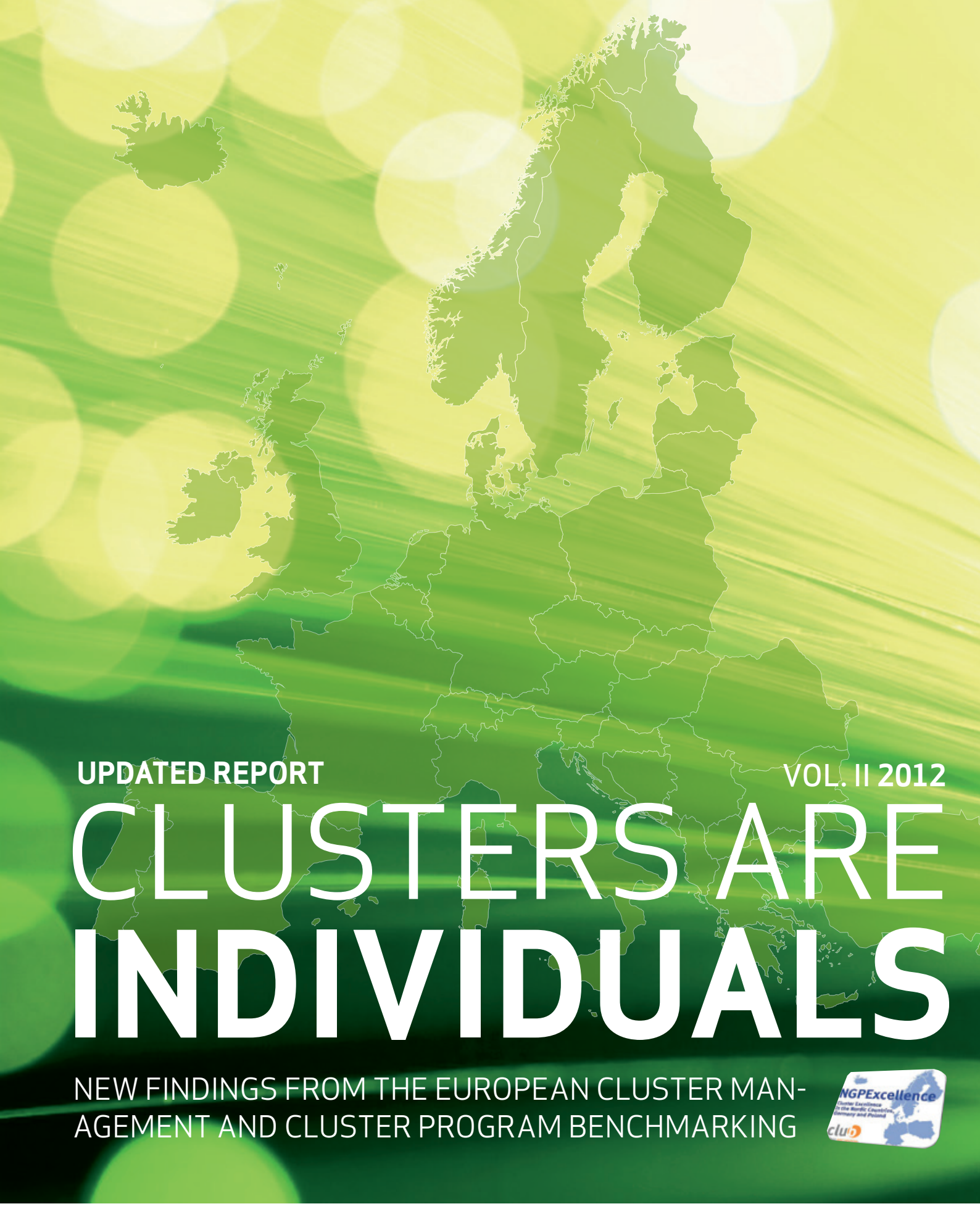

UPDATED REPORT

VOL. II 2012

CLUSTERS ARE INDIVIDUALS

NEW FINDINGS FROM THE EUROPEAN CLUSTER MANAGEMENT AND CLUSTER PROGRAM BENCHMARKING

Ministry of Science, Innovation and Higher Education

VDI | VDE | IT

Bundesministerium für Wirtschaft und Technologie

COLOPHON

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NEW FINDINGS FROM THE EUROPEAN CLUSTER MANAGEMENT AND CLUSTER PROGRAM BENCHMARKING

NGPExcellence
Cluster Excellence in the Nordic Countries, Germany and Poland

UPDATE 2012

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The project was initiated by the Danish Ministry of Science, Technology and Innovation.
It was carried out by VDI/VDE Innovation + Technik GmbH on behalf of the Danish Ministry for Science, Technology and Innovation.

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ABBREVIATIONS OF CLUSTER PROGRAMS USED IN THE FIGURES

Table 1: Abbreviations for the cluster programs benchmarked in this study

COUNTRY	NAME OF PROGRAM	ABBREVIATION
AUSTRIA	Cluster Program Lower Austria	Lower Austria
BELGIUM	Competence Centres-Light Structures	Belg LS
	Cooperative innovation network integrated project	Belg VIS
CZECH REPUBLIC	Cooperation–Clusters	CZ
DENMARK	Innovation Networks Denmark (Innovationsnetværk Denmark)	IND
ESTONIA	Cluster Development Program	EST
FINLAND	Centre of Expertise Program (OSKE, Osaamiskeskusohjelma)	OSKE
	Strategic Centres for Science, Technology and Innovation (SHOK, Strategisen huippuosaamisen keskittymät)	SHOK
FRANCE	Grappe d'entreprises	Grappe
	Les Pôles de Compétitivité	PdC
GERMANY	Competence Networks Germany (Initiative Kompetenznetze Deutschland) (expired)	KOM
	Go-Cluster Initiative	Go Cluster
	Clusterpolitische Gesamtstrategie der Freien und Hansestadt Hamburg (Cluster Policy Strategy of the Free and Hanseatic City of Hamburg)	HH
	Cluster Offensive Bayern (Bavarian Cluster Initiative)	COB
	Zentrales Innovationsprogramm Mittelstand – Fördermodul Netzwerkprojekte (ZIM NEMO) (Central Innovation Program SME – Funding Module Network Projects)	ZIM
HUNGARY	Cluster Development Program of the New Széchenyi Plan	HU
ICELAND	Strategic Research Program for Centres of Excellence and Research Clusters (The Icelandic Centre for Research (Rannsóknamiðstöð Ðslands))	RANNIS
	Regional Growth Agreements (Vaxtarsamningur)	VAX
ITALY	Innovation Clusters Piedmont	Piedmont
LATVIA	Cluster Program	LAT

LITHUANIA	InnoCluster LT	LT
	InnoCluster LT+	LT+
LUXEMBOURG	Luxembourg Cluster Initiative	Lux
NORWAY	Norwegian Centres of Expertise (NCE)	NCE
	Arena Program (Arena-programt)	ARENA
POLAND	Polish Cluster Support Schemes: Support for the development of Supra-Regional Clusters and Cluster Creation in Eastern Poland	POL
PORTUGAL	Portuguese Operational Competitiveness Program - COMPETE	Compete
ROMANIA	Development of business support infrastructures of national and international interest (Competitiveness Poles)	CP, RO
	Support to the integration of SMEs in value chains and clusters (Clusters)	Clusters, RO
SERBIA	Serbian Cluster Development Support Program	Serbia
SLOVAKIA	Support to innovative industrial cluster organizations	SK
SPAIN	Cluster Development Catalonia	Spain Cat
SWEDEN	Vinnväxt	VINN
TURKEY	Support for the Improvement of International Competitiveness (UR-GE)	URGE, TR
UNITED KINGDOM	Knowledge Transfer Networks	KTN

EXECUTIVE SUMMARY

In economic and innovation policy the term „cluster" is usually used to explain geographical concentrations of economic and innovation activities. According to conventional wisdom clusters support economic development through the specialization of regions in activities within which companies gain higher productivity through accessing external economies of scale or other comparative advantages. During the past 15 years clusters and innovative (competence) networks have gained more and more importance as an element of economic development and innovation strategies of the European Union and its Member States. The analyses in this report challenge conventional wisdom of what drives development and innovation within a cluster. Based on the largest international analysis of its kind involving a simultaneous benchmarking of more than 260 cluster organizations and of cluster policies from 23 European countries it is found that the economic impacts of clusters depend on many more factors not related to the specialization of regions through the geographical concentration of the cluster than earlier research suggests. Cluster management excellence and the spectrum and frequency of business-related services of the cluster organization are important determinants for the impact of a cluster. The analyses of cluster organizations and cluster policies also show many other key determinants for the development and characteristics of a cluster such as internationalization activities, R&D activities, age, technology areas.

The overall objective is to contribute to the development of outstanding clusters through excellent management and excellent cluster programs. Conducted from October 2010 to September 2012 the project pays particular attention on the characteristics of cluster management organizations and their effects on cluster development. More than 260 cluster management organizations from 16 countries were benchmarked to base the analysis on a comprehensive comparative portfolio. 34 cluster programs from 24 countries supporting most of the analyzed cluster organizations were analyzed to facilitate a better understanding of successful strategies and mutual learning between the program owners and to develop recommendations for a "perfect" cluster program.

The Danish Ministry of Science, Technology and Innovation has initiated this project. The analyses were carried out by VDI/VDE Innovation + Technik GmbH. Invaluable support was given by the country experts of the benchmarked clusters and cluster programs in this report.

1 RESULTS OF THE BENCHMARKING OF CLUSTER MANAGEMENT ORGANIZATIONS

In order to understand the characteristics of cluster management organizations and their interaction with cluster stakeholders in more detail, 261 cluster management organizations have been benchmarked since November 2010. The results provide a detailed insight into cluster management organizations and clusters in terms of the structure of the cluster, cluster management and governance, financing, services provided by the cluster management organization and achievements and recognition of the cluster management organization.

This chapter presents the results of the benchmarking of cluster management organizations. The comparative portfolio is explained in chapter 1.1, while chapter 1.2 introduces the findings of the benchmarking in terms of the general characteristics of cluster management organizations and clusters. Chapter 1.3 analyses differences between cluster management organizations and clusters. Chapter 1.4 gives an insight into excellent cluster management organizations, while chapter 1.5 presents key determinants that decide about the effect a cluster on business activities of cluster participants.

1.1 COMPARATIVE PORTFOLIO

The comparative portfolio includes 261 cluster management organizations from 17 countries (see Figure 1) covering a broad range of technology areas respectively industries (see Table 2).

Figure 1: Participating countries

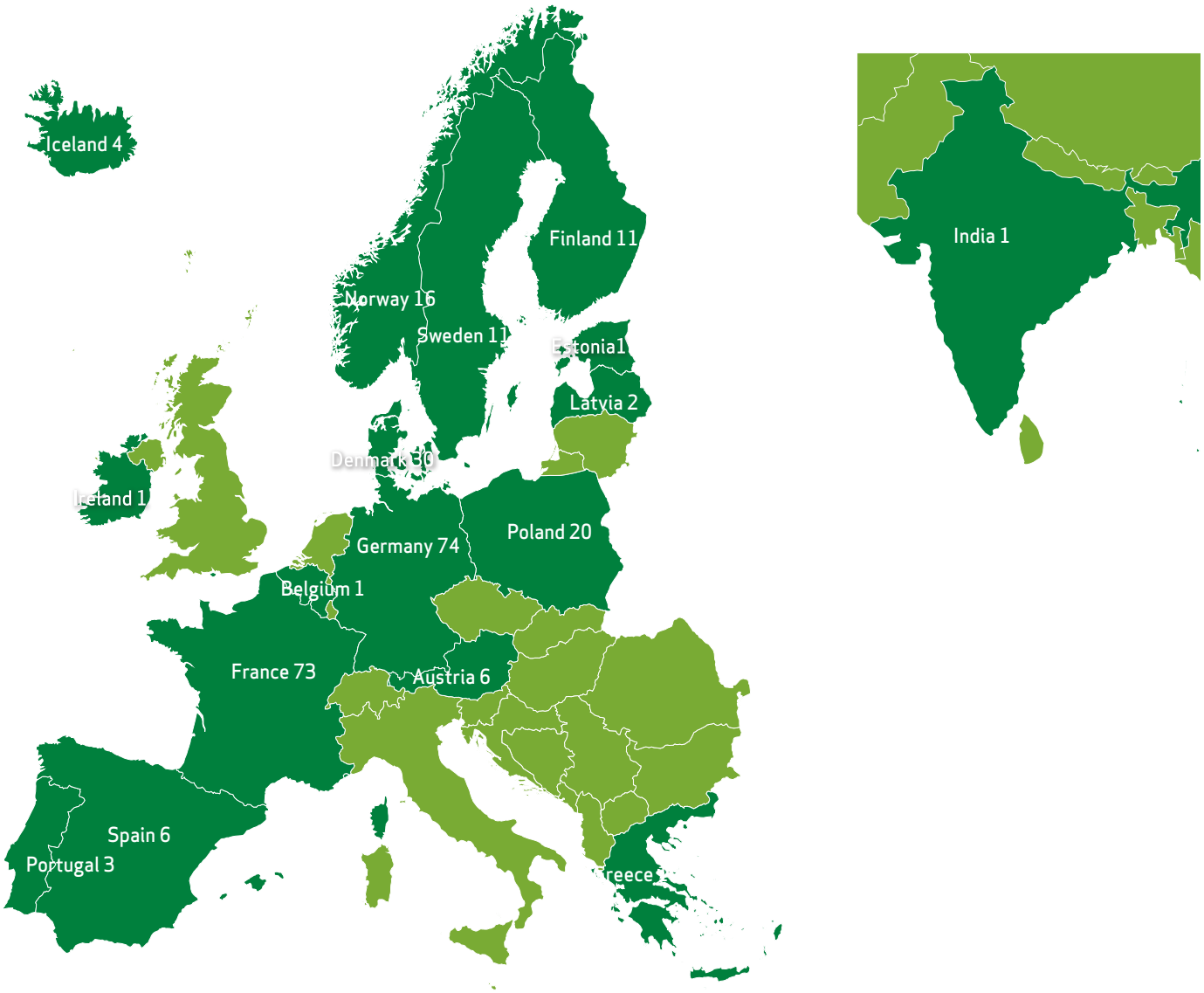


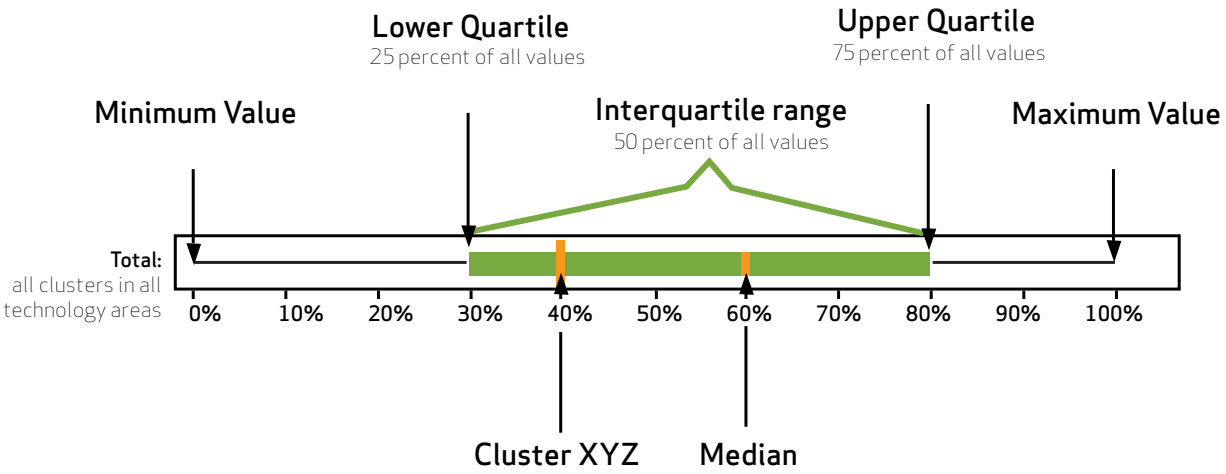
Table 2: Benchmarked clusters per country and technology area

