Vanguard Initiative New Growth through Smart Specialisation

Building EU Value Chains through S3

Vanguard as a tool for internationalisation of S3 and activities of regional clusters

RegioneLombardia

Asturias
Auvergne - Rhône-Alpes
Baden-Württemberg
Basque Country
Cantabria
Catalonia
Dalarna
Emilia Romagna
Flanders
Galicia
Ile de France
Lombardia
Malopolska
Navarra
Nord pas de Calais
Norte
Nort Rhine-Westphalia
Ostrobothnia
Pays de la Loire
Randstat
Skåne
Saxony
Scotland
Silesia
South Denmark
South Netherlands
Tampere Region
Upper-Austria
Wallonia

Vanguard & EU Value Chains

The **Vanguard Initiative** is a coalition of European regions committed to enhancing the **growth and competitiveness of their companies**, through **inter-regional cooperation**, **co-investment** and **industrial innovation** along **EU value chains**
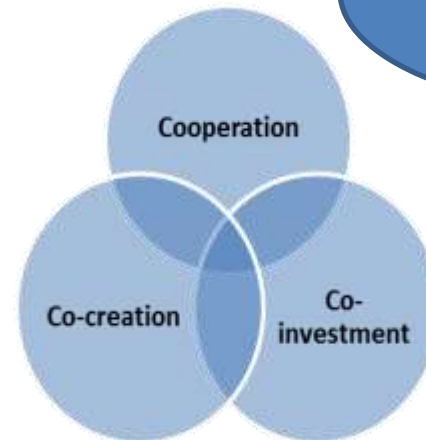
30 Partner Regions

Cooperation

Co-creation

Co-investment

https://www.youtube.com/watch?v=7h5I6vvrkZY

www.s3vanguardinitiative.eu

VANGUARD INITIATIVE
NEW GROWTH THROUGH SMART SPECIALISATION

VIDEO

https://www.youtube.com/watch?v=7h5I6vvrkZY -
https://www.youtube.com/watch?v=7h5I6vvrkZY

www.s3vanguardinitiative.eu

How does Vanguard work?

