



June 2021

# The Made in Europe Partnership & EFFRA

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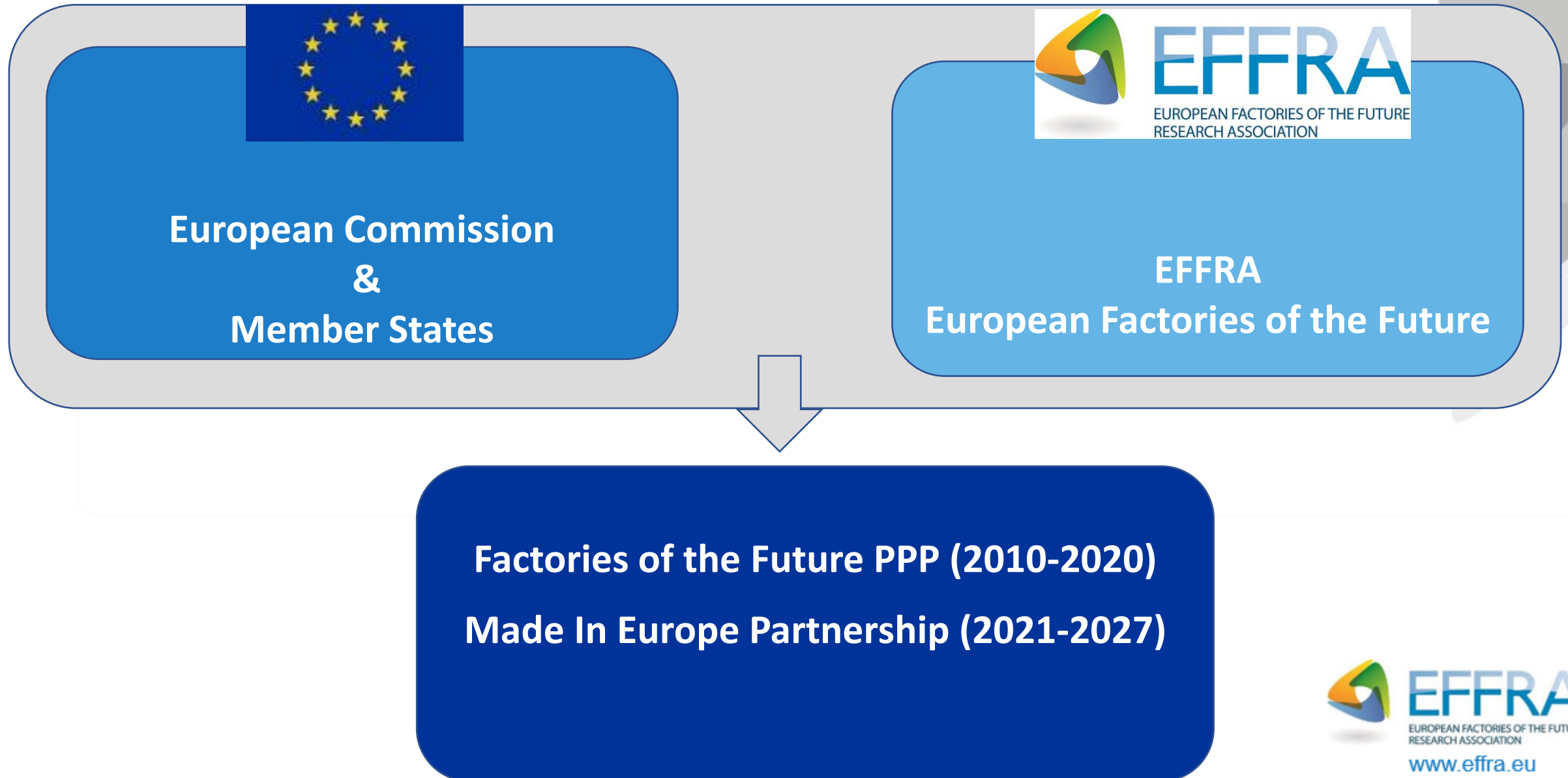


