



European Commission: Activities in the Framework of Industrial Commons

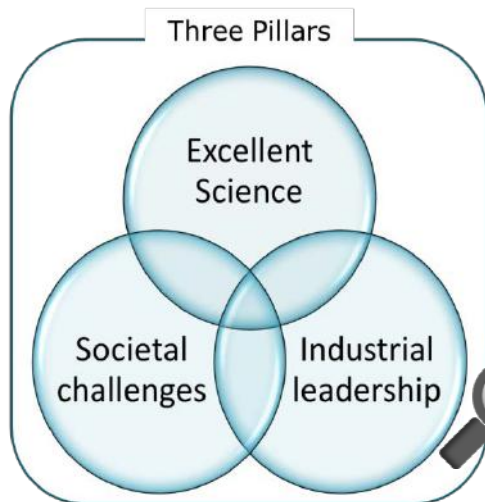


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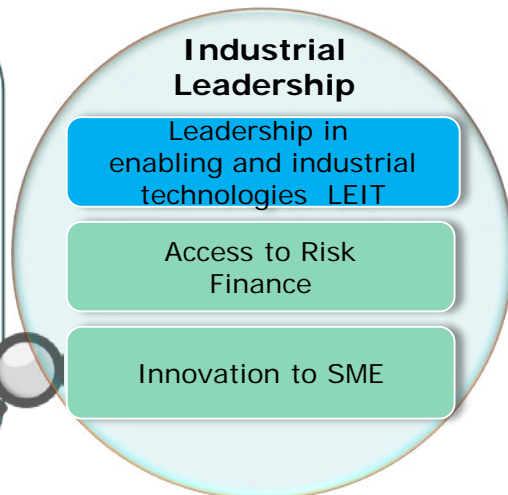
EMMC International Workshop 2019
25 February 2019