VANGUARD INITIATIVE
New growth through smart specialisation

Regional Public Private Partnerships

Cluster platforms
Companies and innovation actors in the regions

EU INSTITUTIONS

OPERATIONAL LEVEL

POLITICAL LEVEL

Regional representatives in Brussels

S3 as coordination principle

EU Value Chains

PILOTS

PROJECT
PROJECT
PROJECT

ACTORS

Cluster Platforms

Public Private Partnership

Enterprises

Innovation actors
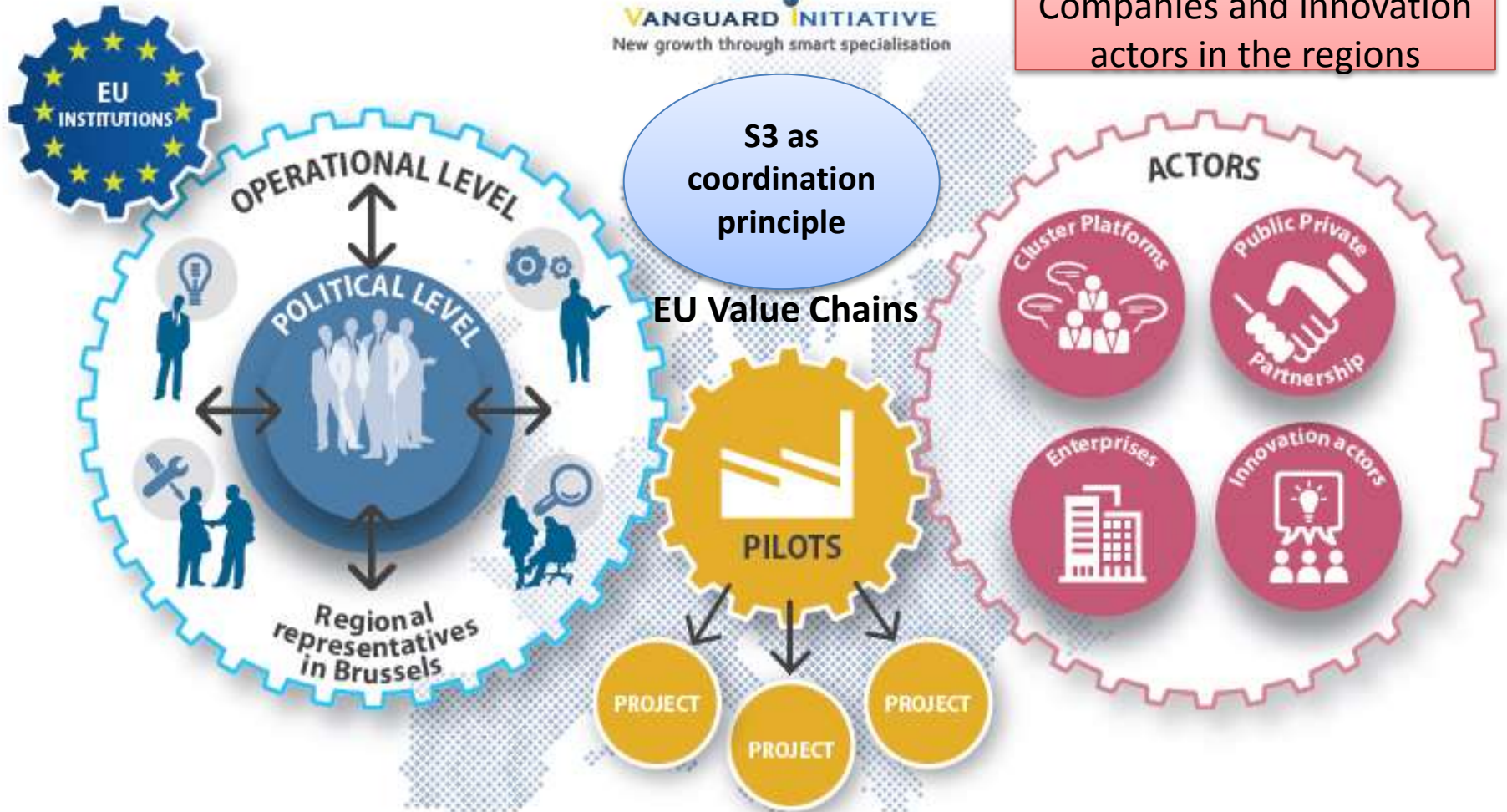
5 Pilot projects & 27 Demo cases (pilot S3P)

Vanguard Initiative Pilot Projects

- Vanguard Initiative regions explore **industry-led opportunities** in specific **Key Enabling Technology** (KET) areas where inter-regional collaboration and co-investment could result in the creation of **EU value chains**.

- The aim is to generate **proposals** which can be translated into **jointly funded projects or pilots**.

'**Conditions**':

- **Industry-leadership**

- Demonstrable international market potential for **up-scale projects/investments**

- **Uptake of research results – innovation to the market -TRL >5**

- Boost **EU-value chains** through **smart specialisation**

- **Leading by example** in supporting the implementation of European industrial policy

Vanguard Initiative Pilots

The **focus** is on the **joint development of networks of demonstrators and pilots** to accelerate market development for **existing and emerging value chains** for competitive and **high-value added products**

