

## RI2integrate - Embeddedness of high quality research infrastructures in the Danube Region

*Training Seminar on Science and Technology Parks:  
operation, financing, best practices  
and contribution to the development  
of Regional Competitiveness*



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ELI-NP Conference Room

## ***Development of Regional Competitiveness and Innovation Entrepreneurship Initiatives with the contributions of Science Parks – Cluster development***

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# Clusters: Definitions

- **Clusters:** *"Geographically proximate group of interconnected **companies** and associated **institutions** in a particular field"*, Michael Porter 1990
- **Innovation Clusters:** *"An **ecosystem** of companies and other entities with relationships that stimulate the development and adoption of **new technologies** and accelerate **learning**"*

# EC Definition of Innovation clusters

- **Groupings** of independent undertakings — innovative **start-ups, small, medium and large** undertakings as well as research organisations
- Operating in a particular **sector** and **region** and
- Designed to stimulate innovative activity by
  - promoting intensive **interactions**,
  - **sharing** of facilities and **exchange** of knowledge and expertise and by
  - contributing effectively to **technology transfer**,
  - **networking** and information **dissemination** among the undertakings in the cluster.

# Clusters Competitive Advantage

- Achieved through **easier access** to
  - skills
  - suppliers
  - customers
  - specialized information
  - complementary products and services