NMBP in Horizon 2020

HORIZON 2020

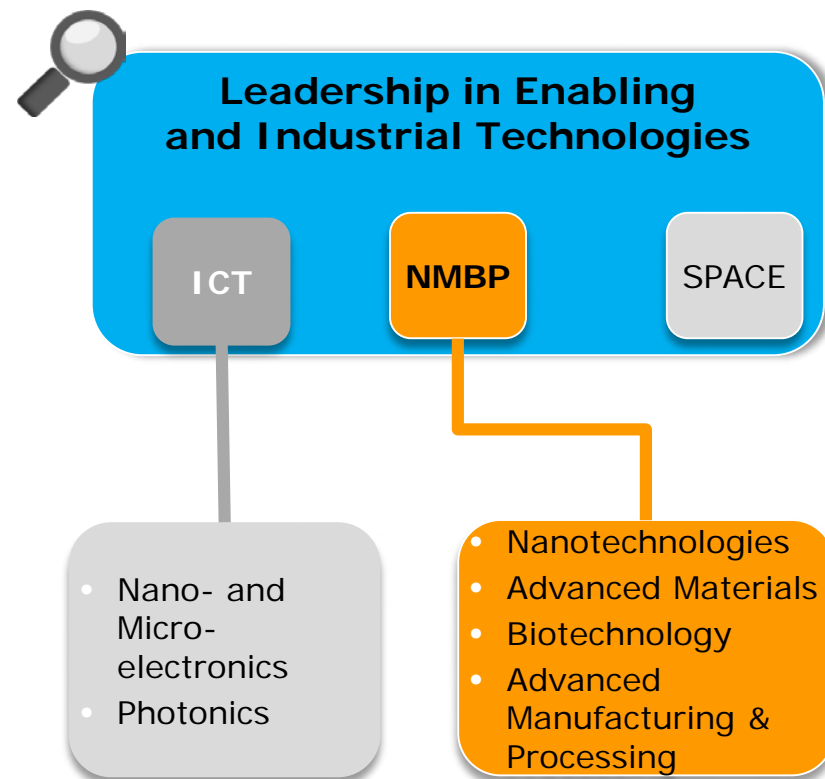


Indicative budget:
75 billion € *



Indicative Budget:
16.5 billion € *

Out of it for NMBP:
3.8 billion € *

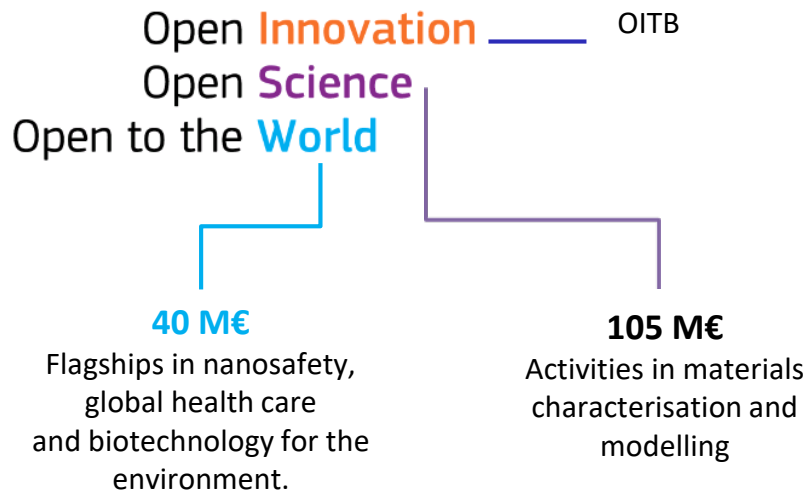


* July 2015 – includes EIT, JRC, "Science with and for Society", "Spreading Excellence / Widening Participation", in addition to three priorities above

Research and Innovation

WP 2020 LEIT-NMBP – Targeted impact

THE THREE 'Os'



FOCUS AREAS NMBP contribution



Digitising Industry

713 M€
(250 M€ in 2020)



Circular Economy

378 M€
(143.5 M€ in 2020)



Low Carbon

284 M€
(105 M€ in 2020)

BIG TICKET

- **Industry Commons** 2 topics – 8 M€

sharing industrial research data

linked to the

- Open Access data initiatives
- Science Cloud



NMBP Calls 2020

Calls

***FOUNDATIONS FOR
TOMORROW'S INDUSTRY***
~ 395 M€

***TRANSFORMING EUROPEAN
INDUSTRY***
~ 525 M€

***INDUSTRIAL
SUSTAINABILITY***
~ 665 M€



Impacts

Materials, characterisation, processing
Eco-system for
design/testing/upscaling
of materials

Global industrial leadership for
re-industrialisation

Less energy input,
more energy/resource efficiency

NMBP Work Programme for 2020

- Trends in WP2020:

Transition to Horizon Europe

Most pre-published topics will remain

- **Currently: discussion with stakeholders and Member-States**
- **Publication early summer 2019**

WP2020 Industrial Commons

➤ Definition

- Sharing R&D-derived knowledge, data, and capabilities for design, engineering and manufacturing, applicable across industry sectors

➤ Rationale

- Industrial Commons is a tool to accelerate innovation
- Re-use of data stimulates the development of new products, services, materials and manufacturing processes.

➤ Objectives

- Standardise the documentation of data through taxonomies and ontologies
- Making data accessible and enabling its re-use across different domains
- Enable domains to connect, link and exchange information
- Create a common information system that would allow data sharing and enable new or improved materials, products, processes and services

Make the data FAIR

(findable, accessible, interoperable and re-usable)

NMBP WP2020 – Industrial Commons

➤ Call for Proposals

- Topic 1: Towards Standardised Documentation of Data through taxonomies and ontologies (CSA)
- Topic 2: Creating an open market place for industrial data (RIA)

Recent Activities (workshops & communications)

➤ Workshops

- Industrial Commons as a tool to drive innovation in EU (June '18, Brussels)
- Materials and Manufacturing Ontology Workshop (June '18, Brussels)
- IntOp 2017 and 2018
- EMMC international workshops
- EC ontology workshop June 2019

➤ Documents

- 2018 Communication "Towards a common European Data Space"
- Working Document "Guidance on sharing private sector data in the European data economy"

Commons and Ontologies Workshops

➤ Main Conclusions (Ontologies)

- Ontologies support the intermediate structuring and meaningful storage of data, enabling and speeding up AI
- Wide range of efforts and approaches in ontologies ranging from fundamental ontologies to purely application-oriented ontologies
- The power of ontologies demonstrated in applications, including data-mining, data-base linking, as well as reasoning example (early AI)
- Addressing a number of challenges in engineering
- Need for one common ontology across a field (i.e. materials) to enable knowledge extraction and exchange is clearly endorsed

Workshops

➤ Recommendations

- Ensuring sustainable support for open data repositories across Europe
- Ensure harmonisation and good data management practice (i.e. Data Management Plans will become mandatory in projects in “Horizon Europe”).
- Build an integrated knowledge framework to generate value from data (ontology). The audience is convinced that exchange and collaboration has to be based on a common ontology. Starting with the domain of materials and manufacturing would be a good start.
- Build an ecosystem to share data.
- Establish a system of trust that takes human factors into account.

NMBP WP2020 – Materials Modelling

➤ Call for Proposals

1 topic RIA-4M€ **materials modelling workflow**

Thank you for your attention