



#### A Sustainability Journey into Cluster Policies Across the EU

#### 28th February 2024 | Online













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**SMART** 





Claudia Soncin

TCI Network







# Agenda

#### **3:00pm - Introduction to Accelerate GDT Project**

Claudia Soncin, Project Manager Global, TCI Network

#### 3:10pm - Keynote speaker + Q&A

Annie Renders, Head of Unit Cluster Policy, VLAIO-Flanders

#### **3:40pm - EU Cluster Ecosystem Analysis**

Dr John Hobbs, Senior Lecturer, Munster Technological University

4:10pm - Panel Discussion + Q&A

4:30pm - Wrap up and conclusions



#### MODERATOR & PRESENTER



Claudia Soncin TCl Network



John Hobbs Munster Technological University

#### **KEYNOTE SPEAKER**



Annie Renders VLAIO-Flanders Innovation & Entrepreneurship

#### EXPERTS FORM ACCELERATE GDT PARTNER REGIONS



**Anna Laura Fusco** Cittá metropolitana di Torino



**Filip Kruta** Czech Invest



**Nica Muller** Austria Wirtschaftsservice (aws)



**Peter Keller** Ministry of Public Administration and Regional Development of Hungary



Alberto Pezzi ACCIÓ, Catalán Agency for Business Competitiveness



**Domink Bartz** Duisburg Business & Innovation



Annie Renders

VLAIO-Flanders Innovation & Entrepreneurship



### Clusterpolicy & twin-transition in Flanders

FLANDERS INNOVATION & ENTREPRENEURSHIP

Accelerate GDT February 28<sup>th</sup> 2024



- Introduction to Flanders/Vlaio/clusterpolicy
- Challenges to support clusters and cluster development
- Intercluster collaboration for twin-transition (green&digital)

### Flanders / VLAIO



#### **FLANDERS**

- 13,625 km<sup>2</sup> with 6.774.807
- Open economy, internationally oriented, diversified economy
- Strong chemical industry, logistics, food processing, ...

#### VLAIO

- Governmental agency for innovation and entrepreneurship
- Industry support for R&D&I: directly 200 mio €/y & via clusters 70 mio €/y
- Services to companies (training, coaching, ..)

### **Support scheme for innovation clusters in Flanders**

Decree of the Flemish Government of 4 March 2016 "Support to innovation clusters"

- Goal: Unlock untapped economic potential and increase competitiveness of companies in Flanders through collaboration between all actors
- Target group
  - Companies operating in Flanders and with growth ambitions
  - Innovative and International outlook
  - Open to collaboration with other companies and knowledge centres
- Characteristics
  - Bottom-up initiatives from companies , companies in de "drivers' seat",
  - Clear goal and competitiveness program, clear commitment from companies
  - Spearhead clusters : Strategic domain for Flanders, triple helix, ambitious, long-term strategy



ENTREPRENEURSHIP

### **Cluster support scheme (Since 2017)**

Spearhead clusters (7 > 6)	Innovative business netwo (14 +6 > 3)	rks
Cluster organisation as facilitator		
<ul> <li>Removal of obstacles for growth</li> </ul>		
<ul> <li>Activities along the innovation spectrum (all TRL-levels)</li> </ul>		
<ul> <li>Initiate collaboration inside and outside cluster</li> </ul>		
Strategic domain	Bottom up	
Ambitious, large scale	Smaller scale	
ong term vision – intermediate results	Short term results	
Triple helix (comp, KI, gov) – to quadruple helix	All relevant actors, focus on businesses	
Contract based on competitiveness programm	Contract based on action plan	
Commitment of all partners in clusterpact		
Max 10j, max 650 k€/γ funding	Max 3j, max 150 k€/y funding	
50% private investment	50% private investment	FLANDE

**ENTREPRENEURSHIP** 

See : eccp-factsheet-belgium.pdf (clustercollaboration.eu)

#### **R&D&I ecosystem: overview**



FLANDERS INNOVATION & ENTREPRENEURSHIP

### **Challenges in clusterpolicy**

- Spearheadclusters innovative business networks
- Clusters as neutral actor in innovation-ecosystem
- Development of clusters to support new business opportunity
  - Blue Cluster



# 2017: Development of the Blue Cluster in Flanders

Google blue economy Wikipedia https://en.wikipedia.org > wiki > Bl... Blue economy World Bank https://www.worldbank.org > news What is the Blue Econom THE BLUE ECONOMY OECD https://www.oecd.org > regional Cities and Regions for a Blue Economy - water 100 MILLION JOB Gunter Pauli PERCENT TO THE CLUB OF ROM

- 65 km coastline in Flanders
- Strategic domain for Flanders?
- Economic activities?
- Knowledge base in Flanders?
- Commitment from companies?

