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

INTERNATIONAL CAE CONFERENCE | www.caeconference.com

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

Overview of 49 European Partnerships

PILLAR II - Global challenges & European industrial competitiveness

CLUSTER 1: Health

- Innovative Health Initiative
- Global Health Partnership
- Transformation of health systems
- Chemicals risk assessment
- ERA for Health
- Rare diseases*
- One-Health Anti Microbial Resistance*
- Personalised Medicine*
- Pandemic Preparedness* *Co-funded or co-programmed*

CLUSTER 4: Digital, Industry & Space

- Key Digital Technologies
- Smart Networks & Services
- High Performance Computing
- European Metrology (Art. 185)
- AI-Data-Robotics
- Photonics
- Made in Europe
- Clean steel – low-carbon steelmaking
- Processes4Planet
- Global competitive space systems**

CLUSTER 5: Climate, Energy & Mobility

- Clean Hydrogen
- Clean Aviation
- Single European Sky ATM Research 3
- Europe's Rail
- Connected and Automated Mobility (CCAM)
- Batteries
- Zero-emission waterborne transport
- Zero-emission road transport
- Built4People
- Clean Energy Transition
- Driving Urban Transitions

CLUSTER 6: Food, Bioeconomy, Agriculture, ...

- Circular Bio-based Europe
- Rescuing Biodiversity to Safeguard Life on Earth
- Climate Neutral, Sustainable & Productive Blue Economy
- Water4All
- Animal Health & Welfare*
- Accelerating Farming Systems Transitions*
- Agriculture of Data*
- Safe & Sustainable Food System*

PILLAR III - Innovative Europe

EIT

- InnoEnergy
- Climate
- Digital
- Food
- Health
- Raw Materials
- Manufacturing
- Urban Mobility
- Cultural and Creative Industries

SUPPORT TO INNOVATION ECOSYSTEMS

- Innovative SMEs

CROSS-PILLARS II AND III

- European Open Science Cloud

Institutionalised Partnerships (Art 185/7)
Institutionaised partnerships / EIT KICs
Co-Programmed
Co-Funded

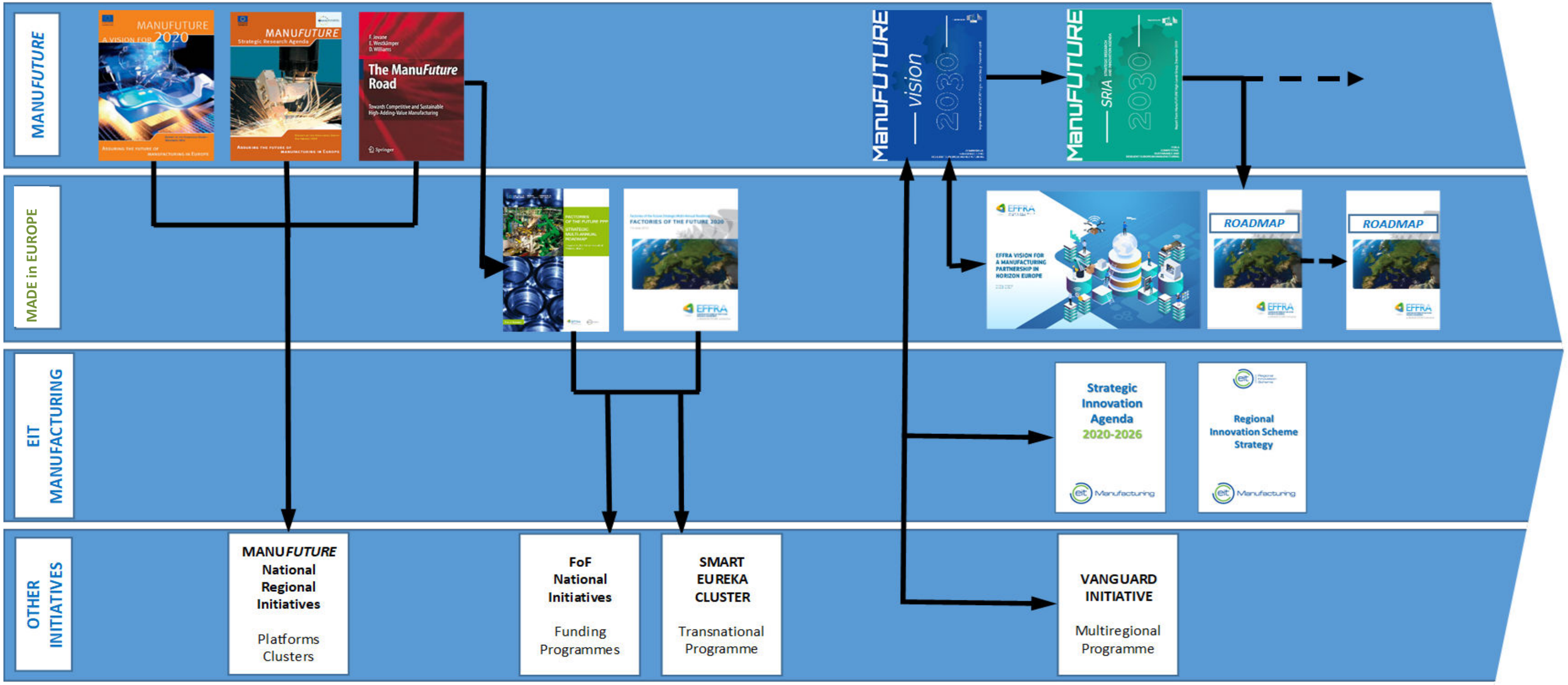
** Calls with opening dates in 2023-24*
*** Calls with opening dates not before 2022*