TECHNOLOGY AREAS		Aviation and space	Biotechnology	Construction/building sector	Energy and environment	Food industry (non-biotech)	Health and medical science	Humanities/social sciences, media, design, service innovation	Information and communication	Micro, nano and optical technologies	New Materials and chemistry	Production and engineering	Transportation and mobility	TOTAL
COUNTRIES	AUS		1	1	1				1			2		**6**
	BEL					1								**1**
	DNK	1	1	1	4	2	2	5	5	1	2	3	3	**30**
	ESP				1		1	1	1			1	1	**6**
	EST								1					**1**
	FIN				3	2		1	2	1	2			**11**
	FRA	3	2	1	15	10	6	3	8	5	11	4	5	**73**
	GER	2	10		7	5	5	3	13	10	6	8	5	**74**
	GRC									1				**1**
	IND											1		**1**
	IRL								1					**1**
	ISL				2	1						1		**4**
	LVA								1				1	**2**
	NOR				2	1	2	2	1	2	1	5		**16**
	POL	2		2	4		2	3	3	1	1	1	1	**20**
	PRT					2			1					**3**
	SWE		2		2		1	1	**2**	1	1	1		**11**
	TOTAL	**8**	**16**	**5**	**41**	**24**	**19**	**19**	**40**	**22**	**24**	**27**	**16**	**261**

Box 1: Explanation of figures used to present the results of the benchmarking

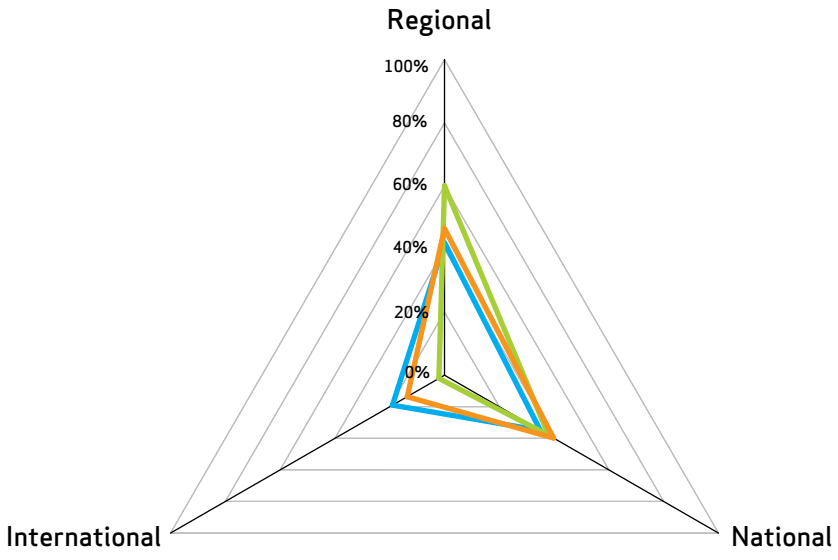
Boxplot

A boxplot presents the minimal and maximal values as well as the median of the results. The median is a numerical value separating the higher half of a sample from the lower half. The lower quartile covers the lowest 25 per cent and the upper quartile covers the lowest 75 per cent of the data. The difference between the upper and lower quartiles is called the interquartile range. It represents 50 per cent of the data.



Radar Chart

A radar chart is a graphical method of displaying multivariate data in the form of a two-dimensional chart of quantitative variables represented on axes starting from the same point. In the following example the data of the benchmarked cluster is indicated by a green line and compared to the data of the clusters in its specific technology area (orange line) and all technology areas (blue line).



1.2 GENERAL CHARACTERISTICS OF CLUSTER MANAGEMENT ORGANIZATIONS AND THEIR CLUSTERS

This chapter provides an overview of the general characteristics of cluster management organizations and their clusters for each country[1]. The overview includes data on

- The age of cluster management organizations,
- The size of clusters,
- The composition of clusters,
- The regional concentration of clusters and
- Financing of cluster management organizations.

1.2.1 AGE OF THE CLUSTER MANAGEMENT ORGANIZATION

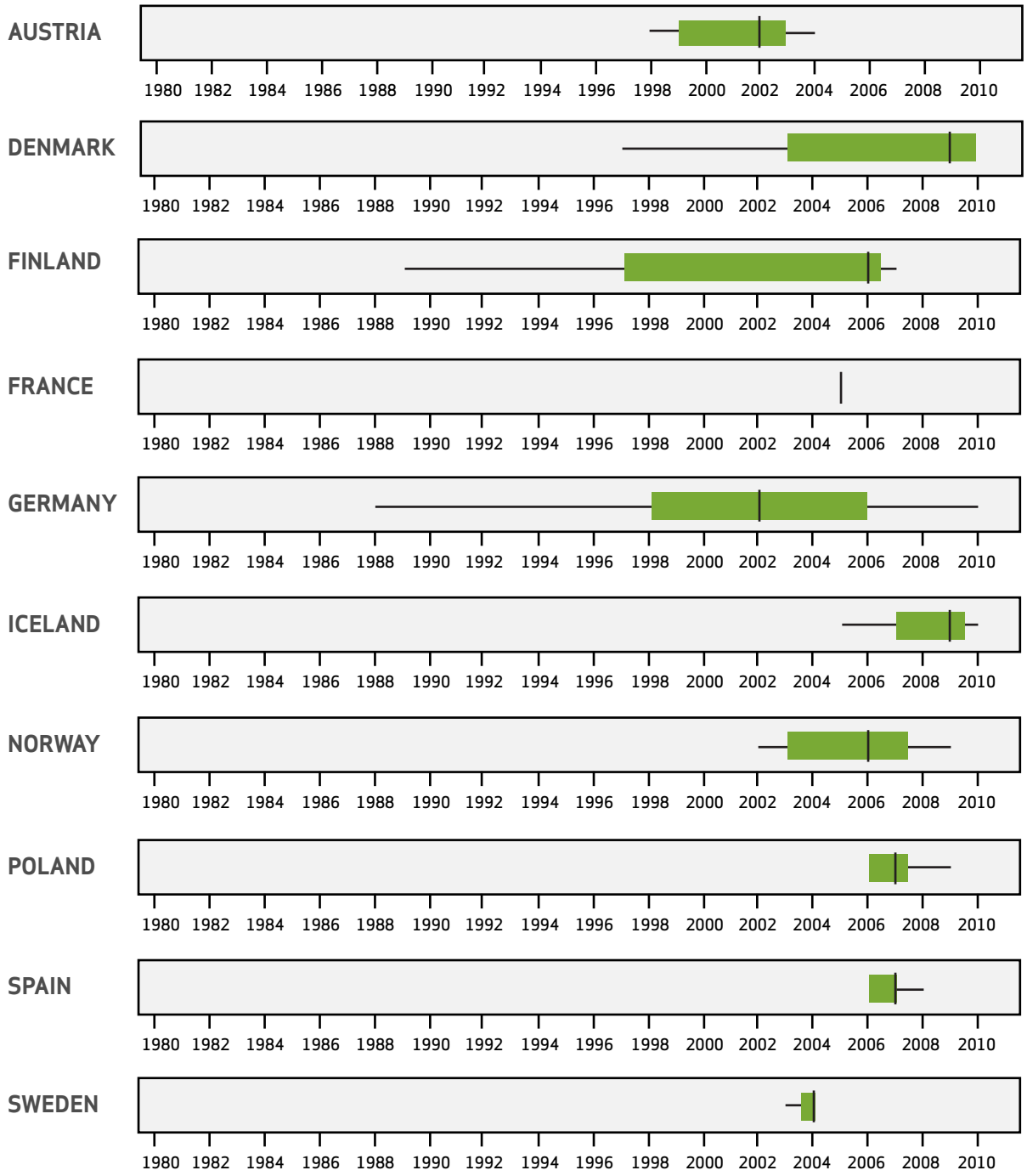
The establishment of the majority of cluster management organizations started in Austria, Germany and Finland already at the end of the 1990s followed by Denmark, France, Norway, Sweden, Spain Poland and Iceland (see Figure 2).

This pattern reflects the history of cluster policy in many of these countries. While, for example, cluster policy in Germany started in the mid-1990s resulting in a number of support programs both from the federal and regional level, in other countries cluster policy developed rather late at the beginning of the 2000s, like in Sweden, or even later, like in Iceland. As the majority of benchmarked cluster management organizations in their early phases relied heavily on public funding there is a clear correlation between the establishment and the inception of funding programs.

An interesting observation concerns the length of cluster institutionalization processes. While the majority of clusters in Germany were established during an eight-year period between 1998 and 2006, and in Finland between 1999 and 2007, this process was much shorter in other countries, e.g. in Poland just two years (2006 to 2008) or in Sweden just one year (2005). As this pattern cannot be explained by the influence of funding programs (e.g. through the publishing date of call for proposals) only – except for France where the Pôles de compétitivité program was launched in 2005 -, it is most likely that other dynamics such as specific developments in individual industries also had an effect on the date of establishment.

1 In order to get meaningful results the analysis includes only countries with more than four benchmarked clusters.

Figure 2: Year of establishment of the cluster management organization



1.2.2 SIZE OF CLUSTERS

For the purpose of this project the size of clusters was measured in terms of numbers of cluster participants who are committed to the work of the cluster management organization. A committed cluster participant is a company, R&D institution etc. who meets at least one of the following criteria:

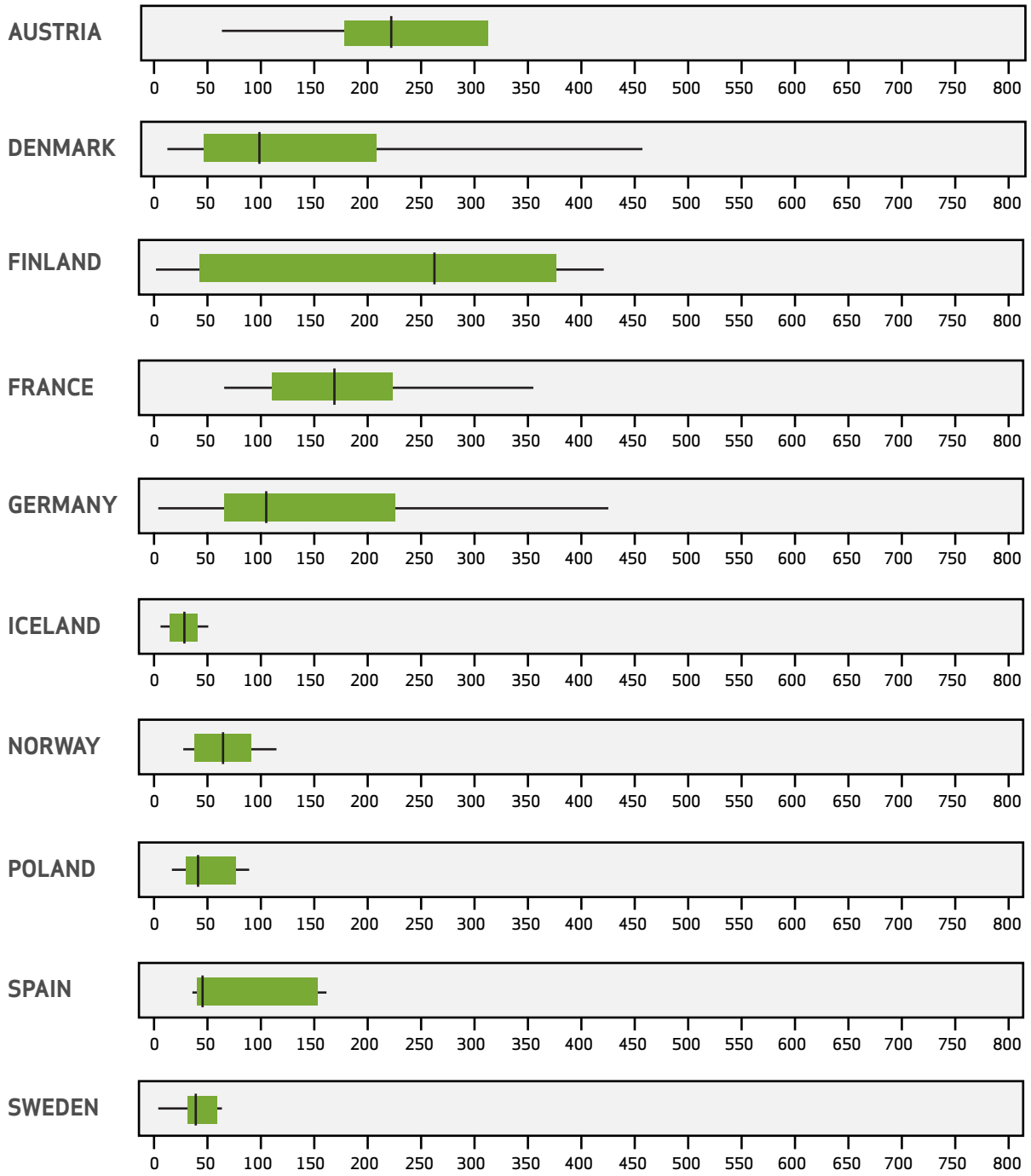
- The cluster participant has signed a membership agreement, a letter of intent or a similar form of written commitment;
- The cluster participant pays membership fee or provides financial support to the cluster management on a regular basis (this may also include inkind contributions or staff working time);
- The cluster participant contributes actively to the development of the cluster on a regular basis, e.g. through the participation in projects, workshops or working groups.

