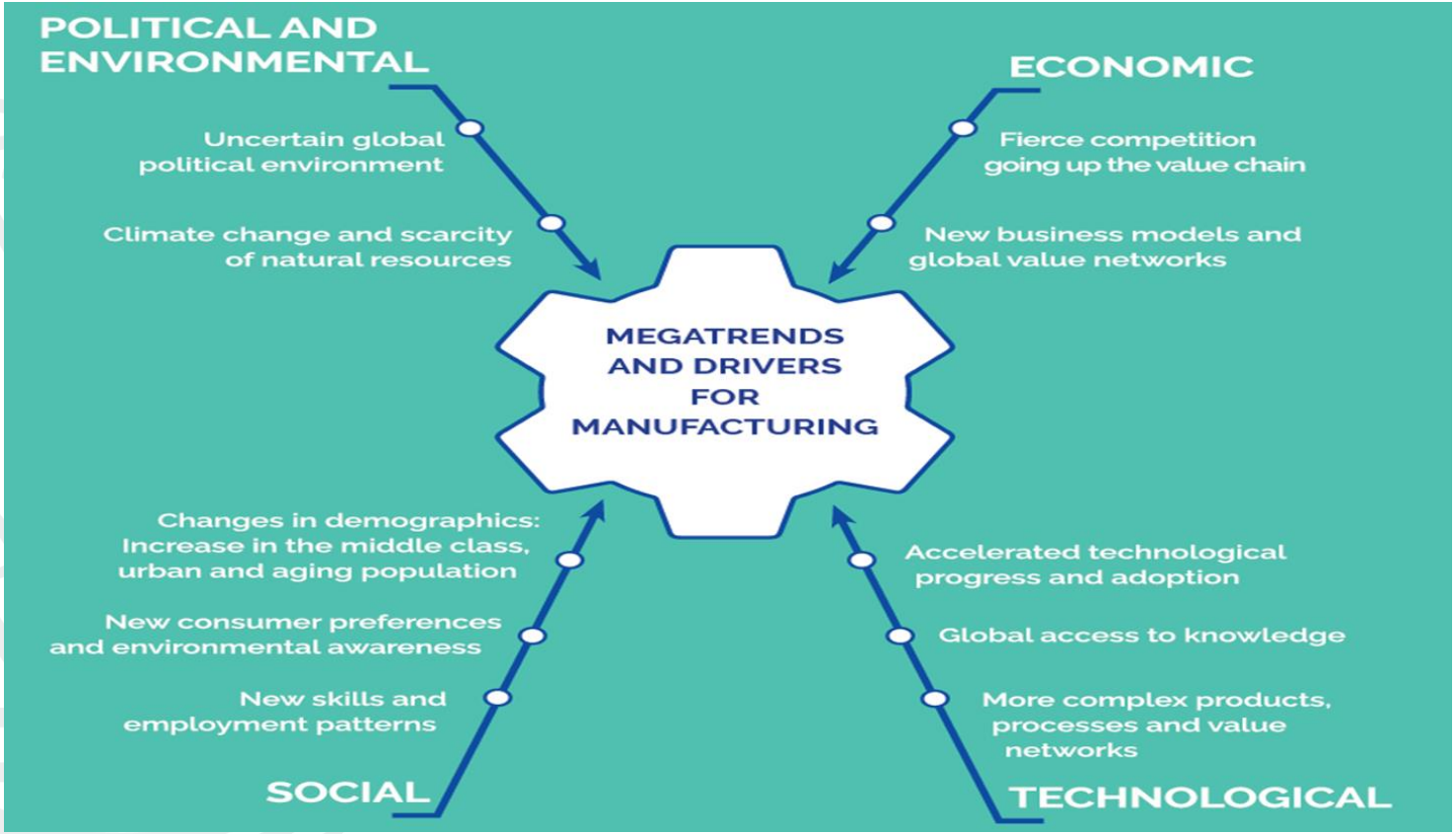
ManuFUTURE Vision 2030



ManuFUTURE Strategy for 2030

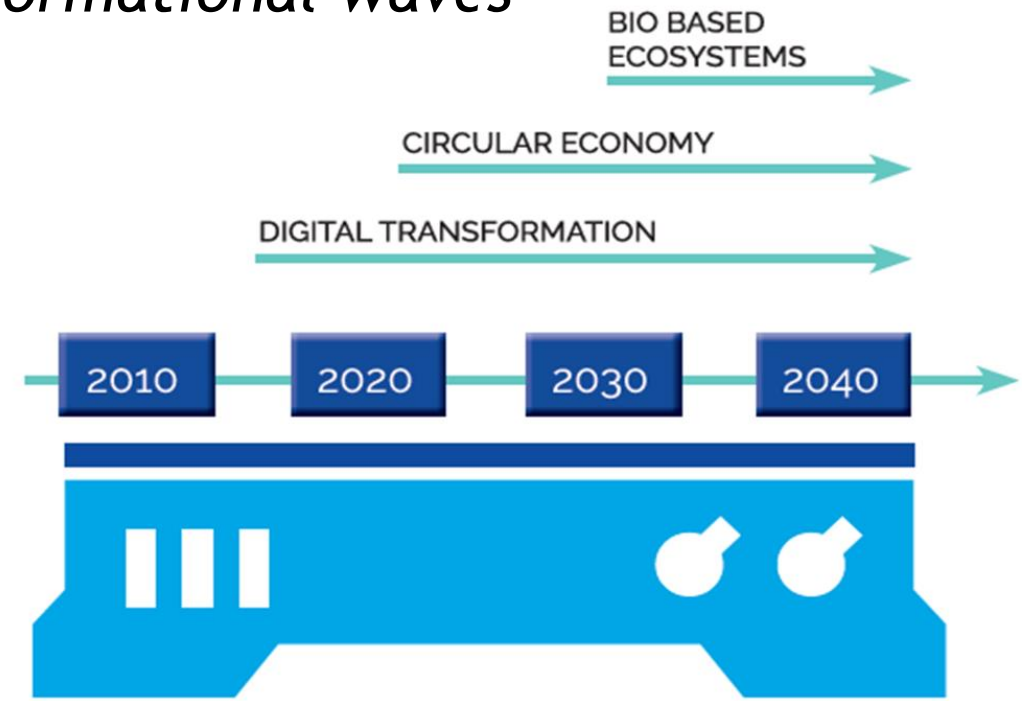
Europe needs to build on its proven capabilities and **invest more to ensure its leadership**

Megatrends and Drivers for Manufacturing



Implementation Roadmap

Three transformational waves



Production requirements continue to increase

Manufacturing will be the engine of the new low-carbon, resource-efficient and knowledge-based economy. Manufacturing is part of the solution not of the problem

