EUROPEAN CLUSTER COLLABORATION PLATFORM

European Cluster Panorama 2021

Leveraging clusters for resilient, green and digital regional economies

An initiative of the European Union

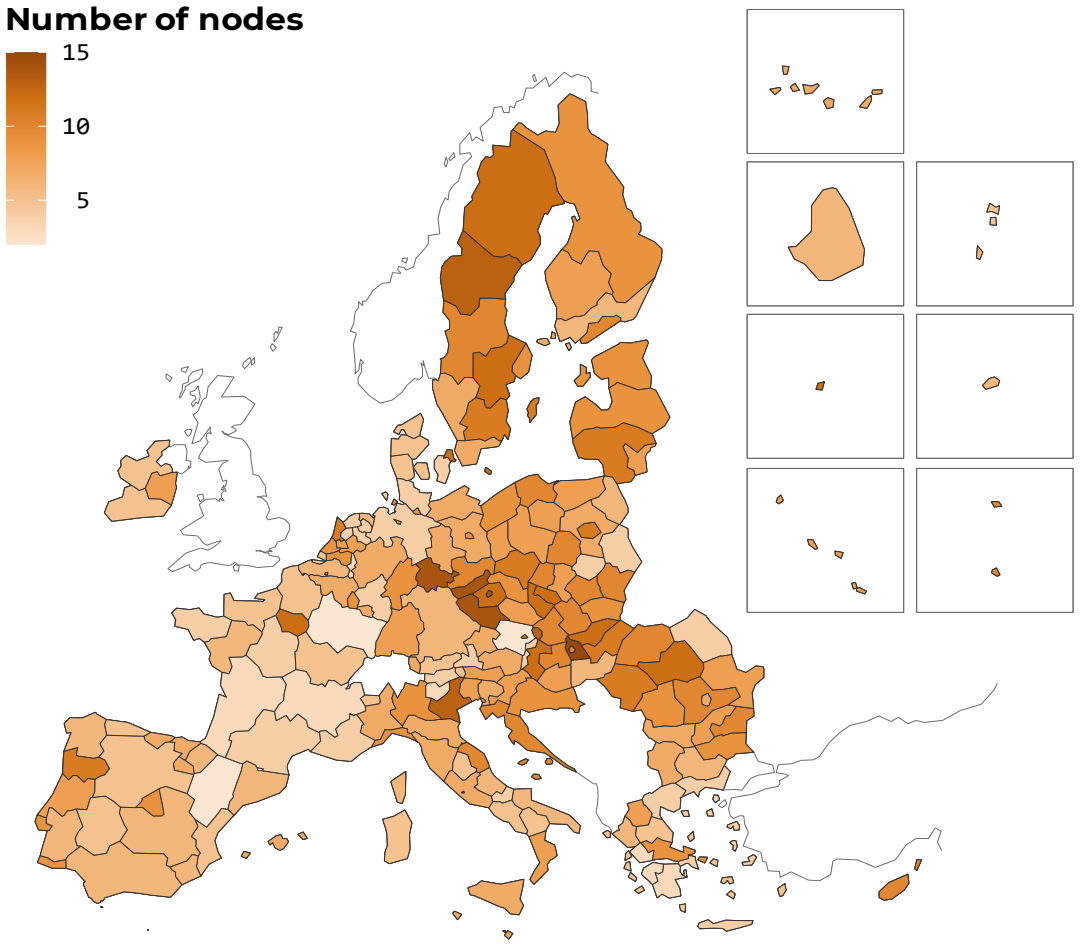
Overview

- **Comprehensive picture** of clusters and cluster organisations in Europe
- Maps specialisation of economic activity across **201 regions in EU-27 countries**, based on sector data for employment and value added.
- Extends analysis to **14 pan-European industrial ecosystems** identified
- Explores the contribution of clusters to **green and digital transition**
- Develops a **new typology of regions** according to their specialisation profiles
- Analyses the relationships between specialisation and different dimensions of **regional performance**

Clustering is a key feature of the European economy

- Clear **geographic specialisation** in NACE 2-digit sector activity
- **1160 industry-relevant specialisation nodes** across 201 EU-27 regions (Location Quotient > 1.5 and >1% of EU-27 sector employment)
- **1501 region-relevant specialisation nodes** across 201 EU-27 regions (Location Quotient > 1.5 and >1% of regional employment)
- Region-relevant specialisation nodes are present in all regions and account for **24.4% of EU-27 employment**
- They are heavily concentrated in **traded activities, especially manufacturing**

