



# **CLUSTERS AND IMPROVEMENT OF COMPETITIVENESS – study from the Czech Republic**

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# Clusters are ...

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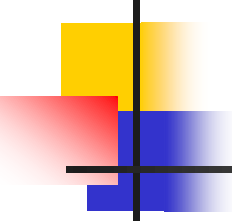
- There is a number of definitions of clusters in the literature
- Cortright (2006): „...one fixed definition of clusters cannot be made and it is necessary to modify one’s definition depending on the purpose of the given study“
- For the purpose of this research: *„Cluster is a a geographic concentration of mutually interconnected companies, specialized suppliers, providers of services, companies in similar fields and associated institutions, such as universities, agencies and associations of different orientations, which compete, but also cooperate.“* Cluster’s activities can be organized and managed.



# Clusters as a Tool for Increasing the Performance of Companies and Regions

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- Clusters of interrelated firms can be an important source of competitive advantage
- Active membership of cluster can lead to increased performance of individual firms.



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Within the framework of solution of a project called „*Cluster Performance Management and Measurement*“ supported by the Czech Science Foundation (No. 402/06/1526), selected aspects of cluster development and management has been analysed.

The project has been solved by a team of researches from the Faculty of Management and Economics of the Tomas Bata University in Zlin in cooperation with foreign and domestic partners.



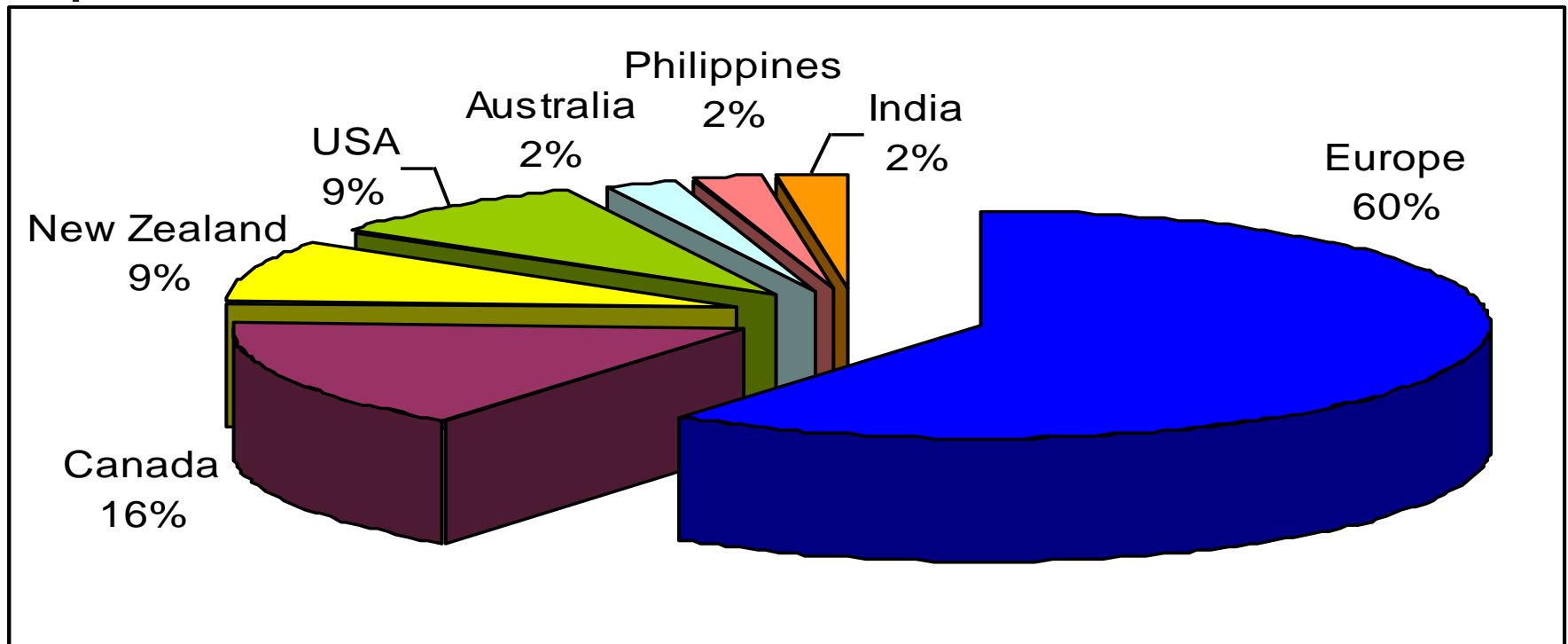
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Analytical work examined the activities of clusters and cluster initiatives:

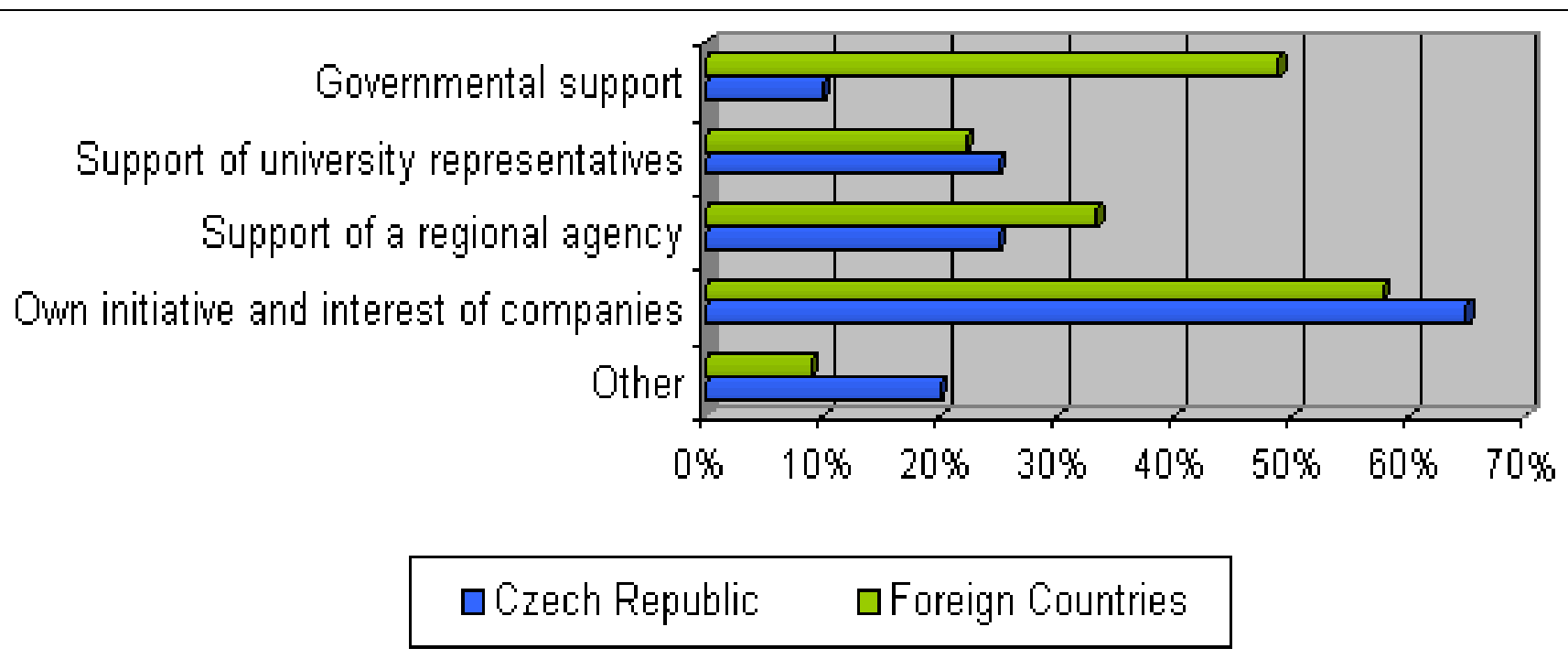
- in the Czech Republic
- in a variety of foreign countries

Survey made use of questionnaires and interviews of cluster managers.

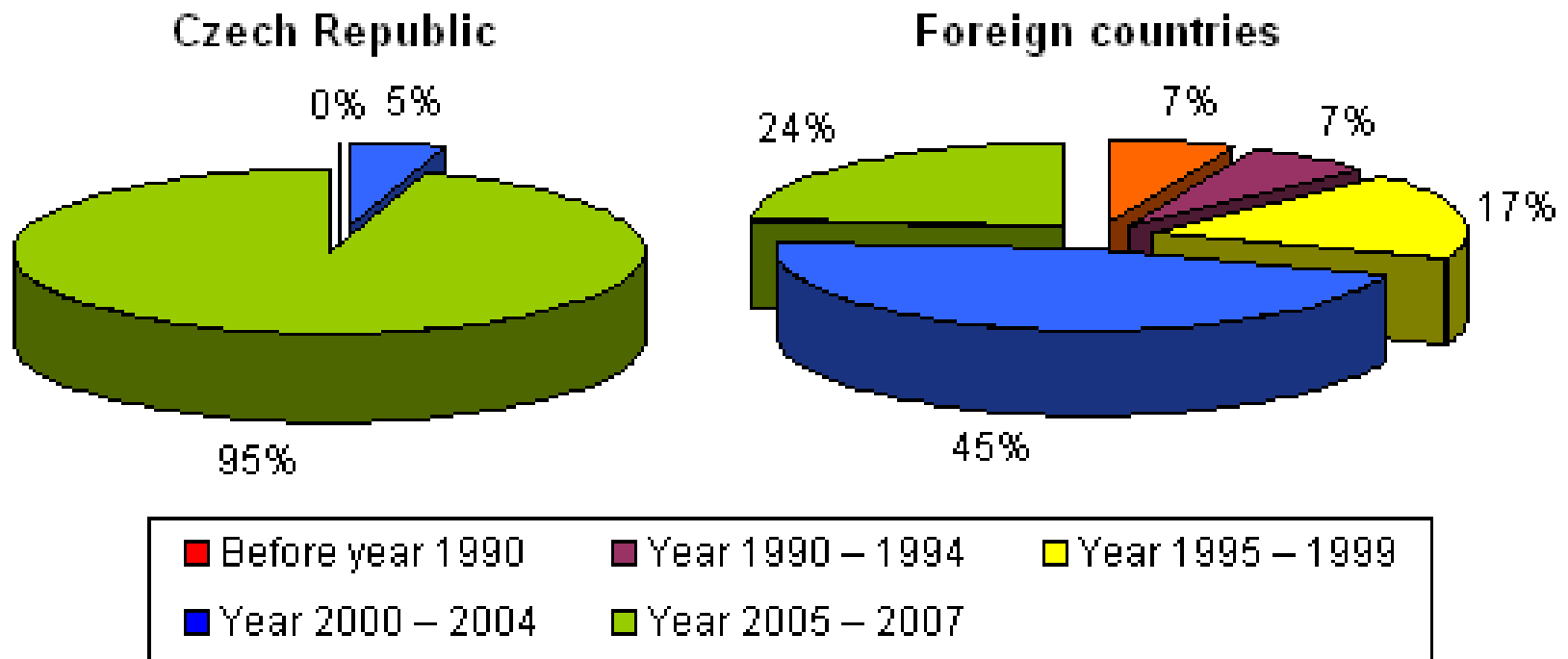
***Figure 1: Territorial representation of clusters in the sample (Czech clusters are excluded)***