1. High-performance production through 3D-printing
(lead: South-Netherlands, Flanders and Norte)

2. Efficient and Sustainable Manufacturing
(lead: Catalonia and Lombardy)

3. Advanced Manufacturing for Energy Applications in Harsh Environments
(lead: Scotland and Basque Country)

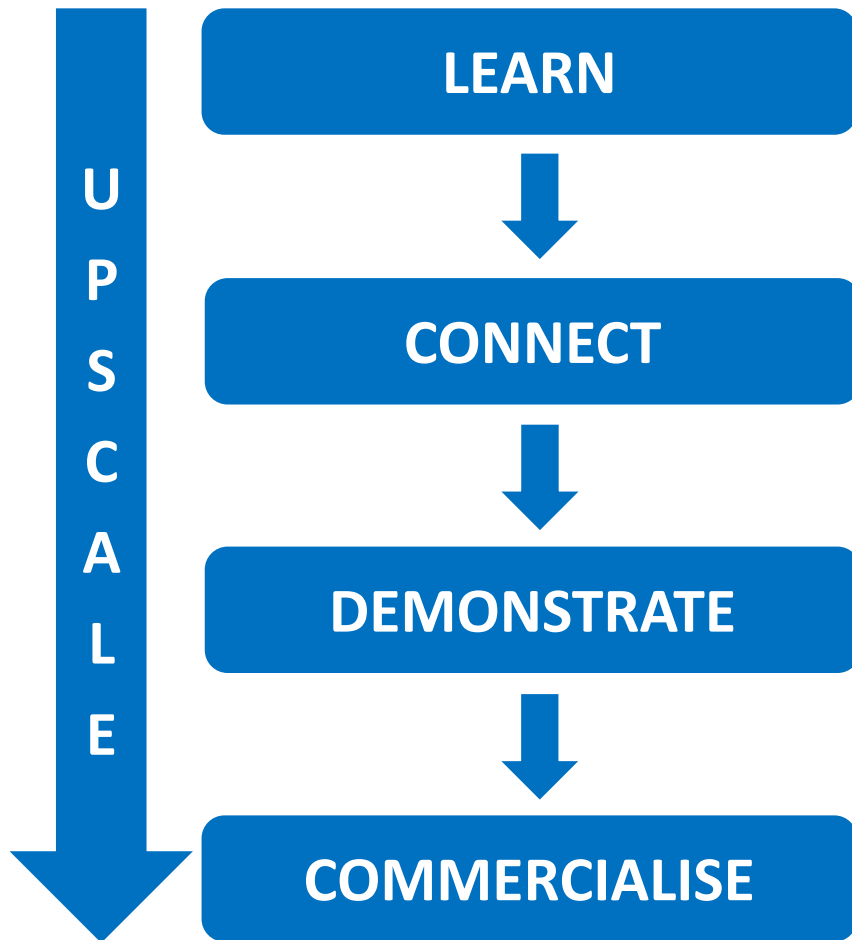**4. Bioeconomy –** Interregional cooperation on innovative use of non - food Biomass
(lead: Randstad Region and Lombardy)

5. Nano Enabled Products
(lead: Skåne and Tampere)

27 demo cases

Vanguard Initiative Methodology

LEARN

CONNECT

DEMONSTRATE

COMMERCIALISE

UPSCALE

Scoping paper
(common vision and methodology)
Identifying **lead regions**
Mapping questionnaire
(potential/gaps)
Identifying **lead-actors**
(capability, capacity, opportunity)

Matching events for complementary partners
Project development for **existing or new value chains**

Networked demonstration
(Joint Demonstration Initiative)
Pilot lines and first of a kind factories
TRL 6 – 7 - 8

Launch of new ventures / start - ups
New value chains bring **research results to the market**
TRL 9

Vanguard Initiative
The Match Making event

VIDEO:
https://www.youtube.com/watch?v=7h5I6vvrkZY
3min 23

https://www.youtube.com/watch?v=ixDAKGapaUc
1min 26

Vanguard Initiative
Where are we?

EXEMPLE from ESM Pilot: Application Domain (Re-De Manufacturing)

