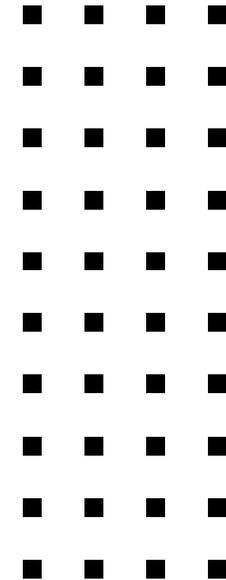


Hoja de ruta y principales objetivos

Partenariado Made-in-Europe (MiE)



Juanan Arrieta
Infoday nacional CL4 (CDTI, Madrid, 15Dic2022)



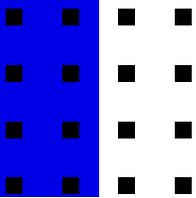
Contexto político

Camino hasta topics Estructura HE y
Partenariados Estructura Cluster 4 Encaje
Made-in-EU (MiE)



Contexto MiE WP23-24

Evolución SRIDA Visión detallada SRIDA y topics Ventajas de participación activa Sinergias con otros partenariados ¿Qué viene ahora? Momento actual y recomends



El camino completo hasta los "topics"

EC Political Priorities

A European Green Deal

I want Europe to strive for more by being the first climate-neutral continent

A Europe fit for the digital age

I want Europe to strive for more by grasping the opportunities from the digital age within safe and ethical boundaries

An economy that works for the people

I want Europe to strive for more when it comes to social fairness and prosperity

A stronger Europe in the world

I want Europe to strive for more by strengthening our unique brand of responsible global leadership

Promoting our European way of life

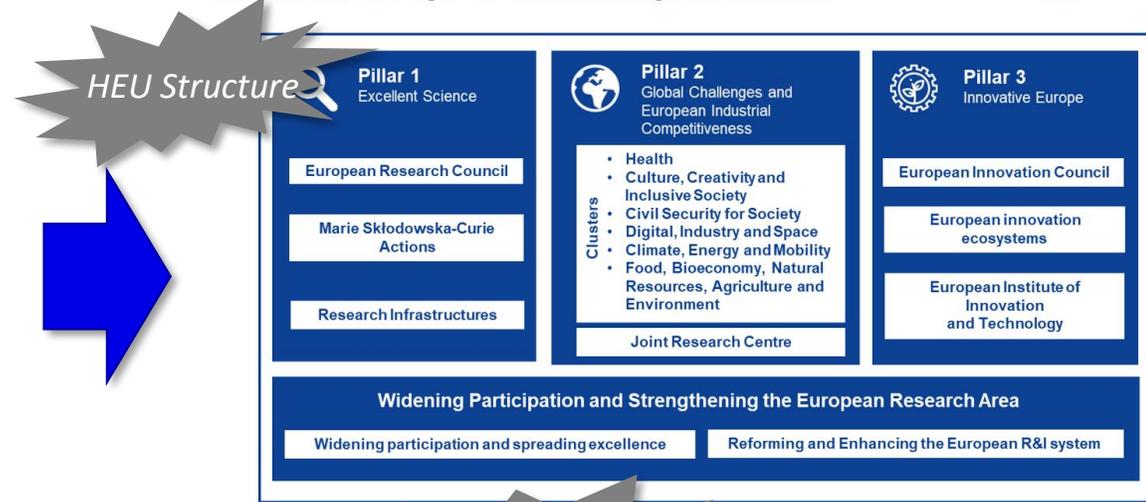
I want Europe to strive for a Union of equality and diversity, building consensus on migration and enhancing resilience to hybrid threats

A new push for European democracy

I want Europe to strive for more in nurturing, protecting and strengthening our democracy

EC Political Guidelines

Horizon Europe: Preliminary structure



SYNERGIES

Horizon Europe

Other Union Programmes, including

- Common Agricultural Policy
- LIFE
- Erasmus
- ERDF
- Connecting Europe Facility
- Innovation Fund
- External Instrument
- ESF+
- Internal Security Fund
- Maritime & Fisheries Fund
- Digital Europe
- Single Market Programme
- InvestEU
- Space Programme

PARTNERSHIPS

HORIZON EUROPE PILLAR II - Global challenges & European industrial competitiveness