FLANDERS INNOVATION & ENTREPRENEURSHIP



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Clusters for Growth

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The case of the

#### Governance

**Stakeholders General Assembly** All "working" members General Local Ngo's Press authorities public withill till the **Steering Group Board of directors** Scientific Advisory Representation of enterprises, Premium-members – president . i 2 Hard Alle He addition **Board (SAB)** president SAB, VLAIO & vice-pres SME committee President: Flanders Marine President SAB and VLAIO Institute (VLIZ) (observers) SME committee President and vice-president







Clusters for Growth

### **Cluster supporting twin-transition (green&digital)**

- Cluster projects in each of the transition priorities
  - Digitalisation
  - Circular economy
  - Energy transition
  - Health care
- Intercluster collaboration in each of the transition priorities
- Intercluster collaboration in twin-transition Green Digital



#### **Project 2020 – 2021 – 2022 – SDG labelling**

Flemish policy priority – SDG labeling	% cluster projects 2020-2022
Digitalisation	38
Energy/climate	36
Circular Economy	22
Env./Biodiv./water	20
Food	18
Health	18
Mobil./Smart Cities	6
Education/Training	1









samen voor **#sterkgroeien** 

FLANDERS INNOVATION & ENTREPRENEURSHIP

### InOpSys: Circular Economy is not a hype, it is a necessity

- Start-up company, member Catalisti (spearhead cluster sustainable chemistry)
- Financial support for collaborative research (industry/university)
  - Mobile unit for on-site cleaning and re-use of process water in chemical plant or pharmaceutical production site

&

- recover valuable material e.g. metals
- Networking with other companies (start-up, SME, Large firms)
- Peer learning "mentor me"



samen voor **#sterkgroeien** 



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Case study Roadmap food packaging of the future

> Circular economy







samen voor #sterkgroeien





samen voor #sterkgroeien

### Roadmap for food packaging: Circular Economy Project Multi2recycle

- Multi-layer food packaging
  - Recyclable + optimal barrier for food
- Several case studies with different materials (mixed and pure waste streams- PP, PET, ...)
  - Recycling limits
  - Tolerance levels for food packaging
- Broad dissemination to food industry and packaging material providers





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**FNTREPRENEURSHIP** 

#### **Digital & energy transition**



### **Logigrid : Smart Microgids for logistics**

- Prepare logistics sector for energy transition
- Cluster VIL (logistics) + cluster FLUX50 (energy) : testing the deployment of marketready (digital&energy) technologies at six business parks.
- Explore energy partnerships with neighbour companies: energy community.
- Goal: rationalise energy consumption and reduce energy bills.
- Green and sustainable electricity production essential for energy transition. Logistics companies, with large roof areas and their specific location offer many opportunities for producing green electricity.



samen voor **#sterkgroeien** 



samen voor **#sterkgroeien** 

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Thank you for your attention

annie.renders@vlaio.be

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John Hobbs Munster Technological University

<b>CLUS</b>	FER ECOS	SYSTEM	ANALY	SIS			SLIDE 8
Capital: Size: Population: National GDP: GDP per capita: % Unemployment:	Dublin 84,421 sq. km2 5,123,536 (2022) €423.5 billion (2021) €70,530 (2021) 5.6% (2021)	Barcelona 32,108 sq. km2 7,700,000 (2022) €270,71 billion (2022) 33400 (2022) 9.7% (2022)	Turin 25,387 sq. km2 4,240,736 (2023) € 146,289.3 (2022) € 29,500 (2020) 8% (2021)	Vienna 83,882 sq. km2 9,104,772 (2023) € 447,2 billion (2022) € 70,530 (2021) 4.8% (2022)	Budapest 93,026 sq. km2 9,723,536 (2022) \$222,201 billion (2022) \$21,075 (2023) 4.2 % (2022)	Prague 78,870 sq. km2 10,827,529 (2022) €271,4 billion (2022) €25,396 (2022) 3.4 % (2023)	Düsseldorf 34,098 sq. km2 18,000,000 (2023) €793,7 billion (2022) €81,608 (2022) 7.5% (2024)
Partner:	Official Teicneolaidenta na Mumhan Munster Technological University      An Roinn Fiontar, Trádála agus Postaiochta Department of Enterprise, Trade and Employment	Catalonia e Trade & Investment	TORINO METROPOLI Città metropolitana di Torino	austria wirtschafts service	GOVERNMENT OF HUNGARY	CZECHINVEST	<b>DUISBURG</b> BUSINESS & INNOVATION
<b>Territory</b> :	Reports of Internet					Martin Contraction	Ketch Brand Hessen Hessen Brindland Hessen Baden Wurtemberg Baden Wurtemberg Baden Wurtemberg Wurtemberg Baden Wurtemberg Wurtemberg Wurtemberg Wurtemberg Wurtemberg
Source:	<image/>	Catalonia Clusters			Klauterfejleutei itrategia 2023-2020	Connection	

### POLICY BACKGROUND OF CLUSTERS IN IRELAND

• Recent national enterprise and economic policies recognised the potential of collaboration and clustering to support enterprise competitiveness, internationalisation, and productivity to secure long-lasting stable jobs and growth.



