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# The role of Clusters in Smart Specialization Strategies

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# The Cluster concept

- ❑ *A mode of organization of the productive system, characterized by a geographical concentration of a critical mass of economic actors and other organizations, specialized in a common field of activity, developing inter-relations of a market and non-market nature, and contributing to innovation and competitiveness of its members and the territory*
- ❑ Key elements :
  1. Geographical concentration
  2. Specialisation
  3. Presence of companies and other institutions
  4. Connectivity
  5. Structural character
  6. Critical mass
  7. Importance of innovation

# Cluster benefits

- Increased productivity : economies of scale, specialisation of factors (labour market, specialised R&D and technology sources, specialised venture capital, ...), cost savings thanks to lower transaction costs, better opportunities for just-in-time practices,...
- Collective learning, Access to market and technology information, Knowledge spillovers (tacit knowledge), Innovation in co-operation, ...
- Image and attractiveness of territory
- Industrial restructuring

**Largely un-demonstrated !!**

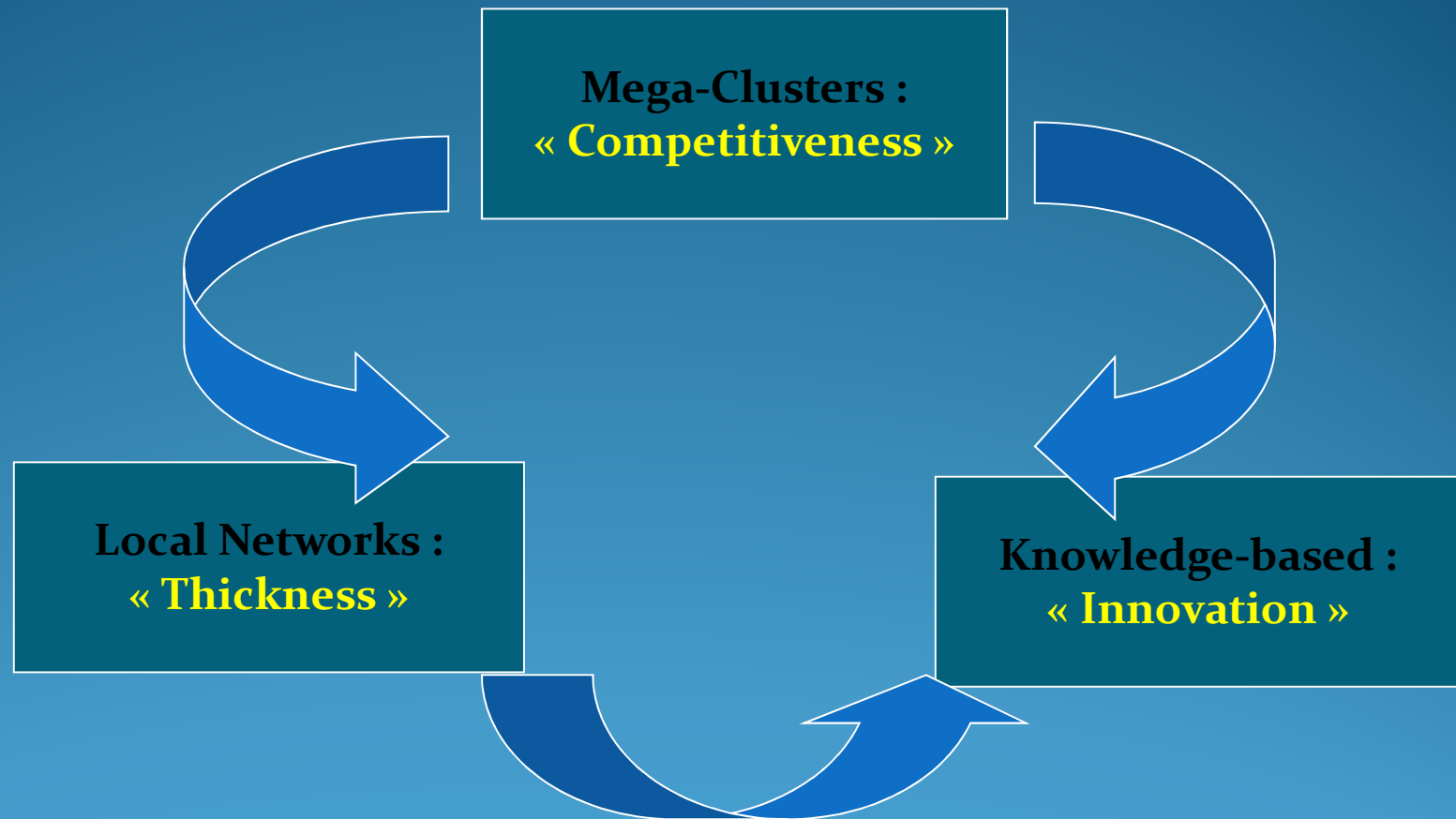
# Cluster Dangers

- Lock-in effects
- Decrease in (perceived) competitive pressures
- Self-sufficiency syndrome : the “weaknesses of strong ties” (Granovetter)

# Cluster Diversity

Mega clusters	Local Networks	Knowledge based
Industry Competitiveness	Territory Competitiveness	Innovation, Technological Development
Sectors, « filières », market, value-chain	SMEs (large enterprise)	Enterprises and research centres
Macro Meso	Micro	Micro Meso
Mapping studies, empirical analyses	Enterprise dynamics	Knowledge flows

# Notion of Cluster « success » varies



# A simple typology of cluster policies

Acting on clusters' environment		Facilitating synergies		Supporting projects	
Cluster-informed policies (all types)	Co-operative Research-industry Platforms	Regional / Local Initiatives	Clusters identity building	Co-operative projects of SMEs Networks	Collaborative R&D projects

# The real nature of Cluster policies

Cluster policies = efforts to improve policy interfaces

▶▶ **Rather than a new policy area**