People

Knowledge

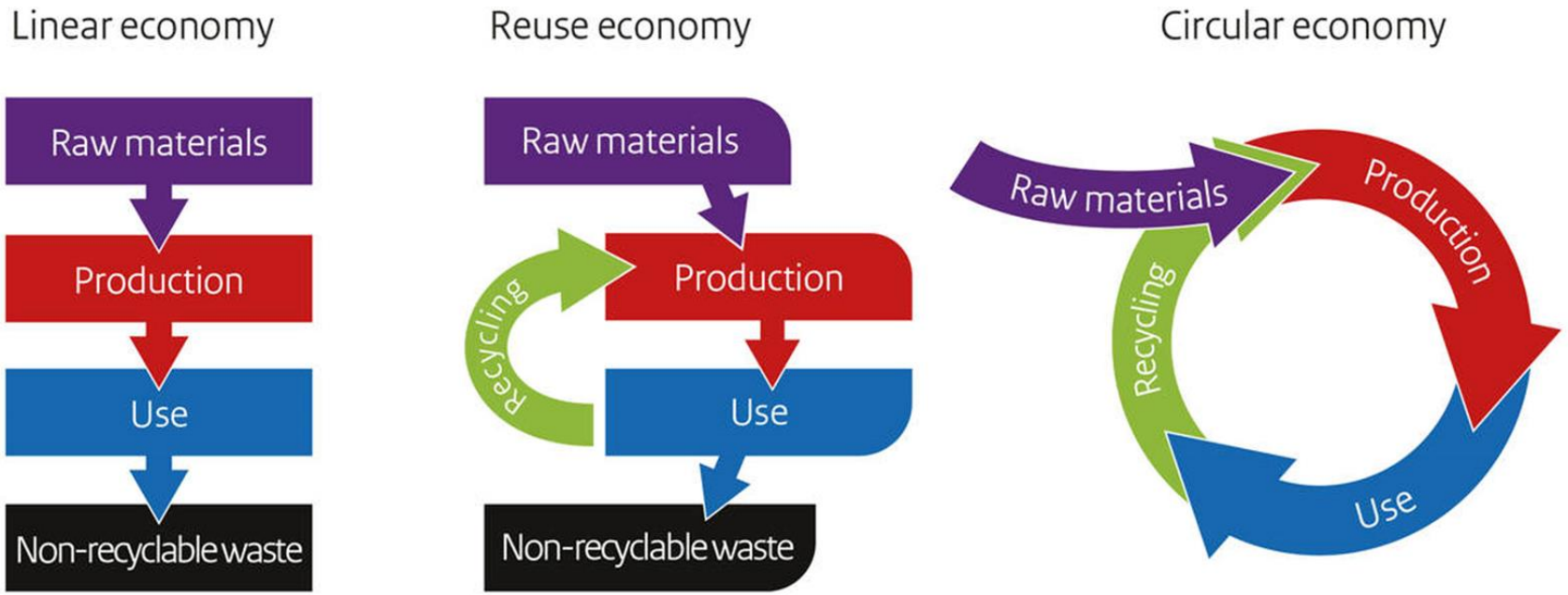
Input
- Energy
- Materials

Output
High Added Value Products
Zero Emissions / Zero Waste

Assets

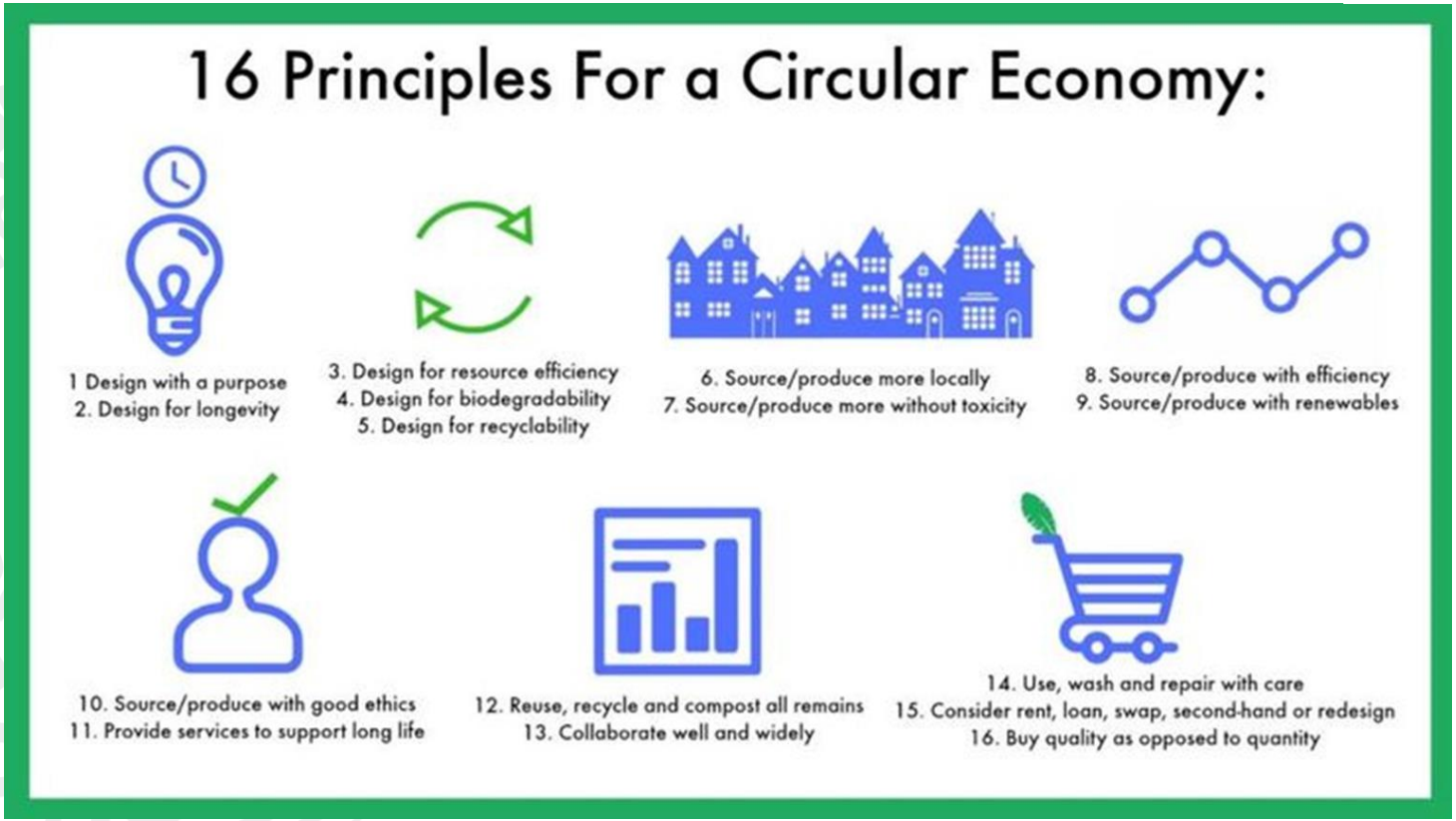
lean, clean, green, sustainable, resilient

From a linear to a circular economy



A sustainable world does not mean a drop in the quality of life for consumers, and can be achieved without loss of revenue or extra costs for manufacturers. The argument is that circular business models can be as profitable as linear models, allowing us to keep enjoying similar products and services.