***Figure 2: Primary impulse for the establishment of the cluster***

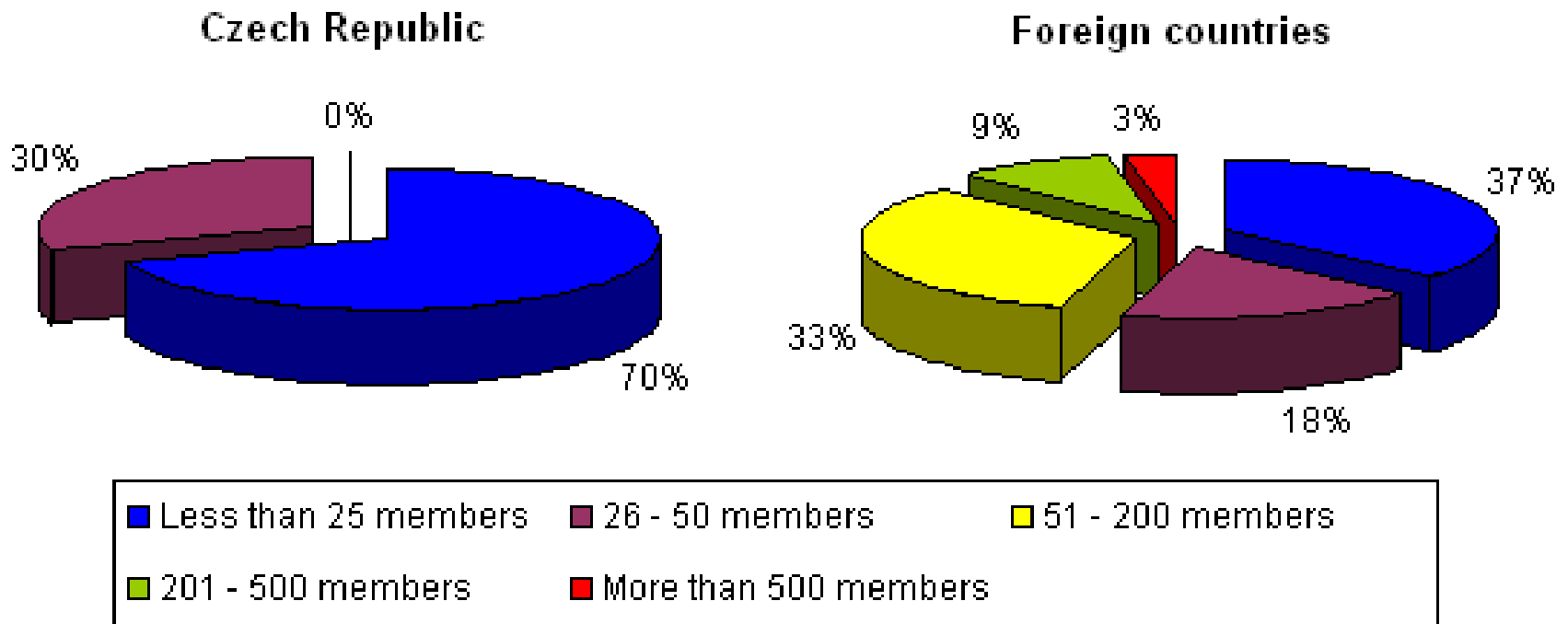


**Figure 3: Formation of the cluster (year)**

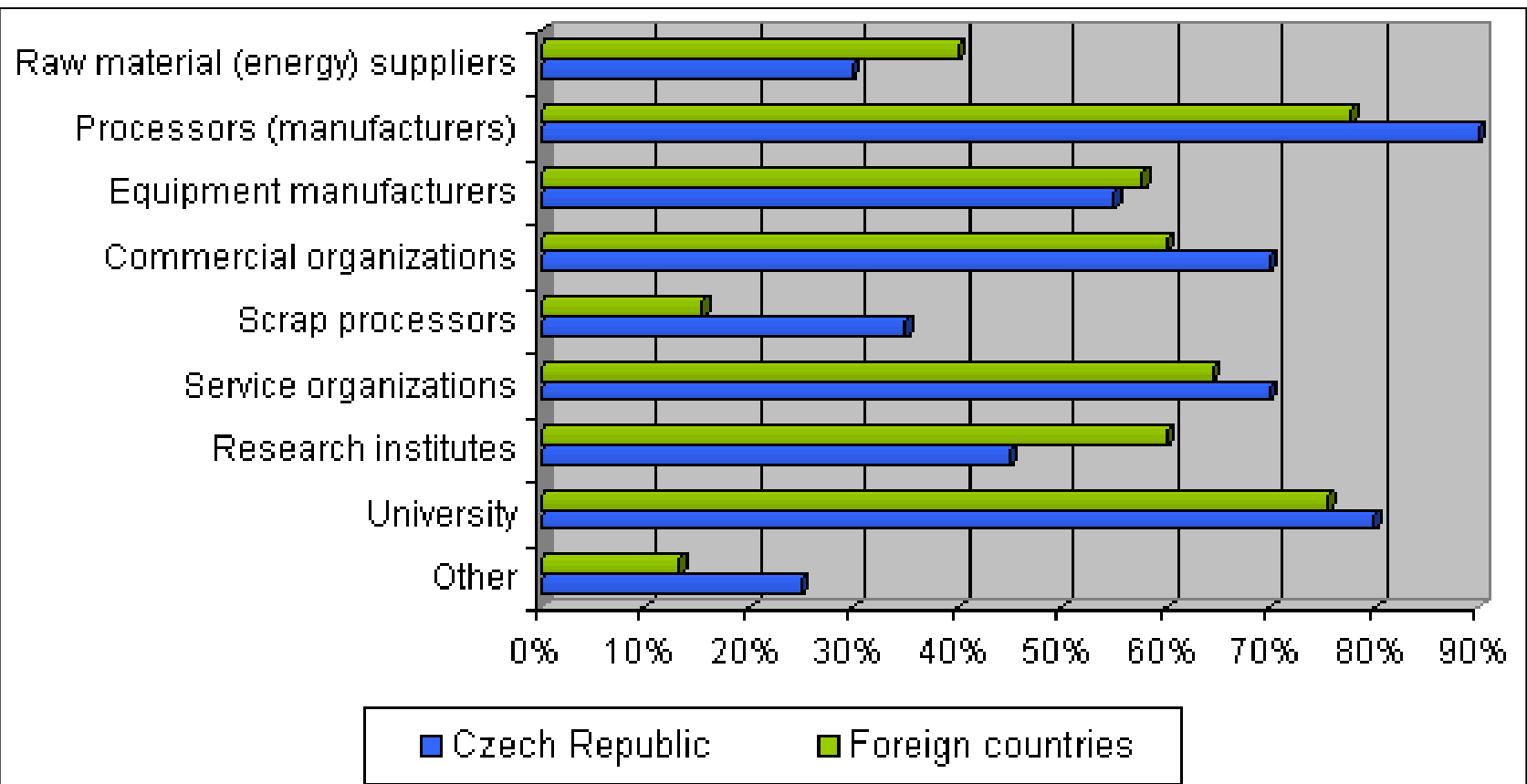




**Figure 4: Total number of companies in clusters**



**Figure 5: Members of clusters**





# Goals of clusters

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Most frequent goals of clusters in foreign countries are:

- *the growth of companies to increase the ability to compete*
- *the growth of a region*
- *strengthening cooperation*
- *support of innovations*
- *development of human resources*



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## Czech clusters:

- *the strengthening of the position of the given field in a specific region,*
- *strengthening of export and effectiveness of participating companies, by means of the application of new knowledge in research and development, innovations and technology transfer*



## Fields for cooperation:

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- networking
- human resource management
- research and development, innovation processes
- marketing, public relations
- investments
- lobbying, etc.