*...which leads to **lower costs and higher quality***

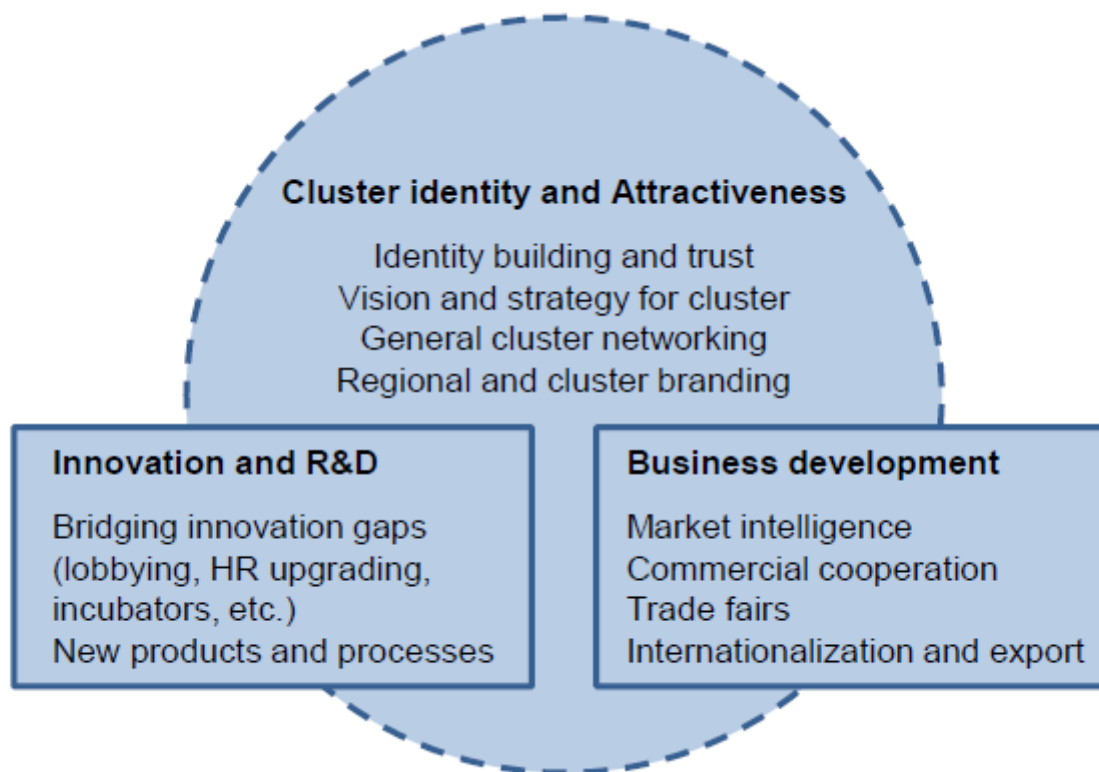
# Types of Actors in Clusters



# Cluster Features

- **SMEs** in the focus
- Partnerships with **academic and research** institutions
- Support from **public** institutions
- Access to private and public **funding**
- Presence of **large companies/ drivers**
- Close proximity and **interpersonal** networks
- **Shared** values and interests
- **Mobility** of people (*industry/ research*)
- **Internationalization** of company activities

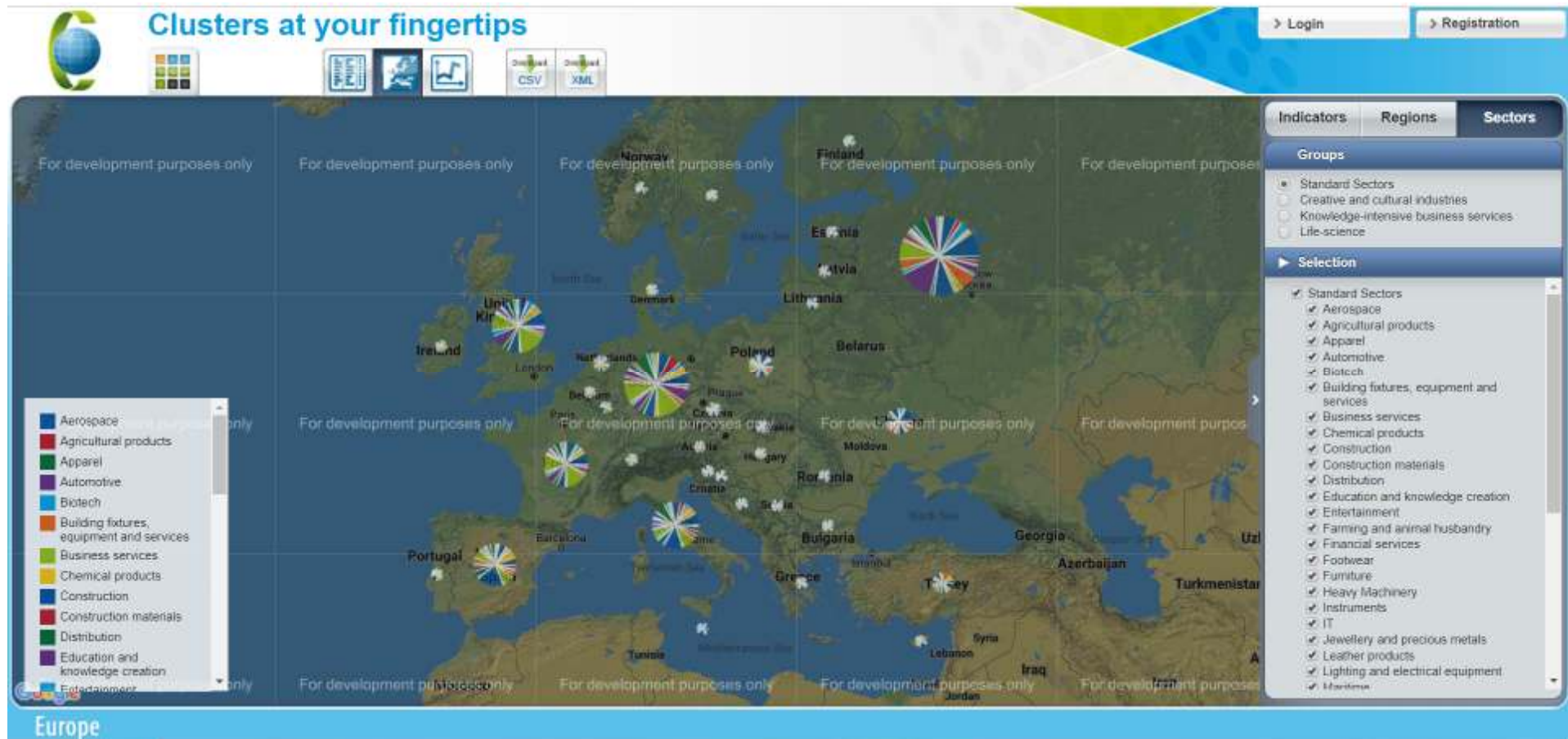
# Three Pillars of Cluster Organizations