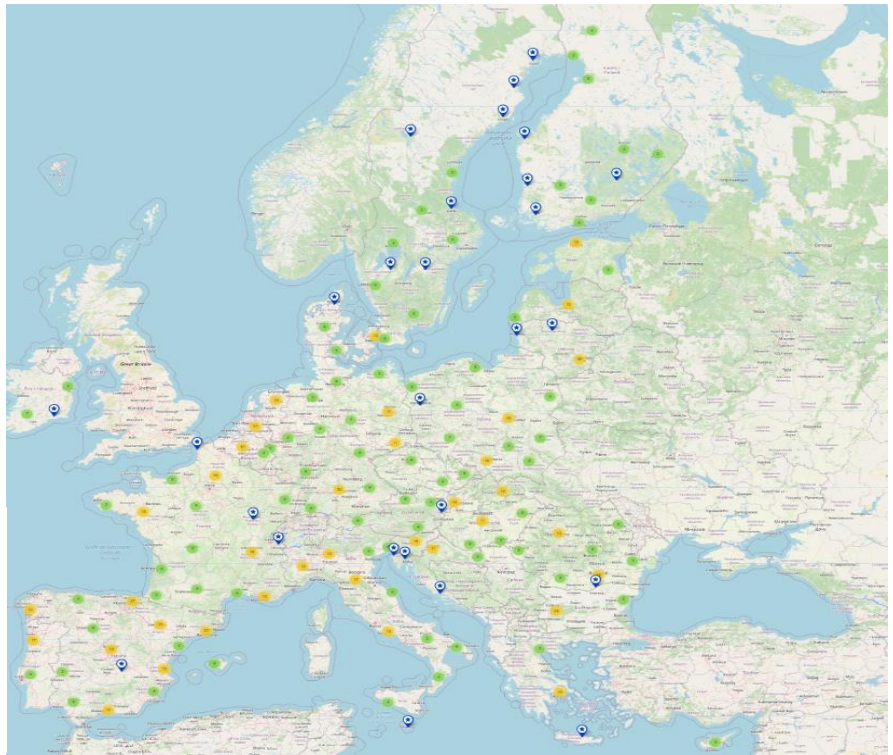
Region-relevant specialisation nodes



Source: Based on data from Eurostat and national statistics offices.