- State supports for such initiatives currently operate through a range of innovation, rural regeneration, and enterprise
  policy interventions rather than through a single or coordinated cluster policy framework.
- Regional Technology Cluster Fund (RTCF); Regional Enterprise Development Fund (REDF); Regional Enterprise Transition Scheme (RETS); Border Enterprise Development Fund (BEDF); InterTradeIreland – Synergy; Smart Regions Enterprise Innovation Scheme
- The Department of Enterprise, Trade and Employment is developing a National Clustering Policy and Framework, to ensure a strong impact from existing and future clusters in Ireland.





**5** National cluster organisations funded under a new National Clustering Programme by 2025 **CLUSTERS IN IRELAND** 

**Grant Thornton Study Commissioned by DETE (March 2022).** 

#### Self 45 STRATEGY Ø Identity 78% have a strategy



#### **Overall Findings**

19 organisations identified as 'clusters' by Grant Thornton, 15 x funded by Enterprise Ireland (12 x RTCF programme and 3 x REDF), 1 x funded by Department of the Environment and 3 x funded by InterTradeIreland.

**89% est.** <**5 years** 

- Industrial Area: Advanced Manufacturing Technology (4 Clusters); Agriculture Technology; Aviation and Aerospace; Circular Economy; Construction; Cyber Security; Digital Health and Medical Technologies (3 Clusters); Engineering (3 Clusters); Financial Services; Information Communication Technologies; Maritime and Wood Manufacturing.
- Clusters are dispersed across Ireland in line with Regional Policy aims.
- If measured with EU cluster metrics, the analysis may be different. As classification of a cluster is aligned with its membership size, membership fees and activities/initiatives which the organisation undertakes or provides for members and the overall ecosystem.

**Development of an Evidence Base to Support the Development of a National Clustering Policy and** Framework



53% Regional 42% National



<25 Members



**100% Receive** 



# STATE / REGIONAL SUPPORTS FOR CLUSTERING - IRELAND

In Ireland Government identified an ambition to build sectoral clusters of Small Medium Enterprises (SMEs) at regional and national levels, and a number of different programmes have been utilised to reach this ambition.

SLIDE 11

Enterprise	Enterprise	Enterprise	Enterprise	Enterprise	lnterTradelreland
Ireland	Ireland	Ireland	Ireland	Ireland	
Regional Technology Cluster Fund Claim	Regional Enterprise Development Fund	Regional Enterprise Transition Scheme (RETS)	Border Enterprise Development Fund (BEDF)	Smart Regions Enterprise Innovation Scheme	Synergy

#### **Cluster Supports:**

**Salary** costs of up to €80 – €100k per year on a scale between 50% and 100% of eligible costs.

**Operational Costs** A maximum grant of up to €80,000 of between 50% and 80% of eligible costs.

Travel, Overheads and Consultancy Costs also included between 50% and 100% of eligible costs.

**Differing KPIs:** Range of different KPIs across the various programmes above from supporting job creation regionally, increased research and innovation for industry to internationalisation of member firms in the various funded clusters.

Biggest difficulty is the disparity between the funding levels and goals of the programmes across Ireland

# **CONCLUSIONS – GOALS FOR POLICY LEARNING - IRELAND**

This research identifies 3 areas which can contribute to the solidification of the Irish Cluster Ecosystem so as to ensure that it is strong enough to be able to support SMEs from across all sectors to collaboratively tackle their green and digital transitions.

#### 1) CLARITY ON CLUSTERING IN IRELAND

Need to state why it is supporting a clustering programme at a national level, as there can be many high-level goals for cluster programmes internationally, which include for example increased internationalisation, growth for SMEs, increasing research and innovation and/or supporting companies to network and collaborate further.

#### 2) POLICY DEVELOPMENT, IMPLEMENTATION & FUNDING

• Develop a Cluster Policy which includes programmes with appropriate time scales and cycles.

• Establish a Centralised Cluster Financing Programmes which is based on Key Performance Indicators relevant to the cluster focus aligned with strategic priorities.

#### 3) CAREER PROGRESSION AND DEVELOPMENT OF CLUSTER PROFESSIONALS

It is important that Ireland develops its National Cluster Policy in a framework that provides support in a fair and equitable manner to cluster organisations that can grow and evolve to have an economic impact for Ireland

### **POLICY BACKGROUND OF CLUSTERS IN CATALONIA**

 Catalonia has over 30 years of experience in using clusters as a key tool for competitiveness reinforcement. Our approach to working with clusters is highly pragmatic and it is based on an original methodology that focuses on strategic change as a main driver for improving competitiveness.