Cluster policies = finding the right mix of instruments

▶▶ **Originating from technology, industrial or regional policy toolboxes**

Clusters as means to reach goals, rather than ends

▶▶ **This makes evaluation of success absolutely critical**

# Role of clusters in smart specialisation strategies

Confusion about the relation between the **concepts**



How are S3/RIS3, clusters, and cluster policy conceptually related?

Role of **cluster policies** in S3/RIS3



What key challenges of S3/RIS3 can good cluster policies help to address?

**Better practices** of cluster policies



What are key features of good cluster policies?

This part of the presentation is based on the work of the Expert Group on the role of clusters as vehicles for smart specialization in European regions, set up by DG Research & Innovation. Members of the group were Christian Ketels (chair), Claire Nauwelaers (rapporteur), Jennifer Harper Thymos, Göran Lindqvist, Beata Lubicka, and Frank Peck.

# Consistency of Conceptual Foundations

## Similarities

Clusters and the theoretical frameworks underpinning  
S<sub>3</sub>/RIS<sub>3</sub> **share many key elements**

### *Drivers of performance*

- Productivity and innovation are critical for sustained prosperity growth
- Many factors contribute and interact in driving productivity and innovation

### *Role of regions*

- Locational context is critical
- Proximity/local spill-overs matter

### *Role of policy*

- Prosperity is created in market processes/firms; governments shape the context in which markets/firms operate
- Multiple externalities create a role for collective or public action

# Consistency of Conceptual Foundations

## Differences in Emphasis

Clusters and theoretical frameworks underpinning  $S_3/RIS_3$   
**differ in the emphasis they put on specific issues**

### *Clusters*

- Critical mass
- External effects through shared infrastructure and input markets
- Groups of companies in related industries
- Efficiency of individual policy tools
- Enhancing performance of a set of specific linked companies

### *$S_3/RIS_3$*

- Explore emerging market opportunities
- Facilitate spillovers between knowledge domains
- Exploit related variety between knowledge domains
- Enhance efficiency of policy mix
- Drive structural change by embedding innovative practices and behavior in economy and society