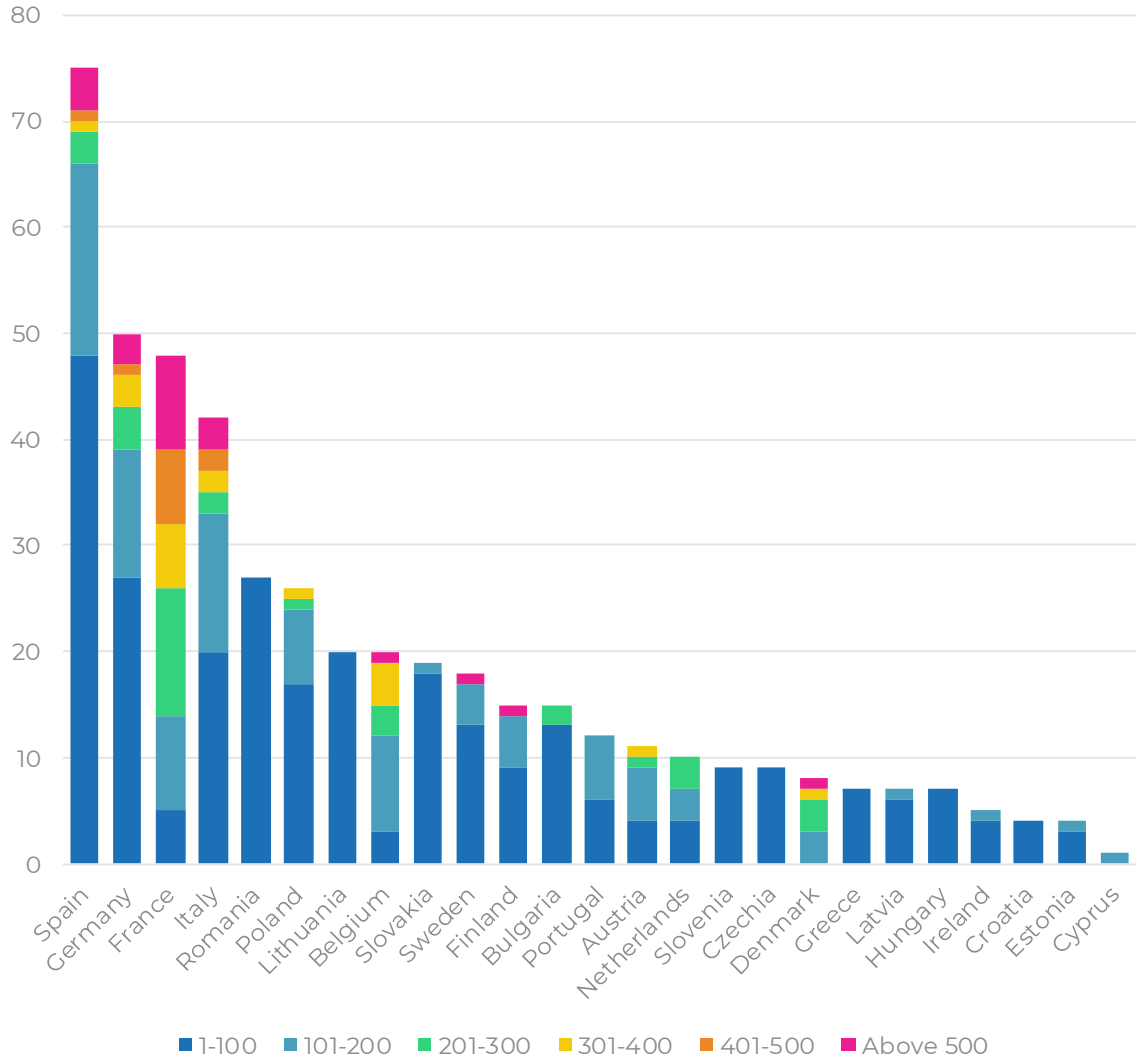
EU-27 Cluster organisations are widespread

- **1036 EU-27 cluster organisations** are registered on the ECCP
- Heavily concentrated in **traded activities and especially manufacturing**
- Average **membership composition** of 70% SMEs, 10% large firms and 8% research organisations



Source: ECCP interactive cluster mapping tool

Size profile of EU-27 cluster organisations



Source: ECCP profile data; sample of 468 cluster organisations with updated profiles on 29/11/2021