Figure 3 presents the composition of clusters in terms of total number of committed cluster participants. The total number includes participants from the following categories: SME[2] , Non-SME, R&D institutions, universities, training and education providers, financial intermediaries, consultants, governmental agencies and others. The size of a cluster does not correlate with its business and innovation potential or its utilization: it is the quality of the cluster participants that is important.

The size of a cluster does not necessarily depend on the size of the national economy. Although the economies of Germany and Denmark are very much different in terms of the numbers of economic players, clusters in these two countries have a similar size. The size of clusters in Poland is quite small given the size of the Polish economy; but clusters may further grow in the future given the very young history of these clusters since the establishment of the cluster management organization. Eventually there is of course a size limit set by the size of the economy as it has an influence on the number of players in economic sectors in which clusters can develop. The large size of Finish clusters can be explained by the fact the majority of the benchmarked clusters are rather coordination bodies of smaller clusters in the same economic field; in this particular case the funding program "OSKE – Centre of Expertise Program", which supports the cluster management organizations, had a significant effect on the size of the clusters.

2 Based on the SME definition of the European Commission (Recommendation 2003/361/EC regarding the SME definition) this benchmarking considers a company as a SME if it has no more than 250 employees.

Figure 3: Size of the clusters (total number of committed cluster participants)

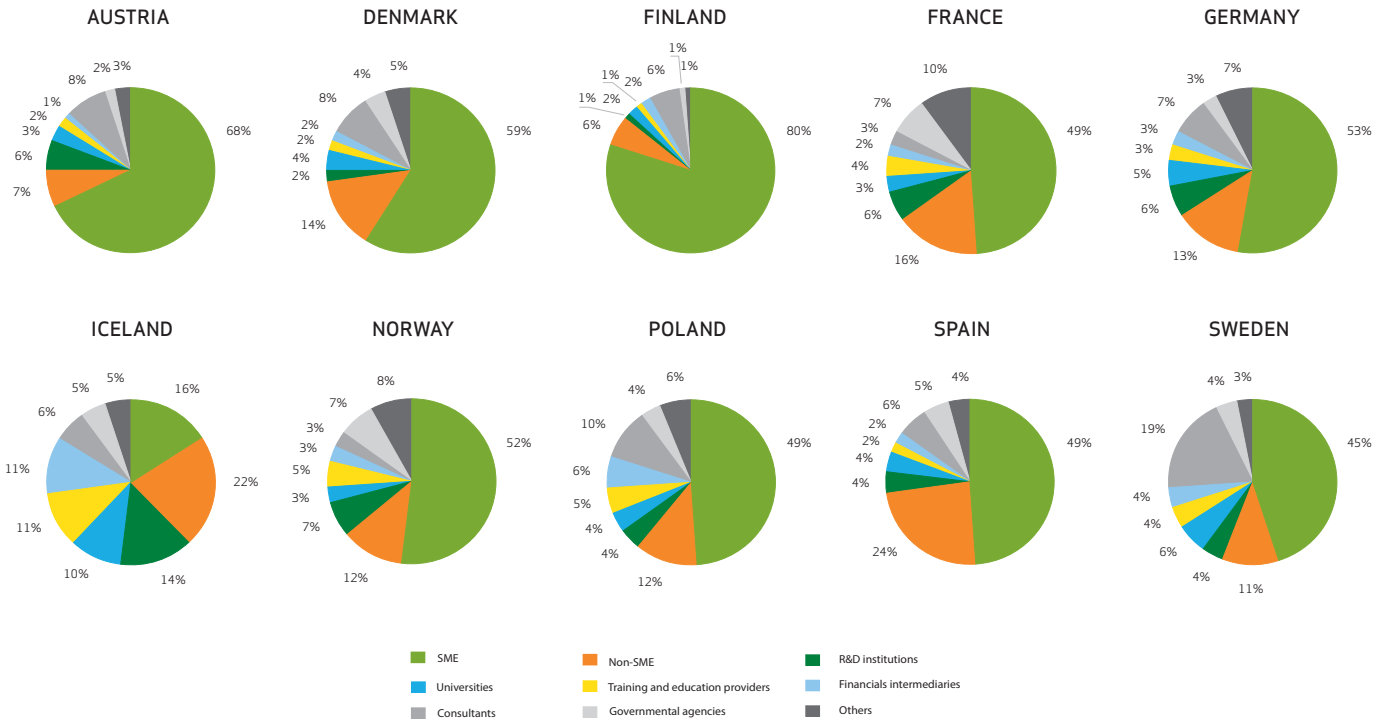


1.2.3 COMPOSITION OF THE CLUSTERS

Figure 4 displays the typical composition of a cluster for each country. With the exemption of Iceland in all countries industry (SME and Non-SME) is the dominating stakeholder. Swedish clusters have the lowest share of industry (56 per cent, SME: 45 per cent) and Finnish clusters, which are dominated by SME, the highest (86 per cent, SME: 80 per cent). The share of industry in Icelandic clusters is only 38 per cent.

The share of R&D institutions and universities is very much different between the countries. Iceland and Germany have the highest share (R&D institutions and universities account for 24 respectively 11 per cent of all stakeholders).

Figure 4: Composition of clusters



1.2.4 REGIONAL CONCENTRATION OF CLUSTERS

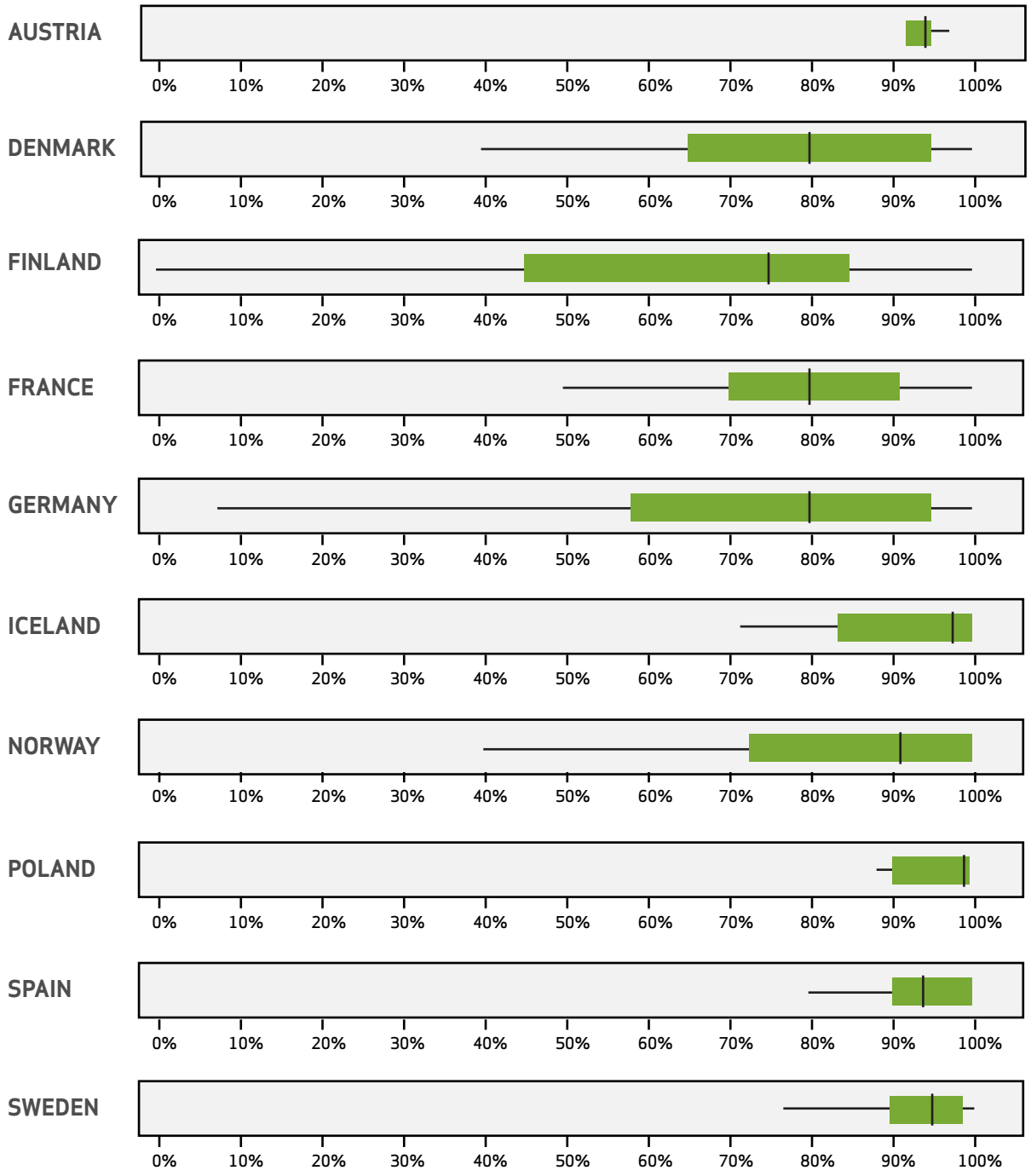
According to the definition of Michael E. Porter "clusters are geographic concentrations of interconnected companies and institutions in a particular field".[3] The closer these players are located to each other, the more likely is not only interaction between them, but also the chance of mutual trust building between them is much higher. Modern ways of communication, particularly structured by the internet, have made communication much easier, but nothing beats face-to-face interaction when it comes to the development and implementation of projects, in particular if problems have to be solved. Personal interaction matters in this regard, as it contributes to the building of trust between project partners, which is a mandatory resource for successful projects.

It was therefore analyzed how dense the regional concentration of a cluster is. Figure 5 displays for each country the percentage of cluster members located within a distance of 150 kilometers from the office of the cluster management organization. This distance can be easily covered by car or train in a short period of time, which facilitates personal interactions through frequent meetings of the cluster stakeholders.

All clusters that were benchmarked show a high regional density with a median value of at least 75 per cent. The conditions for successful work in terms of the spatial proximity of the cluster management organization to the members of the cluster are in these cases favorable.

3 Michael E. Porter, 1998: Clusters and the New Economics of Competition, in: Harvard Business Review, November/December 1998, p. 78

Figure 5: Regional concentration of clusters

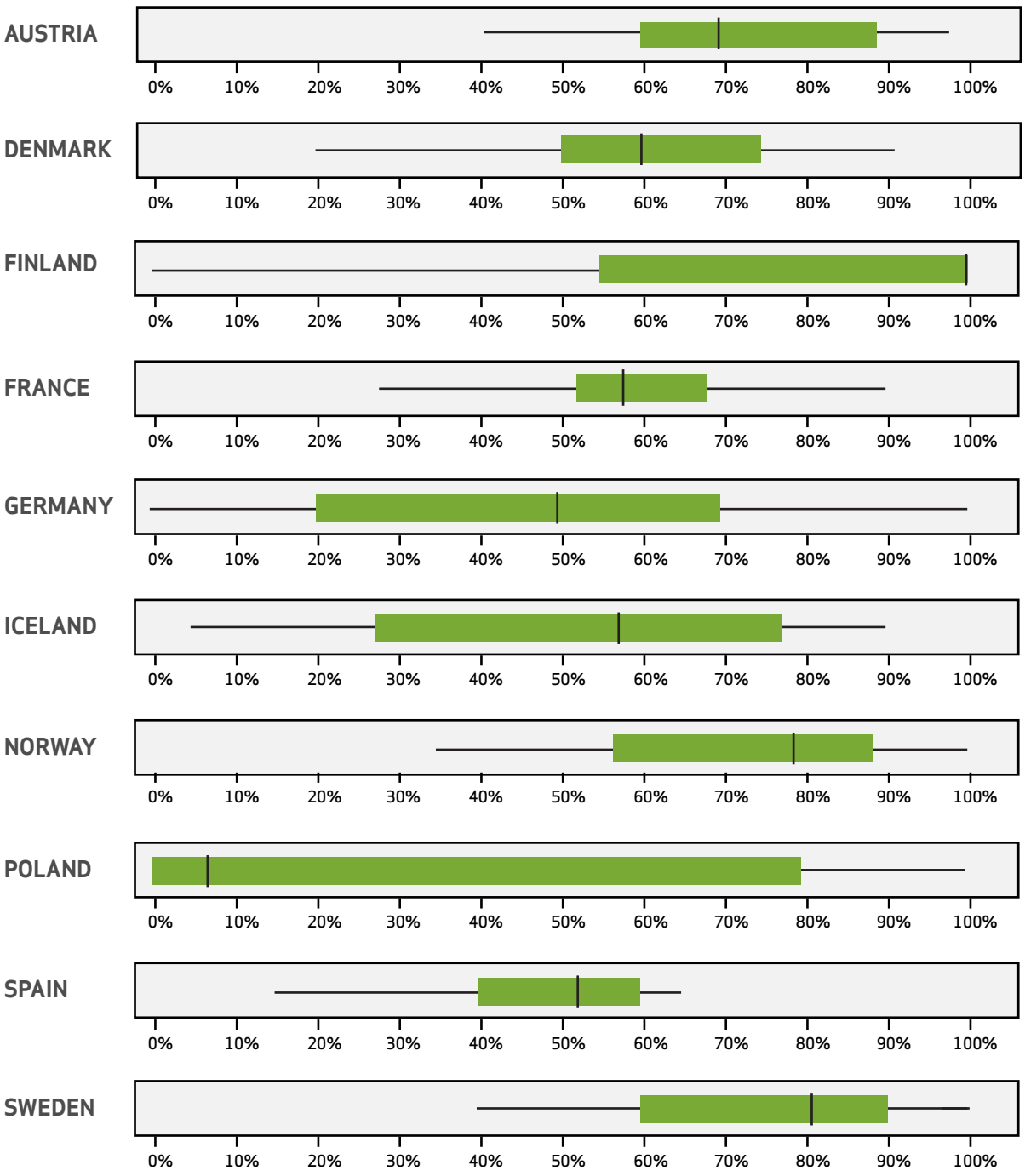


1.2.5 FINANCING OF CLUSTER MANAGEMENT ORGANIZATIONS (SHARE OF PUBLIC FUNDING IN TOTAL BUDGET)

Many cluster management organizations depend to a large extent on public funding to finance staff and other resources, such as office space and equipment (see Figure 6). Sources of public funding include project-based grant funding, institutional funding or service contracts. The sources and the share of public funding depend very much on the clusters and their individual environments as well on the public funding programs that support them. Cluster management organizations can be funded from different regional, national and European funding programs.