# The Role of Cluster Policies in S3/RIS3

## Key Leverage Points

*How can regions select appropriate focus domains for policy action?*

**Prioritization**

*How can different stakeholders be motivated to engage?*

**Stakeholder Engagement**

**Multilevel Governance**

*How can the roles of different levels of government be integrated?*

**Integrated Policy**

*How can individual policies be packaged to increase their combined impact?*

**Evidence-Based Policy**

*What data and indicators can be used to make robust policy choices?*

**Cross-border Collaboration**

*How can government policies be aligned with the economically relevant regions?*

# The Role of Cluster Policies in S3/RIS3

## Key Leverage Points

### Potential of Cluster Policy

### Reality of Cluster Policy

### Beyond Cluster Policy

#### Prioritization

- Clusters are a natural dimension for selection
- Lack of tools to identify emerging clusters
- Knowledge domains can be different from clusters

#### Stakeholder Engagement

- Clusters combine critical stakeholders in relevant groups
- Cluster initiatives have a key role as bridge builders
- Regional engagement structures are needed as well

# The Role of Cluster Policies in S3/RIS3

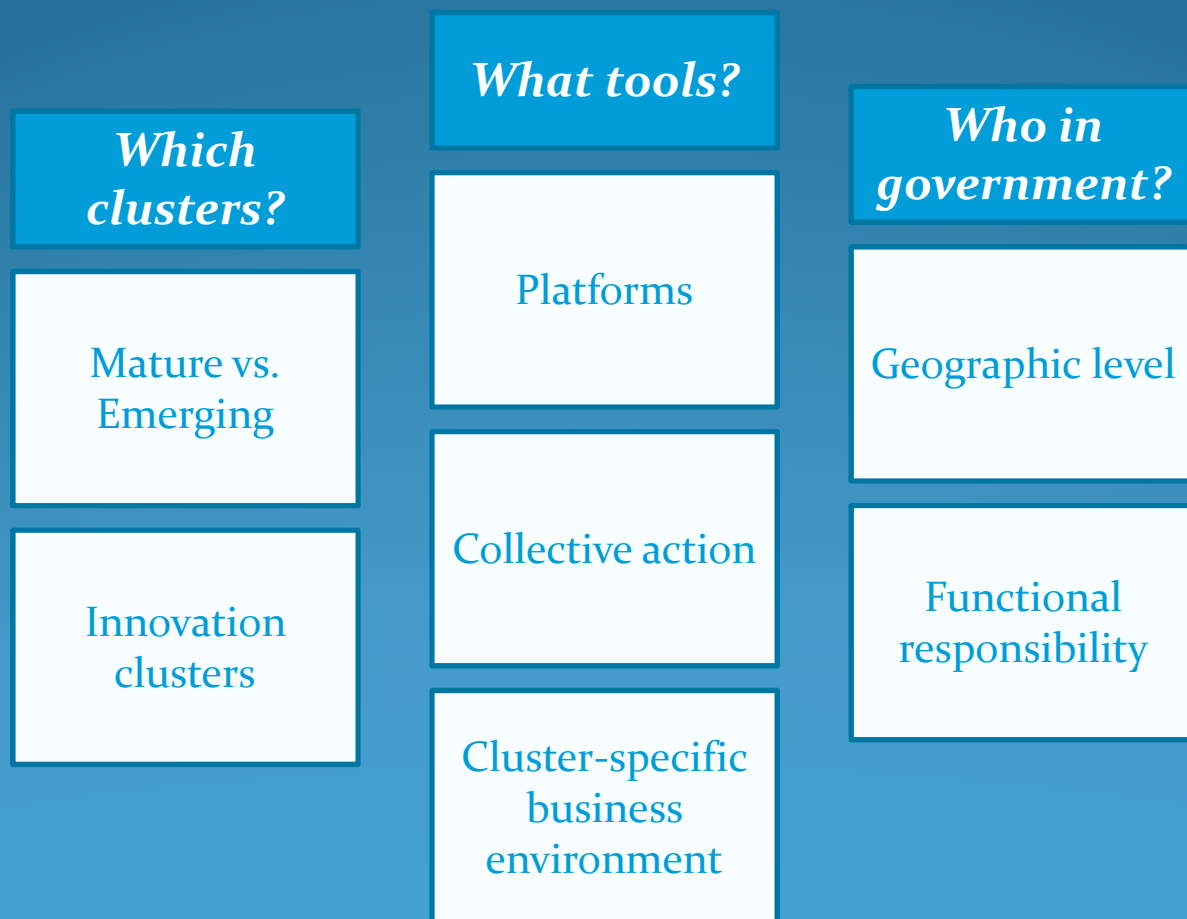
## Key Leverage Points

	Potential of Cluster Policy	Reality of Cluster Policy	Beyond Cluster Policy
Integrated Policy	<ul style="list-style-type: none"><li>Clusters are naturally suited to organize the design and delivery of integrated policies</li></ul>	<ul style="list-style-type: none"><li>Policies often fragmented and focused on single issues</li></ul>	<ul style="list-style-type: none"><li>Cross-cutting policies for business environment upgrading needed as well</li></ul>
Evidence-Based Policy	<ul style="list-style-type: none"><li>A range of cluster-specific data and analytical tools is available</li></ul>	<ul style="list-style-type: none"><li>Limitations in existing cluster data; use of data often ad-hoc</li></ul>	<ul style="list-style-type: none"><li>Cross-cutting regional data is needed as well and is only partially available</li></ul>
Multilevel Governance	<ul style="list-style-type: none"><li>Clusters draw on multiple levels of policy</li></ul>	<ul style="list-style-type: none"><li>Limited actual collaboration across levels of government</li></ul>	<ul style="list-style-type: none"><li>Important multi-level issues are cross-cluster</li></ul>