CLUSTER 1: Health	CLUSTER 4: Digital, Industry & Space	CLUSTER 5: Climate, Energy & Mobility	CLUSTER 6: Food, Bioeconomy, Agriculture, ...
Innovative Health Initiative	Key Digital Technologies	Clean Hydrogen	Circular Bio-based Europe
Global Health Partnership	Smart Networks & Services	Clean Aviation	Rescuing Biodiversity to Safeguard Life on Earth
Transformation of health systems	High Performance Computing	Single European Sky ATM Research 3	Climate Neutral, Sustainable & Productive Blue Economy
Chemicals risk assessment	European Multitology (Art. 185)	Europe's Rail	Water4All
ERA for Health	AI-DATA-Robotics	Connected and Automated Mobility (CCAM)	Animal Health & Welfare*
Rare diseases*	Photonics	Batteries	Accelerating Farming Systems Transitions*
One-Health Anti Microbial Resistance*	Made in Europe	Zero-emission waterborne transport	Agriculture of Data*
Personalised Medicine*	Clean steel - low carbon steelmaking	Zero-emission road transport	Safe & Sustainable Food System*
Pandemic Preparedness** Co-funded or co-programmed	Processes4Planet	Built4People	
	Global competitive space systems**	Clean Energy Transition	
		Driving Urban Transitions	

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

PILLAR III - Innovative Europe

EIT (KNOWLEDGE & INNOVATION COMMUNITIES)	SUPPORT TO INNOVATION ECOSYSTEMS
InnoEnergy	Innovative SMEs
Climate	
Digital	
Food	
Health	
Raw Materials	
Manufacturing	
Urban Mobility	
Cultural and Creative Industries	

CROSS-PILLARS II & III

- European Open Science Cloud

CLUSTERS (sections, destinations, topics)

Horizon Europe: Preliminary structure - Clusters

Clusters	Areas of intervention
Health	<ul style="list-style-type: none"> Health throughout the life course Non-communicable and rare diseases Tools, technologies and digital solutions for health and care, including personalised medicine
Culture, creativity and inclusive society	<ul style="list-style-type: none"> Democracy and Governance Social and economic transformations
Civil security for society	<ul style="list-style-type: none"> Disaster-resilient societies Protection and Security
Digital, Industry and space	<ul style="list-style-type: none"> Manufacturing technologies Advanced materials Next generation internet Circular industries Space, including Earth Observation Emerging enabling technologies
Climate, Energy and Mobility	<ul style="list-style-type: none"> Climate science and solutions Energy systems and grids Communities and cities Industrial competitiveness in transport Smart mobility
Food, bioeconomy, natural resources, agriculture and environment	<ul style="list-style-type: none"> Environmental observation Agriculture, forestry and rural areas Circular systems Food systems

Pillar 2: Global Challenges & European Industrial Competitiveness

boosting key technologies and solutions underpinning EU policies & Sustainable Development Goals

Estructura HE y evolución Partenariados (i)

Horizon Europe: Preliminary structure



Mapeo completo de los Partenariados HE

Overview of 49 European Partnerships

PILLAR II - Global challenges & European industrial competitiveness

CLUSTER 1: Health	CLUSTER 4: Digital, Industry & Space	CLUSTER 5: Climate, Energy & Mobility
Innovative Health Initiative	Key Digital Technologies	Clean Hydrogen
Global Health Partnership	Smart Networks & Services	Clean Aviation
Transformation of health systems	High Performance Computing	Single European Sky ATM Research 3
Chemicals risk assessment	European Metrology (Art. 185)	Europe's Rail
ERA for Health	AI-Data-Robotics	Connected and Automated Mobility (CCAM)
Rare diseases*	Photonics	Batteries
One-Health Anti Microbial Resistance*	Made in Europe	Zero-emission waterborne transport
Personalised Medicine*	Clean steel – low-carbon steelmaking	Zero-emission road transport
Pandemic Preparedness* <i>Co-funded or co-programmed</i>	Processes4Planet	Built4People
	Global competitive space systems**	Clean Energy Transition
		Driving Urban Transitions

PILLAR III - Innovative Europe

EIT	SUPPORT TO INNOVATION ECOSYSTEMS
InnoEnergy	Innovative SMEs
Climate	
Digital	
Food	
Health	
Raw Materials	
Manufacturing	
Urban Mobility	
Cultural and Creative Industries	
CROSS-PILLARS II AND III	
European Open Science Cloud	