EU-27 Cluster organisations support members in diverse ways

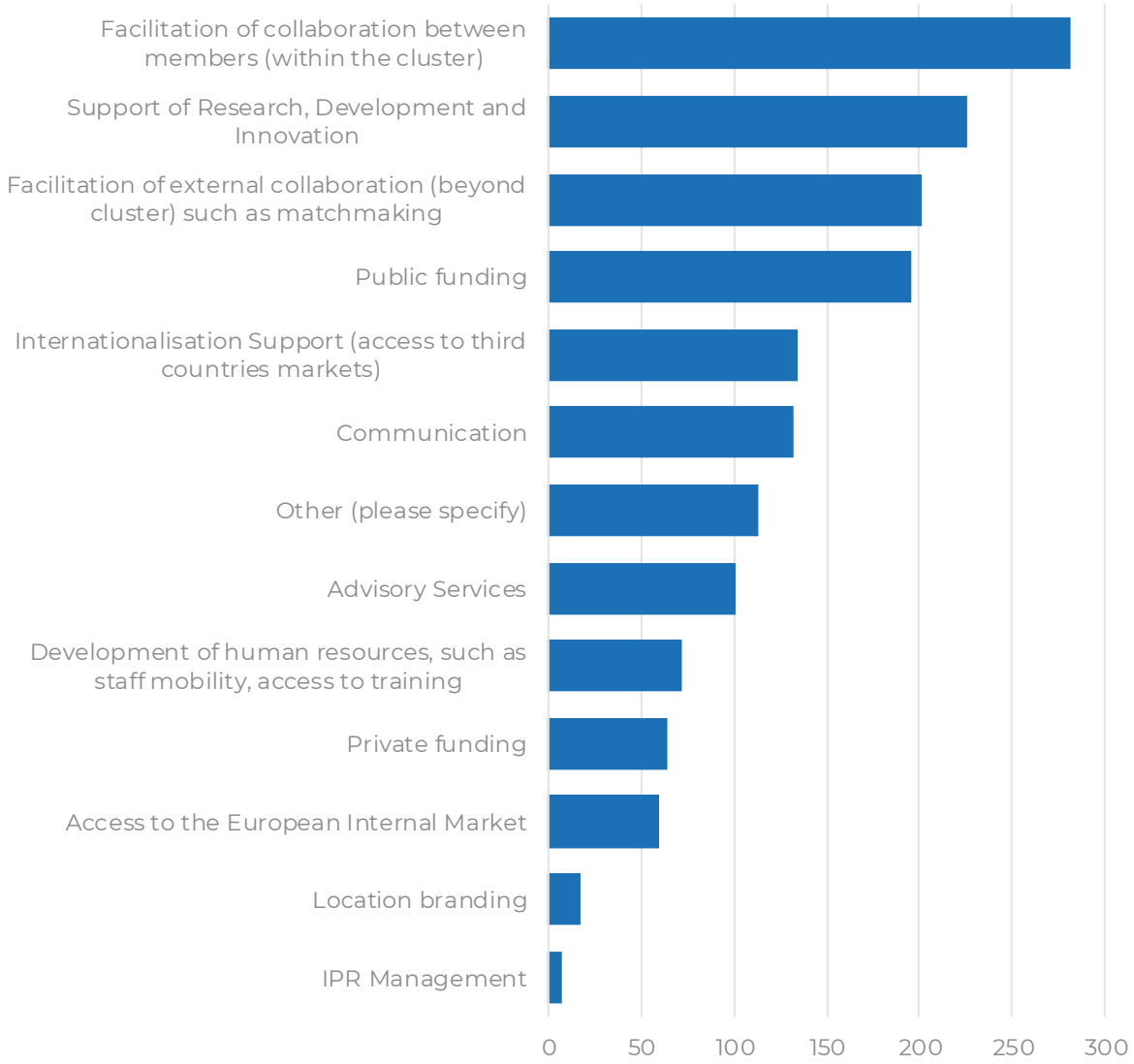
Key areas of support for members

- 85% support internationalisation
- 82% support digitalisation
- 62% support companies to be green
- 49% support social innovation
- 21% provide training activities

