



## L'impegno dei Cluster Lombardi sul tema delle batterie

### *Il tema batterie nelle Strategic Communities di AFIL e nelle Iniziative Europee*

AFIL  
Giacomo Copani  
26/01/2022

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# AFIL E LE STRATEGIC COMMUNITIES

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# Mission di AFIL



**Soggetto di riferimento di Regione Lombardia per il Manifatturiero Avanzato nell'ambito della strategia S3**



**Incrementare la competitività delle imprese del Manifatturiero Lombardo in ottica di filiera di ricerca e innovazione regionale**



**Posizionare il Manifatturiero Lombardo in Italia, Europa e a livello globale**

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# The Lombardy R&I Community represented by AFIL



Regione Lombardia



140  
MEMBERS



112 INDUSTRIAL COMPANIES



14 RESEARCH CENTERS AND UNIVERSITIES



14 ASSOCIATIONS



WORLD ECONOMIC FORUM

[Link](#)



Regional and National Clusters in Europe



 **fabbrica<sup>®</sup> intelligente**

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Regione Lombardia

# Che cosa si fa in AFIL



- **Ci si trova in un network di R&I molto qualificato e organizzato**
- **Visibilità** a livello nazionale ed internazionale
- Si condividono **trend, esperienze e competenze** innovative
- Si definiscono **priorità e progetti strategici che si vogliono portare avanti** come filiera regionale
- **Si implementano progetti** con la facilitazione del Cluster e di Regione Lombardia
- **Si portano priorità/progetti strategici alle Istituzioni** affinché diventino programmi
- **Ci si connette a filiere di innovazione internazionali**

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# Le Strategic Communities di AFIL