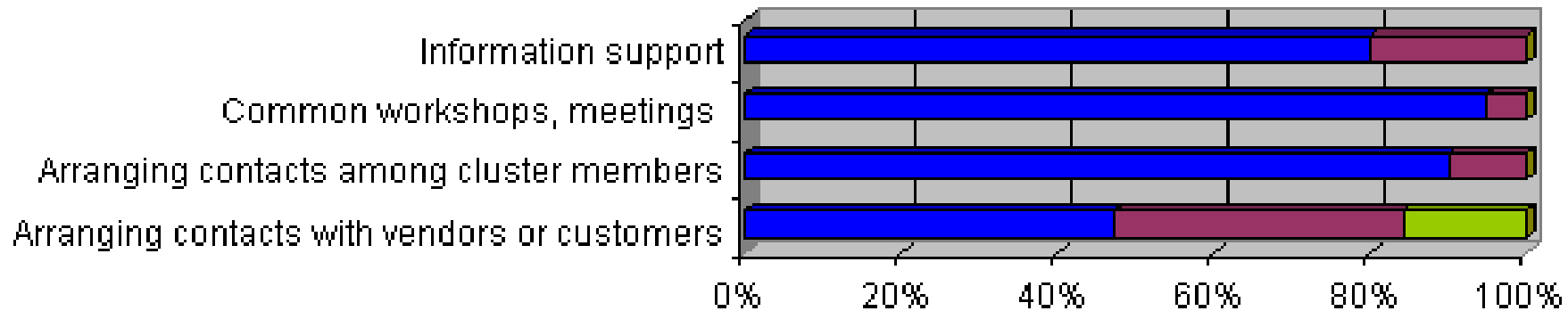


# *Networking*

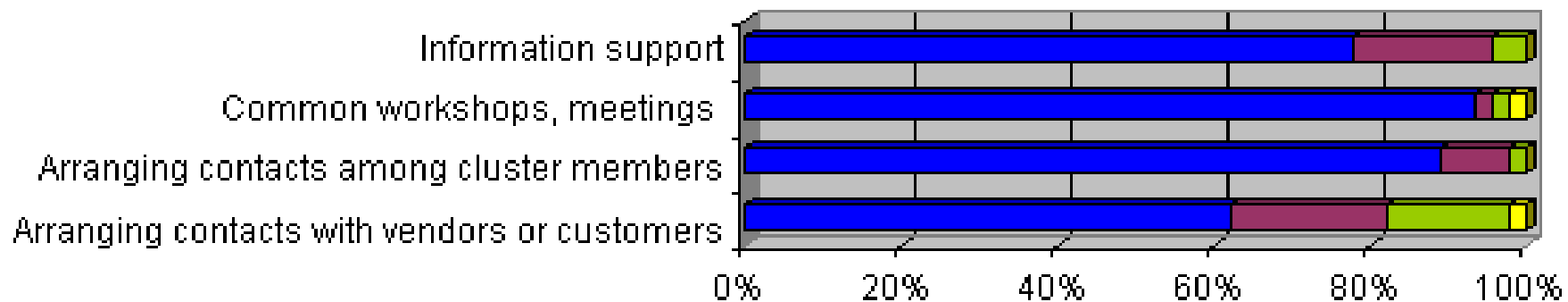
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- creation of conditions for formal and informal flow of information and knowledge within the cluster
- it can have the form of short meetings of representatives of individual cluster members, information support by common web site, newspaper, setup information center etc.
- the management of a cluster may arrange contacts not only among the members of the cluster, but also with suppliers, customers, providers of financial capital, with educational, research and other institutions, which are not members of the cluster

## Czech Republic



## Foreign countries



1. clusters currently offer to their members,
2. clusters currently do not offer , but plan doing so in few years,
3. clusters currently do not offer, but in case of need cluster managements are able to arrange,
4. clusters neither offer nor plan doing so