Increasingly professionalised

- 68% have some form of quality label
- 42% have the ESCA label

Top services provided by EU-27 cluster organisations

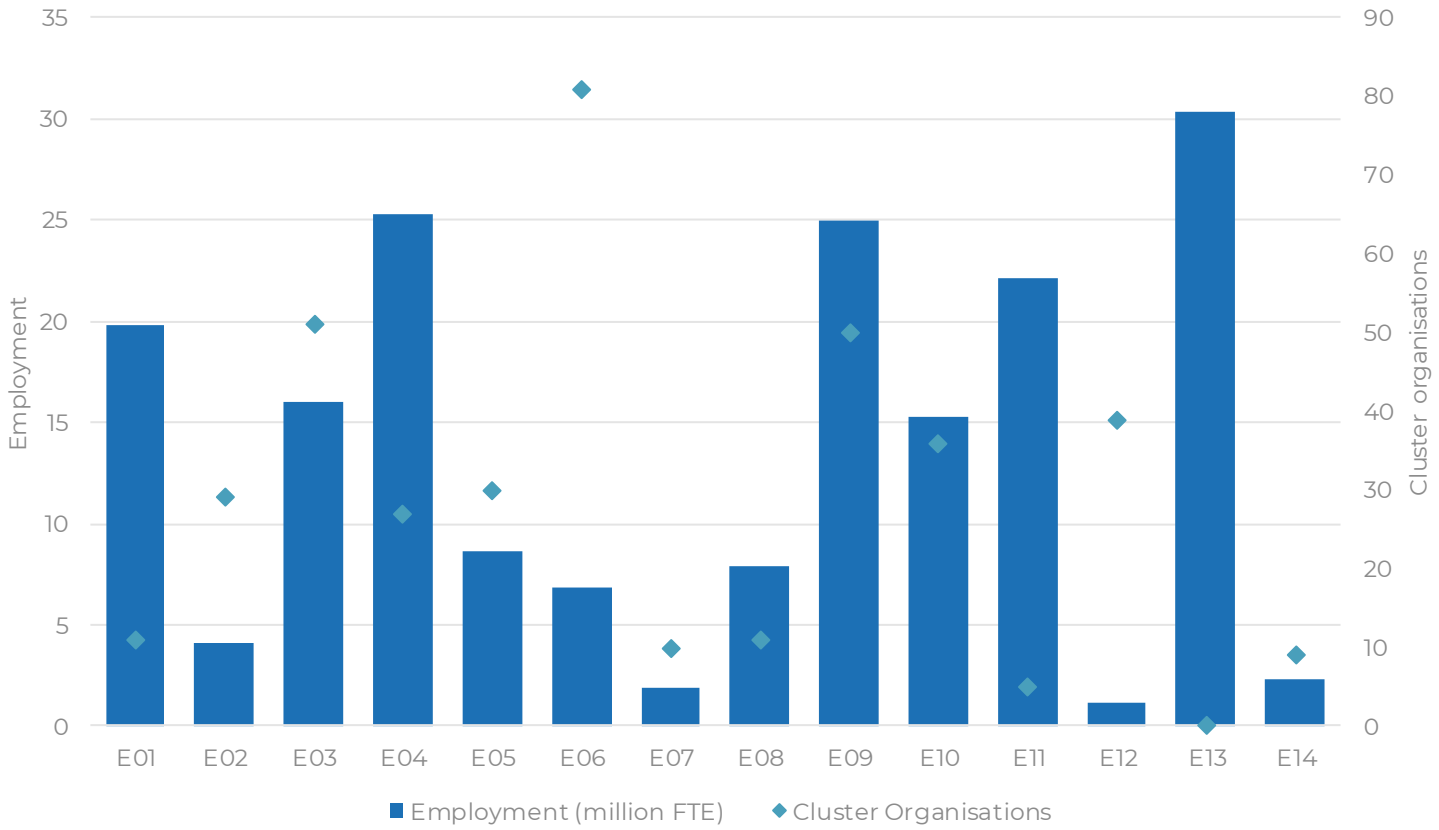


Source: ECCP profile data; sample of 468 cluster organisations with updated profiles on 29/11/2021

Industrial ecosystems and clusters

- EU-27 employment is spread more evenly across industrial ecosystems than sectors
- Agri-food, energy intensive industries and textile ecosystems tend to greater regional specialisation
- Regions with national capitals tend to be more productive in all ecosystems
- Cluster organisations are most prevalent in the digital ecosystem, highlighting its transversal nature despite low employment

Employment and cluster organisations in 14 industrial ecosystems

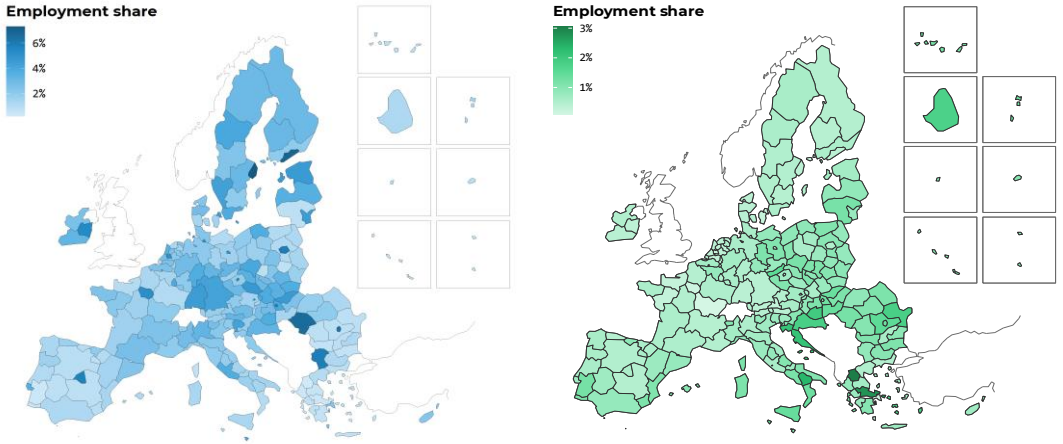


Source: Based on data from Eurostat, national statistics offices and ECCP profile data; sample of 468 cluster organisations with updated profiles on 29/11/2021.

