Regional Manufacturing DIHs in the Vanguard Pilot Initiative “ESM - Efficient and Sustainable Manufacturing”

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Brussels, 21 February 2018
ESM in Industrial Modernisation Thematic Platform

http://s3platform.jrc.ec.europa.eu/industrial-modernisation

List of Regions involved

Legend
- Leading regions:
  - Lombardy (IT)
  - Catalonia (ES)
- Participating regions:
  - Baden-Württemberg (DE)
  - Saxony (DE)
  - Basque Country (ES)
  - Emilia-Romagna (IT)
  - Flanders (BE)
  - Veneto (IT)
  - Tampere (FI)
  - Šádová (SK)
  - Norte (PT)
  - Scotland (UK)
  - Hauts de France (FR)
- Interested regions:
  - Austria (AT)
  - Navarra (ES)
  - Slovenia (SI)
  - Galicia (ES)
  - East-Netherlands (NL)

Coordinated Initiative (strategic project)
Formally supported by multiple Regional Governments
Focused on a strategic challenge for industry
Aimed at generating and supporting inter-regional projects for the establishment of pilot plants supporting manufacturing innovation
Pilot, demo–cases and use cases

- Broad strategic scope
- Interface between industry and policy
- Methodological support

  *i.e.* Efficient and Sustainable Manufacturing, ...

- Focus on defined technology areas or manufacturing goals
- Operative project level

  *i.e.* circular economy, Digital & Virtual Manufacturing, ...

- Focus on specific technologies and industry sectors
- Concrete implementation intent for the benefit of companies

  *i.e.* energy efficiency in automotive manufacturing processes
A network of coordinated RM DIHs sharing the same methods, tools (Business Maturity Migration Models) and KPIs Ecosystem.

Each RM DIH must have at least one physical experimental facility, being it a Didactic or a Smart Factory Pilot Plant.

Each RM DIH promotes Open Standards and Open Platforms to implement Industrial IoT and Analytics solutions.

A common MIDIH Innovation & Collaboration Platform (OEDIPUS EIT DIGITAL) to be validated in 2018.
General Financial Structure – three layers

Layer 1
- Basic Demonstration Infrastructures – Initial Costs related to the setting up of the infrastructures and platform
- Regional, national and EU Subsidies

Layer 2
- Projects-related activities (within the platform; TRL 5-7/8) - Operating costs
- Public Subsidies and private co-investments

Layer 3
- Replication – Indus. Upscale (TRL8/9) 1
- Replication – Indus. Upscale (TRL 8/9) 2
- Replication – Indus. Upscale (TRL 8/9) 3
- Replication – Indus. Upscale (TRL 8/9) 4
- Etc.

Public Support
(100% coverage ‘non-profitable top’ through public funds, structural)

Notes:
• Layer 1 (to some extent Layer 2 as well) contains « non-profitable top » (hence the subsidies)
• Layers 2 & 3 can’t be functioning if « top » not financially secured (⇒ no bankable plan !)
• Layers inter-dependent; smooth flow between them key!
Lombardy Intelligent Factory Association

- **Cluster for Advanced Manufacturing**, one of the Specialisation Areas identified by Lombardy Region in its S3 Strategy
- Created in 2014 and **formally recognized by Lombardy Regional Government**
- 150 members (more than 70% companies)

**Mission**
- To represent Regional Manufacturing
- To collect and provide R&I priorities to policy makers
- To support policy makers in R&I governance
- To increase regional manufacturing competitiveness leveraging on S3

**Appointed by Regional Government** to technically coordinate the regional participation to **Vanguard Advanced Manufacturing activities**
# AFIL Business Model

**BUSINESS ECOSYSTEM**

**STRENGTHS AND OPPORTUNITIES:**
Strong technological competences, Lombardy manufacturing leadership, firms international involvement, company size, new start-up, Intelligent Factory as S3 Lombardy strategy, cross-fertilization and KET diffusion, AM transition.

**STRATEGIES:** Funding strategies, students company-university exchange program.

**WEAKNESSES AND BARRIERS:**
Company size, industry fragmentation, cultural inertia, lack of high qualified personnel, lack of demo centres/living Lab/Vanguard Pilots

<table>
<thead>
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<th>KEY PARTNERS</th>
<th>KEY ACTIVITIES</th>
<th>VALUE PROPOSITION</th>
<th>CUSTOMER RELATIONSHIP</th>
<th>CUSTOMERS</th>
<th>EXTENDED BENEFICIARIES</th>
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</table>
| Industrial players, SMEs, Universities, Clusters, CFI Industrial Associations, Investors, Associations, Governments and public institutions, Start-up, Research centres. | • Knowledge Access Services  
• Technologies Access Services  
• Industrial Experimentations  
• Capital & Funding Opportunities  
• Roadmapping | • Spreading awareness among companies on advanced manufacturing key topics  
• Guide companies through digitalization processes  
• Support companies in the planning of innovative investments  
• Support in accessing to private and public funding | • Communities  
• Co-creation | • Companies  
• Universities & Research Institutes | • Region  
• Communities |

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<tr>
<th>GOVERNANCE</th>
<th>KEY RESOURCES</th>
<th>COST STRUCTURE</th>
<th>IMPACT</th>
<th>REVENUE STREAMS</th>
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</table>
| Industrial and institutional governance: Industrial for operative processes, guided by institutional strategies | 1. physical  
2. intellectual  
3. human  
4. financial | • Variable + Fixed costs (infrastructures, management,...) | • Increase employment and competitiveness of Lombardy manufacturing industry | • Members fees (33%)  
• Public/private funds (77%) |
# AFIL FINANCIAL STRUCTURE

<table>
<thead>
<tr>
<th>Cluster</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
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<tbody>
<tr>
<td></td>
<td>Public</td>
<td>Private (Members fees)</td>
<td>Public</td>
<td>Private (Members fees)</td>
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<tr>
<td>AFIL</td>
<td>35%</td>
<td>65%</td>
<td>38%</td>
<td>64%</td>
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PUBLIC 2017
- 10% Regional
- 90% European
Brainport Industries Campus brings the best high-tech contract manufacturers together under one roof. With the best production equipment and people we built the factory of the future. The hotspot for the high-tech industry, and magnet for customers, talent and innovation.

Investments
Campus: building and services: 100% private
Innovation programme and demonstration facilities: 50% private 50% public for a period of 4 years

Businessmodel:
Pay per use for m2 and fee for services

Cooperation:
National Government
Regional Government
City of Eindhoven
Industrial Companies
Estate development Agency
• The **Shared Production Facilities** for education, development & promotion purposes

• **Best Education** spot making use of latest equipment & technologies

• **The Showroom** for Production Equipment and Software providers

• The Area for execution of **Innovation Programs** (Fieldlabs)

• The Area for start-ups and **Joint Development** projects

• **Meeting point** for industry, education and society and to attract and retain technical talents
Manufacturing Innovation Program with 8 projects from exploration to operation with 75 companies and 25 M Euro (public-private investments)
Thank you for attention

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