## Gruppi di Soci impegnati su challenge strategici per il Manifatturiero Lombardo

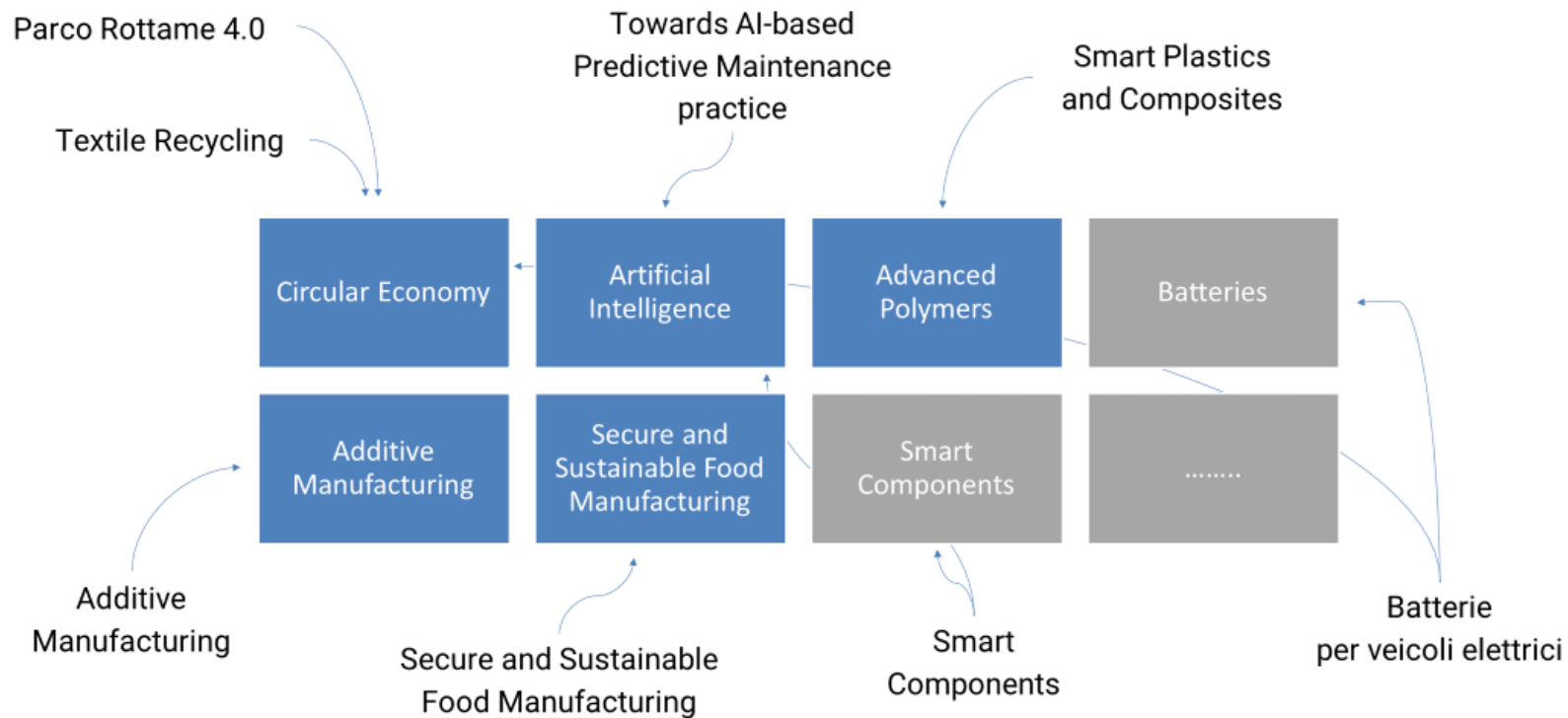
### Caratteristiche

- **Filiera**
- Basate su **problemi** e bisogni **dell'industria**
- **Tematica** specifica e sfidante
- **Proposte** e gestite nei contenuti **dai Soci**
- Organizzate

### Che cosa si fa

- Scambio di **competenze** e capacità
- **Networking** per R&I
- **Definizione di progetti** di interesse
- **Posizionamento** dei progetti presso le Istituzioni (roadmap)
- **Internazionalizzazione**
- **Partenariati, proposte e progetti**
- **Hackathons**

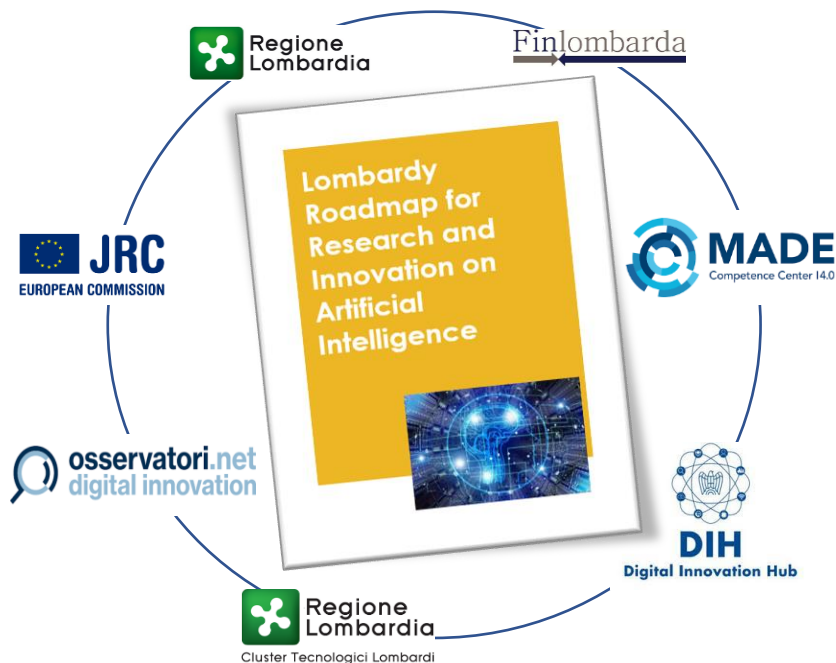
# I temi caldi nelle Strategic Communities



# Le Roadmap di Ricerca e Innovazione



## Roadmap Circular Economy e Intelligenza Artificiale



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# IL CONTESTO EUROPEO

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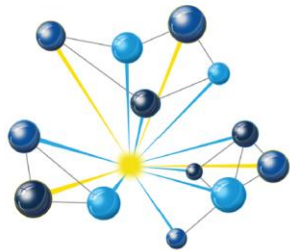


# Piattaforme Europee di Regioni



Cluster Intelligent Factory Lombardia

Technical party representing  
advanced manufacturing of  
Lombardy Region in



**VANGUARD INITIATIVE**  
New growth through smart specialisation



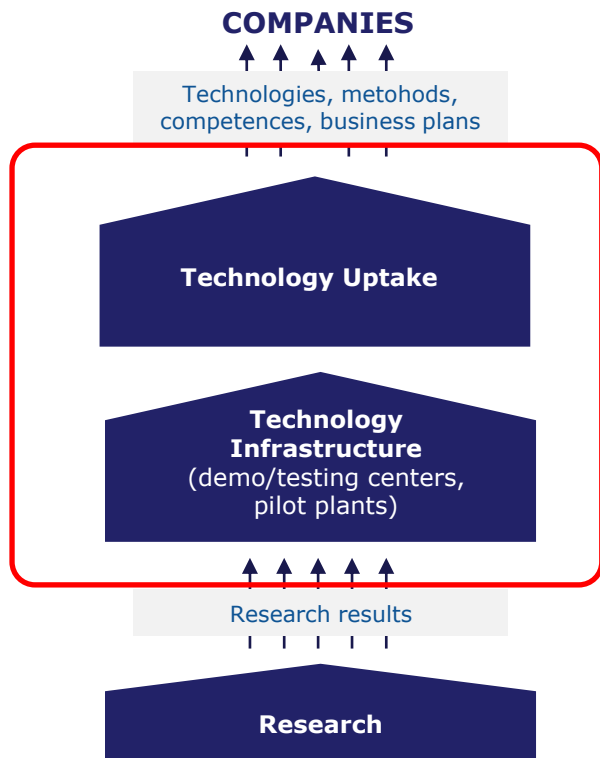
[www.4motors.eu](http://www.4motors.eu)