Note: E01. Tourism; E02. Aerospace & Defence; E03. Agri-food; E04. Construction; E05. Creative & Cultural Industries; E06. Digital; E07. Electronics; E08. Energy Intensive Industries; E09. Health; E10. Mobility-Transport-Automotive; E11. Proximity & Social Economy; E12. Renewable Energy; E13. Retail; E14. Textile

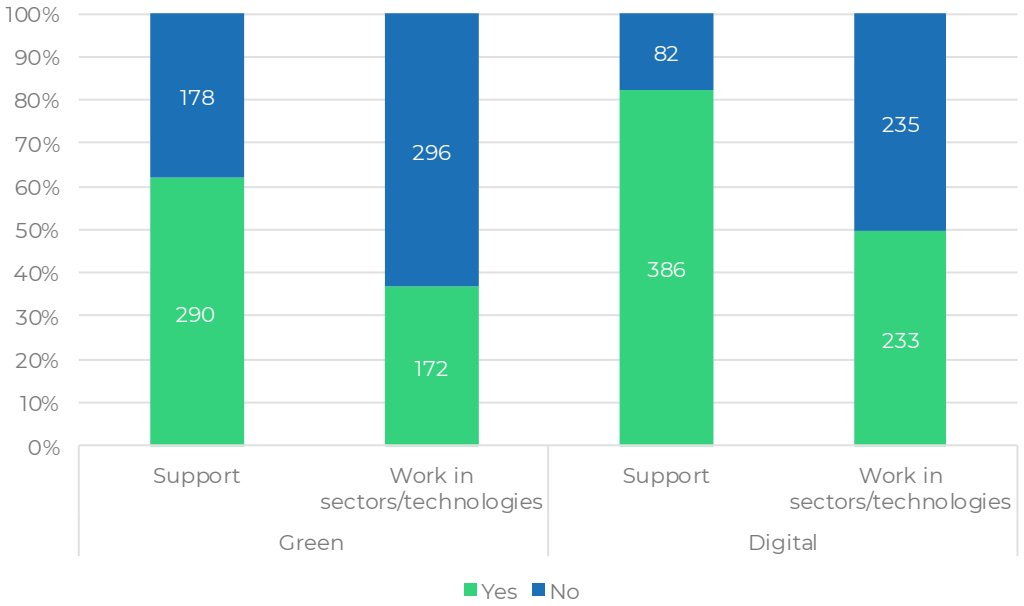
Clusters supporting green and digital transition

- Share of employment in 'traditional' green (1%) and digital (3%) sectors does not capture the **transversal nature of green and digital transition**
- But the **transversality is clearly captured by cluster organisations**



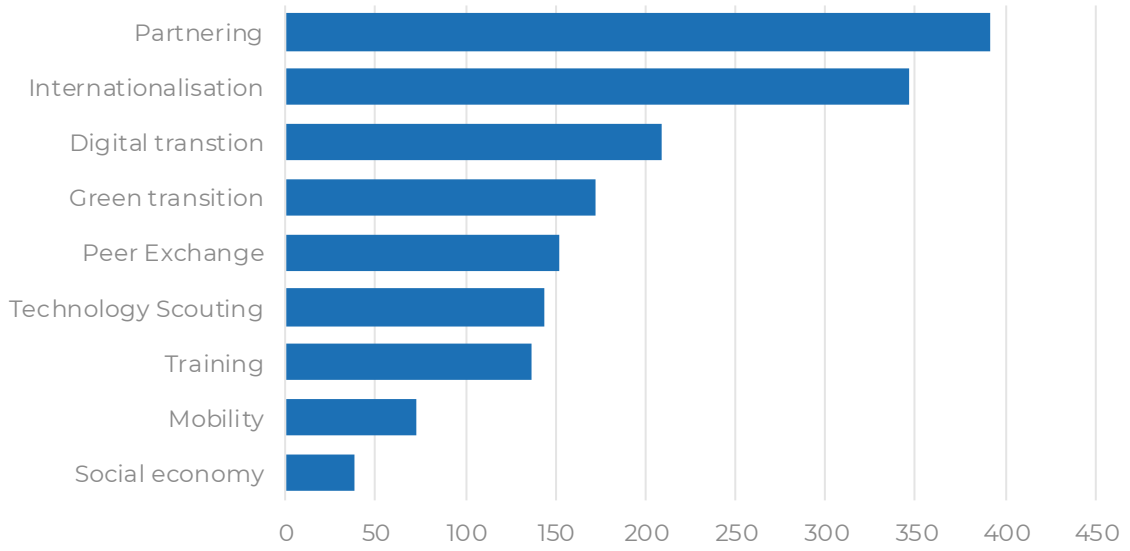
Source: Based on data from Eurostat and national statistical offices