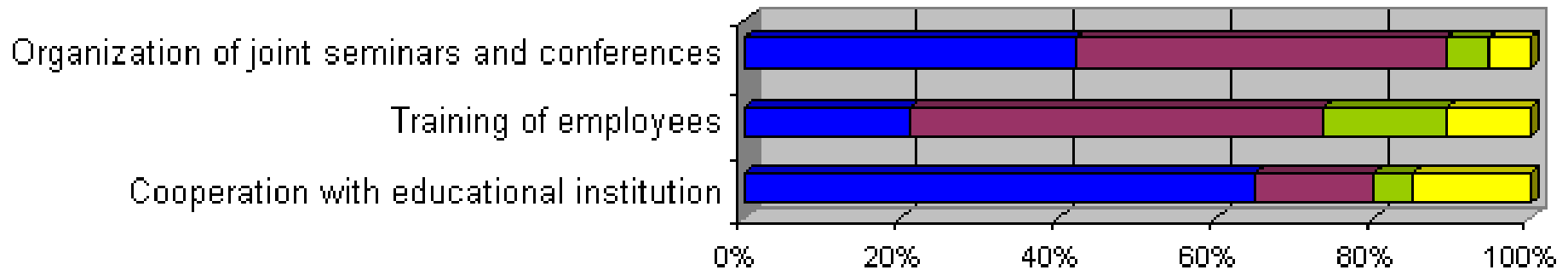
## ***Human resources***

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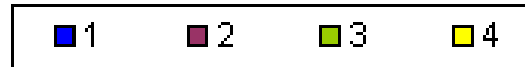
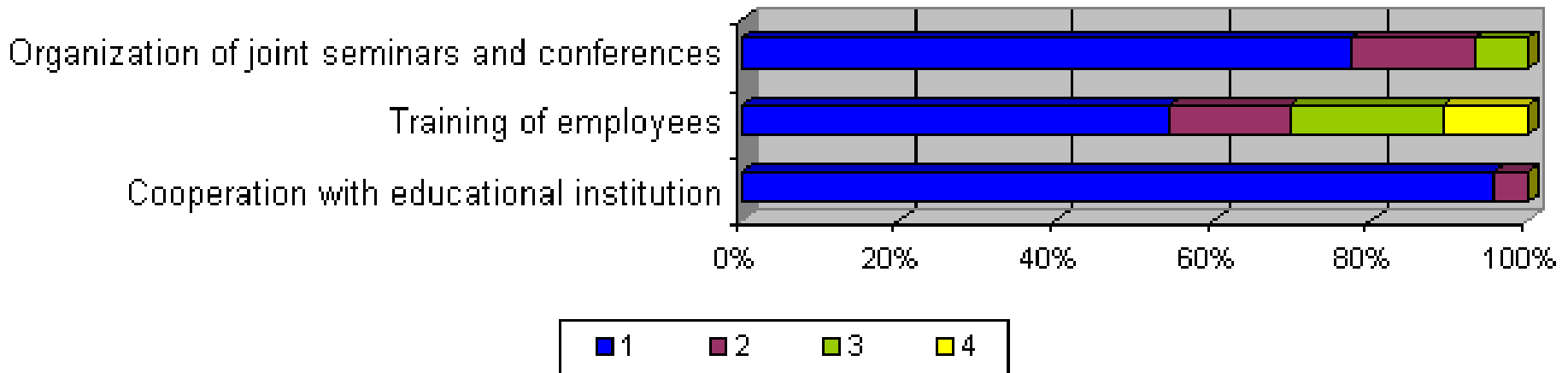
- availability to the companies and the improvement of people qualifications and skills, represent an important field for the cooperation within the clusters
- forms of cooperation: a common vocational guidance and education of employees by organizing courses, common seminars and conferences, by creation of educational centers
- clusters often organize these activities in cooperation with educational institutions
- cooperation of the cluster with secondary schools, colleges and universities can be significant in creating cooperative networks, helpful in formulation of demands on graduates of these schools according to the needs of industrial practice
- the presence of a strong cluster in a region may also attract talents from elsewhere.



## Czech Republic



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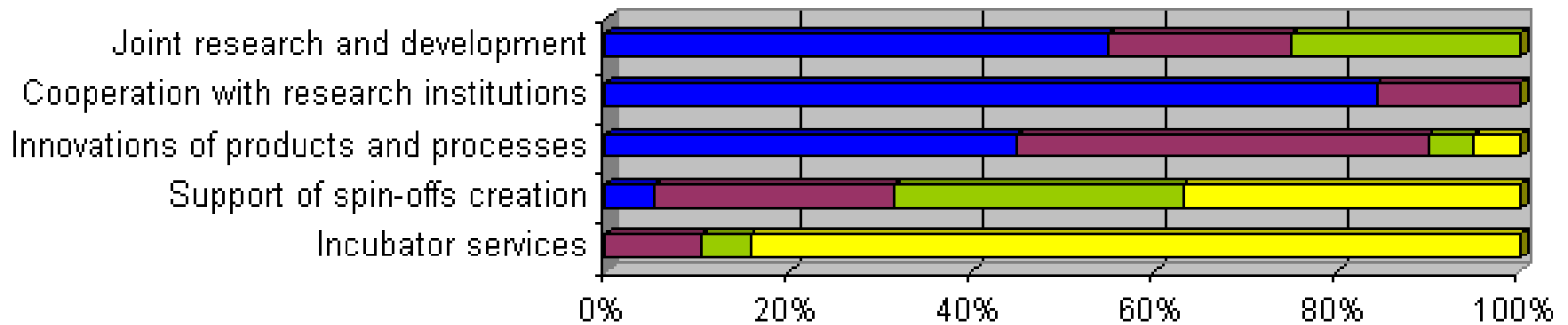


# ***Research and Development, Innovations***

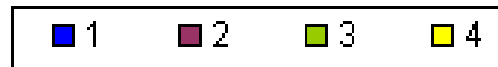
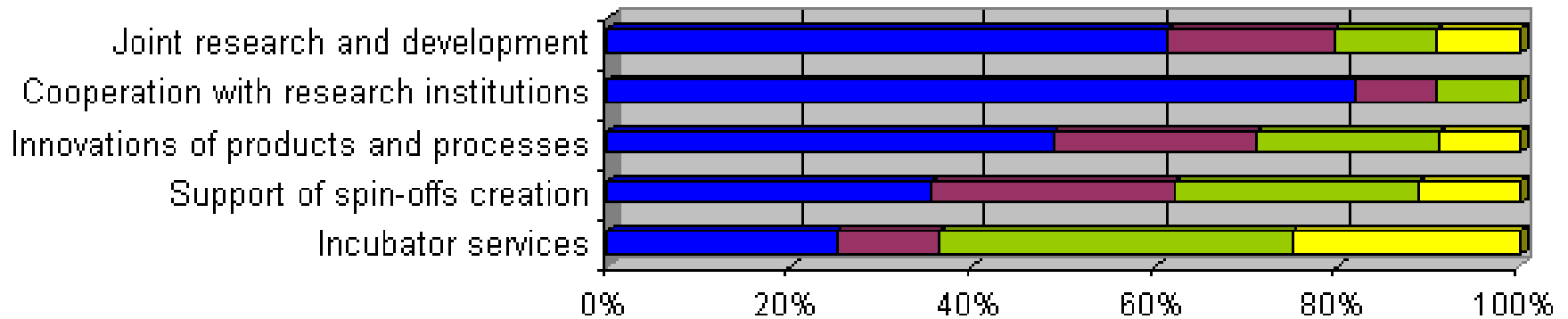
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- innovations maintain the viability and prosperity of companies in the marketplace; research and development create the condition for future growth.
- the cooperation of the companies within the cluster may have the form of sharing information and ideas, mutual research projects, support of formation and expansion of spin-off companies etc.
- companies can develop a mutual research infrastructure together or cooperate with research institutions (research institutes or universities), which have the necessary materials, technical facilities and equipments as well as properly trained personnel and which are often initiators and operators of „incubators“ and scientific and technical parks.
- universities and research institutes can also greatly benefit from the cooperation with clusters - they can better move the results of their research into implementation in practice and commercialization.