- The Catalan model has indeed never been based on listing good or bad sectors, but rather on the understanding that all sectors have a future if they have the right strategic approach.
- The methodology in Catalonia for cluster development is a **combination of analysis and process.** 
  - 1. Strategic analysis to understand the reality of the cluster
  - 2. Definition and execution of the action plan.
  - 3. Structuring of governance, which is consolidated with the creation of a cluster organization.
  - 4. Hiring a cluster manager to manage the initiative







**3,7% est.** <**5 years** 

12,5 years old on average

Clusters' headquarters



#### **Overall Findings**

- 27 Catalan clusters belong to the Catalan Cluster Programme
- Industrial area: Food (5 clusters), Chemistry, energy and resources (3 clusters), Industrial System (4 clusters), Health related industries (3 clusters), Sustainable mobility industries (3 clusters), Design-based industries (4 clusters), Cultural and experienced-based industries (5 clusters)



116 Members on average

 Clusters are located across Catalonia although mostly gathered around Barcelona.





#### **Over 70 billion euros**

### **STATE / REGIONAL SUPPORTS FOR CLUSTERING – CATALONIA**

#### **Competitiveness Reinforcement Initiatives.** Aims:

- **Co-fund selected actions of their annual action plans** (Animation)
- Supporting clusters to co-fund projects to increase the competitiveness of members and clusters (Competitive reinforcement projects line)
- Co-fund projects based on the incorporation of any of the 20 prioritized technological trends (Innovation projects line)



24/24 funded 21/41 funded projects 18/22 funded projects

### Permanent Services Clusters have access to members of the Catalonia Cluster Programme:



- Support Team in ACCIO
- Advisory Support
- Co-working space
- Annual capacity building programme

#### Agrupación Empresarial Innovadora (AEI) (Innovative Business Group)

AEI clusters may apply to for grants in three different strands:

- Actions to support the functioning of the AEIs: launch and development of the coordination and management structures of the emerging AEIs.
- **Technical feasibility studies**: including those of a preparatory nature for research, experimental development and innovation projects.
- Digital technology projects

#### 77 projects approved 10.1 million

# CONCLUSIONS – GOALS FOR POLICY LEARNING - CATALONIA

This research identifies 2 areas which can contribute to the solidification of the Catalan Cluster Ecosystem so as to ensure that it is strong enough to be able to support SMEs from across all sectors to collaboratively tackle their green and digital transitions.

#### 1) COORDINATION WITH OTHER PUBLIC POLICIES

**Increasing coordination with other public policies** in order to break out silos and become better embedded in the overall policy mix.

R&D and RIS policies are of particular interest.

#### 2) FURTHER PROMOTION OF TWIN TRANSITIONS

Innovative and effective ways of promoting twin transitions (green and digital) using **clusters as a tool**. It can be either strategies, roadmaps, tools...

Also, it is very relevant to **learn methodologies and measures to measure the impact** in an effective yet easy way.

### POLICY BACKGROUND OF CLUSTERS IN PIEDMONT REGION

Regions in industrial transition, such as Piedmont, could and should benefit from **clusters structures and the development of a regional innovation ecosystem** in their innovation governance, in order to prepare local industries for current megatrends, such as the twin transitions and the growing complexity and interdependence of research and development (R&D) activities.

- The **Italian industrial innovation policy choices** of recent years, especially during the period of the economic and financial crisis of 2008, were the result of an **internationally oriented** search for a policy instrument that would be adequate to deal with the recession.
- In 2009, through the funds of the 2007-2013 ERDF ROP, Piedmont was the first Italian region to activate 12 Innovation Clusters in as many technological domains. Regional innovation clusters were created with two main objectives: to be knowledge brokers for local networking, strengthening social capital and spreading educational opportunities; and to be service providers and suppliers, for intellectual property protection, opening foreign markets and sharing technology infrastructure.
- Piedmont Region has recognized clusters as playing a key role in the regional business ecosystem as promoters of industrial renewal and transformation, which is why it has decided to renew regional support for innovation clusters, with the 2014-2020 ERDF ROP, but promoting a review path, aimed at further strengthening the Cluster System. The region reclassified the clusters into seven thematic areas to promote innovation, technology transfer, knowledge and skills sharing, by acting as a bridge among enterprises and public and private research players.
- In 2022 (also in conjunction with the new ERDF ROP 2021-2027) Piedmont launched the Piedmont Poles System (https://sistemapolipiemonte.it/), a new organizational model that aims to enhance the competences acquired since 2009 by the 7 regional poles by putting them into a system and overcoming individual vertical specializations, making exchange and contamination its strong point. This new system aims to promote and implement actions, programs, research and innovation projects characterized by a strong intersectorality, in particular by fostering ecological and digital transitions as well as people's well-being. Indeed, the ultimate goal is to amplify knowledge and opportunities for enterprises and SMEs and for the whole territory.