Cluster organisations supporting green/digital transition



Source: ECCP profile data; sample of 468 cluster organisations with updated profiles on 29/11/2021

Collaboration interests of EU-27 cluster organisations



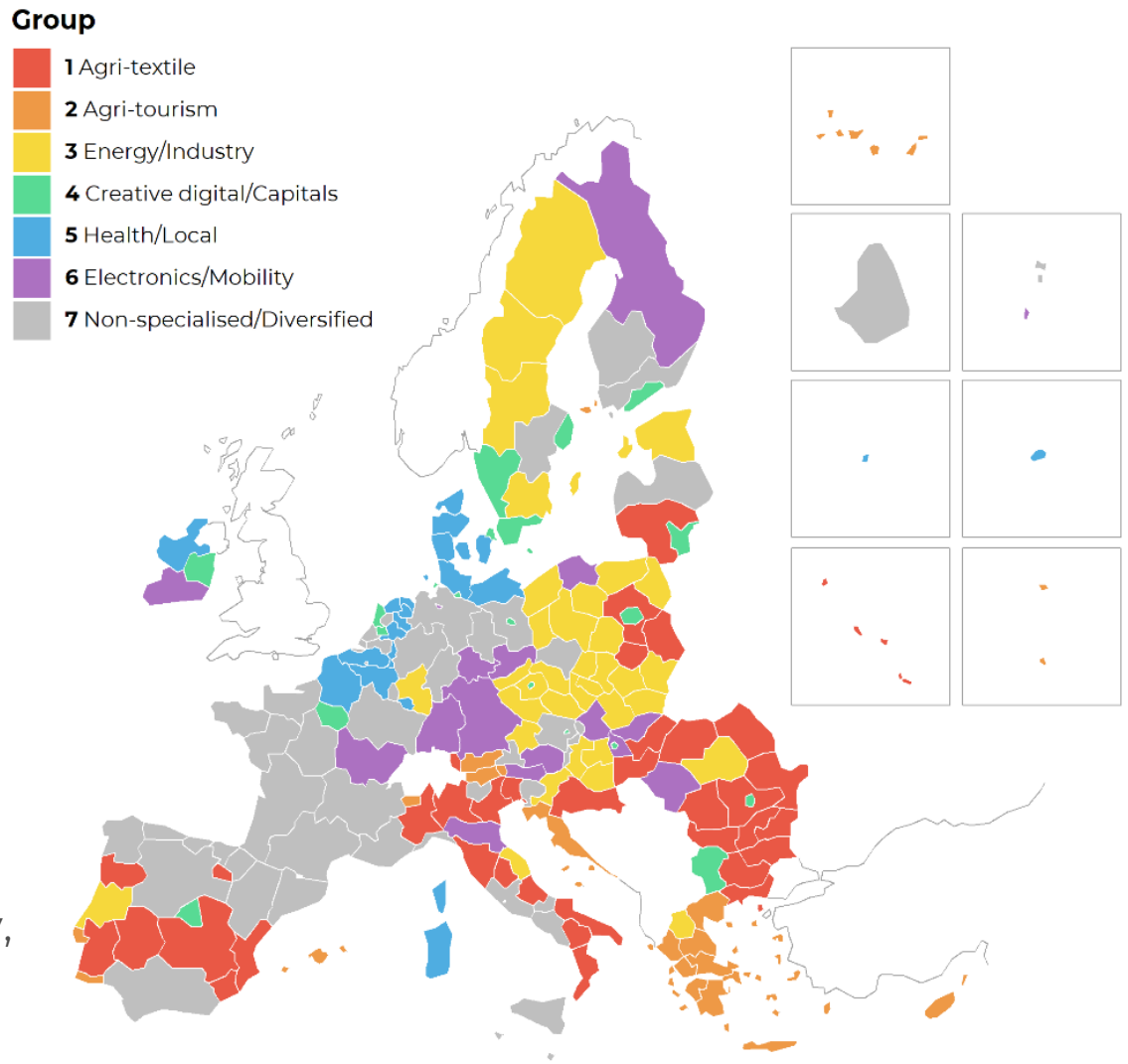
Source: ECCP profile data; sample of 468 cluster organisations with updated profiles on 29/11/2021