## The manufacturing research & innovation community





# Implementing programmes effectively



# Transforming Manufacturing with Help of EU Framework Programmes

FP7

FoF 2020

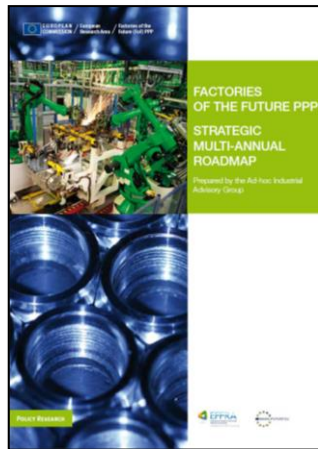
Factories 4.0 and Beyond

Horizon Europe

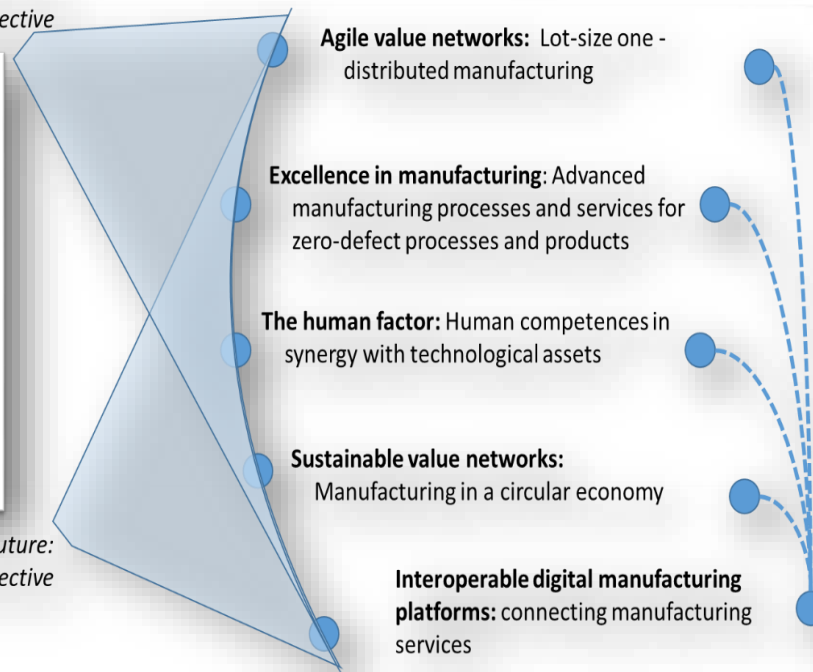
Building on the vision of the FoF 2020 roadmap and public consultation in 2016

Key priorities for FoF 18-19-20

*Vision of the factories of the future:  
the challenge perspective*



*Vision of the factories of the future:  
the technology perspective*



2009/2010

2013/2014

2016

# EFFRA's different roles

Partner of the EU institutions, but also:

- Source of information for all actors
- Networking between members/actors
- Source of information and feedback for the Commission and Member States (both national and regional levels)
- Platform for bringing together national and regional programmes and initiatives
- Platform to meet, cooperate and explore opportunities for dissemination, exploitation and cross-fertilisation with other activities



*Note: EFFRA was the first PPP association that was set up; many PPP associations were based on the EFFRA model and they used the EFFRA statutes as a reference*

# Made in Europe Partnership – Challenges, Opportunities, Drivers

Climate Change needs to be tackled. European society & policymakers are demanding a minimal/zero environmental impact of manufacturing activities (for both, processes and products)

The Covid Pandemic demonstrated the vulnerability of European industry; Europe needs a more resilient industry; at the same time, there is uncertainty about how economic recovery will look like

International competition is high, especially coming from Asia.

Today, natural resources and energy need to be imported from abroad; many critical components too. There is also a wish for ensuring a high level of technological sovereignty, for Europe to become less dependent on Asia & America.

New technologies offer immense opportunities which accelerate innovation and transformation.

The fast-moving transition towards smart autonomous systems and the increased use of Artificial Intelligence is profoundly changing the interaction between humans and machines.

Changes of policy frameworks, markets and customer preference are inducing a structural change in manufacturing value chains (*shift to electromobility, higher recycling targets etc*).

Other regions in the world are heavily investing in manufacturing support programmes.

Companies are preoccupied with a shortage of skilled personnel and with an ageing workforce.

New Business Models are offering new opportunities but are also challenging today's way of doing business.



# The 2030 vision of the manufacturing industry

“Ensuring competitiveness & sustainability and supporting resilient and adaptive manufacturing ecosystems, able to cope with external disturbances and rising environmental and social requirements”

“Europe to be the leading ‘solution provider’ in production technology, digitalisation, resource efficiency and circular economy implementation.”

Activities and investments need to focus on:

- Resilience of European Industry
- Sovereignty of European Industry
- Environmental sustainability of Europe Industry
  - comment: the challenge here does not lie only in “producing with less energy/CO2 emissions”, but mainly in developing & producing goods that comply with circularity criteria



# MADE IN EUROPE



Watch the Video





# Horizon Europe: Strategic Orientation 2021-2024

Promoting an **open strategic autonomy**  
by leading the development of  
key digital, enabling and  
emerging technologies,  
sectors and value chains

**Restoring Europe's  
ecosystems**

Making Europe the first  
digitally enabled circular,  
climate-neutral  
and **sustainable economy**

