Towards a OPEN INNOVATION HUBS EU STRATEGY in Nanotech and Advanced Materials

EURONANOFORUM 2017

Session 13: Technology and business networks in Europe - promoting innovation and new industrial ventures

Valletta, 22 June 2017

Dr. Peter Dröll, European Commission
Shaping Europe's Future
EU comparative advantage

**Revealed technological advantage - Extrapolation 2020**

Source: RISE, Fraunhofer, 2016

- Advanced manufacturing technologies
- Internet of Things
- Space
- Cross-cutting topics addressing cyber-security
- Advanced materials
- Photonics
- Biotechnology
- Nanotechnologies
- Future Internet
- Content technologies and information management
- Advanced Computing
- Robotics, Micro- and nano-electronic technologies
- Human-centric Digital Age
- New generation of electronic components and systems

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<tr>
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<th>2020</th>
<th>2010-2012</th>
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Crossing the valley of death

BUSINESS MODELS & FINANCE

TESTING, PILOT LINES, MANUFACTURING FACILITIES

MODELLING, CHARACTERIZATION, SAFETY, STANDARDS

The valley of death
Overcoming the Challenge of Upscaling
Towards European Open Innovation Hubs

- Industrial Modernisation
- Open Innovation
- Innovation Ecosystems

PILOT LINES
CHARACTERISATION
MODELLING
SAFETY

ACCELERATING PHYSICAL INNOVATION for MATERIALS Industry
In the two KETs: Nanotechnologies and Advanced Materials

OPEN INNOVATION HUBS

FP7-H2020

OPEN INNOVATION HUBS

H2020-FP9
Enablers for Innovation Ecosystems (1)

Pilot Line Projects Horizon 2020:
- EU Contribution 150 M€
- 29 Pilot Line Projects
- >80 Pilot Facilities and Demonstrators
- >30 Regions involved
Enablers for Innovation Ecosystems (2)

Industry Pilot Facilities

83 Pilot Facilities and Demonstrators, mostly with industry:

PRIVATE FOR PROFIT

RESEARCH

UNIVERSITIES

OTHERS

46

25

10

2
Enablers for Innovation Ecosystems (3)

European Pilot Production Network (EPPN CSA)

• Facilitating further development of pilot production capabilities in Europe.
• Facilitating the development of business, through the access to new customers and potential investors across borders.
• Providing advisory services and facilitate access for SME’s and start-ups.
• Setting the scene for the establishment of innovation hubs across the member States and regions. Coordination on resources and actions.
• Mapping of the pilot line capabilities, existing ecosystems and relationships among the value chain.
• Organising and supporting networking and brokerage events at regional, national and European level.
## Enablers for Innovation Ecosystems (4)

<table>
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<tr>
<th>Enablers</th>
<th>Materials Characterisation</th>
<th>Materials Modelling</th>
<th>Safety and Risks Governance</th>
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<tbody>
<tr>
<td>Horizon 2020 NMBP investment</td>
<td>Spread along all projects</td>
<td>42 M€</td>
<td>60 M€</td>
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<tr>
<td>Horizontal platforms</td>
<td>European Materials Characterisation Council EMCC</td>
<td>European Materials Modelling Council EMMC</td>
<td>NanoSafety Cluster</td>
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Open Innovation Hubs

- Lightweight materials and components
- Medical Technologies for Health
- Surfaces and membranes
- Bio-based materials
- Materials for Construction
- Nano-Pharmaceutical
- Characterisation
- Nanosafety
- Modelling
Open Innovation Hubs - Tasks

Open access to facilities and services for design, development (prototyping), testing, and upscaling materials and nanotechnologies for new products

Demonstration in the relevant industrial environments

Show-casing technologies with user industry in cross border applications

Facilitate access of European SMEs along product supply chains

Identification and assessment of potential regulatory, economic and technical barriers

Engagement of stakeholders across the EU and the Associated Countries
Open Innovation Hubs – Expected Impact

- Open and upgraded facilities at the EU level
- Reduced services access costs for companies using the hubs
- Improved industrial productivity
- Accelerated innovation in the specific domain
- Increased access to finance (for SMEs in particular) for investing in these materials or in applications using them.
- 20% increase in SMEs access to hubs' services and increased access to finance for investing in these materials or in applications using them.
NMBP 2018-2020

Priorities

- Bringing the digital to the physical world
  - Industry 4.0
  - Circular Economy (20%)
  - Climate, Energy (20%)
  - Climate, Energy and the Circular Economy

Calls

- FOUNDATIONS for tomorrow's industry (~395M€)
- TRANSFORMING European industry (~525M€)
- Industrial SUSTAINABILITY (~665M€)

Impacts

- Eco-system for design/testing/upscaling
- Global industrial leadership for re-industrialisation
- Less energy input, more energy/resource efficiency
THANK YOU VERY MUCH

...... ANY "OPEN"QUESTIONS?