Circular Economy

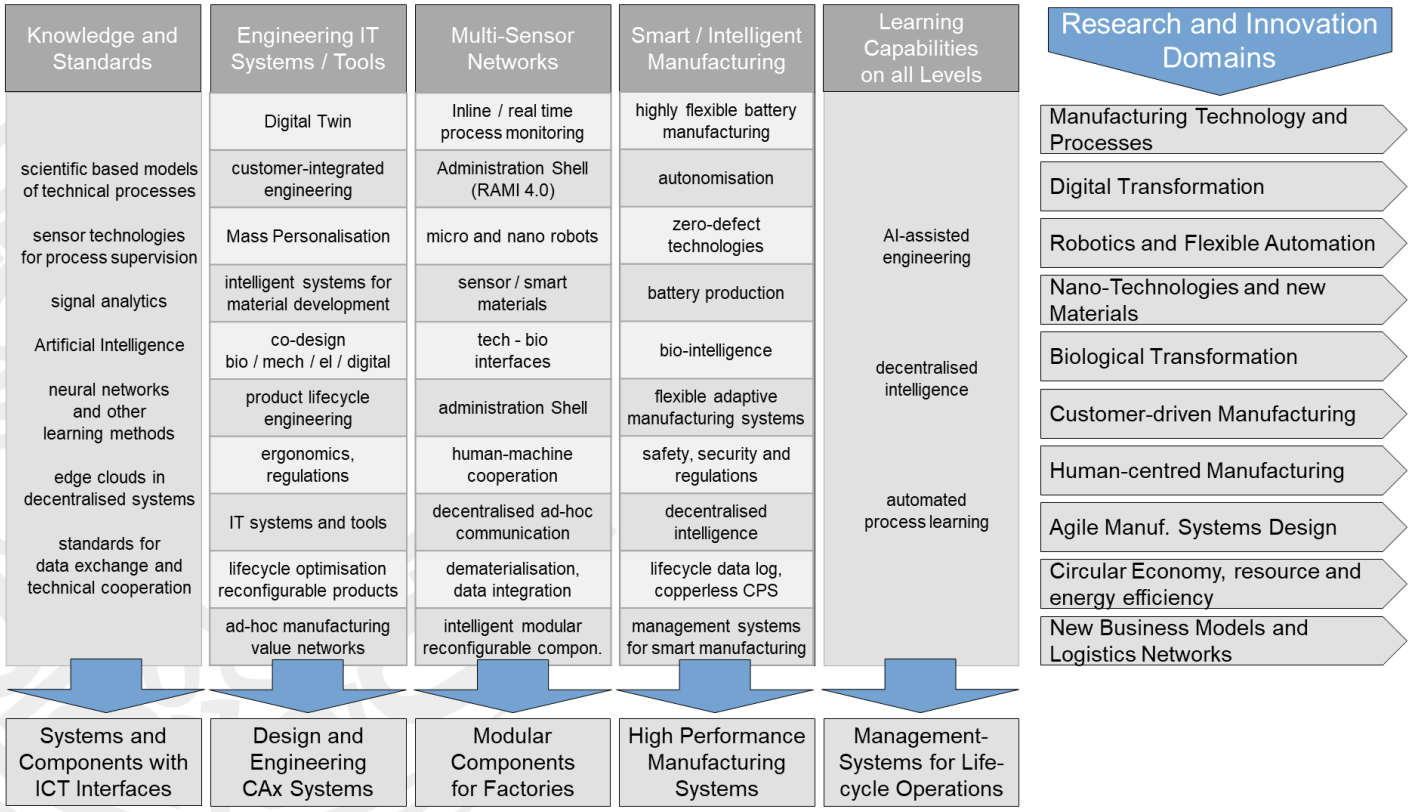


MANU*FUTURE* SRIA 2030 Proposed Research and Innovation Domains

ENABLING TECHNOLOGIES AND APPROACHES	MANUFACTURING STRATEGIES
1. Manufacturing technology and processes	6. Customer-driven manufacturing
2. Digital transformation	7. Human-centred manufacturing
3. Robotics and flexible automation	8. Agile manufacturing systems design and management
4. Nanotechnology and new materials	9. Circular economy, resource and energy efficiency
5. Biological transformation of products, processes and value creation	10. New business models and logistics networks

- Each domain generates an average of 10 sub-topics
- Sub-topics cover frontiers' research, applied research and demonstrators and pilot lines
- Sub-topics are cross sectorial, but some sectorial challenges are also considered

Road towards technical intelligence



How to coexist competition and ethics in a challenging, selfish worldwide scenario ?

"***commoditization***" defined as the process by which goods that have economic value and are distinguishable in terms of attributes (uniqueness or brand) end up becoming simple commodities in the eyes of the market

source Wikipedia

The Challenge: How to ensure growth, jobs and prosperity?

General Developments: „The new global disorder“

- Energy Scarcity & Soaring Prices
- Rising raw material prices and insecure supply of critical raw materials
- Deglobalisation / Restructuring of value chains
- Global Technology Race /Souvereignty/Strategic Value Chains
- Trend "Environmental Social Governance (ESG)“
- **Demographic change / Skills Shortage**
- **Reluctance to invest in Europe**

Some recommendations to overcome the problems

- Tax reduction for manufacturing workers,
  to increase attractiveness and help to solve the problems of shortage of skills, high direct taxes on jobs make them unattractive.
- Mobilization of private savings (very high in Italy) to support real economy development.
- Strengthen of State Aids measures, revision of the European "de minimis“ rules to provide knowledge-intensive playing field in global competition.

Thank you

www.manufuture.org

maurizio.gattiglio@manufuture.org

m.gattiglio@arcapartners.it