### **CLUSTERS IN PIEDMONT**

The cluster mapping tool, developed by the European Cluster Collaboration Platform, shows **88 clusters** active in Italy in 2024, which operate in the following industrial ecosystems (2022 ECCP Country Factsheet on Italy): digital; health; constructions; mobilitytransport-automotive; creative and cultural industries; agri-food; aerospace and defence; renewable energy; proximity and social economy; textiles; energy-intensive industries; tourism.

- Among those, Piedmont hosts 10 cluster organizations: **the 7 regional innovation clusters and other 3 clusters** (Piedmont's Aerospace Cluster, Torino Social Impact and SmartCommunitiesTech).
- Moreover, ICT, MESAP, CLEVER, BIOPMED, Piedmont's Aerospace Cluster, Torino Social Impact and SmartCommunitiesTech, are located in the Metropolitan city of Turin.

	Cluster	Area
	CLEVER	Energy and Cleantech
CREEN CREEN CHEVISTOR AND ADVANCED MATERIALS	CGREEN	Green Chemistry and Advanced Materials
	MESAP	Smart products and manufacturing
Pointex Pelo Interactore Testio	PO.IN.TEX	Textile
Polo	AGRIFOOD	Agri-food
bio	BIOPMED	Life science and health
torinowireless	ICT	ICT



### STATE / REGIONAL SUPPORTS FOR CLUSTERING PIEDMONT REGION

- In Italy, a series of national and regional policies, tools and/or programs, currently support clustering. Among the existing programs and tools, only those actually targeting **Piedmont** (or the metropolitan area of Turin specifically) and currently under implementation were selected. These are:
- Action I.1i.3 of Piedmont Region's European Regional Development Fund (ERDF) Regional Programme (RP) for the 2021-2027 programming period: "Support for the innovation ecosystem";
- Investment 1.5 of Mission 4, Component 2, of Italy's National Recovery and Resilience Plan (NRRP), funded by the Recovery and Resilience Facility: "Establishing and strengthening of "innovation ecosystems for sustainability", building "territorial leaders of R&D" (hereafter "Innovation Ecosystems");
- Investment 2.3 of Mission 4, Component 2, of Italy's National Recovery and Resilience Plan (NRRP), funded by the Recovery and Resilience Facility: "Strengthening and sectorial/ territorial extension of technology transfer centres by industry segments".







### **CONCLUSIONS – GOALS FOR POLICY LEARNING - THE METROPOLITAN CITY OF TURIN AND PIEDMONT REGION**

This research identifies 3 areas which can contribute to the solidification of the Cluster Ecosystem in Piedmont Region:

ameliorate the relations among innovation ecosystem actors, by a greater focus on synergies between operational activities and therefore by optimising existing resources;



ensure **innovation operational continuity** by leveraging existing players in the territory and capitalising on existing skills to foster the **twin transitions**;



consolidating roles in innovation management, by **increasing and solidifying stakeholder engagement.** 

### **POLICY BACKGROUND OF CLUSTERS IN AUSTRIA**

- STI: Science, Technology and Innovation Strategy 2030
   Currently the Austrian Science, Technology and Innovation (STI) Strategy 2030 determines
   Austria's STI policy. The strategy aims to position Austria as a leading research,
   technology, and innovation country by 2030.
- Today dozens of clusters have been established throughout the country, particularly in Styria, Lower Austria, Upper Austria, and Tyrol. These federal states have been following cluster policies through their regional development agencies. (...) other federal states do not have a cluster policy tradition.
- Lessons learned over the past 25 years include the balance between top-down and bottomup approaches. Initially, government kickstarted the initiative, but over time, it has evolved into a more bottom-up approach with less direct involvement from the government.

### **CLUSTERS IN AUSTRIA**

#### 27 organisations identified as 'clusters'

	Name	Sector	Region
1	Plastics Cluster Burgenland	Chemistry	Burgenland
2	Software Internet Cluster	IT	Carinthia
3	Green Building Cluster	Construction	Lower Austria
4	Food Cluster	Food	Lower Austria
5	IT Cluster	IT	Upper Austria
6	Plastics Cluster	Chemistry	Upper Austria/Lower Austria
7	Mechatronics Cluster	Machinery	Upper Austria/Lower Austria
8	Automotive Cluster	Automotive	Upper Austria
9	Cleantech Cluster	Environ. and Energy Technologies	Upper Austria
10	Food Cluster	Food	Upper Austria
11	Medical Technology Cluster	Medical	Upper Austria
12	Building Innovation Cluster	Construction	Upper Austria
13	Wood Cluster Salzburg	Wood	Salzburg
14	GIS Cluster Salzburg	Information Systems	Salzburg
15	Creative Industries Styria	Creative Industries	Styria
16	Green Tech Valley Cluster	Environ. and Energy Technologies	Styria
17	Holzcluster Steiermark	Wood	Styria
18	Human.Technology.Styria	Medical	Styria
19	Styrian Service Cluster	Services	Styria
20	Materials Cluster Styria	Chemistry	Styria
21	Acstyria Mobilitätscluster	Mobility	Styria
22	Cluster Renewable Energies Tirol	Environ. and Energy Technologies	Tyrol
23	Cluster Information Technology Tirol	п	Tyrol
24	Cluster Life Science Tirol	Medical	Tyrol
25	Cluster Mechatronics Tirol	Machinery	Tyrol
26 27	Cluster Wellness & Life Quality Tirol LISAVienna	Medical Life Sciences	Tyrol Vienna