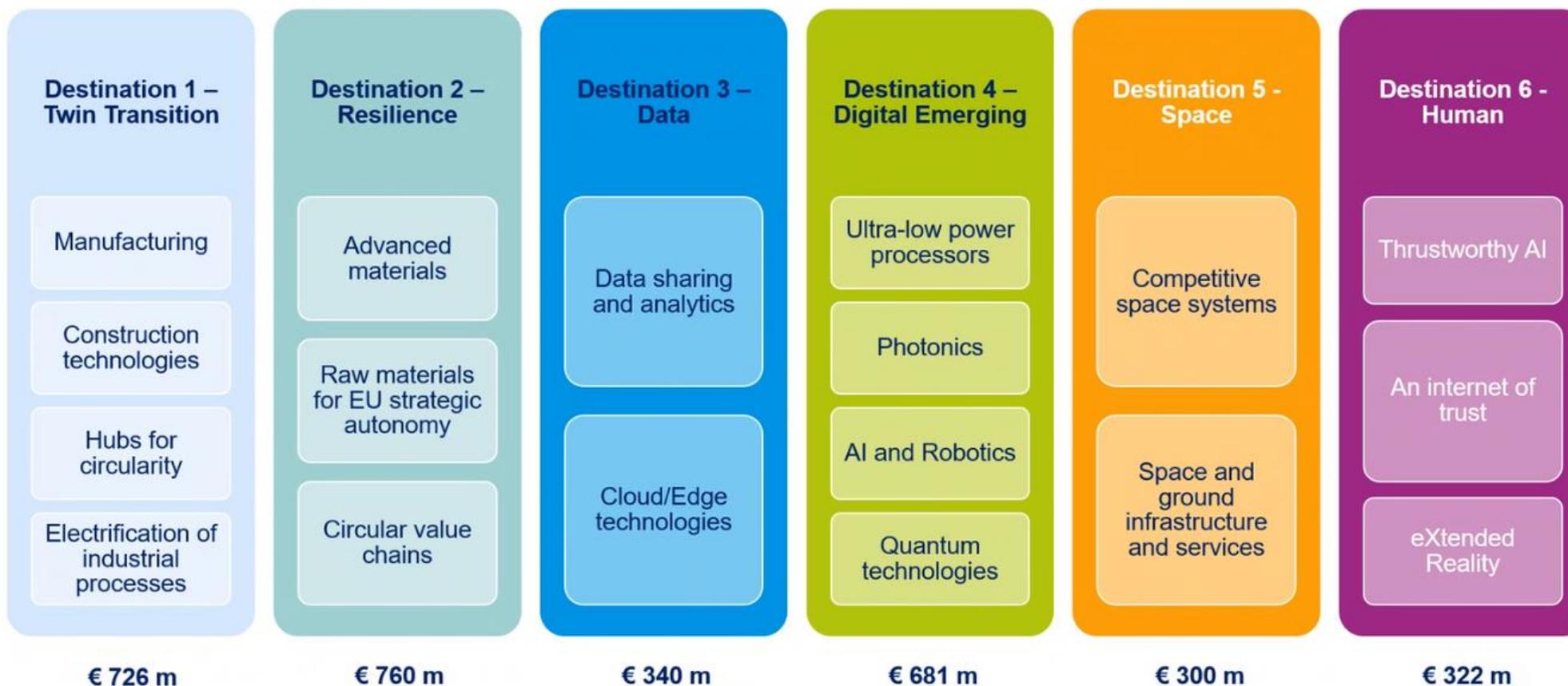
- Institutionalised Partnerships (Art 185/7)
- Institutionalised partnerships / EIT KICs
- Co-Programmed
- Co-Funded

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

Estructura Cluster 4 (Digital, Industria, Espacio)