The main goal of the pilot is to *integrate* a multidisciplinary set of *advanced and innovative enabling technologies* and to use the *regional smart specialization* in synergic way to offer a *service to European end-users*, mainly manufacturing companies, to solve specific *sustainability-oriented problems* related to their products.
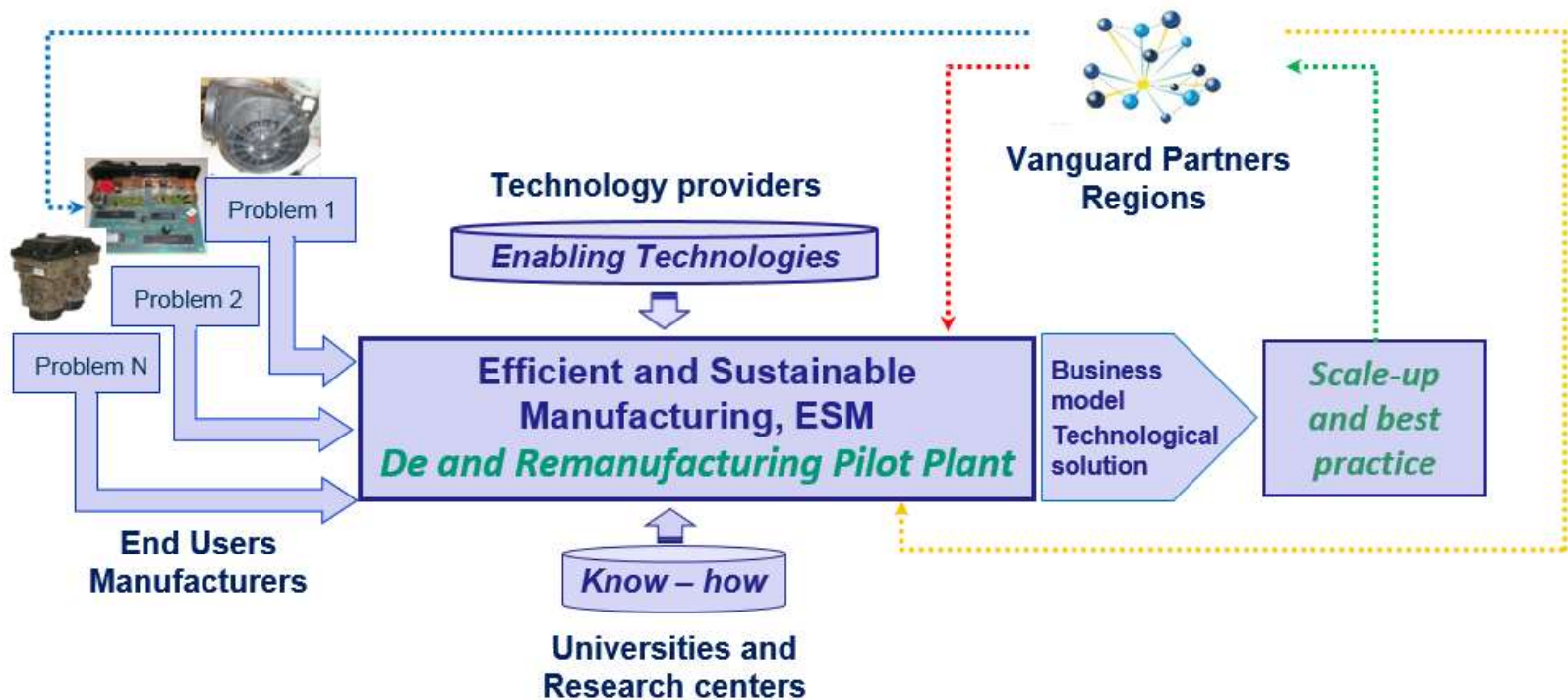
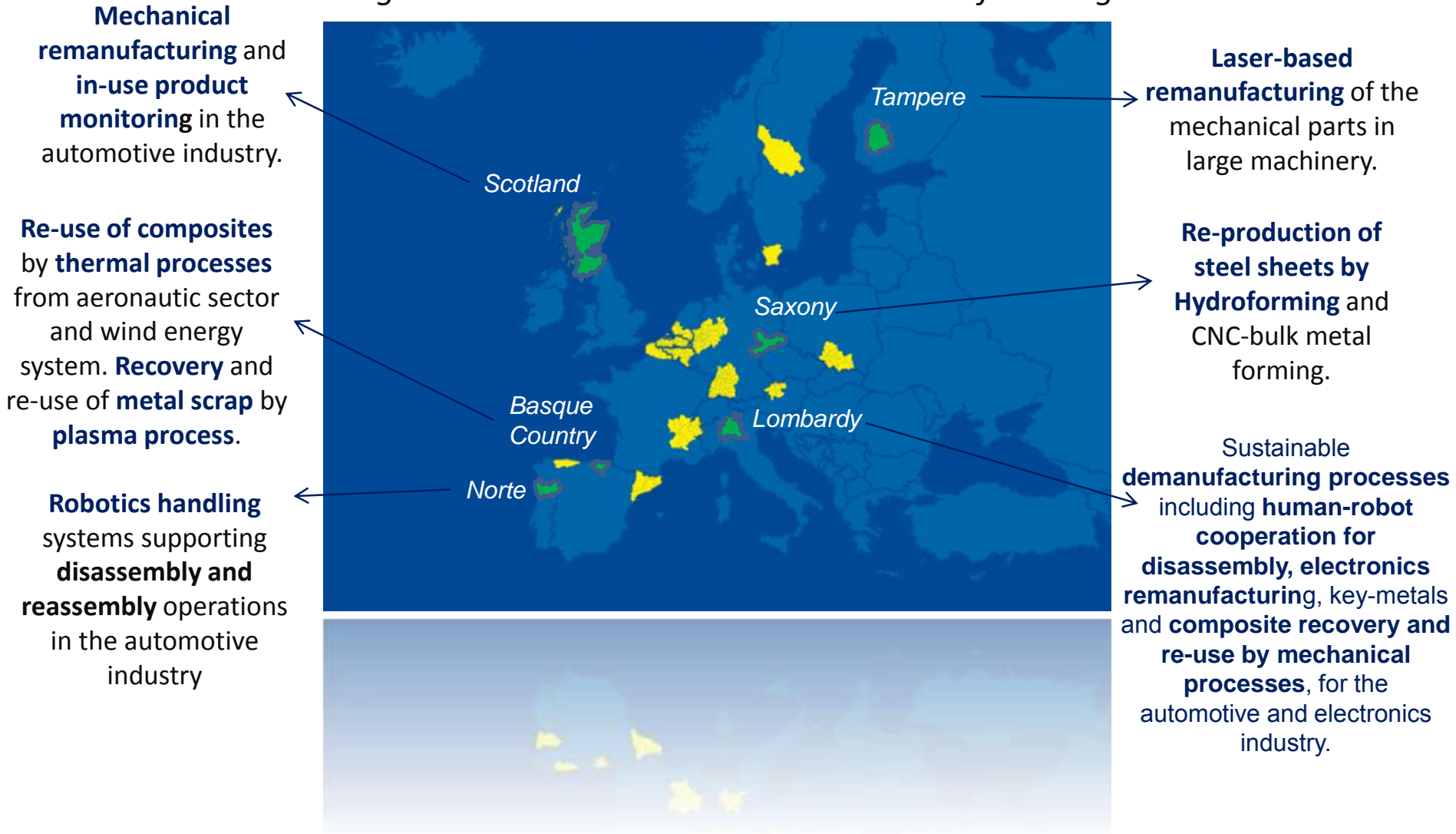# ESM Pilot Geographic Configuration and Regional Specialization