The small share of public funding in the budget of Polish cluster management organizations (median value compared to other countries) is due to the fact that many of the clusters originate from groups of companies that have not made use of public funding programs (yet) because they are not eligible (e.g. they do not have a legally institutionalized cluster management organization which is a typical eligibility criterion for funding).

Figure 6: Share of public funds in total budget of cluster management organization



1.3 WHAT MAKES THE DIFFERENCE?

Clusters and their cluster management organisations are individuals. Even though they share some characteristics as discussed in the previous chapter, there are also significant differences. What they are and what actually makes the difference between clusters that are individuals is presented in this chapter.

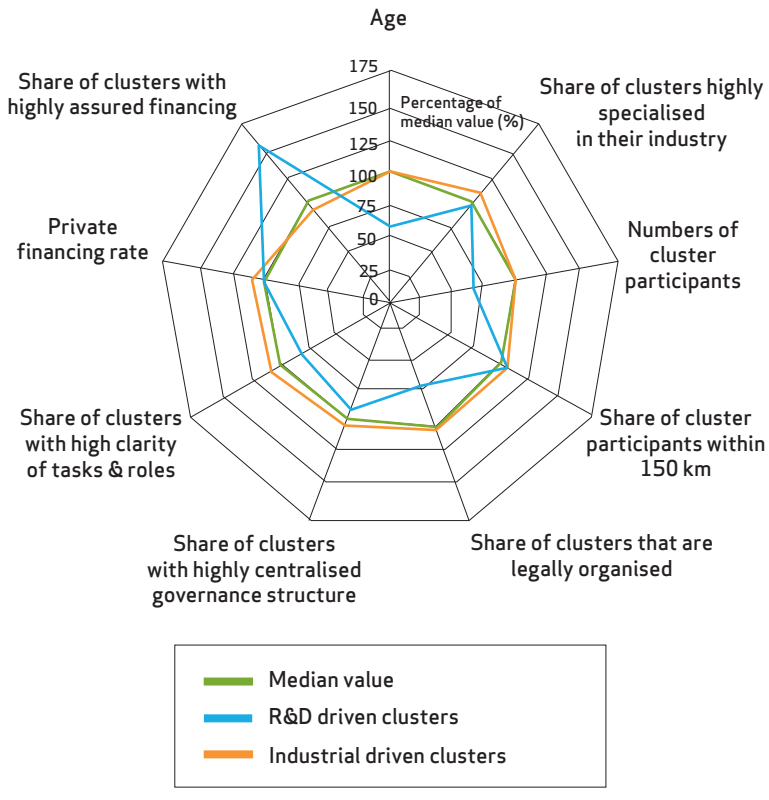
Further insight into this will be provided by further analysis of:

- Differences between research-driven and industry-driven clusters
- Sources of funding
- Relevance of specific determinants
- Effects of the cluster's technology field
- Links between services of the cluster management organisation and SME activities

1.3.1 DIFFERENCES BETWEEN RESEARCH-DRIVEN AND INDUSTRY-DRIVEN CLUSTERS

Research-driven clusters show different characteristics than industry-driven clusters[4]: their financial situation is better than that of industry-driven clusters, they are smaller in terms of numbers of cluster participants and in terms of governance (clarity of roles, level of centralization of governance structure and legal organization) they show a less distinct profile than industry-driven clusters. In contrast to industry-driven clusters the financial outlook in terms of budget security of R&D-driven clusters is better (Figure 7).

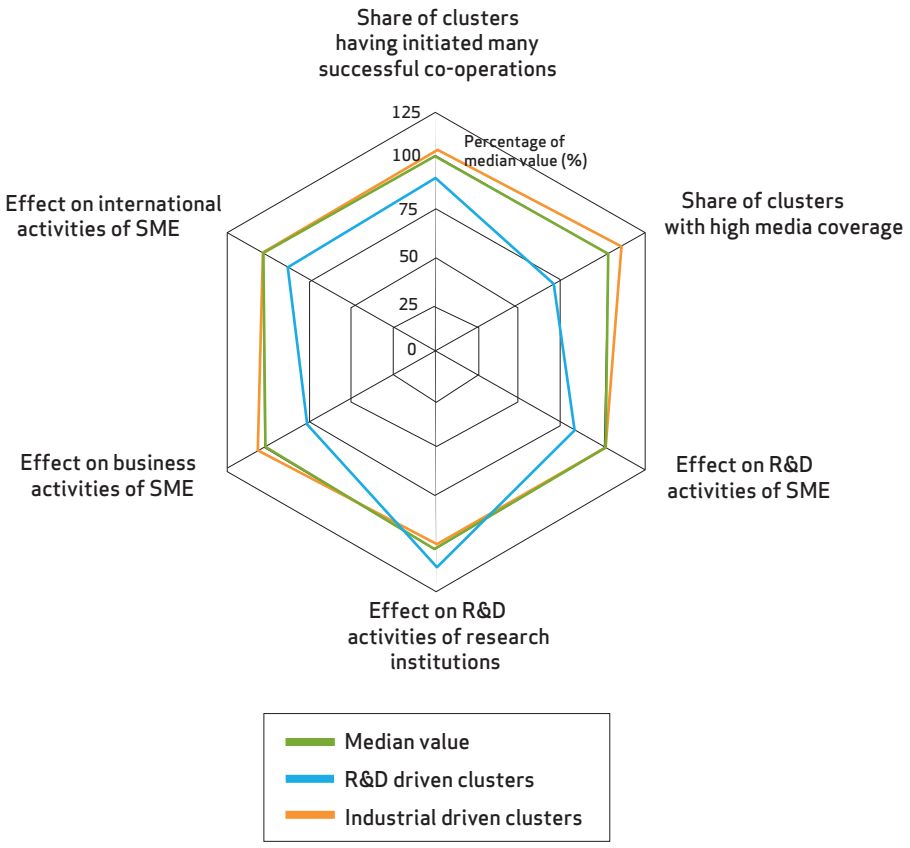
Figure 7: Comparison of R&D- and industry-driven clusters in terms of structural factors



4 In the context of the benchmarking cluster managers were asked to classify their clusters as either research or industry-driven. A cluster is research-driven if strategy and activities are mainly defined by research institutions or universities. If mainly industry defines strategy and activities, then a cluster is classified as industry-driven.

Research-driven clusters have lesser effects on the development of SMEs. While research-driven clusters have a higher effect on R&D activities of research institutions (including universities) than industry-driven clusters through their cluster management organization, their effects on the industry are rather small. In contrast, industry-driven clusters have a larger effect through their cluster management organization on business, R&D and international activities of SME. They are also more successful in establishing co-operations with companies and research institutions outside the cluster. This suggests that the specific impact of a cluster on business, R&D and international activities of the cluster participants depends on the agenda setter: if companies set the agenda – which is the case in industry-driven clusters – they benefit more, if research institutions set the agenda – which is the case in research-driven clusters – they benefit more (Figure 8).

Figure 8: Comparison of R&D- and industry-driven clusters in terms of effects on cluster participants



The following table gives an overview of clusters per country in terms of whether they are research or industry-driven. The vast majority is driven by industry (65% of the total sample). There are only a few research-driven clusters (10% of the total sample), while a quarter of the total sample is both driven by industry and research.

Table 3: Number of research-driven and industry-driven clusters and number of those clusters that are both driven by industry and research

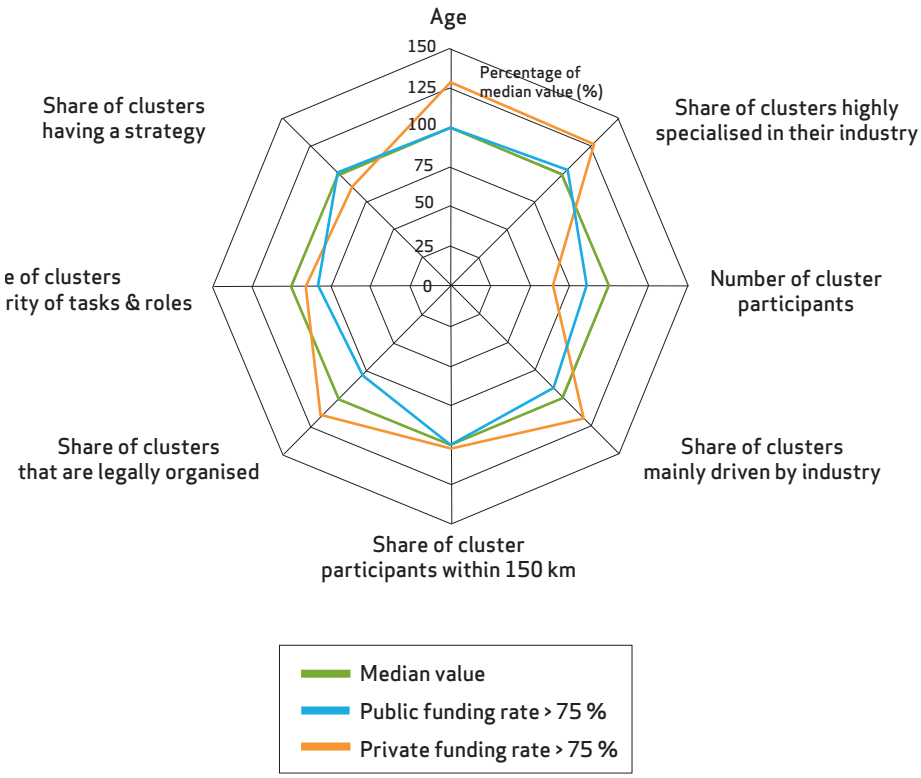
COUNTRY	NUMBER OF RESEARCH-DRIVEN CLUSTERS	NUMBER OF CLUSTERS THAT ARE BOTH DRIVEN BY INDUSTRY AND RESEARCH	NUMBER OF INDUSTRY-DRIV-EN CLUSTERS
AUSTRIA	0	1	5
DENMARK	8	10	12
FINLAND	0	2	9
FRANCE	2	28	43
GERMANY	6	15	53
ICELAND	2	0	2
NORWAY	0	2	14
POLAND	4	3	13
SPAIN	0	1	5
SWEDEN	3	1	7
TOTAL	**25**	**63**	**163**

1.3.2 SOURCES OF FUNDING

In terms of structure and governance clusters with a small share of public funding (private funding has a share of more than 75 per cent in total funding of the cluster management organization) and a high share of public funding (the share of public funding in total funding of the cluster management organization is higher than 75 per cent) are similar. However, there are some differences between these two types of clusters (see Figure 9):

- There are more clusters being mainly driven by industry and highly specialized in a certain industry that have a cluster management organization that is financed to more than 75 per cent by private means.
- Clusters with a cluster management organization that is financed to more than 75 per cent by private means show specific characteristics of governance more often than clusters with cluster management organizations that are financed to a large extent by public funds. They have more often a dedicated legal form (e.g. registered association or limited liability) and there are more cluster management organizations that report a high clarity of tasks and roles. Thus, clusters with a high share of private funding tend to be more often highly institutionalized than clusters with a high share of public funding.
- Cluster management organizations that are funded to a large extent by private means are often older.

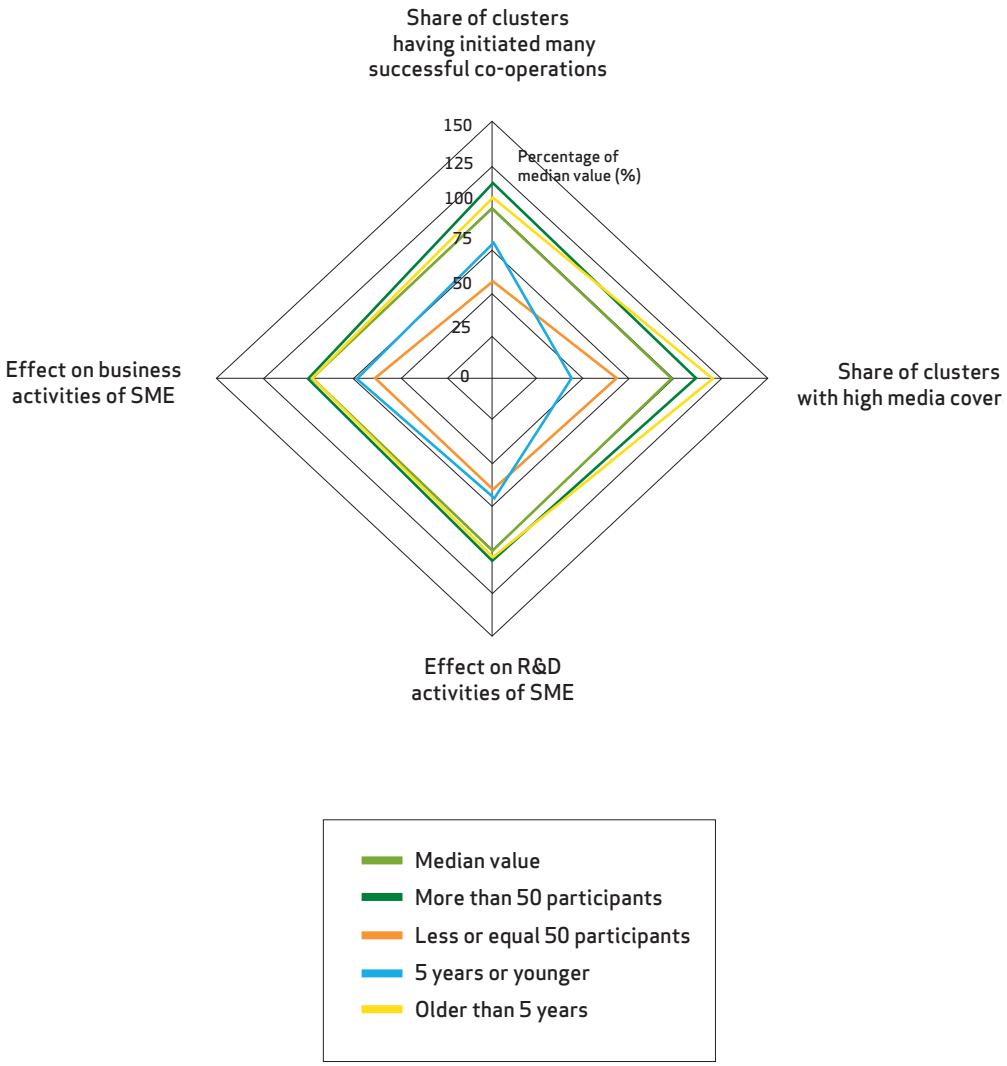
Figure 9: Characteristics of clusters with a small or high share of public funding