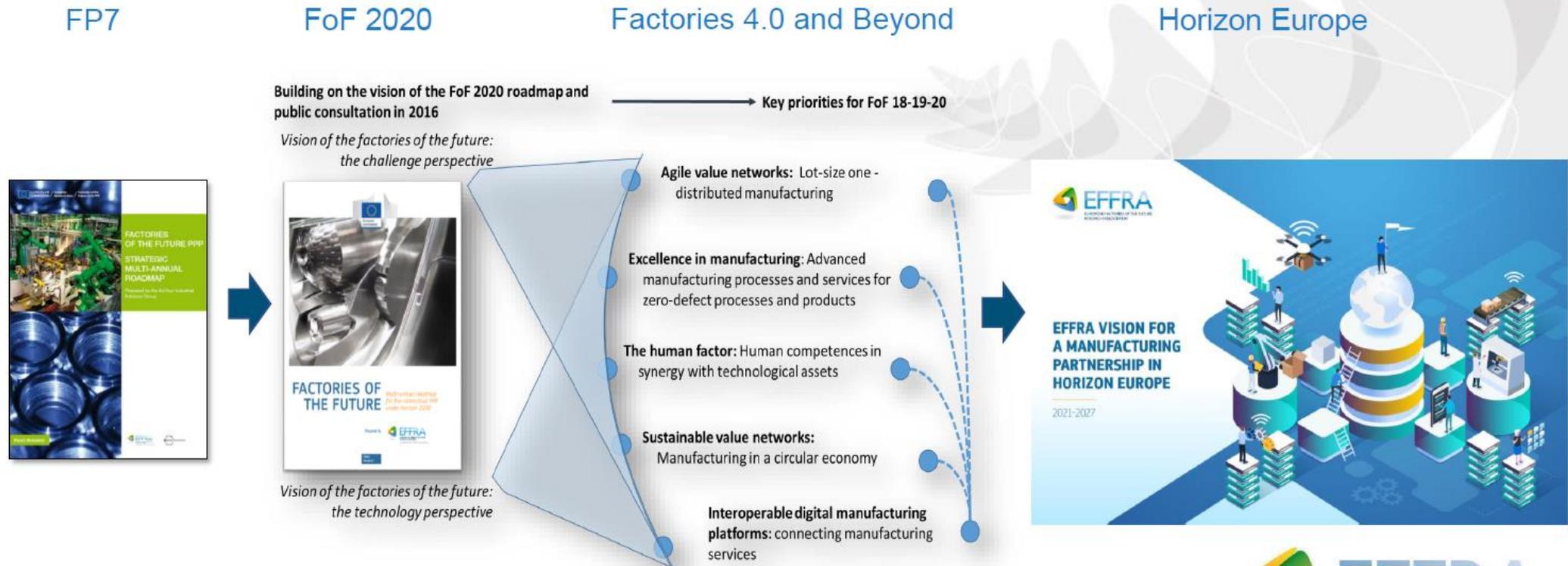


Cluster digital, industry & space – WP21/22



Evolución SRIDA del Partenariado FoF->MiE

Transforming Manufacturing with Help of EU Framework Programmes

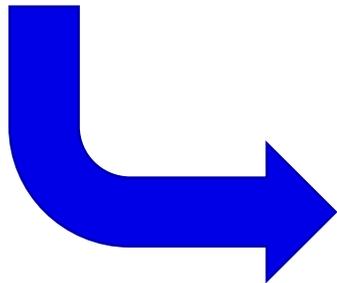


2009/2010

2013/2014

2016

SRIDA de MiE: objetivos & tecnologías



MIE policy 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 value added 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**

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**

SRIDA de MiE: objetivos específicos y de I+D



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

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 & IP integrity, open systems and cyber security along the product and manufacturing life-cycle

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

Topics 2023-24 de Fabricación (MiE)



Made in Europe Partnership: New Call Topics 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: 7 th February 2024 Second deadline: 24 th September 2024	HORIZON-CL4-2024-TWIN-TRANSITION-01-01 (Two stages): Bio-intelligent manufacturing industries (RIA)

Topics 2023-24 de Fabricación (MiE)



MAIN FIGURES

(Applicable only to draft Made In Europe calls)

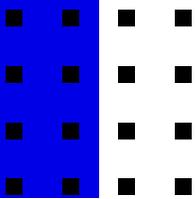
2023	2024	2024 Two Stages
4 Call Topics	2 Call Topics	1 Call Topic
Deadline: 20 th April 2023	Deadline: 7 th February 2024	First deadline: 7 th February 2024 Second deadline: 24 th September 2024
Total budget: 102 million	Total budget: 71 million	Total budget: 25 million
Total number of projects to be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