New Typology of Regions

- Statistical data on employment highlights **different specialization profiles across EU-27 regions**

- This is reflected in a new typology of 7 groups of regions that share similar specialization profiles in industrial ecosystems
  - ✓ **Agri-textile** (37 regions)
  - ✓ **Agri-tourism** (22 regions)
  - ✓ **Energy / industry** (35 regions)
  - ✓ **Creative / Digital / Capitals** (19 regions)
  - ✓ **Health / Local** (21 regions)
  - ✓ **Electronics / Mobility** (17 regions)
  - ✓ **Non-specialized / Diversified** (50 regions)

- Regions in the Creative/Digital/Capitals, Electronics/Mobility, and Non-specialised/Diversified categories host considerably more **cluster organisations** on average



Source: Based on data from Eurostat and national statistics offices.

Clusters and Regional Competitiveness Performance

- Sector specialisation is associated with stronger **innovation behaviour and economic performance** when specialisation nodes account for a significant proportion of European employment in their sectors (industry-relevant)
- Sector specialisation is associated with stronger **employment and social performance** when specialisation nodes account for a significant proportion of regional employment (region-relevant)
- The presence of **cluster organisations** is mainly related to stronger performance in the economic or technological aspects of competitiveness
- Sector specialisation is negatively correlated with key dimensions of **green performance** and positively correlated with key dimensions of **digital performance**
- **Creative/Digital/Capitals** regions perform better in most dimensions of regional competitiveness; **Agri-food**, **Agri-textile**, and **Energy/Industry** regions perform worse

Dimension		Indicator	Cluster organisations	Regional relevant nodes	Industry relevant nodes
Outcome indicators		GDP per capita (PPP)	0.16		0.23
		Air pollution (pm2.5)		0.19	0.31
		Population satisfied with efforts to preserve the environment			
		Population at risk of poverty and exclusion		-0.16	
		Long-term unemployment		-0.26	-0.21
Intermediate performance indicators		Apparent labour productivity	0.16		
		Employment rate		0.21	
		PCT patents per million population	0.20		0.15
		PCT patents in ICT		0.16	0.17
		Green PCT patents			
		CO_2 emissions per electricity production		0.20	0.25
Drivers of competitiveness:	Firms' behaviour	Business R&D expenditure	0.27		0.28
		PCT Patent co-invention	0.19		0.20
		Gross fixed capital formation			
	Business environment	Electricity production that comes from renewable sources			-0.25
		Public R&D expenditure			0.16
		Human resources in science and technology	0.16	0.21	0.29
		Population aged 25-64 with upper secondary or tertiary education		0.32	0.18
		Lifelong learning			
		Households with broadband access			
		Individuals purchases over the internet			
		Digital engagement (freq. of internet access)			
		Quality of Government			

Source: Based on data from Eurostat, national statistics offices, other statistical sources, and ECCP profile data; sample of 468 cluster organisations with updated profiles on 29/11/2021.

Key Messages

- **Clustering** of economic activity in traded sectors is a key feature of the European economy

- **Cluster organisations** across Europe provide a wide range of support services to their (largely SME) members, and their presence is positively correlated with performance in economic and technological dimensions of regional competitiveness

- **Green and digital transition** permeate transversally across the spectrum of European clusters, and there is evidence that EU-27 cluster organisations see themselves as playing key roles in these transitions

- **A critical policy challenge** is to leverage cluster organisations to accelerate transition in the traded, manufacturing activities where the greatest efforts are needed and greatest competitiveness benefits possible