1.3.3 RELEVANCE OF SPECIFIC DETERMINANTS

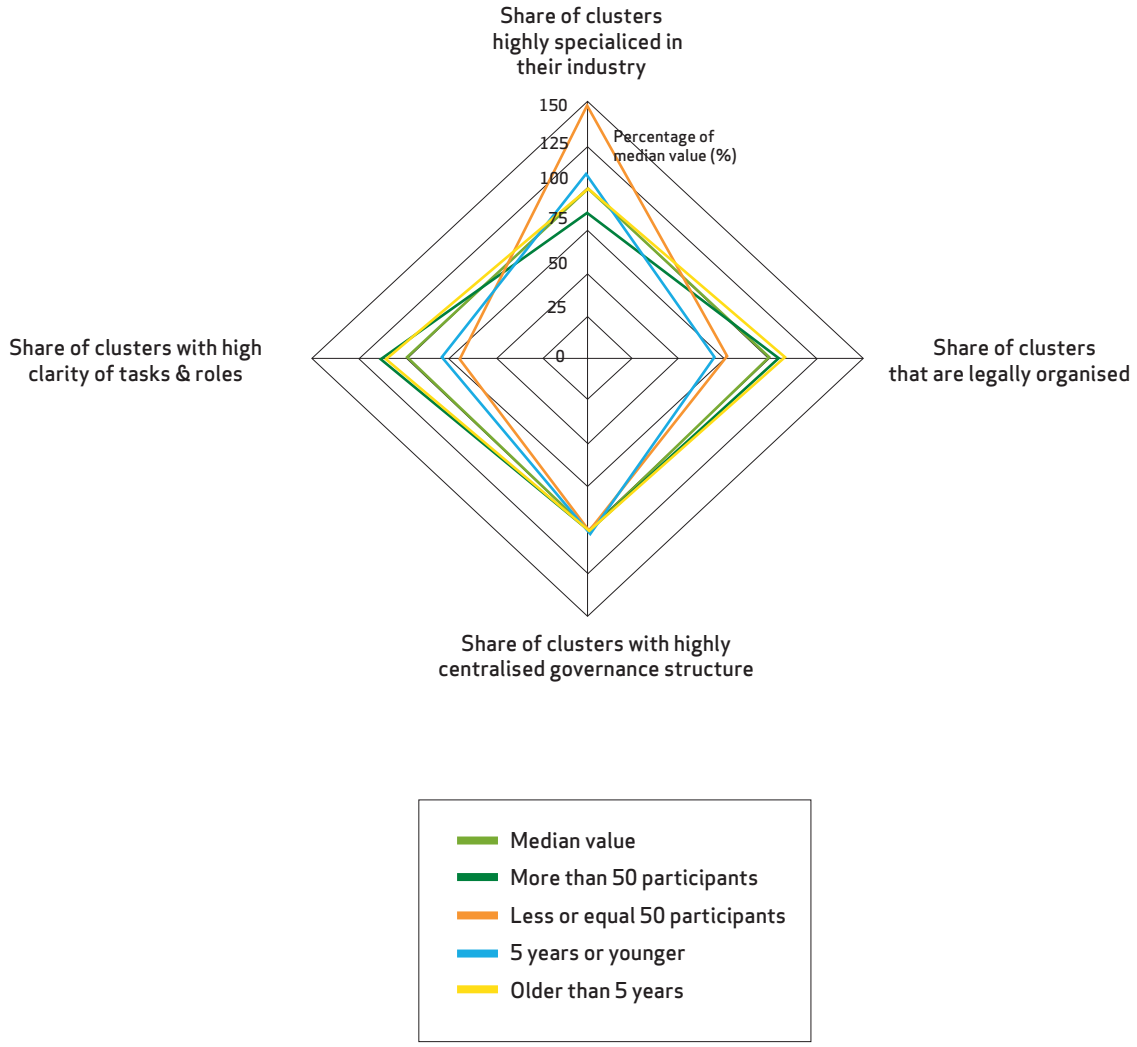
There is a strong correlation between the age and the size of a cluster and the effect of the work of the cluster management organization on business and R&D activities of SME. Clusters that are five years or older and have more than 50 members perform significantly better than younger and smaller clusters in this regard as well as in terms of the numbers of initiated successful co-operations. This is also reflected by the cluster's visibility in terms of press and media coverage (see Figure 10). Apparently, larger and matured clusters provide a much better environment for results and impacts as an effect of activities of a cluster management organization.

Figure 10: Relevance of size and age for the effect on cluster participants



The older and larger a cluster is, the more institutionalized it is in terms of having a legal form (with regard to the cluster management organization) and clarity of tasks and roles (e.g. through statutes or contracts) of its institutional parts such as the cluster management organization, a steering committee or board and a general assembly (see Figure 11).

Figure 11: Relevance of size and age for the level of institutionalisation of the cluster



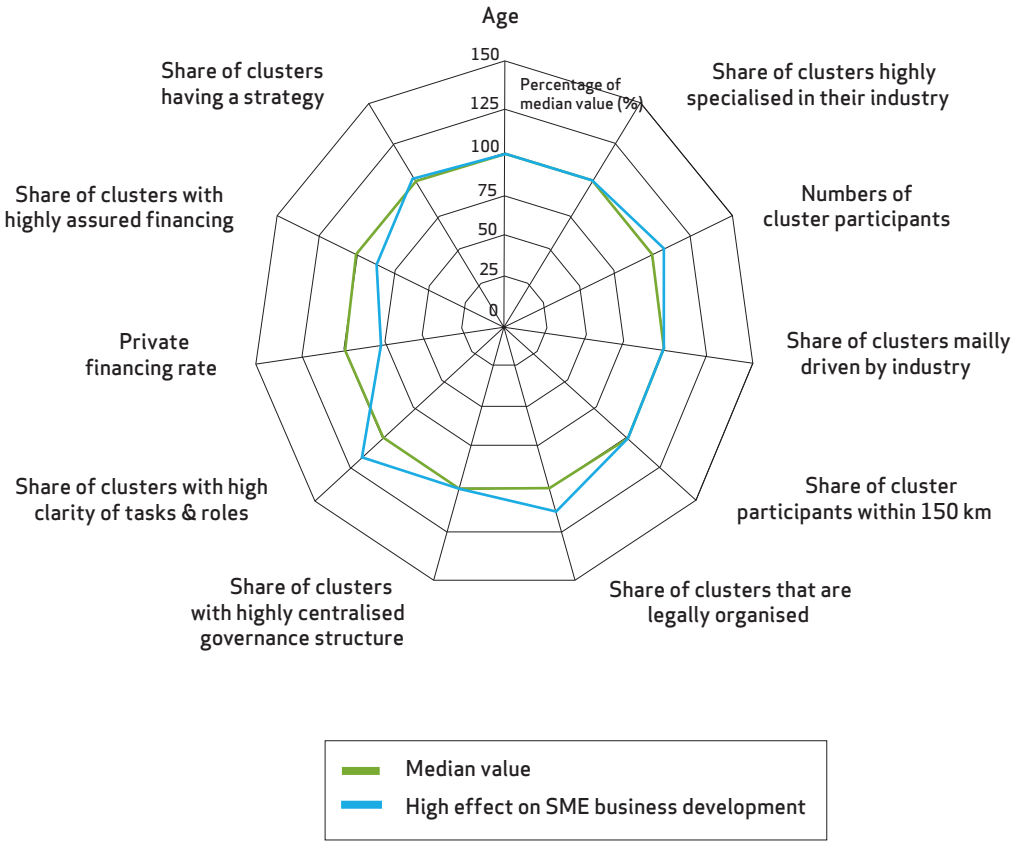
Assuming that clusters that are governed by a cluster management organization mature over time, it is not surprising that they become more and more institutionalized as they learn like any other organization that a certain set of rules is a necessary requirement for success. The process of institutionalization becomes even more relevant the larger and more heterogeneous a cluster is in terms of membership. A clear and binding set of rules and institutions is important for building and maintaining trust in large and heterogeneous groups. The larger and more heterogeneous a group is, the more it tends to be anonymous and thus the more it is prone to misconduct. Institutionalization of rules and processes counterbalances this effect and thus contributes to a culture of trust in a cluster which facilitates collaboration between its members. As business and R&D activities in a cluster require trustfully relationships between the partners, it is not surprising that old and large institutionalized clusters show a higher impact for exampleon business and R&D activities of SME than small and young cluster do.

Another interesting pattern is that smaller clusters tend to specialize in a particular field (see Figure 11). It seems that clusters tend to be less specialized the larger they are. In larger clusters more players are involved with a more diversified set of interests and options for collaboration. This translates into a more diversified development of the technology portfolio of the cluster and – as a result – into a lesser degree of specialization in a particular field.

The finding that size and institutionalization have an important effect on the development of SME is confirmed by a further analysis of structural characteristics of clusters.

Figure 12 shows that clusters that have a high effect on business activities of SME are larger in terms of numbers of members, have more often a legal form (respectively the cluster management organization) and feature more often a clear assignment of tasks and responsibilities of their actors compared to the median value of all analyzed clusters.

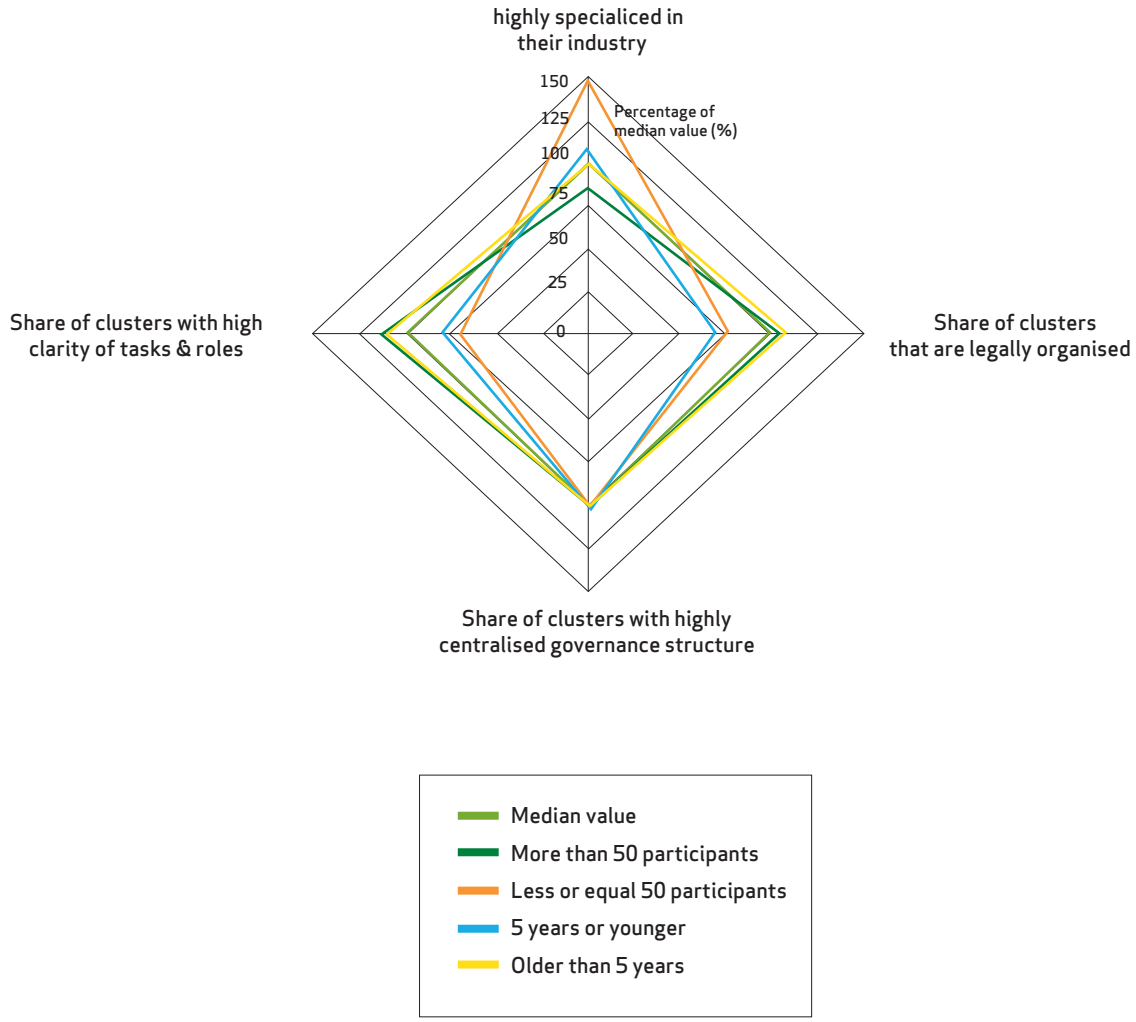
Figure 12: Characteristics of cluster with a high effect on business activities of SME



1.3.4 EFFECT OF THE CLUSTER'S TECHNOLOGY FIELD

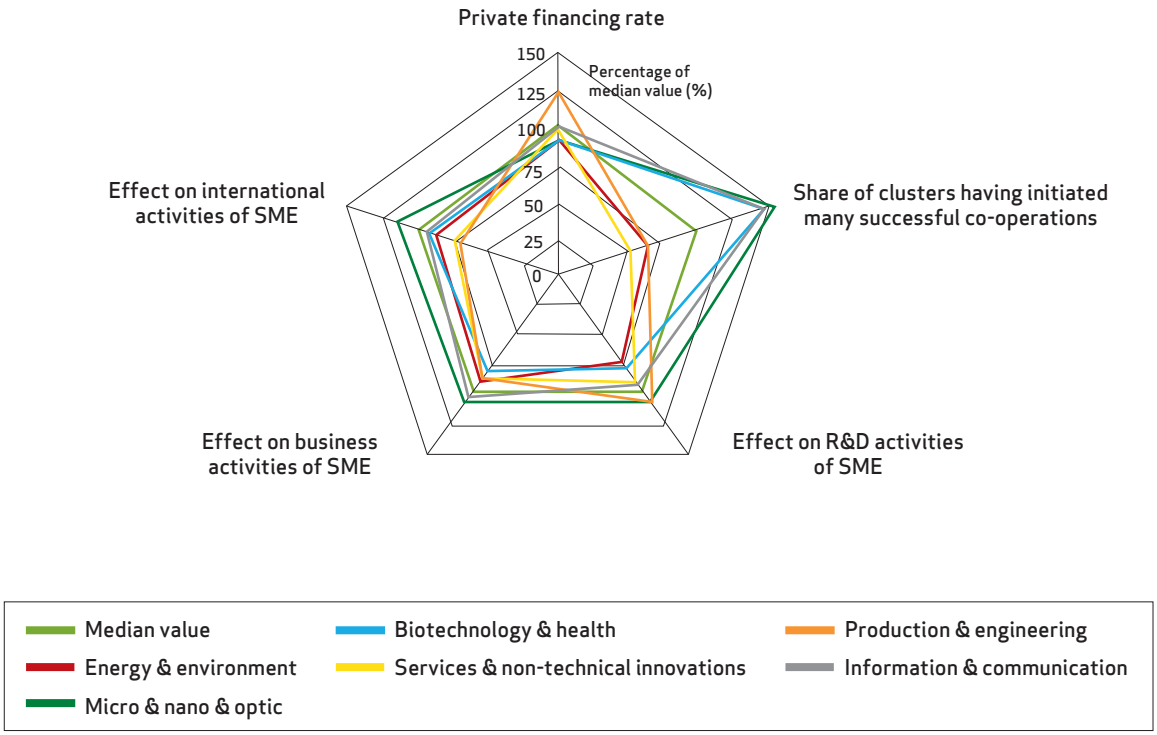
The characteristics of a cluster depend very much on the technology field it is operating in. Figure 13 displays structural characteristics of clusters from six different technology fields. The different structural characteristics reflect the characteristics of their industry sectors or technology fields. For example, biotechnology clusters are less oriented towards industries as still today biotechnology is very much driven by research institutions and universities. Other examples for specific industry characteristics are the industry sectors of energy and environment, services as well as micro, nano and optic. Clusters in these industries are not highly specialized as they work on technologies that can also be applied in various other industries.