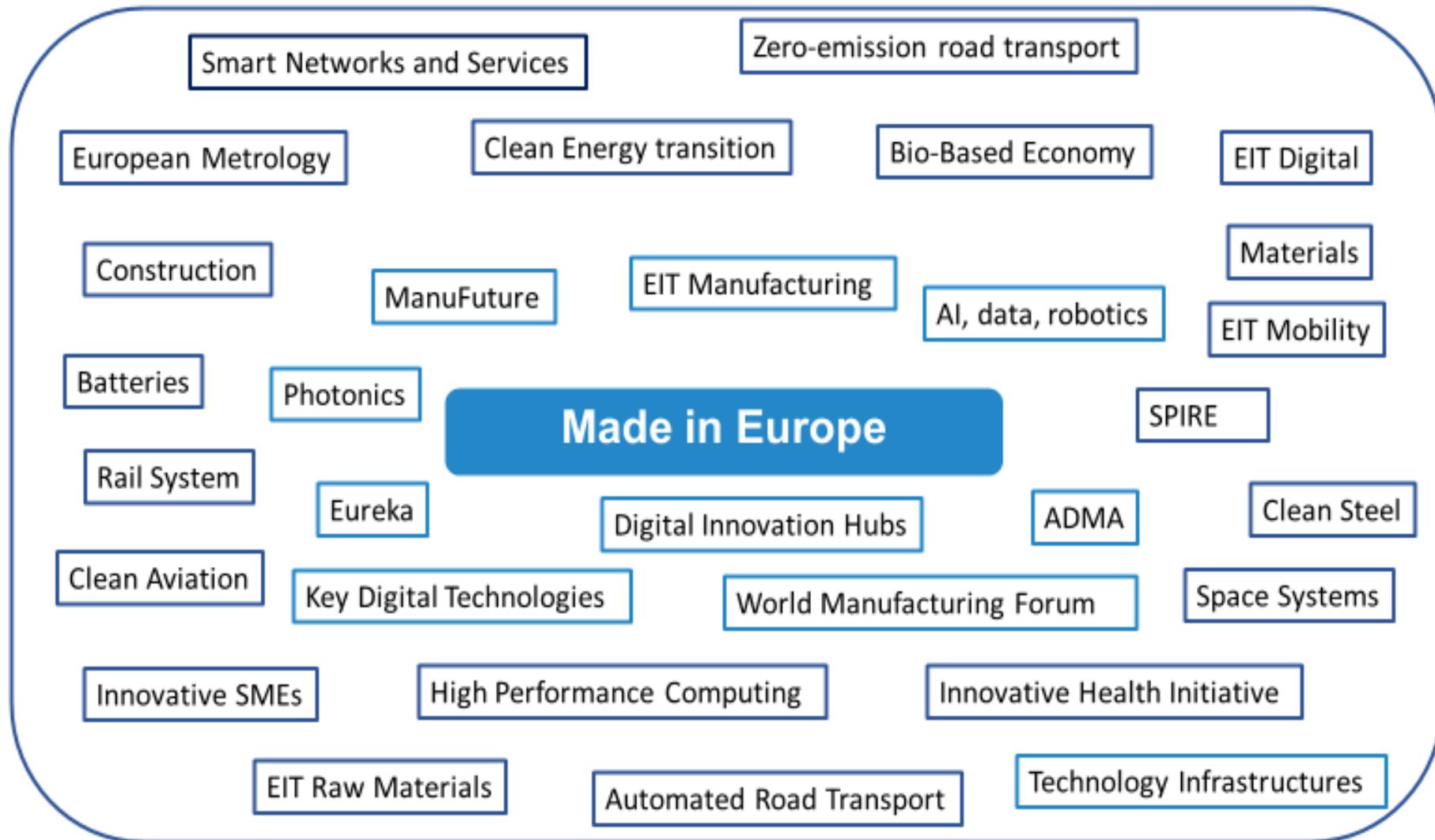
Ventajas de participación activa en MiE

Ventajas de una participación activa en Partenariados EU como MiE:

- Influencia en SRIDA y futuros programas/topics (lobby)
- Información relevante de primera mano y antes de que se haga pública (antelación)
- Networking/partnering de alto valor añadido
- Visibilidad, notoriedad
- Partners tecnológicos y posibles relaciones cliente-proveedor
- Participación en propuestas EU de I+D+I
- Eventos EFFRA específicos de fabricación avanzada
- Se complementa con la participación en ETPs (Manufuture) y mirrors nacionales (ManuKET)



Sinergias MiE con otros partenariados



¿Y ahora qué viene? Cronología



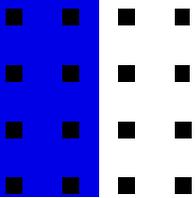
Próximos hitos:

- WP 2023-24 (cierres en Mar-Abr 2023)
- Actualización SRIDA de EFFRA
- Esbozos del SP25-27, base para el futuro WP25-27
- Y después del HE (2021-2027)?? FP10...
- Consultas públicas abiertas

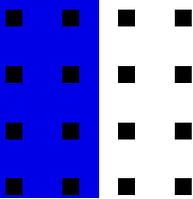
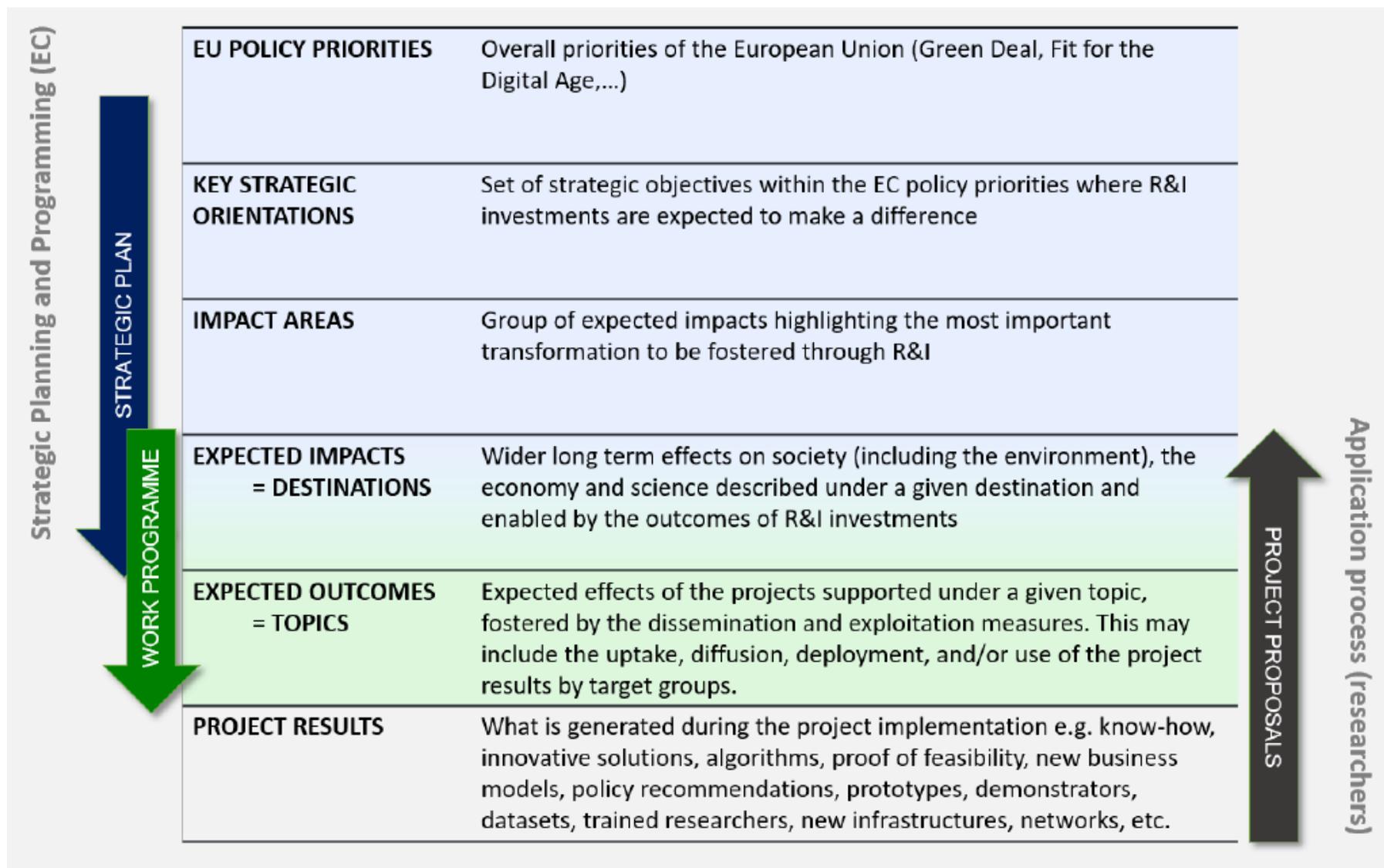
Plan estratégico (4 años) y programas bianuales