The Cluster Initiative Greenbook 2.0

by Göran Lindqvist, Christian, Ketels Örjan Sölvell

# EU Clusters Observatory



<http://www.clusterobservatory.eu>



# Global Cluster Initiative Survey 2012

Table 2.1. Country of respondents

Country	Respondents	Country	Respondents
Germany	37	Norway	8
Spain	34	Austria	7
Denmark	20	UK	7
Sweden	18	Finland	6
Colombia	14	Russia	6
Poland	14	Iran	5
Serbia	14	Ireland	5
USA	14	Latvia	5
Switzerland	12	Bulgaria	4
Hungary	11	India	4
Mexico	11	Netherlands	4
Belgium	10	Slovenia	4
Italy	10	Argentina	3
Portugal	10	Estonia	3
Turkey	10	Greece	3
Romania	9	Other	26
France	8	<b>Total</b>	<b>356</b>

Table 2.2. Industry sector of the respondents

Sector	Count	Sector	Count
IT	55	Materials	10
Food	23	Biotech	9
Automotive	21	Medical	8
Green Technology	19	Optics and Photonics	8
Health	19	Education	7
Energy	18	Forest Products	7
Textiles	17	Micro and Nanotechnology	7
Metal Manufacturing	13	Aerospace	6
Tourism	13	Business Services	6
Transportation and Logistics	13	Chemical	6
Agricultural Products	12	Media and Publishing	5
Construction	12	Furniture	4
Production Technology	12	Entertainment	2
Creative Industries	11	Telecom	2
Maritime	11		

Figure 2.1. Initiation year of cluster initiative

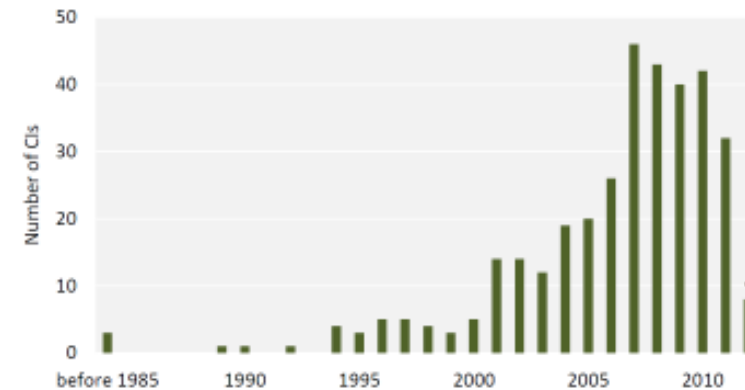
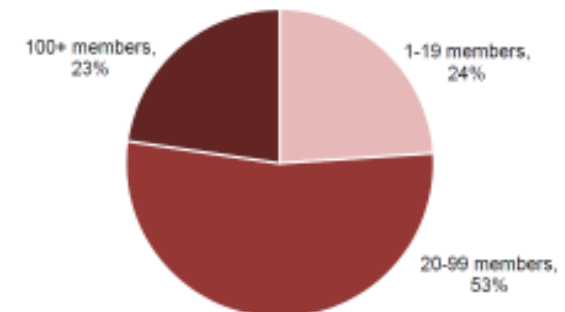