- Pilot ESM-Efficient and Sustainable Manufacturing
- Pilot 3DPrinting
- Pilot AI
- Partnership Batterie
- Partnership 5G e Wireless ICT

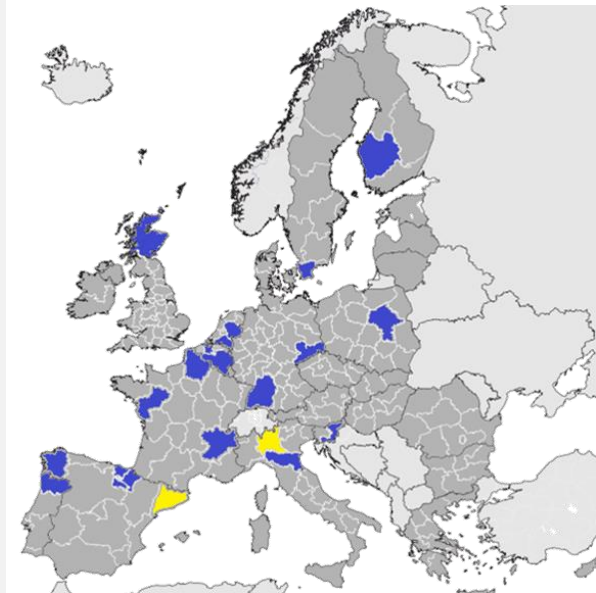
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# Obiettivo e overview dell'iniziativa Vanguard/S3

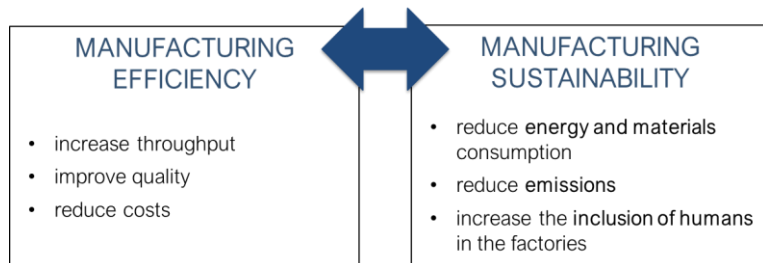


- High TRL: the goal is **support massive technology uptake** (no research)
- ...but: activities may trigger research (in other contexts) and should be aligned with ongoing research
- **Pilot plants and demo-centers as enabling asset** for technology uptake
- Activities **grounded on S3 and inter-regional cooperation**
- I3, TAF and (inter) regional funding will be the directly targeted instruments
- ...but: other instruments may be used in synergy for the purpose of the Partnership (Interreg, Innosup, IPCEI, ...)



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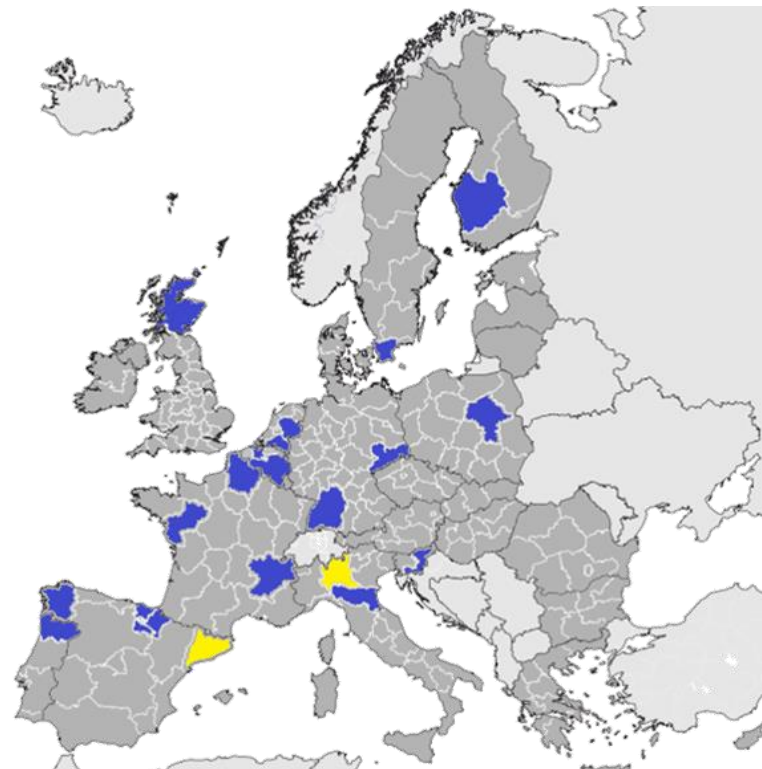
# Efficient and Sustainable Manufacturing ESM Pilot