#### Aggregation by Industrial Area

Industrial Area	Number of Clusters
Medical	4
IT	3
Environm. Energy & Technologies	3
Chemistry	3
Construction	2
Food	2
Machinery	2
Wood	2
Automotive	1
Information Systems	1
Creative Industries	1
Services	1
Mobility	1
Life Sciences	1

STATE / REGIONAL SUPPORTS FOR CLUSTERING - AUSTRIA

Austrian clusters are financed by federal states and EU funding Example: Business Upper Austria, Cleantech Cluster







https://www.cleantech-cluster.at/

### **CONCLUSIONS – GOALS FOR POLICY LEARNING - AUSTRIA**

#### 1) AVOID CLUSTER'S STRUCTURAL LOCK IN EFFECT

Clusters should focus on enhancing the internal strengths and capabilities, but also facing the weak spots. Supporting mechanisms should therefore include **fostering entrepreneurship**, **educational initiatives**, **strengthening ties with scientific institutions and other cluster organizations**, even on an **international base**.

#### 2) CLUSTERS SHOULD POSITION THEMSELVES IN THE TWIN TRANSITION

Today, the twin transition stands high on the agenda of most of the clusters in Europe. Considering the wider regional innovation system clusters are embedded in, including the existing assets base, **clusters should clearly position themselves in both the green and digital transition.** The **clear definition of digital and green goals** that a cluster is targeting is a relevant step.

### **POLICY BACKGROUND OF CLUSTERS IN Hungary**

• In December 2000, 12 firms launched the Pannon Automotive Cluster, a pioneer in every respect. The founders of the cluster, seated in Győr, included the major automotive manufacturers of the region .



- Since 2004, numerous clusters started following the Pannon Automotive Cluster, with most founded between 07–10.
- Széchényi Plan (2001–2002) was the first economic policy document which aimed to establishing regional clusters
- 2007–2013 clusters were promoted through long-term programmes (Pólus Programme, New Széchenyi Plan)
- The period 2014–2020 was a time of consolidation and purity. The focus was on clusters that had a track record in and were open to further development. E.g. 2015-EDIOP-1.3.2-15 Support of professional cluster organizations
- National Hungarian Cluster Strategy formally launched in November 2023

### **CLUSTERS IN Hungary**



- The State Secretary for Economic Development Programmes registers 26 accredited cluster and 18 non-accredited clusters active.
- The 26 accredited clusters currently in operation include 1,028 members (the average number of members is 39), of which 944 are considered companies (92%).
- The total revenue of the member companies amounts to HUF 3,407 billion, of which 61 % has been generated through export activities. Member companies employ almost 69,000 people.
- Major cluster industries: ICT, Food industry, Packaging, Healthcare industry, Machine Industry, Timber, Environmental and Energy



### **STATE / REGIONAL SUPPORTS FOR CLUSTERING - Hungary**

**SLIDE 27** 



#### **Cluster Supports:**

2010: HUF 215.5 billion/571 217 900,00 EUR projects with R&D goals, newly started collaborations, the foundation of clusters

**KPIs:** Cluster management service/Joint technological investment of members/Individual innovation projects of members/Joint R&D&I projects of members/Cluster management service/Joint technological investment of members/Cluster management service, joint investments

**2015:** EDIOP-1.3.2-15 Support of professional cluster organizations, 2 billion HUF/5 193 154,61 EUR for employment/ cluster services/ ICT development/ training/ participation on international expos, events/ international market research/ international cluster management title/ general support

KPIs: number of members/ increase in turnover/Cluster management service/Joint technological investment of members/Individual innovation projects of members/Joint R&D&I projects of members/Cluster management service/Joint technological investment of members/Cluster management service, joint investments/ International presence

2024: The 3 types of cluster will benefit from different kind of supports/Registered Clusters/Professional Clusters/Innovation Clusters, 6 billion HUF/ 15,5 million EUR – Cluster Manager Operational Support (wages, international projects, purchasing, development) 2 billion HUF/ 5,5 million EUR- Indirect support (training, consultation, general support of management)