Figure 13: Structural characteristics of clusters in different technology areas



There are also differences between clusters in different technology areas when it comes to the impact of the work of the cluster management organization and the share of private funding of the cluster management organization (see Figure 14).

Figure 14: Effects and private funding of clusters in different technology areas

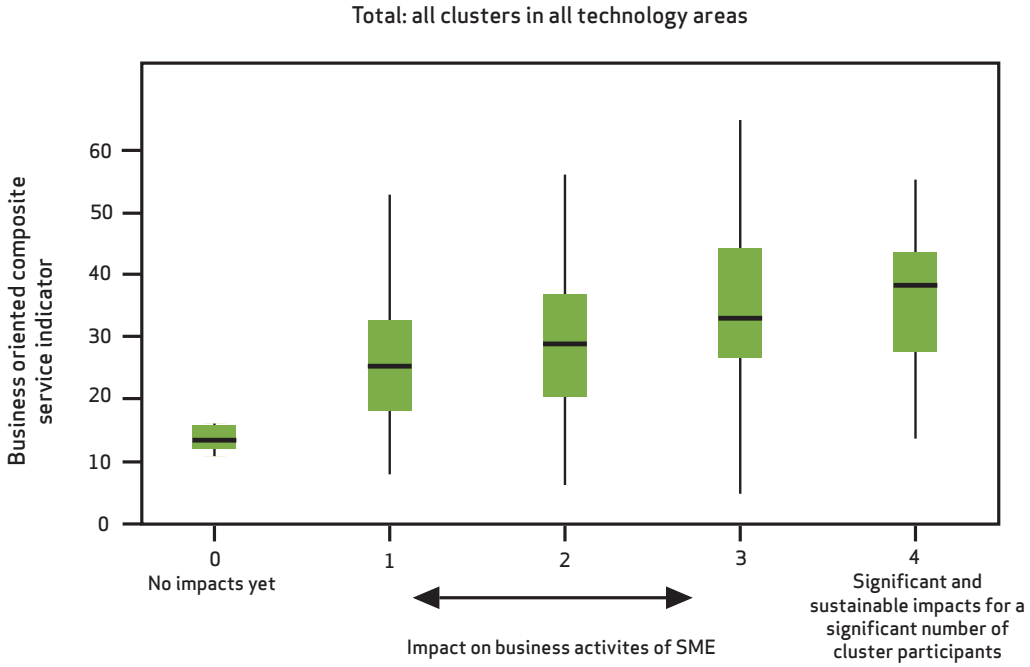


These findings demonstrate that the industry or technology field in which a cluster operates in has an important effect both on the structural characteristics of a cluster and the performance of a cluster management organization. This is an important conclusion for the development of future cluster programs. In order to support clusters according to their specific needs cluster programs have to take the specific technology foci of clusters into account.

1.3.5 LINK BETWEEN SERVICES AND SME DEVELOPMENT

A cluster management organization can influence the development of a cluster through the provision of targeted services for its members (see Box 2 for an overview of services). The analysis of the benchmarking results has demonstrated that the more active a cluster management is in this regard, the higher its impact on the development of business activities of cluster members is. This was in detail analyzed for SME members by calculating a composite indicator for business-oriented services provided by the cluster management organization that was put in relation with the impact of the work of the cluster management organization on business activities of SME. Figure 15 displays a correlation between the spectrum and intensity (in terms of frequency) of business-oriented services and the impact of the work of the cluster management organization on business activities of SME. The more services are provided (see e.g. the median value), the higher the impact on business activities of SME is.

Figure 15: Effect of Spectrum and Intensity of Services on Business Activities of SME



1.4 EXCELLENT CLUSTER MANAGEMENT ORGANIZATIONS - WHAT ARE THEIR DISTINCTIVE CHARACTERISTICS?

Excellent management is considered to be a general prerequisite for successful operation in industry and the private sector in general, in the public sector, like education, health, environment, etc., and in public administration and governmental organizations Therefore, it is obvious that excellent management should also be considered as a main prerequisite for a cluster organization to achieve the highest impacts of the cluster within a given technological, industrial, regional, and legislative framework: for the cluster participants, for the industrial sector in general, and for the development of regions.

Out of the 261 cluster organizations that have been benchmarked since November only 71 – less than a third – can be considered as excellent cluster management organizations (see Table 4). These organizations demonstrate sophisticated management approaches according to the "excellence indicators" defined by the European Cluster Excellence Initiative (ECEI) (see Table 5 on next page) as well as a high level of services and activities.

In terms of structural characteristics excellent clusters respectively their management organisations have more participants and feature more often a higher clarity of tasks and roles in terms of governance. The age of a cluster management organisation as well as the regional concentration of the cluster participants within the cluster do not have an effect on the level of excellence.

Table 4: Number of clusters of the excellence portfolio per specific technology area

TECHNOLOGY AREAS	Aviation and space	Biotechnology	Construction/building sector	Energy and environment	Food industry (non-biotech)	Health and medical science	Humanities/social sciences, media, design, service innovation	Information and communication	Micro, nano and optical technologies	New Materials and chemistry	Production and engineering	Transportation and mobility	TOTAL
TOTAL	5	2	2	11	5	5	6	13	4	7	7	4	71
PERCENT OF EXCELLENT CLUSTERS IN THE SPECIFIC TECHNOLOGY AREA	63 %	13 %	40 %	27 %	21 %	26 %	32 %	33 %	18 %	29 %	26 %	25 %	27 %

Table 5: Excellence indictors of the European Cluster Excellence Initiative (ECEI)

DIMENSION	INDICATOR
STRUCTURE OF THE CLUSTER	Committed Cluster Participation
	Composition of the Cluster Participants
	Number of Committed Cluster Participants in Total
	Geographical Concentration of the Cluster Participants
TYPOLOGY, GOVERNANCE, COOPERATION	Maturity of the Cluster Management
	Human Resources Available for the Cluster Management
	Qualification of the Cluster Management Team
	Life Long Learning Aspects for the Cluster Management Team
	Stability and Continuity of Human Resources of the Cluster Management Team
	Stability of Cluster Participation
	Clarity of Roles – Involvement of Stakeholders in Decision Making Processes
	Direct Personal Contacts Between the Cluster Management Team and the Cluster Participants
	Degree of Cooperation within the Cluster
	Integration of the Cluster Organisation in the Innovation System
FINANCING	Prospects of the Financial Resources of the Cluster Organisation
	Share of financial resources from private sources
STRATEGY, OBJECTIVES, SERVICES	Strategy Building Process
	Documentation of the Cluster Strategy
	Implementation Plan
	Financial Controlling System
	Review of the Cluster Strategy and Implementation Plan
	Performance Monitoring of Cluster Management
	Focus of the Cluster Strategy
	Activities and Services of the Cluster Management
	Performance of the Cluster Management
	Working Groups
	Communication of the Cluster Organisation
	Cluster organisation's web presence
ACHIEVEMENTS, RECOGNITION	Recognition of the Cluster in Publications, Press, Media
	Success Stories
	Customer and Cluster Participants' Satisfaction Assessment

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	Success Stories
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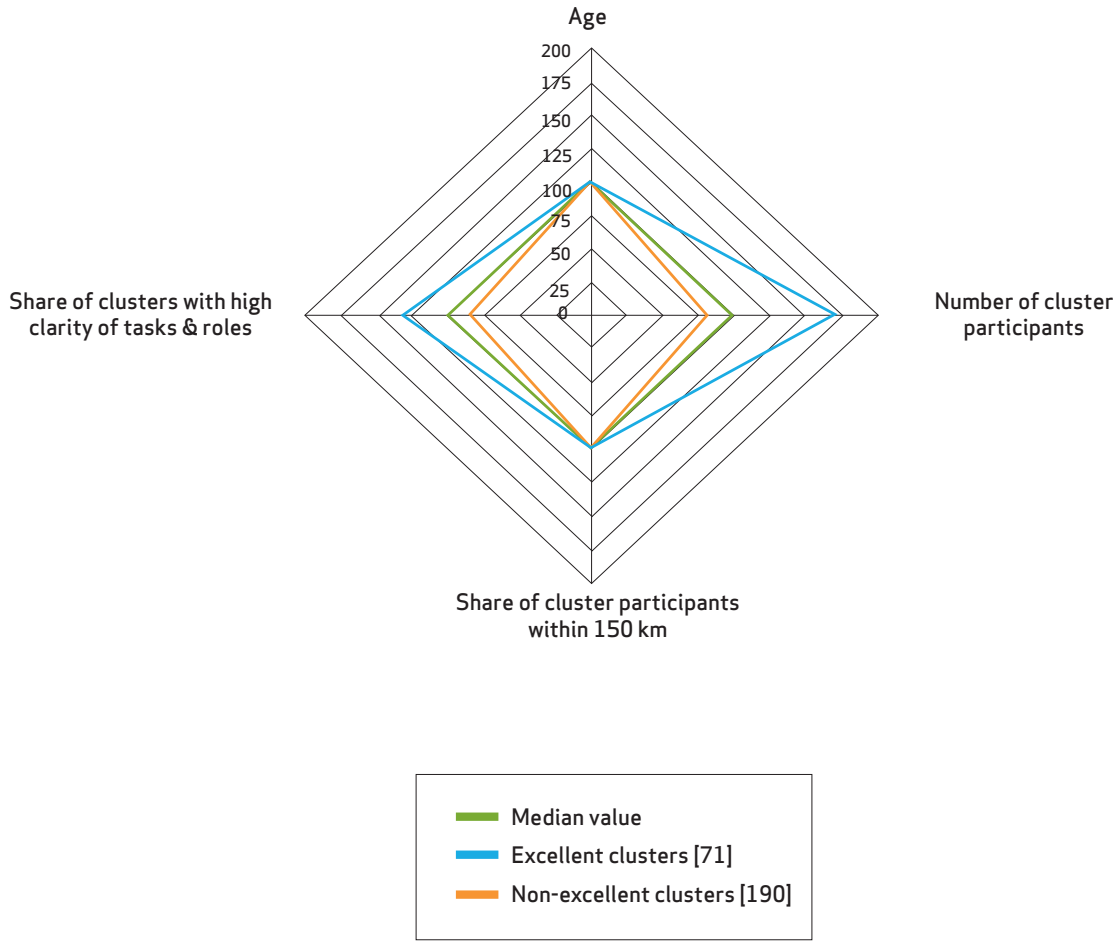
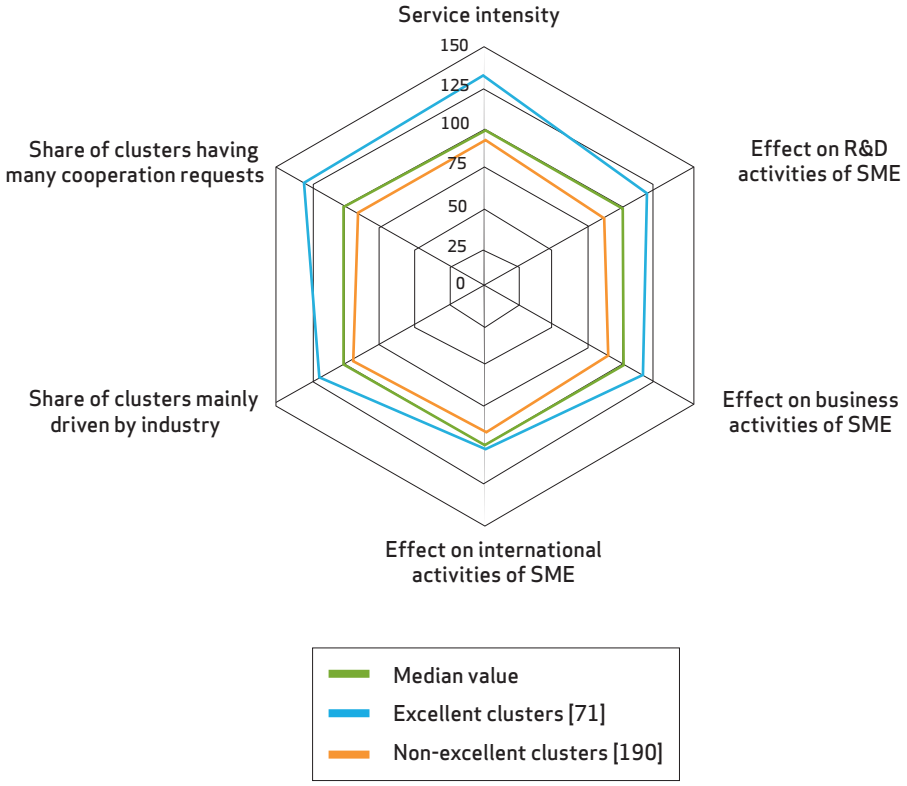
Figure 16: Comparison of structural characteristics of excellent and non-excellent clusters



There is a clear difference between excellent and non-excellent clusters and their management organizations in terms of activity levels and effects. Excellent cluster management organizations demonstrate higher service intensity than non-excellent cluster management organizations and their agenda is more often driven by industrial interests. In view of the results and effects the high service intensity of excellent management organizations reflects in higher effects on R&D activities of SME, business activities of SME, international activities of SME and a larger number of cooperation requests from parties outside the cluster (Figure 17 on next page).

Figure 17: Comparison of effects created by excellent and non-excellent clusters



Summing up the observations, it can be concluded that size, an adequate level of governance and the provision of services are key characteristics of excellent cluster management organizations that yield effects on cluster development, particularly in regard to the development of business, R&D and international activities of SMEs. Hence, excellence cluster organisations provide higher impact on business.