## Partner Regions (21)

### Lombardy - Catalonia - Auvergne Rhone Alpes

- Baden Württemberg
  - Basque Country
  - East Netherlands
  - Emilia Romagna
  - Flanders
  - Friuli Venezia Giulia
  - Navarra
  - Norte
  - Pays de la Loire
  - Saxony
  - Saxony Anhalt
  - Scotland
  - Slovenia
  - South Netherlands
  - Tampere
  - Upper Austria
  - Wallonia
  - Wales
- In talks with...**
- Lower Saxony
  - East & North Finland



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# De- e Remanufacturing for CE demo-case



## De- and Remanufacturing

Technologies and business models for circular economy to re-use, remanufacture and recycle products and materials in all sectors.



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### Regions involved

- Lombardy
- Scotland
- Saxony
- Tampere
- Flanders
- Basque Country
- Norte
- Emilia Romagna
- Wallonia

### Regions interested

- Auvergne Rhone Alpes
- East Netherlands
- Slovenia
- Navarra
- Friuli Venezia Giulia

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# De- e Remanufacturing for CE: use-cases



The main objective of the De-and Remanufacturing pilot network is to **integrate** a multidisciplinary set of **advanced and innovative enabling technologies and digital innovations** (TRL 7-8) and to exploit the **regional Smart Specializations** in synergic way to offer services to European end-users, mainly manufacturing companies, to solve specific **sustainability-oriented problems** related to their products.

Regional/Cross-Regional Use Case	Involved Regions
1. <b>Composite Recovery from Wind Energy System</b>	<u>Basque Countries</u> , Saxony, Lombardy, Tampere, Scotland
2. Heavy machinery components remanufacturing	<u>Tampere</u> , Basque Countries, Lombardy, Saxony, Emilia Romagna
3. Automotive parts remanufacturing	<u>Scotland</u> , Lombardy, Saxony, Norte
4. High-value TLC systems and Electronics Recovery	<u>Lombardy</u> , Tampere
5. Metal components reprocessing	<u>Saxony</u> , Tampere, Lombardy, Wallonia
6. Remanufacturing of e-motors	<u>Saxony</u> , Lombardy
7. Plastics recycling and re-use in electronics	Flanders, Lombardy, Wallonia
<b>8. Automotive Li-Ion batteries disassembly, remanufacturing and re-assembly for second use</b>	<u>Lombardy</u> , Saxony, Basque Countries
9. Photovoltaic panels de-manufacturing	<u>Flanders</u> , Lombardy
10. Machining equipment retrofit and upgrade	<u>Emilia Romagna</u> , Lombardy
11. Manufacturing of metal-sponge catalysts from aluminum waste material for chemical catalysts.	<u>Emilia-Romagna</u> , Lombardy
12. Recovery of both metallic and non-metallic parts of slags, incinerator bottom ash, leaded glass - closing the material loop.	<u>Wallonia</u> , Lombardy, Basque Countries

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# I progetti del De- e Remanufacturing for CE demo-case



## H2020 PROJECTS

### Dealing with batteries



FiberEUse

Composite recycling and reuse in value-added products



CarE-Service

Re-use and remanufacturing of hybrid and electric vehicles components through smart and movable modules



DigiPrime

Circular Economy digital platform overcoming current information asymmetry among value-chain stakeholders



SCREEN Synergic Circular Economy across European regions

Replicable and scalable approach to support EU transition to new CE cross-regional value-chains

## INTERREG PROJECTS



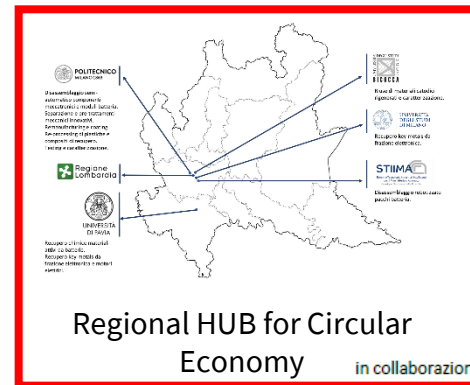
GREENOMED

Methodology for the collaborative design and implementation of pilot plants under the logic of Smart Specialization



Circe  
Interreg Europe

Strengthening the diffusion of Circular Economy (CE) in Europe, modifying or readdressing selected policy instrument





# GRAZIE PER L'ATTENZIONE!

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