## Czech Republic



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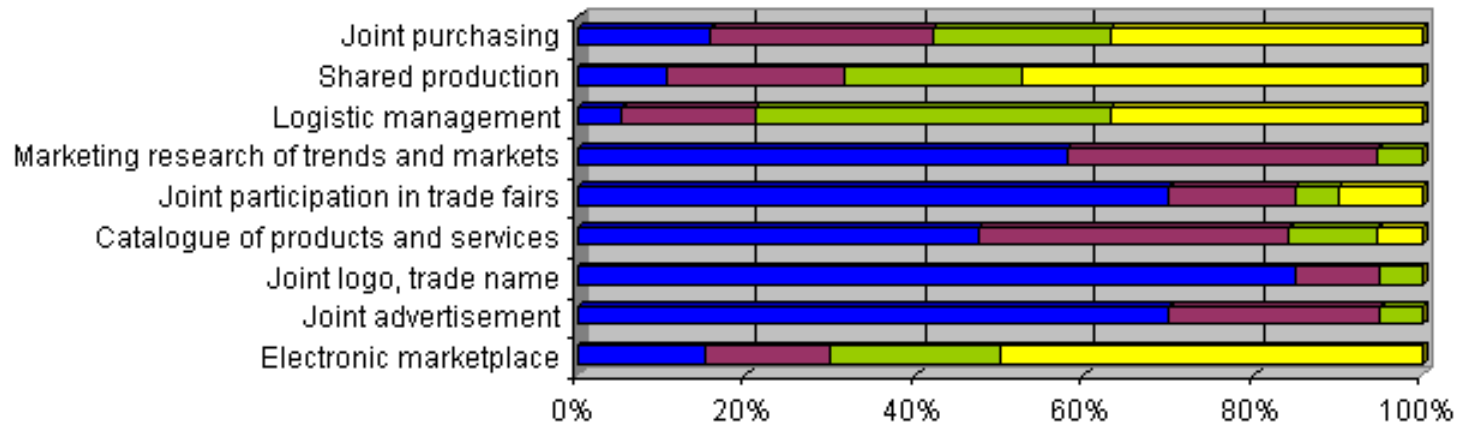


# ***Business cooperation and promotion***

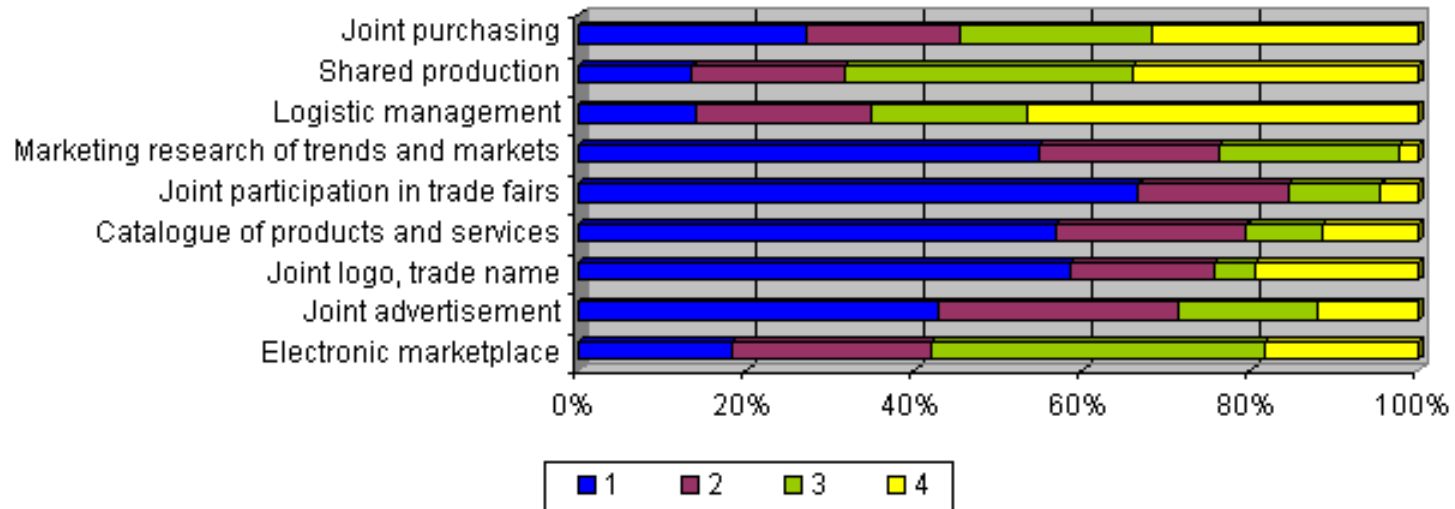
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- activities as joint purchasing and a possibility of a higher pressure on the quality of delivered goods and their pricing
- shared production
- more effective logistic management
- shared expenses for marketing research of trends and markets; joint participation in trade fairs; joint catalogue of products and services for the member of clusters; the possibility to utilize joint logo, trademark, advertisement etc.

## Czech Republic



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## ***Financing of investment projects***

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- very important for the strategic development of a cluster
- significant resource for reducing capital costs and risk
- an access to financing can be easier for a cluster than for an individual company
- investors (often venture capital) may be attracted into the region due to positive image created by the presence of a strong cluster