Figure 2.6. Number of formal members



# Global Cluster Initiative Survey 2012 Key Findings

Figure 3.1. Original trigger for the initiation of the CI

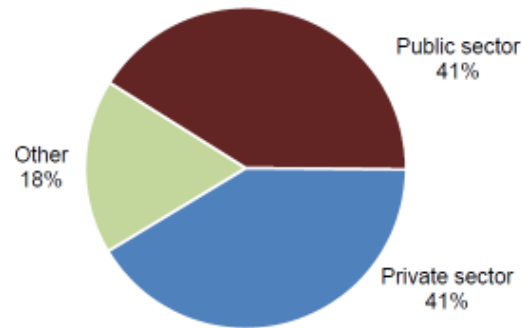


Figure 3.2. Level of priority for ten objectives

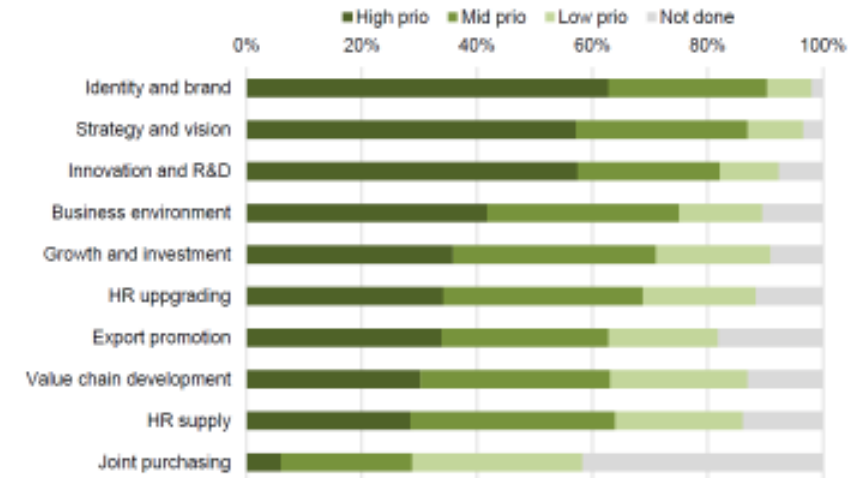


Figure 3.7. Sources of CI revenues

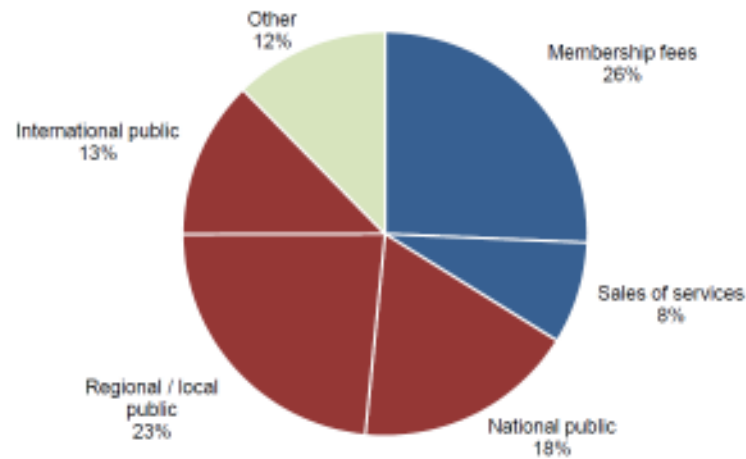
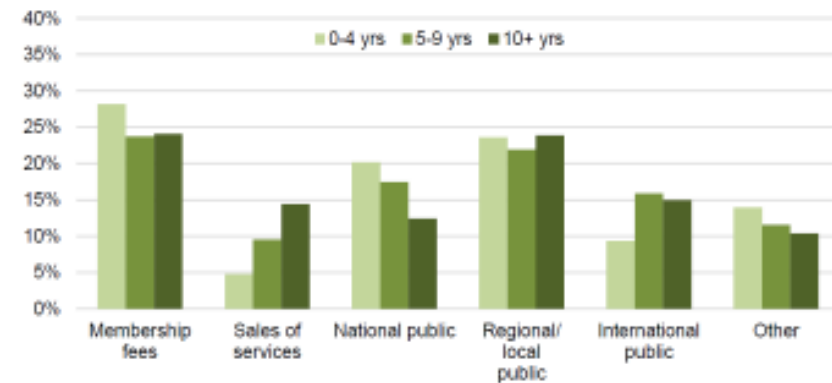