Programme intervention logic

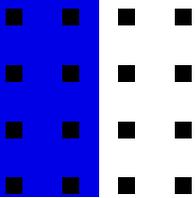


Estructura novedosa HE



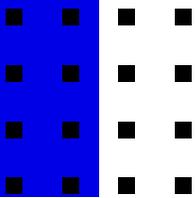
Momento actual EU (i)

- 1) **WP2023-24 ya publicado...** Primeros deadlines: finales Mar23 y mediados Abr23!!
- 2) A las puertas de empezar a conformar el siguiente **Strategic Plan 2025-27**, que será la base para el WP2025-27
- 3) La mayoría de los EU Partnerships **actualizarán sus SRIDAs** (Strategic Research, Innovation & Development Agendas), que son la base para los futuros topics. Importancia de ser activos y visibles para que los futuros topics nos sean favorables (aparte, acceso a networking de gran interés)
- 4) La **estructura de HorizonEurope** (HE) es más compleja hasta llegar al topic. HE se compone de pillars y Clusters, que a su vez se descomponen en Destinations.
- 5) El **“sitio” de MiE** está en Pillar 2, Cluster 4 (Digital, Industry & Space), pero también algo de Cluster 5 (Climate, Energy & Mobility).
 - a) Destinations de interés de CL4: Twin-Transition, Resilience, Data, Digital-Emerging, Human.
 - b) Destinations de interés de CL5: Renewable Energy, Aviation, Waterborne transport
 - c) Los topics se agrupan bajo las secciones de las destinations. Outcomes en topics, pero Expected Impacts en destinations.



Momento actual EU (ii)

- 6) **EFFRA/MiE topics (WP2023-24)**, sucesora de FoF: foco en value network (más que en shopfloor domain) y todo está impregnado por la dimensión GREEN (sostenible, circular, remanufacturing, resiliencia, Maas...)
- 7) La **fabricación** tal y como lo entendemos **parece que ha perdido actualidad (en las agendas políticas)**, a pesar de la importancia que tiene para los que estamos dentro... Si a finales H2020 teníamos q ponerle una “máscara digital” a nuestra actividad, ahora es necesario ponerla una “máscara green” (sustainable, circularity, remanufacturing, resilience, MaaS)
- 8) **Importancia de recuperar presencia de la fabricación**, por parte de todos (stakeholders, NCPs, administraciones regionales y nacionales)... **TODO LO QUE NOS RODEA SE TIENE QUE FABRICAR y nos va el futuro en ello!!**



Recomendaciones a EFFRA y EC (i)

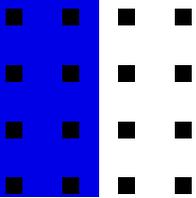
¿¿Cómo percibimos el Manufacturing 2025-2030??

- Necesitamos **traer de vuelta a EU la fabricación excelente/inteligente y de alto valor añadido** (mediante precisión, zero-X, digital, sostenible/verde, manteniendo al operario humano en el centro - Industry 5.0)
- Impulsando la **doble transformación** (digital/verde) de la fabricación industrial, mediante una **cuádruple combinación de tecnologías**:
 - Digitales (convergencia IT/OT, analítica de datos, IA, DLT, DSS...)
 - Ciber-físicas (mecatrónica avanzada, sensórica, fotónica, robótica)
 - Sostenibles (circularidad, remanufacturing, reparación, reciclabilidad, técnicas EoL)
 - Centradas en el humano (Industria 5.0)
- Permitiría avanzar hacia **fábricas conectadas/autónomas y cadenas de valor resilientes**.
- **Dimensión humana**: importancia capital de la generación de skills (STEM, Deep Tech Talent) y de la formación/upgrading continuo de la mano de obra actual.
- **Objetivos finales**:
 - Reducción tiempos/costes e incremento de productividad/competitividad.
 - Abordar de la fabricación sostenible, circularidad, impacto medioambiental, resiliencia.
 - Prosperidad y desarrollo/crecimiento regional, generación de empleo cualificado, atracción para siguientes generaciones.

Recomendaciones a EFFRA y EC (ii)

REFLEXIÓN:

- 1) ¿Queremos que nuestros hijos/as quieran (y puedan) vivir y trabajar en EU, evitando fuga de talento y contribuyendo al desarrollo socio-económico en EU?
- 2) ¿Ó vamos a dejar marcharles en busca de mejores oportunidades a otros lugares del mundo?



¡Muchas gracias por vuestra atención!

IDEKO

**MEMBER OF BASQUE RESEARCH
& TECHNOLOGY ALLIANCE**