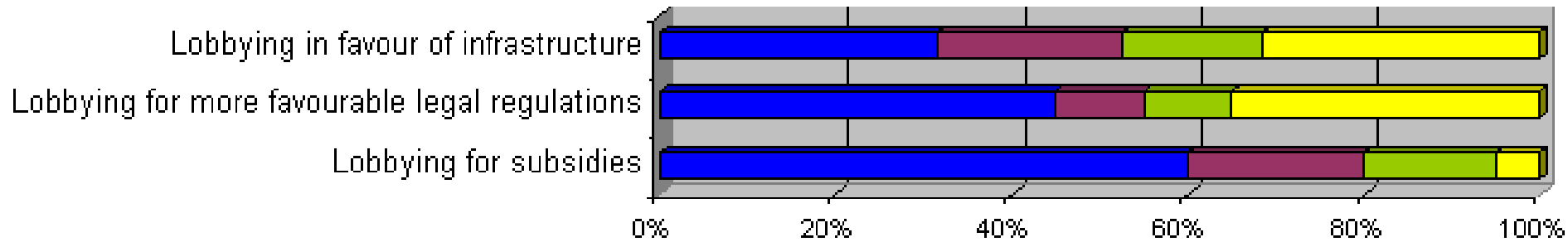


# *Lobbing*

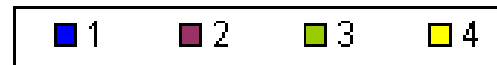
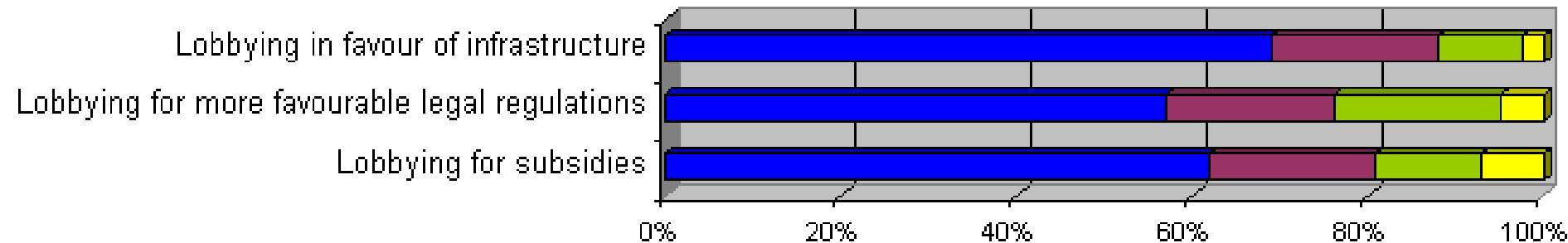
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- lobbing on behalf of building a necessary infrastructure, improvement of legislation, grant policy etc.
- a cluster magnifies the power and voice of smaller companies
- thanks to the visibility of a cluster, cost effectiveness and higher return on investment represented by a cluster, its additional possible investments are more easily justifiable.

## Czech Republic



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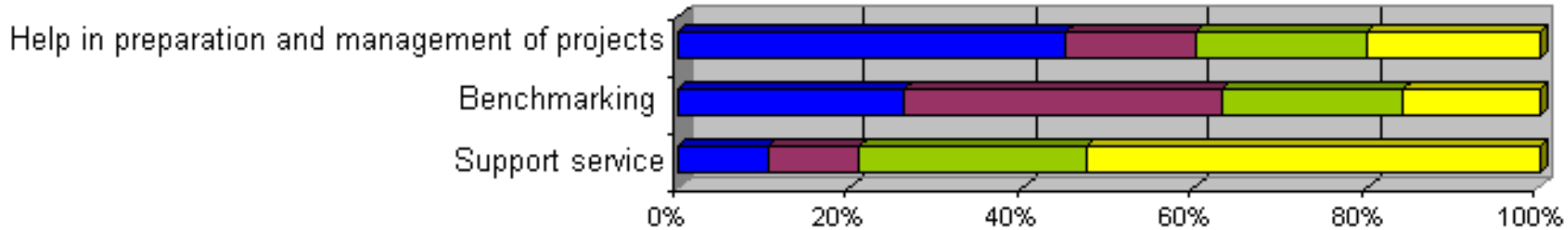


## ***Support activities of cluster management***

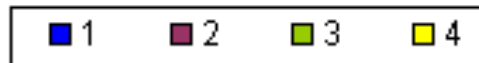
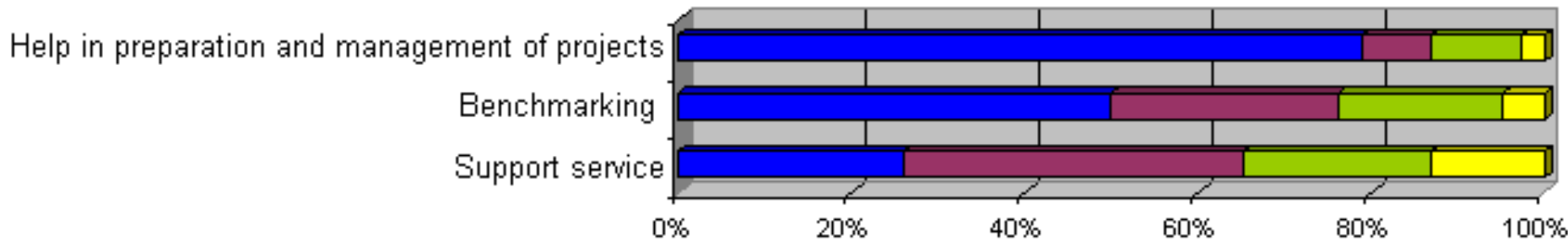
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- help with preparation and management of projects;
- securing service in the form of accounting a legislative consulting; banking services; insurance;
- benchmarking etc.

### Czech Republic



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# Characteristics of activities in dependence on the field in which the cluster operates

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Clusters with „traditional“ fields of business:

- preference of joint training of the employees, joint logo and trademark.

Clusters with „new“ fields of business:

- preference of joint activities in the area of research and development, lobbying on behalf of infrastructure, joint purchasing and shared production, benchmarking.



# Characteristics of activities in dependence of the age of the cluster

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*The activities of clusters are often related to the life-cycle of a cluster:*

The youngest clusters have a low proportion of activities regarding joint research and development, innovations, support of spin-off companies, incubator services, joint purchasing and production.

Older clusters devote more attention to benchmarking and advertising and on the contrary consider joint preparation of product catalogues, joint attending of fairs and support services such as bank services, insurance, legal, accounting and tax consultancy less important.

From the point of view of lobbying, older clusters lobby more in favor of the infrastructure, younger cluster in favor of obtaining subsidies.



# Commitment of cluster members in joint activities

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- Approximately 40 % of cluster members participate in the activities on a regular basis, 40 % participate occasionally and about 20 % not at all.
- The proportion of regular and occasional participating members is the highest in older clusters (established before year 1995).
- Higher activity is also in clusters with smaller number of members.