Figure 3.8. Sources of CI revenues, by age of CI



# Global Cluster Initiative Survey 2012 Key Findings

Figure 3.10. Cluster manager's work experience with cluster initiatives

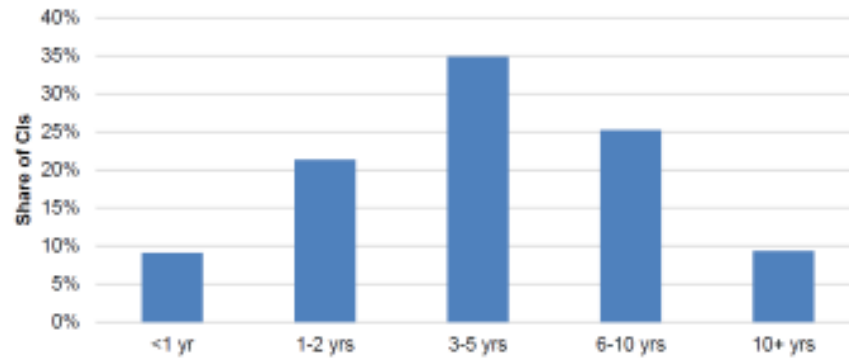


Figure 3.11. Cluster manager's previous work experience in different sectors

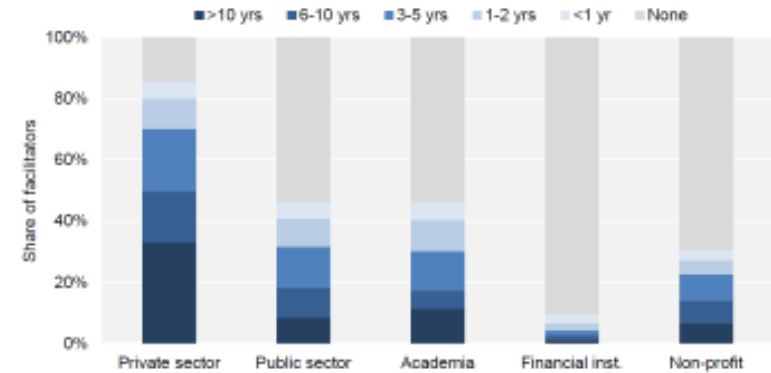


Figure 3.13. Sectoral composition of main governing board

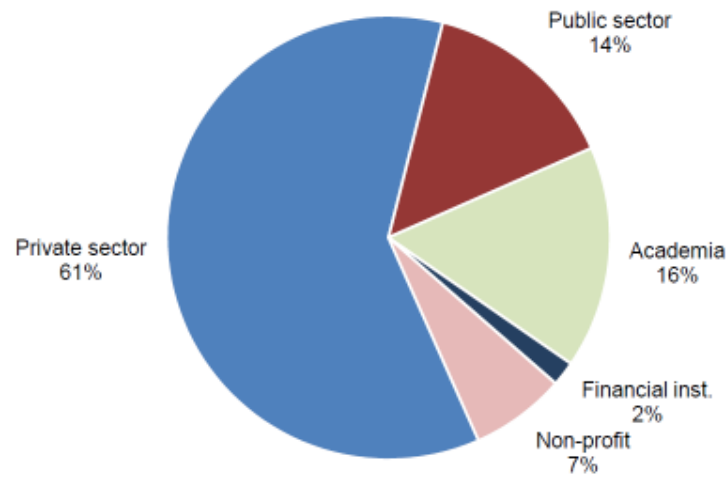


Figure 3.18. Performance of CIs, external and internal



Note: Dark green represents the reply "Improved strongly" for the top three and "Strongly agree" for the bottom four performance indicators, and brighter green represent lower positive performance. Red shades represent negative performance.