KPIs: number of members/ increase in turnover/Cluster management service/Joint technological investment of members/Individual innovation projects of members/Joint R&D&I projects of members/Cluster management service/Joint technological investment of members/Cluster management service, joint investments/ International presence

### **CONCLUSIONS – GOALS FOR POLICY LEARNING - Hungary**

#### 1) MOTIVATION AND CULTURE OF COOPERATION

- A culture of cooperation has not developed or has not been widely accepted as a fundamental value of entrepreneurship.
- Cluster-related knowledge has not been integrated into corporate education materials.
- The government aims to help this specific objective by preparing the next generation, Increasing awareness of clusters, promoting the products and services they produce, improving knowledge sharing between clusters, distinctiveness, recognition of deliverables produced by clusters

#### 2) **BUSINESS COOPERATION**

- One of the major aims of the strategy is to promote business cooperation in different sectors.
- The process of clustering is not associated with innovative technological trends like digitalization or the circular economy;
- The amount and extent of collaborations between economic actors and cluster members are insufficient;

#### 3) COOPERATION FOR INNOVATION

- Governmental action contains steps in order to reach higher innovation capacity;
- Hungarian SMEs typically show low innovativeness;
- Low willingness to cooperate between the stakeholders of the research and development ecosystem. It is necessary to increase
  the efficiency of technology transfer processes;

### POLICY BACKGROUND OF CLUSTERS IN CZECHIA

- Clusters have been supported by Ministry of Industry since 2004
- CzechInvest was the administration and improvised Cluster program body until 2016
- In 2016 was administration agency founded and this task was transferred from CzechInvest
- Soft cluster support slowly faded away from the state structures
- In 2008 Czech National Cluster Association was founded, which was since then trying to bypass the lack of the Cluster program within the state structures
- 2020-2022 Clusters were part of the National RIS3 team within CzechInvest
- 2022 Conduction of research in form of National Benchmark, new methodology for cooperation with clusters has been published
- EU Structural Funds support Czech cluster organizations and technology platforms since 2004, managed by the Ministry of Industry and Trade through the unified Cooperation Clusters program.
- The program's focus is on establishing and developing clusters, as well as promoting their research activities, to enhance collaboration in R&D between businesses and research institutions.



# CLUSTERS IN CZECHIA

#### Methodology for cooperation with clusters (december 2022).

- While mapping clusters we came across 81 cluster initiatives, their functionality was verified in 53 cluster initiatives and 21 joined the Cluster Benchmark
- Majority of Clusters have some sort of strategy (65%)
- Minority of Clusters have the strategy broken down to action plans and KPIs (10%)
- Majority of Clusters desires to have Cluster policy similar to the Basque / Catalan supports (95%)
- Minority of Clusters wants to have similar level of cooperation with state which is central to Spanish supports (low trust in state or "don't mind our business" mindset)
- Current cluster policy is satisfactory for 43% of benchmarked clusters
- On average, Czech clusters that passed the benchmark have 40.5 members in total, of which 32.4 are paying members.
- Only 4 benchmarked clusters have more than 50 paying members.
- Another 7 clusters have between 25 and 36 members. The rest of the benchmarked clusters have less than 25 members.









### STATE / REGIONAL SUPPORTS FOR CLUSTERING - CZECHIA

Basic information about the only cluster support instrument in the Czech Republic

### **Co-operation – Clusters program: Amount of support:** 40.000 - 1.600.000,- EUR, percentage range 35 - 70%

- Supported activities and eligible expenditures for each aktivity :
- a) Collective research staff costs, services, overheads
- b) Shared Infrastructure tangible and intangible assets,
   buildings and their technical improvement, plant and equipment,
   HW and SW, intellectual property rights, rent
- c) Innovation cluster development staff costs, services,

overheads, marketing and promotion, seminars, conference, rent, obtaining the ESCA mark of excellence.

VÝZKUM, VÝVOJ, INOVACE A DIGITALIZACE

**Spolupráce** – klastry – výzva I.



SLIDE 31

### CONCLUSIONS – GOALS FOR POLICY LEARNING - CZECHIA

This research identifies 3 areas which can contribute to the solidification of the Czech Cluster Ecosystem so as to ensure that it is strong enough to be able to support SMEs from across all sectors to collaboratively tackle their green and digital transitions.

#### 1) STRONGER AND SMART CLUSTERS

For optimal functioning of clusters, there is a recommendation to involve members on a triple helix or better pentagon basis. That is, government, industry, research/university or entrepreneur and capital

#### 2) POLICY DEVELOPMENT, IMPLEMENTATION & FUNDING

Strengthening the role of the state as an effective supporter of the whole ecosystem, as well as setting up an effective and significant financial support – and co-ordination.