Cross-Border Collaboration	<ul style="list-style-type: none"><li>Cluster boundaries are defined by their economic reach</li></ul>	<ul style="list-style-type: none"><li>Geographic footprint of cluster organizations often administratively set</li></ul>	<ul style="list-style-type: none"><li>Important cross-border issues are cross-cluster</li></ul>

# What Cluster Policies to Use?

## Learning From Current Policy Practice

Huge **variety of policies** exists – performance seems to be driven by how they are deployed, not which of them



# Types of Cluster-Related Programs

Regional Mature  
Cluster Efforts

National Programs  
for Regional Clusters

Regional Emerging  
Cluster Efforts

National Leading  
Cluster Efforts

Cluster Policy Support Structures

Sectoral Programs

Network Programs

# Good Cluster Policies: Three Sets of Lessons

Better Practices

Stage of Cluster  
Development

Stage of  
Regional  
Development

- Mature vs. emerging
- Strong vs. weak

- Advanced vs. lagging
- Large vs .small
- Federal vs. unitary
- ...

# Better Practices

## Learning from Cluster Policy Experience

### *Activities*

- Action agenda addressing the cluster's specific needs
- Strengthening local buzz and global pipelines
- Systematic exploration of opportunities at boundaries of the cluster
- Systematic tracking of goals, activities, and impact

### *Organization*

- Businesses in the driving seat
- Professional cluster management

### *Policy context*

- Cluster policies integrated into a wider regional development strategy
- Cluster policies aligned to the functional region of the cluster
- Cluster policies informed by sound evidence base and robust evaluations

# Stage of Cluster Development

## Enabling Entrepreneurial Discovery

### *Specific challenges for emerging clusters programs*

- Accept and manage risk
- Clear exit mechanisms
- Project, not institution
- Technical support, less money
- Exploration of market opportunities, less competitiveness upgrading
- Flexible on geographic and industry boundaries

# Key challenges for cluster evaluation

- ❑ Concentrate evaluations on clustering **processes and trajectory** rather than on static measures
  - ✓ FDI, firms displacement and creation,...
  - ✓ People mobility, **employment** growth
  - ✓ Role of key actors or events
  
- ❑ Focus evaluations on **immaterial flows** rather than material flows
  - ✓ Innovations, technology licensing, patents citations,... (*realm of innovation policy*)
  - ✓ Managerial skills, entrepreneurial skills,... (*realm of human resource policy*)