European Commission

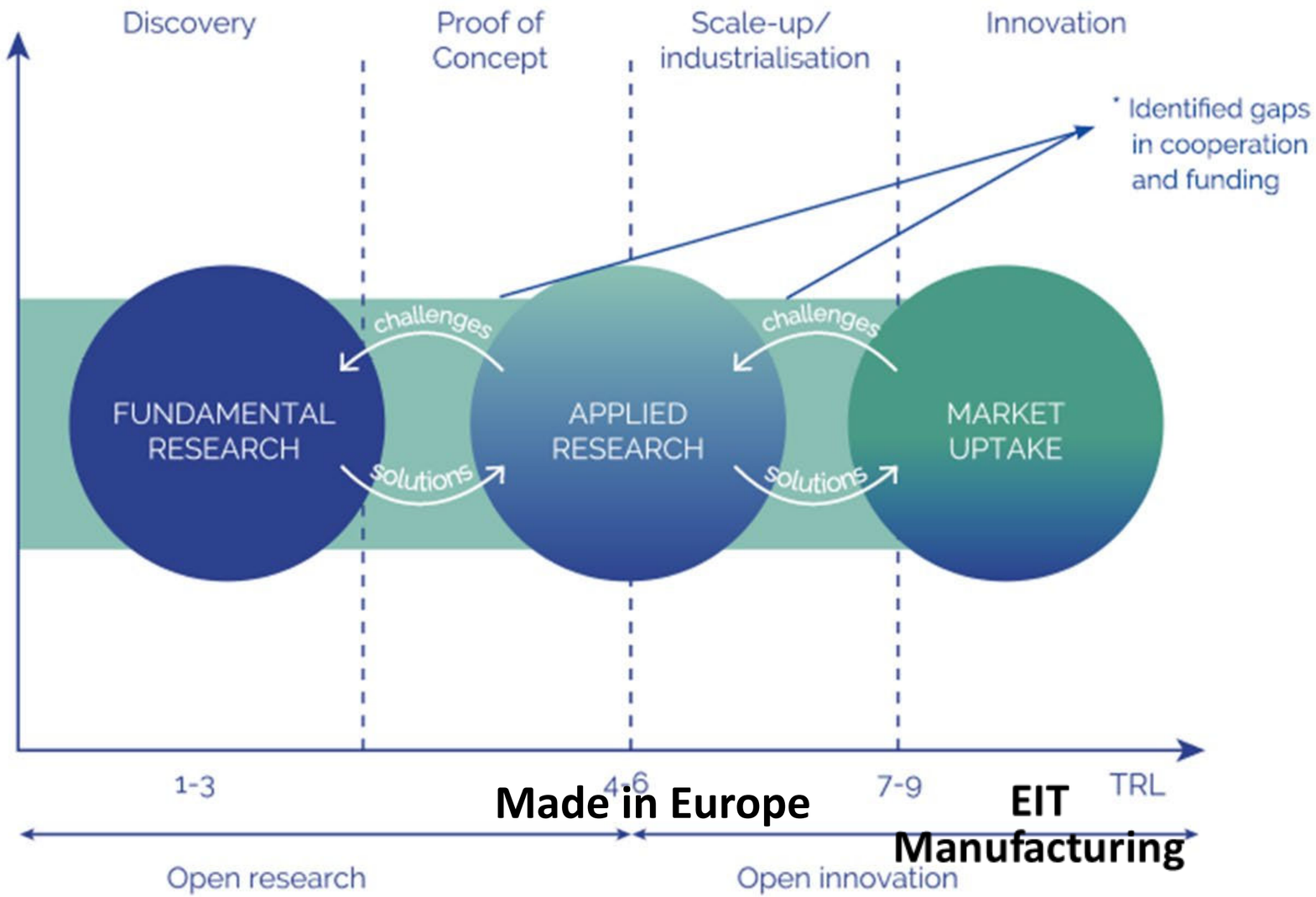
2022, Novemb

ManuFUTURE 19 Years of „Strategic Intelligence“

2004 → 2023



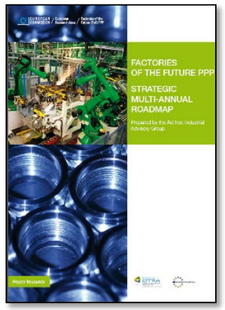
The Innovation Process



MiE Partnership Story line

2009/2010 — 2013 — 2014 — 2016 — 2020 — Present

FP7



FOF 2020

Factories 4.0 and Beyond

MADE IN EUROPE

European Commission
&
Member States

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European Factories of the Future Research Association

FoF
Factories of the Future
Public Private Partnership

2010-2020

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2021-2027
900M€ budget

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**

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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 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**

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**

Research & Innovation Objectives

1. Data highways and data spaces in support of smart factories in dynamic value networks
2. Scalable, reconfigurable and flexible first-time right manufacturing
3. Zero-defect and zero-downtime high precision manufacturing, including predictive quality and non-destructive inspection methods
4. Artificial intelligence for productive, excellent, robust and agile manufacturing chains - Predictive manufacturing capabilities & logistics of the future
5. Advanced manufacturing processes for smart and complex products
6. Manufacturing for miniaturisation and functional integration

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1. Ultra-efficient, low energy and carbon-neutral manufacturing
2. De-manufacturing, re-manufacturing and recycling technologies for circular economy
3. Manufacturing with new and substitute materials
4. Virtual end-to-end life-cycle engineering and manufacturing from product to production lines, factories, and networks
5. Digital platforms and data management for circular product and production-systems life-cycles

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1. Collaborative product-service engineering for costumer driven manufacturing value networks
2. Manufacturing processes and approaches near to customers or consumers
3. Transparency, trust and data & IP integrity, open systems and cyber security along the product and manufacturing life-cycle

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1. Digital platforms and engineering tools supporting creativity and productivity of manufacturing development
2. Improving human device interaction using augmented and virtual reality and digital twins.
3. Human & technology complementarity and excellence in manufacturing
4. Manufacturing Innovation and change management
5. Technology validation and migration paths towards industrial deployment of advanced manufacturing technologies by SMEs

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Made in Europe Partnership: New Call Topics (official only end of this months)
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)**

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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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THANK YOU

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