#### 3) CAREER PROGRESSION AND DEVELOPMENT OF CLUSTER PROFESSIONALS

It is important that Czech develops its National Cluster Policy in a framework that provides support in a fair and equitable manner to cluster organisations that can grow and evolve to have an economic impact for Czech Republic

### POLICY BACKGROUND OF CLUSTERS IN Germany

#### Strategy cascade



Future strategy research and innovation Germany (2023) **Regional innovation strategy** NRW (2021)

**Smart specialisation strategy** Metropolis Ruhr (2022) **Economic compass** City of Duisburg (2022)

# CLUSTERS IN NRW Region & Germany

#### Strategic instruments at federal level:



- Excellence competition for new cluster initiatives
- Seven best cluster initiatives up to € 5 million per year
- Duration: **Three phases over three years each** (evaluation for continuation after each phase)
- Own contribution increases per phase from 20% to 35% to 50%
- A total of **€ 450 million until 2029**
- In NRW: NeuroSys Cluster and Future Cluster Hydrogen



Network for connecting clusters

#### Strategic instruments at state level:

Spitzencluster.NRW

- Spitzencluster was a federal funding programme from 2007-2012
- 15 existing clusters throughout Germany received project-related funding of up to 40 million per cluster over a maximum term of 5 years
- Since then, the two NRW Spitzencluster "Its.OWL" and "SPIN" have continued to receive funding from
- Ministry of Economic Affairs, Industry, Climate Action and Energy of NRW
  - Funding of administrative offices
  - **Project funding** (SPIN, for example, € 15 million for 6 projects from 2020)
  - **Own contribution vary** depending on the project

# **DUISBURG TRANSFORMATION AIM FOR CLUSTERING**

#### **Promoting potential in Duisburg:**

Duisburg has a strong specialisation in the **steel** and **logistics** industries.

Increasing pressure to **decarbonise** these economic sectors in order to future-proof Duisburg as a business location.

Promotion of this potential through the establishment of **thematic networks** that promote the industrial application of **hydrogen** and **circular value creation**.



- **Hydrogen Network** especially for the Region Rhine & Ruhr but also with international Partners
- Just under 50 members
- Financing
  - **Membership fees** (between 600€ and 4800€ per year depending on size and turnover)
  - Funding through a **foundation**



#### Network for Circular Economy ( in development)

- Funding of a staff position by the **City of Duisburg and its** subsidiaries and the DBI
- In the future probably also planned as an association with membership fees

# CONCLUSIONS – GOALS FOR POLICY LEARNING - NRW

Key findings of the Cluster Policy Case Study:

NRW has a **diversified cluster landscape** with a total of 43 cluster organisations active in the innovation fields outlined in the regional innovation strategy.

- Innovative materials and intelligent production
- Networked mobility and logistics
- Environmental economy and circular economy
- Energy and innovative construction
- Innovative medicine, health and life science
- Culture, media and creative industries and innovative services
- Key technologies of the future, ICT
- However, there is **no regular cluster strategy**. The clusters and cluster funding are derived from the **innovation strategy**
- Most of the funding is project-based (KPIs vary depending on the project and call)
- The main focus is on **funding excellence Clusters**







**Financial Supports** 

**Cluster Manager** 

**Operations** 

Travel

**Collaborative Projects** 



SLIDE 37

### **Interreg Europe Policy Learning Platform**

Peer review

Receive feedback from

public authorities)

See all

relevant peers during a two-

day in-depth analysis. (for

#### Our expert team

The Policy Learning

Platform consists of a team of Thematic Experts supporting

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practices

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Thematic articles about our good

Recordings and materials from our

webinars and workshops

We provide answers to any type of questions you might have in regional policy-making



Arnault Morisson

Thematic Expert - Smarter Europe



#### Marc Pattinson

Thematic Expert - Smarter Europe



Mart Veliste

Thematic Expert - Smarter Europe and More Social Europe

#### **Resources by type**

Good practices Don't miss! Tested and transferable solutions from approved projects

#### Policy briefs

Expert analyses of the Interreg Europe projects and topics

#### Expert support reports

Reports from peer reviews and matchmaking sessions

### **Interreg Europe PLP Cluster Resources**







**Anna Laura Fusco** Cittá metropolitana di Torino



Alberto Pezzi ACCIÓ, Catalán Agency for Business Competitiveness



**Domink Bartz** Duisburg Business & Innovation

### PANEL DISSCUSION



John Hobbs Munster Technological University



Filip Kruta Czech Invest



**Nica Muller** Austria Wirtschaftsservice (aws)



**Peter Keller** Prime Minister's Office Hungary

**SLIDE 41** 



### AccelerateGDT

# Thank you!

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**Claudia Soncin**, Project Manager Global, TCI Network, Pg. de Gràcia, Barcelona

Mobile: +34 676 982 155 Email: csoncin@tci-network.org



**Dr John Hobbs**, Lead Partner Accelerate GDT, Senior Lecturer MTU, Bishopstown, Cork

m

Mobile: +353 86 8091294 Email: john.hobbs@mtu.ie