Creating a more resilient,  
inclusive and democratic  
**European society**

# Made in Europe Specific Objective 1



## Excellent, Responsive and Smart Factories & Supply Chains

# Circular Products & Climate neutral manufacturing





## Made in Europe Specific Objective 3



**New Integrated business, product-service and production approaches; new use models**





**Human-centered and Human-driven  
manufacturing innovation**

## Made in Europe General Objectives

Ensuring European Leadership & manufacturing excellence; generating new products and new markets

Achieving Circular and climate-neutral manufacturing

Mastering the digital transformation of manufacturing industry

Creating attractive value-added manufacturing jobs

## Made in Europe 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



## Operational/R&I Objectives

1. Zero-defect and zero-downtime high precision manufacturing, including predictive quality & non-destructive inspection methods
2. Manufacturing for miniaturisation and functional integration
3. Scalable, reconfigurable & flexible first-time right manufacturing
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. Data highways and data spaces in support of smart factories in dynamic value networks

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

1. Collaborative product-service engineering for customer driven manufacturing value networks
2. Manufacturing processes and approaches near to customers or consumers
3. Transparency, trust and data integrity along the product and manufacturing life-cycle
4. Secure communication and IP management for smart factories in dynamic value networks

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



# Brokerage for members and non-members of EFFRA

Using the EFFRA Innovation Portal **for online-brokerage:**

- ☐ Describe your interest and intentions in the project idea description
- ☐ Attach a pdf file which can be a presentation in pdf format or another document.

*note: One project idea must at least be associated with one call topic*

The minimum information in the project idea description and/or the attached document would need to be:

- Presentation of your organisation
- Interest in call(s)
- Offer/ideas
- Contact details



Further guidance can be found - here

[PowerPoint template](#)

[Word document template](#)



## 6 call topics in 2021

*expected budget: 143 million Euros*

## 6 call topics in 2021

*expected budget: 144 million EUR*

**Area 1: Green, flexible and advanced manufacturing**

**Area 2: Advanced digital technologies for manufacturing**

## Area: Green, flexible and advanced manufacturing



### **2021-twin-transition-01-01: AI-enhanced robotics system for smart manufacturing (IA);**

*expected budget of 30 million EUR (3 projects expected to be funded, with a size of 8-12 million per project; 60% funding rate for companies, instead of 70%)*

### **2021-twin-transition-01-02: Zero-defect manufacturing towards zero-waste (IA);**

*expected budget 27,50 million EUR (3 projects expected to be funded, with a size of 8-12 million per project)*

### **2021-twin-transition-01-03: Laser-based technologies for green manufacturing (RIA);**

*expected budget of 26 million EUR (4 projects expected to be funded, with a size of 5-7 million per project)*

### **2021-twin-transition-01-05: Manufacturing technologies for bio-based materials (RIA);**

*expected budget of 20 million EUR (4 projects expected to be funded, with a size of 4-6 million per project)*



## Area: “Advanced digital technologies for manufacturing”



**2021-twin-transition-01-07: Artificial Intelligence for sustainable, agile manufacturing (IA);**

*expected budget of 17 million EUR (3 projects expected to be funded, with a size of 3-8 million per project)*

**2021-twin-transition-01-08: Data-driven Distributed Industrial Environments (IA);**

*expected budget of 22.5 million EUR (3 projects expected to be funded, with a size of 4-8 million per project)*

## Area: “Green, flexible and advanced manufacturing”



### **2022-twin-transition-01-01: Rapid reconfigurable production process chains (IA);**

*expected budget of 27.5 million EUR (3 projects expected to be funded, with a size of 8-12 million per project; 60% funding rate for companies, instead of 70%) )*

### **2022-twin-transition-01-02: Products with complex functional surfaces (RIA);**

*expected budget of 20 million EUR (4 projects expected to be funded, with a size of 4-6 million per project)*

### **2022-twin-transition-01-04: Excellence in distributed control and modular manufacturing (RIA);**

*expected budget of 20 million EUR (4 projects expected to be funded, with a size of 4-6 million per project)*

### **2022-twin-transition-01-05: Intelligent workpiece handling in a full production line (RIA);**

*expected budget of 20 million EUR (4 projects expected to be funded, with a size of 4-6 million per project)*

## Area: "Advanced digital technologies for manufacturing"



### **2022-twin-transition-01-06: ICT Innovation for Manufacturing Sustainability in SMEs (I4MS2) (IA);**

*expected budget of 35 million EUR (3 projects expected to be funded, with a size of 4-8 million per project; 60% funding rate for companies, instead of 70%)*

### **2022-twin-transition-01-07: Digital tools to support the engineering of a Circular Economy (RIA);**

*expected budget of 22 million EUR (3 projects expected to be funded, with a size of 3-6 million per project)*



# Thank you



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