1.5 WHAT MAKES THE DIFFERENCE? SOME KEY FINDINGS

Clusters and their cluster management organisations are individuals. Although each individual is different, analysis reveals some characteristics that are typical for specific "groups of individuals". This applies in particular to the level a cluster is driven by research or industrial interests, the level of private funding of a cluster management organisation, size and age of the cluster respectively its cluster management organisation, the technology field of the cluster and services that are provided by the cluster management organisation to facilitate the development of the cluster:

1) Research- and industry-driven clusters are different in terms of financial situation, size and governance – and most important: industry-driven clusters have a higher effect on SME development.
2) The majority of clusters are mainly driven by industry and - not surprisingly - they also have a higher share of private financing than the research driven clusters.
3) There is a strong correlation between the age and the size of a cluster and the effect of the work of the cluster management organization on business and R&D activities of SME. Clusters that are five years or older and have more than 50 members perform significantly better than younger and smaller clusters in this regard.
4) The characteristics of a cluster depend very much on the technology field it is operating in. This includes

structural characteristics such as governance, being driven by research- or industry, size and age, but also the effect of the cluster management organisation on business, R&D and international activities of SME.

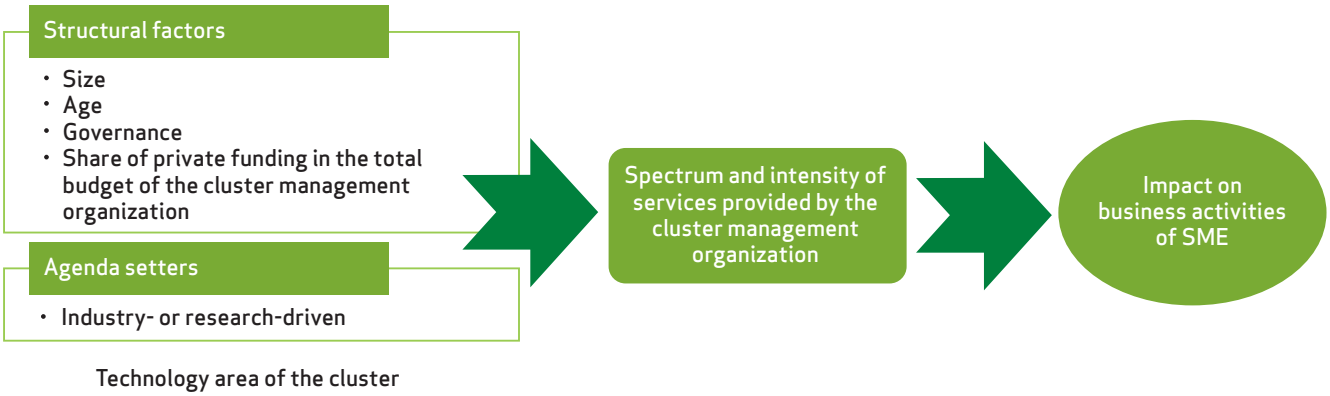
5) There is a correlation between the spectrum and intensity (in terms of frequency) of business-oriented services provided by a cluster management organisation and its effects on business activities of SME. The more services are provided, the higher the impact on business activities of SME is.
6) The older and larger a cluster is, the more institutionalized it is in terms of having a legal form (with regard to the cluster management organization) and clarity of tasks and roles
7) Excellent cluster management organizations reveal higher service intensity than non-excellent cluster management organizations and their agenda is more often driven by industrial interests. In addition, excellent cluster initiatives tend to have more participants and higher clarity of tasks and roles in terms of governance. Hence, excellence cluster organisations provide higher impact on business.

1.6 KEY DETERMINANTS FOR THE IMPACT OF A CLUSTER ON BUSINESS ACTIVITIES OF CLUSTER MEMBERS

The results of the benchmarking suggest that several key determinants matter in terms of a cluster's impact on the business activities of its members; this applies in particular to the impact on business activities of SME. Structural factors such as size, age, governance and the type of agenda setter (industry or research stakeholders) have an effect on the spectrum and intensity of services provided by the cluster management organization and thus on the development of business activities of SME.

Figure 18 displays the causal relationship of structural factors and agenda setters, services and effects: The impact of a cluster in terms of SME business activities depends on the spectrum and intensity of services provided by the cluster management organization which in turn depends on specific characteristics of the structural factors and agenda setters as displayed in the figure, which might be influenced by the specific characteristics of the technology area the cluster is operating in.

Figure 18: Key determinants for impact on business activities of cluster members



Although these determinants are general findings whose relevance may depend on the individual context of a cluster, particularly on the technology field the cluster is operating in, they provide guidance for the development of cluster programs. From a general perspective the conclusion of the cluster management organization benchmarking in this regard is: the more matured in terms of age and institutionalization, the larger in terms of size of membership, the more industry-driven a cluster is and the more active its cluster management organization is in terms of spectrum and intensity of service offer, the higher its effect on economic development is. This is a key message for policy makers and program owners.

Box 2: Overview services of cluster management organizations

Services for clusters members that are provided by the cluster management organization are an important instrument to develop a cluster. They provide a basis for intensifying and/or stabilizing interaction between cluster members, reduce the time and costs spent by cluster members through high-quality standard solutions and/or allow cluster members to focus on their core activities.[5] Table 6 gives a general overview of services that can be offered by a cluster management organization to support the development of a cluster:

CATEGORIES OF SERVICES	EXAMPLES OF SERVICES
ACQUISITION OF THIRD-PARTY FUNDING FOR PROJECTS (PUBLIC FUNDS)	• Acquisition of R&D and non-R&D projects on behalf of cluster members • Distribution of information about funding programs
COLLABORATIVE TECHNOLOGY DEVELOPMENT, TECHNOLOGY TRANSFER AND R&D PROJECTS	• Organization of tasks forces/working groups • Management of projects on behalf of cluster members • Legal advice, e.g. on IPR
INTERNAL NETWORKING AMONG CLUSTER MEMBERS	• Regular meetings, get-togethers, thematic events/workshops for cluster members • Internal newsletters, databases etc.
DEVELOPMENT OF HUMAN RESOURCES	• Participation in the development and implementation of vocational training or study courses together with external partners such as universities • Training courses for cluster members • Recruitment of staff on behalf of cluster members
DEVELOPMENT OF ENTREPRENEURSHIP	• Consulting and coaching • Acquisition of financing (e.g. venture capital, banks, public funds) on behalf of entrepreneurs
MATCHMAKING AND NETWORKING WITH EXTERNAL PARTNERS/PROMOTION OF THE CLUSTER LOCATION	• Information material, website, press releases, publications • Presentation of the cluster and its members on trade fairs or conferences • Events/workshops to present the cluster • Matchmaking/partnering events
INTERNATIONALIZATION OF THE CLUSTER	• Presentation of the cluster and its members on trade fairs or conferences, networking visits, study tours • Offices or other permanent representations abroad • Cooperation with export promotion agencies

For further information about this topic please see Buhl, Claudia Martina/Meier zu Köcker, Gerd (eds.), 2009: Cluster Management Excellence, Vol. 1: Network Services, Competence Networks Germany, Berlin, www.kompetenznetze.de/the-service/order-service/cluster-management-excellence-volume-1-network-services

5 Sydow, Jörg/Zeichhardt, Rainer, 2009: Importance of Network Services for the Success of Networks, in: Buhl, Claudia Martina/Meier zu Köcker, Gerd (eds.), 2009: Cluster Management Excellence, Vol. 1: Network Services, Competence Networks Germany, Berlin, p. 20

2 RESULTS OF THE BENCHMARKING OF CLUSTER PROGRAMS

Cluster policy issues have appeared in scientific publications since the 1990s.[6] Until today, the question has remained, whether there are long term impacts visible in those countries where cluster programs have been implemented. This chapter gives an overview of 34 European cluster programs, their objectives, activities, instruments and results.
Clusters help people engaged in the same technology field to network with each other, e.g. companies with companies, companies with research institutes, universities with governments and so forth. Policies are set up to reply to market failures. By implementing a cluster policy, national or regional economies are able to reply to the market failure of information asymmetries. As a consequence countries have started to set up specific policies particularly designed to help establishing new clusters and advancing matured ones.

Thus, governments are eager to start specific policies aiming at the development of clusters –cluster programs – in order to increase the benefit for the companies, universities and R&D institutions and other service providers within the cluster. Quoting Boekholt and Thuriaux, cluster policies "comprise the set of policy activities that aim to: stimulate and support the emergence of these networks; strengthen the interlinkages between the different parts of the networks; and increase the value added of their actions".[7] Ketels defines cluster policy as "efforts by governments, alone or in a collaborative effort with companies, universities, and others, that aim to increase the competitiveness of specific clusters by organizing government policies around them."[8] Both definitions serve as basis for the analysis presented in this chapter.

Sure, it is one of the government's main task to inspire overall national or regional strategies that lead to more business deals and motivate more R&D activities, thus improving the framework conditions for economic well-being. Fulfilling these authoritative tasks, many policy makers have realized that f. ex. installing infrastructures for the development of clusters and further supporting them can be a good step towards smart specialization. The concept of smart specialization includes an "entrepreneurial process of discovery"[9] about what the unique selling propositions with regard to R&D and production of a specific country or region are. In a way, this is a bottom-up policy process which may probably be best carried out by clusters and networks. It can therefore be assumed that due to the corrective influence of clusters within an economy, many countries have set up their specific cluster program.

It is hence of interest to compare the characteristics of the current cluster programs in Europe in order to learn a. o. which cluster program has well-developed instruments, which one is well adjusted to its country specific economic development strategy and which cluster programs provide ideas for others to follow a distinct R&D strategy.

For this reason, a pan-European benchmarking exercise was initiated of which the first run took place in 2011 and the second in 2012. The results of the 2011 benchmarking of cluster programs have been updated in 2012 and are presented in this chapter. Furthermore, the data base of 2012 has been extended by more cluster programs. They have been benchmarked with the same criteria as the programs analyzed in 2011. As of today, 34 cluster programs of 24 countries are included in the cluster program benchmarking portfolio.

A group of experts of 24 European countries has evaluated their specific national or regional cluster program.

As already stated in the introduction, nowadays policy makers and program owners are no longer facing the question whether they should establish new clusters, but the question of how they can improve the global competitiveness of existing clusters. How can cluster programs support the development of clusters that can compete in a global economy? How can cluster programs contribute to cluster management excellence as a precondition of world-class clusters? These questions motivated policy makers and program owners from different European countries to engage in a benchmarking of cluster programs that should facilitate mutual learning in this respect.

Chapter 3.1 introduces the comparative portfolio, which consists of 34 cluster programs from 24 countries. Chapter 3.2 describes the characteristics of these programs in terms of objectives, strategic focus, instruments, terms and financial aspects. Important key findings from the benchmarking are presented in chapter 3.3. The key findings give further insight into the different types of cluster programs,

6 Cf.: OECD (1999). Boosting Innovation: The cluster approach. Paris: OECD Proceedings.; Sölvell, Ö., Lindqvist, G., Ketels, Ch., (2003). The Cluster Initiative Greenbook. www.cluster-research.org.

7 Boekholt, P., Thuriaux, B. (1999). Public policies to facilitate clusters: background, rationale and policy practices in international perspective. In: Boosting Innovation: the cluster approach. Paris: OECD Proceedings. p. 381.

8 Ketels, Ch. (2010). Cluster Policy: A Guide to the State of Debate. In: Hernández, J.M., Pezzi, A., Soy, A. (2010). Clusters and competitiveness: the case of Catalonia (1993-2010). Government of Catalonia, Ministry of Enterprise and Labour, Directorate General for Industry, Observatory for Industrial Foresight

9 Foray, D., David, P., Hall, B. (2009). Smart Specialization – The Concept. In: Knowledge Economists Policy Brief No. 9. European Commission.

their relevance on the policy agenda and their coordination with other funding programs, support of cluster internationalization, the role of program owners when it comes to the development of clusters, the relevance of cluster management excellence in the programs, monitoring and evaluation practices and lessons learned by the program owners.

With this update of the cluster program benchmarking, six countries that have joined the EU only in 2004 have been added to the portfolio (Hungary, Czech Republic, Romania, Lithuania, Estonia and Latvia). Thus, in total the benchmarking exercise includes seven (+ Poland) "younger" EU member states. It is thus of special interest, if these countries have different core areas in their programs.

2.1 COMPARATIVE PORTFOLIO

The cluster program benchmarking covered 34 cluster programs from 24 countries, which are Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Iceland, Italy, Latvia, Lithuania, Luxembourg, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Spain, Sweden, Turkey and United Kingdom.

Figure 19: Participating countries

The programs cover a wide array of different rationales, objectives and instruments, but have the development of clusters through the support of cluster management organizations in common.