# Global Cluster Initiative Survey 2012 Key Findings

Figure 4.4. Level of priority for seven types of collaboration promotion

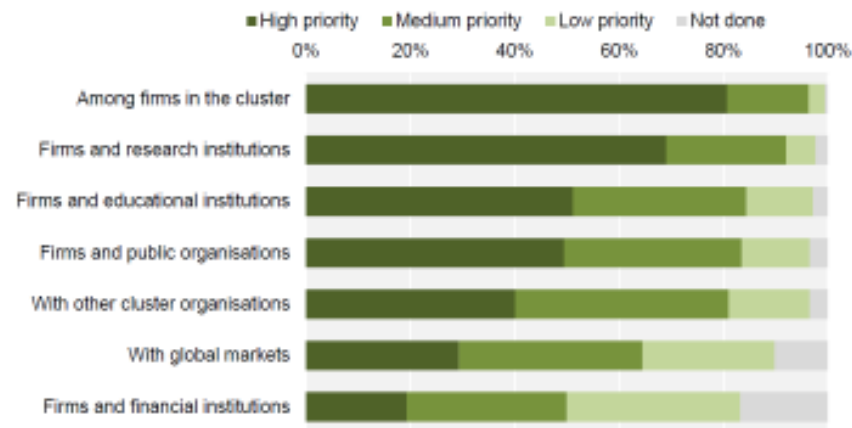
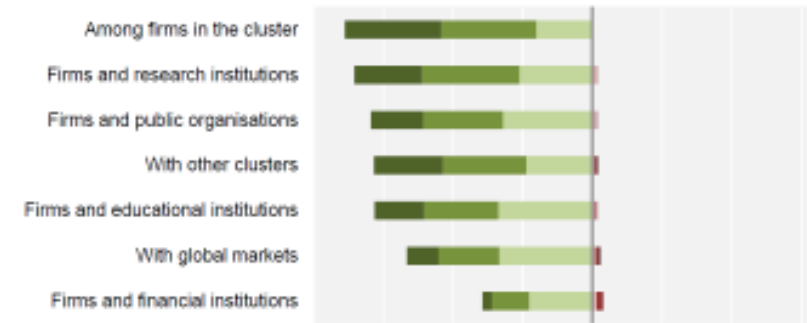
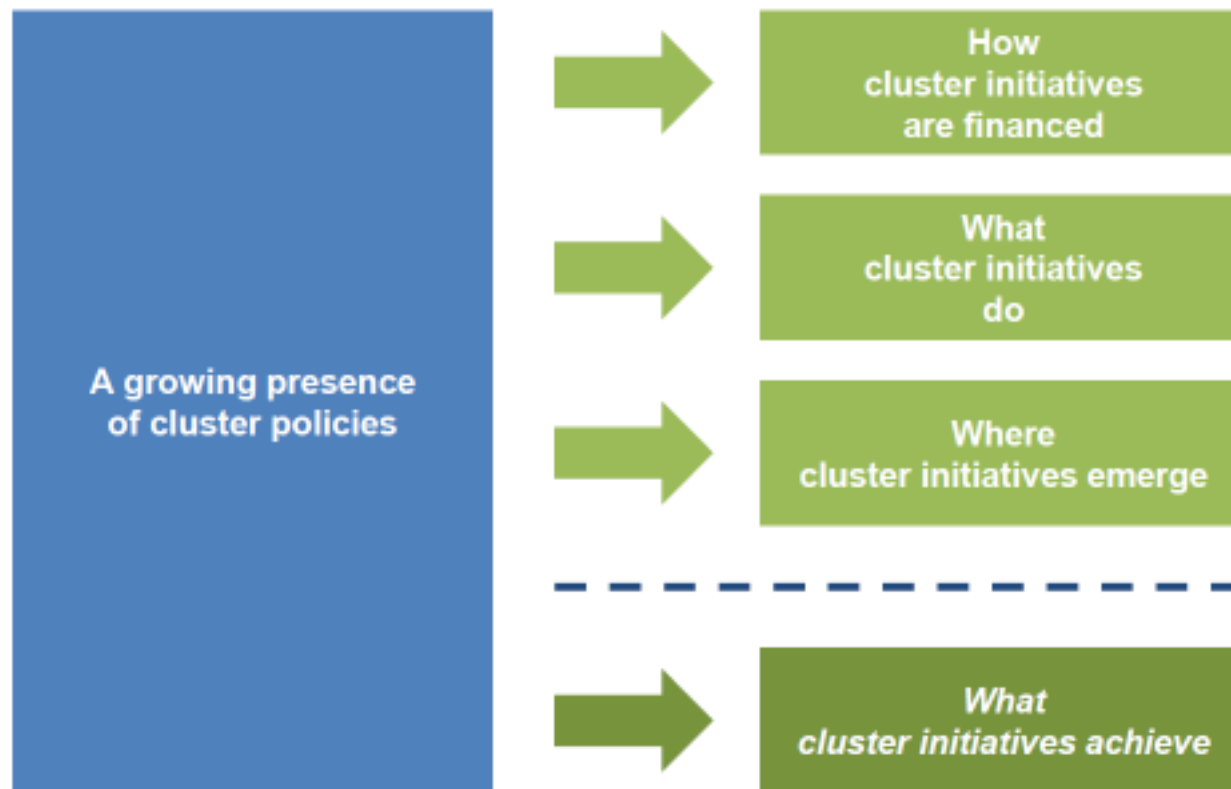