Vanguard Pilot Network on De- and Remanufacturing

Mechanical remanufacturing and **in-use product monitoring** in the automotive industry.

Re-use of composites by **thermal processes** from aeronautic sector and wind energy system. **Recovery** and re-use of **metal scrap** by **plasma process**.

Robotics handling systems supporting **disassembly and reassembly** operations in the automotive industry

Laser-based remanufacturing of the mechanical parts in large machinery.

Re-production of steel sheets by Hydroforming and CNC-bulk metal forming.

Sustainable **demanufacturing processes** including **human-robot cooperation for disassembly, electronics remanufacturin**g, key-metals and **composite recovery and re-use by mechanical processes**, for the automotive and electronics industry.

Map labels: Tampere, Scotland, Saxony, Basque Country, Lombardy, Norte

Estimating the parameters of this business model

Analysis & identification of *sectorial Use Cases*, with potential industrial partners associated, from different regions involved.

For each *specific Use Case*, a business case has been detailed including a *business plan* for the industrial take-up of the developed solutions within *specific value chains*.

Regional/Cross-Regional Use Case	Involved Regions
Composite Recovery from Wind Energy System	**Basque Countries**, Saxony, Lombardy, Tampere
Heavy machinery components remanufacturing	**Tampere**, Basque Countries, Lombardy, Saxony
Automotive parts remanufacturing	**Scotland**, Lombardy, Saxony, Norte
High-value TLC systems and Electronics Recovery	**Lombardy**, Tampere
Metal components reprocessing	**Saxony**, Tampere, Lombardy
Remanufacturing of e-motors	**Saxony**, Lombardy, Norte

This pilot network is designed to be a "*generator" of new industrial pilots*
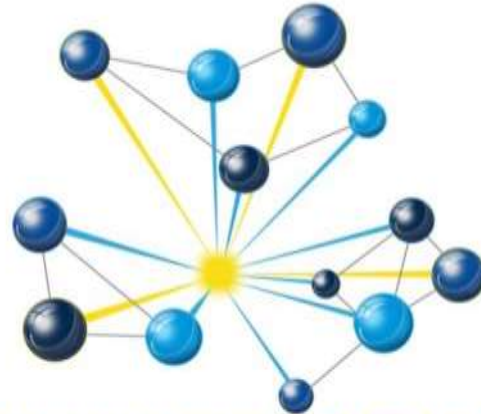
Conclusion

The Vanguard Initiative is a clear example of the power of connected regional innovation ecosystems and of the added benefit that can be achieved within EU value chains