## Methods of management of clusters

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Clusters can be managed by different ways, e.g. by:

- own manager (most frequently)
- representatives of companies
- public institutions
- universities

All Czech clusters have their own professional manager and this is more than in foreign clusters (69%).

Almost one half of clusters is managed by the representatives of companies, or these representatives share the management duties.



# What can contribute to the progress of clusters and to the support of their performance?

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Since cluster performance is not a single-dimensional concept  
→ to look at a range of factors influencing cluster performance:

- *The macroeconomic and microeconomic framework for the growth of enterprises*
- *National or regional policies for the formation of clusters (mapping of potential grouping) and their development*
- *Efficiency of an organization of cluster activities and cluster management*



# Governmental and Local Cluster Policies

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The forms of support:

- *informational support and education by means of „guides“, seminars, and conferences,*
- *grants supporting mapping of potential clusters,*
- *grants supporting the implementation of selected projects.*





# Cluster policy in the Czech Republic

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- **KLASTRY (2004-2006)**

2 phases: mapping and cluster development projects

- **Cooperation (2007-2013)**

Support for establishing and developing cooperative sectoral associations:

- clusters,
- Technology platforms
- cooperative projects

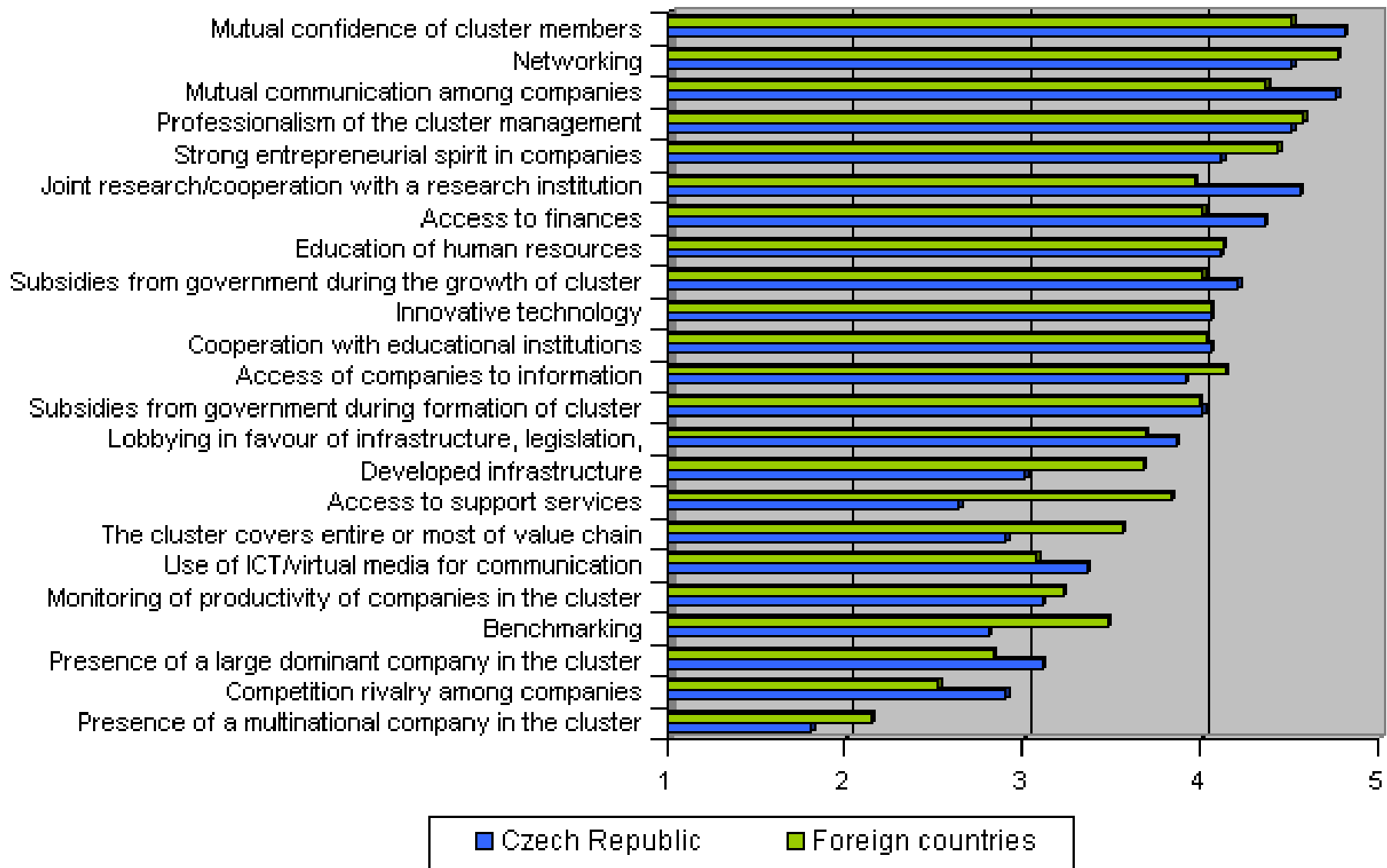
at regional, supraregional and international levels as a tool for boosting competitiveness of the economy and economic growth.



# The factors essential for cluster development and high performance:

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- Networking and mutual communication among cluster members;
- Professionalism of the cluster management;
- Mutual confidence and communication among cluster members;
- Strong entrepreneurial spirit in companies;
- Joint research or cooperation with a research institutions;
- Access of companies to information;
- Education of human resources and cooperation with educational institutions;
- Innovative technologies,
- Access to finances;
- Subsidies from government/region during the formation/growth of cluster.





# Conclusions

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- The research of literature, studies and own research have shown that clusters are a tool that in the environment of globalized business is able to support the ability of individual companies to compete.
- Clusters may have varied legal form, size, structure, different methods of management as well as different areas of interest.
- The research among cluster managers in the Czech Republic has shown that the Czech clusters even though being very young, are aware of the possibilities offered by this type of cooperation and offer their own members a number of joint activities or plan to do so in a near future.
- The experience of foreign clusters indicates which activities are possible and preferred within the realm of clusters.



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*Thank you for your  
kind attention*

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