Figure 4.6. Impact of CI on interaction and collaboration



Note: Dark green represents the reply "Much better", and brighter green represent lower positive performance. Red shades represent negative performance, down to "Much worse".

# Cluster Policies



# Example: Regional Funding for Cluster Development and Operation

- Region of Central Macedonia Programme
- 4M€ Public Funding
- ~55-60% Public Funding
- ~40-45% Private Funding (*cluster entity capital, contribution to cost of services, selling services to 3<sup>rd</sup> parties*)
- ~4-6 Clusters will be funded
- Min 10 companies and one academic/ research partner.  
Associations, NGOs, etc. may also participate
- Smart Specialisation Strategy priorities (agrofood, tourism, apparel/textile, materials, IT, energy, environment, transport)

# Indicative Cluster activities

## Cluster promotion and extroversion

- Branding and internationalisation
- Networking and promotion
- Participation in exhibitions, fairs, etc.

## Transfer of know-how to companies

- Scientific and business personnel providing services to companies (and other members)

## Cluster Management

- New and existing personnel
- Administrative/ operational costs

## Investments in buildings and equipment

- Testing equipment
- IT infrastructure, etc.
- Software and licences

## External services

- Industrial research and technological development
- Feasibility studies

# Examples of Clusters under development in our Region





# Key success factors



# Cluster formulation steps

Identify Cluster theme/  
topic with regional  
importance...Complemen  
tarity of companies  
(value chain) vs.  
competition

Identify public  
financing  
opportunities and  
jointly develop the  
programme/ scheme

Work together with  
companies to identify  
common challenges  
and cooperation  
opportunity areas

Develop a sound  
sustainable financial  
model (cluster entity  
capital, contribution  
to cost of services,  
selling services to 3<sup>rd</sup>  
parties)

Engage academia/  
research/ technology  
providers to propose  
areas of intervention