Table 7: Overview of cluster programs

COUNTRY	NAME OF PROGRAM	INTERNET
AUSTRIA	Cluster Program Lower Austria	www.ecoplus.at/en/ecoplus/cluster
BELGIUM	Competence Centres-Light Structures	Public website not yet available
	Cooperative innovation network integrated project	http://www.iwt.be/subsidies/vis-trajecten
CZECH REPUBLIC	Cooperation–Clusters	www.czechinvest.org
DENMARK	Innovation Networks Denmark (Innovationsnetværk Denmark)	www.innovationsnetvaerk.dk
ESTONIA	Cluster Development Program	www.eas.ee
FINLAND	Centre of Expertise Program (OSKE, Osaamiskeskusohjelma)	www.oske.net
	Strategic Centres for Science, Technology and Innovation (SHOK, Strategisen huippuosaamisen keskittymät)	www.tekes.fi
FRANCE	Grappe d'entreprises	www.territoires.gouv.fr/grappes-denterprises
	Les Pôles de Compétitivité	www.competitivite.gouv.fr
GERMANY	Competence Networks Germany (Initiative Kompetenznetze Deutschland) (expired)	www.kompetenznetze.de
	Go-Cluster Initiative	www.go-cluster.de
	Clusterpolitische Gesamtstrategie der Freien und Hansestadt Hamburg (Cluster Policy Strategy of the Free and Hanseatic City of Hamburg)	www.bwa.hamburg.de
	Cluster Offensive Bayern (Bavarian Cluster Initiative)	www.cluster-bayern.de
	Zentrales Innovationsprogramm Mittelstand – Fördermodul Netzwerkprojekte (ZIM NEMO) (Central Innovation Program SME – Funding Module Network Projects)	www.zim-bmwi.de/netzwerkprojekte
HUNGARY	Cluster Development Program of the New Széchenyi Plan	www.magzrt.hu

ICELAND	Strategic Research Program for Centres of Excellence and Research Clusters (The Icelandic Centre for Research (Rannsóknamiðstöð Ðslands))	www.rannis.is
	Regional Growth Agreements (Vaxtarsamningur)	www.vaxtarsamningur.is
ITALY	Innovation Clusters Piedmont	www.regione.piemonte.it
LATVIA	Cluster Program	www.liaa.lv/lv/es_fondi/projektu_istenosana/klasteru_programma/
LITHUANIA	InnoCluster LT	www.ukmin.lt
	InnoCluster LT+	www.ukmin.lt
LUXEMBOURG	Luxembourg Cluster Initiative	www.clusters.lu
NORWAY	Norwegian Centres of Expertise (NCE)	www.nce.no
	Arena Program (Arena-programt)	www.arena-programt.no
POLAND	Polish Cluster Support Schemes: Support for the development of Supra-Regional Clusters and Cluster Creation in Eastern Poland	www.parp.gov.pl
PORTUGAL	Portuguese Operational Competitiveness Program - COMPETE	www.pofc.qren.pt
ROMANIA	Development of business support infrastructures of national and international interest (Competitiveness Poles)	http://amposcce.minind.ro
	Support to the integration of SMEs in value chains and clusters (Clusters)	http://amposcce.minind.ro
SERBIA	Serbian Cluster Development Support Program	http://klasteri.merr.gov.rs/en/
SLOVAKIA	Support to innovative industrial cluster organizations	Not yet available
SPAIN	Cluster Development Catalonia	www.acc10.cat/en//index.jsp
SWEDEN	Vinnväxt	www.vinnova.se/en/activities/vinnvaxt
TURKEY	Support for the Improvement of International Competitiveness (UR-GE)	www.smenetworking.gov.tr/
UNITED KINGDOM	Knowledge Transfer Networks	https://connect.innovateuk.org

For a detailed overview of each program in terms of rationales, objectives, instruments and results please see the appendix to this report: "Description of Cluster Programs".

2.2 CHARACTERISTICS OF CLUSTER PROGRAMS

This chapter provides a tabular overview of the different programs in terms of

- Overall objectives of the cluster programs
- Strategic Focus: Creation of new clusters or support of existing clusters?
- Strategic objectives of cluster programs in terms of numbers of clusters to be supported etc.
- Strategic approach: top-down or bottom-up
- Instruments of cluster programs
- Term of cluster programs and financial aspects

2.2.1 OVERALL OBJECTIVES OF THE CLUSTER PROGRAMS

The cluster programs that have participated in the benchmarking feature a diverse set of overall objectives. Common to all programs is their rationale of increasing the competitiveness of the national economy through the facilitation of collaboration between companies and research stakeholders. Most of the programs have a national perspective, while a few focus on the promotion of regional systems of innovation. The diverse set of overall objectives also reflects different types of cluster programs, each of them serving a specific purpose.

Table 8: Overall objectives of the cluster programs

COUNTRY	NAME OF THE PROGRAM	OVERALL OBJECTIVES
AUSTRIA	Cluster Program Lower Austria	• To foster innovation through cooperation of companies in the region's fields of economic strength
BELGIUM	Competence Centres-Light Structures	• To support innovation for a large group of companies with focus on SMEs. These projects should bring companies and knowledge providers together and contribute to the solution of major socioeconomic challenges
	Cooperative innovation network integrated project	• To support innovation for a group of at least 20 companies with focus on SMEs. These projects should result in innovative solutions that can have a short term implementation
CZECH REPUBLIC	Cooperation–Clusters	• To support the development of cooperative sectoral alliances (clusters) on regional and national level as a tool for the stimulation of international competiveness and acceleration of economic growth • To create a favorable business climate with improved conditions for business development and innovations and to build a sustainable competitive advantage by enhancing the quality of relationships among research institutions, universities and business sectors
DENMARK	Innovation Networks Denmark	• To strengthen innovation and research in Danish companies and thereby promote knowledge-based growth in business and industry • To strengthen public-private interaction and knowledge sharing and development of research and innovation between knowledge institutions and companies
ESTONIA	Cluster Development Program	• To increase the international competitiveness of entrepreneurs through implementing the co-operation projects of a cluster

FINLAND	OSKE – Centres of Expertise Program	• To create new innovations, products, services, companies and jobs based on top-class expertise • To support interregional specialization and division of duties in order to create internationally competitive centres of expertise • To increase the attraction of regional innovation environments in order to lure international companies, investments and leading experts to the region
	SHOK – Strategic Centres for Science, Technology and Innovation	• To establish international Strategic Centres of Excellence in STI in key competence areas with regard to future needs of the business sector and society. The centres are expected to renew industry clusters and to create radical innovations
FRANCE	Grappe d'entreprises	• To develop business clusters in economic sectors with weak R&D activity
	Les Pôles de Compétitivité	• To boost the competitiveness of the French economy and to help develop growth and jobs in key markets • To improve the attractiveness of France by providing support for high-tech and creative activities, primarily industrial, in the various regions of France and by that increasing international visibility
GERMANY	Competence Networks Germany	• To facilitate intensive networking between industry and science to increase the innovation capacity and international competitiveness of German industry • To increase international visibility of the clusters and by this market Germany as an international innovation hub
	Go-Cluster	• To continue the mission of the Competence Networks Initiative • To increase the competitiveness of German regions • To approach the excellence status of European cluster management organizations
	Cluster Offensive Bayern	• To support the competitiveness of the Bavarian enterprises in selected fields of competence
	Cluster Policy Strategy of Hamburg	• Medium and long term support of economic growth and employment
	Zentrales Innovationsprogramm Mittelstand – Netzwerkprojekte (ZIM NEMO)	• Development of innovation capacities and competitiveness of SME through the support of innovation networks
HUNGARY	Cluster Development Program of the New Széchenyi Plan	• To develop R&D and innovation infrastructure, improve the facilities of higher education institutes • To motivate the cooperation of companies through clusters • To support joint innovation investments of clusters • To accredit innovative clusters
ICELAND	Regional Growth Agreements (Vaxtarsamningur)	• To promote innovation and strengthen the competitiveness of regions through networking and cluster co-operation among firms, R&D institutions, universities, municipalities and the government
	Strategic Research Program for Centres of Excellence and Research Clusters	• To reinforce science and technology research, encourage successful collaboration between different parties nationally, as well as internationally and actuate value creation and investment in research and innovation in the economy
ITALY	Innovation Clusters Piedmont	• To identify firms' technological needs in order to guide future regional policy actions in support of research and innovation • To stimulate R&D and innovation in its firms, valorizing the present assets, developing the internationalization processes and increasing the attraction of productive investments in the region

LATVIA	Cluster Program	• To promote cooperation between unrelated companies operating in specified sectors and research, educational and other institutions, thus promoting increase of export volumes and competitiveness of entrepreneurs as well as development of new products
LITHUANIA	InnoCluster LT	• To stimulate the collaboration of Lithuanian industries • To increase international competitiveness of Lithuanian industries
	InnoCluster LT+	• To stimulate collaboration among Lithuanian industries and to increase international competitiveness of Lithuanian industries • To create a favorable environment for innovative clusters and to develop international clusters
LUXEMBOURG	Luxembourg Cluster Initiative	• To enhance the visibility of the technological excellence and the innovation potential of cluster members • To encourage the uptake of new technologies and the identification of potential business opportunities
NORWAY	Norwegian Centres of Expertise (NCE)	• To facilitate growth by generating and reinforcing cooperation-based innovation and internationalization processes within clusters with clear ambitions and substantial national and international growth potential
	Arena Program	• To strengthen the capability of regional business environments for innovation and value creation by intensifying alliances between business environments, educational institutions and the public sector
POLAND	Polish Cluster Support	• Increased competitiveness of the Polish economy through the support of the establishment and development of clusters at the national and regional level
PORTUGAL	COMPETE	• To improve the sustained competitiveness of the Portuguese economy in the context of the global market, intervening on strategic dimensions such as innovation, scientific and technological development, internationalization, entrepreneurship and modernization of public administration
ROMANIA	Competitiveness Poles	• To foster the setting up and development of innovative enterprises / activities in enterprises resulting in an increased number of suppliers and clients on national and international markets via an integrated financing package of projects jointly developed by enterprises, R&D organisations, NGOs and public bodies
	Clusters	• To develop specific business structures (clusters) around productive activities aiming at increasing the added value of competitive products on national and international markets
SERBIA	Serbian Cluster Development Support Program	• To improve international competitiveneness • To introduce a new economic development policy in accordance with the EU standards and use the results in order to define key assumptions for fostering competitiveness in Serbia • Tto use clusters as a platform for new innovation policy which is under preparation
SLOVAKIA	Support to innovative industrial cluster organizations	• To develop individual measures of the Innovation Strategy of the Slovak Republic for 2007 to 2013 • To set up support mechanisms for the creation and development of innovation structures, innovation businesses, partnership and cooperation among businesses, universities and research institutes in the fields of research, development and innovation, and the establishment of conditions for

SPAIN	Cluster Development Catalonia	• To improve the competitiveness of Catalan companies by facilitating strategic change and upgrading their business toward more added value activities. • To strengthen innovation through cross-sectoral cooperation projects • To improve the professionalization of cluster managers and stimulate networking
SWEDEN	Vinnväxt	• To promote sustainable growth in regions by developing competitive research and innovation environments within specific growth fields
TURKEY	Support for the Improvement of International Competitiveness (UR-GE)	• To develop a joint action culture • To create new exporters • To create new export markets • To develop consultancy services capacity of Turkish companies
UNITED KINGDOM	Knowledge Transfer Networks	• To stimulate technology-enabled innovation through increased knowledge transfer, partnership formation, supply chain support and other relevant support

2.2.2 STRATEGIC FOCUS: ESTABLISHMENT OF NEW CLUSTERS OR SUPPORT OF MATURED CLUSTERS

Most programs support both the establishment of new cluster management organizations and the further development of already existing matured cluster management organizations.

Only a few programs concentrate either on the establishment of new cluster organizations or the further development of already existing matured cluster organizations. These programs - including the German programs "Go-Cluster" and "Cluster Offensive Bayern", the Norwegian programs "Norwegian Centres of Expertise" and "Arena", the Icelandic program "Strategic Research Program for Centres of Excellence and Research Clusters", the "Cluster Program Lower Austria", the French "Pôles de Compétitivité", the Lithuanian initiative "InnoCluster LT", the Romanian "Competitiveness Poles" and the Spanish/Catalan program "Cluster Development Catalonia" – have a dedicated strategic orientation towards either setting up cluster management organizations from scratch or towards the promotion of particular industries that are already cluster-driven to improve the global competitiveness of industry sectors that are relevant for the national economy.

Although such a clear focus on such a single specific objective is certainly an advantage for a cluster program as it supports the concentration of resources on the specific needs of clusters, programs that both establish new cluster organizations and further develop already existing matured cluster organizations do not have to be necessarily ineffective or inefficient. In their case it depends ultimately on how well developed the strategy and the set of instruments are and if they are applied in a way that ensures the addressing of the needs of both target groups. However, due to the different needs of young and matured cluster organizations it is most likely that more efforts by the program owners have to be made in terms of coordination. This may have a negative effect on the efficiency and effectiveness of a cluster program, if it is not equipped with sufficient resources, particular in terms of numbers and experience of staff.

The cluster programs of the younger EU member countries mostly support both the establishment of new cluster management organizations and the further development of already existing matured cluster management organizations. Romania has two cluster programs each of which specifically dedicates its effort to either the development of new cluster organizations or the further support of the already existing cluster management organizations.

Table 9: Strategic Focus: Creation of new or support of existing cluster management organizations?

COUNTRY	NAME OF THE PROGRAM	ESTABLISHMENT OF NEW CLUSTER ORGANIZATIONS	FURTHER DEVELOPMENT OF ALREADY EXISTING MATURED CLUSTER ORGANIZATIONS
AUSTRIA	Cluster Program Lower Austria		X
BELGIUM	Competence Centres-Light Structures	X	X
	Cooperative innovation network integrated project	X	X
CZECH REPUBLIC	Cooperation–Clusters	X	X
DENMARK	Innovation Networks Denmark	X	X
ESTONIA	Cluster Development Program	X	X
FINLAND	OSKE – Centres of Expertise Program	X	X
	SHOK – Strategic Centres for Science, Technology and Innovation	X	X
FRANCE	Grappe d'enterprises	X	X
	Les Pôles de Compétitivité		X
GERMANY	Competence Networks Germany		X
	Go-Cluster		X
	Cluster Offensive Bayern		X
	Cluster Policy Strategy of Hamburg	X	X
	Zentrales Innovationsprogramm Mittelstand – Netzwerkprojekte (ZIM NEMO)	X	
HUNGARY	Cluster Development Program of the New Széchenyi Plan	X	X
ICELAND	Strategic Research Program for Centres of Excellence and Research Clusters (RANNIS)	X	
	Regional Growth Agreements (Vaxtarsamningur)	X	X

ITALY	Innovation Clusters Piedmont	X	
LATVIA	Cluster Program	X	X
LITHUANIA	InnoCluster LT		X
	InnoCluster LT+		X
LUXEM-BOURG	Luxembourg Cluster Initiative	X	X
NORWAY	Norwegian Centres of Expertise (NCE)		X
	Arena Program	X	
POLAND	Polish Cluster Support	X	X
PORTUGAL	COMPETE	X	
ROMANIA	Competitiveness Poles		X
	Clusters	X	X
SERBIA	Serbian Cluster Development Support Program	X	X
SLOVAKIA	Support to innovative industrial cluster organizations		
SPAIN	Cluster Development Catalonia		X
SWEDEN	Vinnväxt	X	X
TURKEY	Support for the Improvement of International Competitiveness (UR-GE)	X	X
UNITED KINGDOM	Knowledge Transfer Networks	n.a.	n.a.

2.2.3 STRATEGIC OBJECTIVES IN TERMS OF NUMBERS OF CLUSTERS

Most programs do not have particular strategic objectives in terms of numbers of clusters that are funded, restrictions on thematic areas and coverage of the most important business sectors.

If there are such strategic objectives then they are motivated by the interest in a consolidated cluster landscape (e.g. in the case of Innovation Networks Denmark it was decided to limit the number of nationwide clusters) or in the concentration of efforts on the most important business sectors of the economy (e.g. Luxembourg Cluster Initiative, Innovation Networks Denmark, the Norwegian Centers of Expertise program or the Cluster Policy Strategy of the Free and Hanseatic City of Hamburg).

If a decision was taken to limit the number of clusters per thematic area it was motivated by concentrating efforts on specific clusters to increase the efficiency and effectiveness of the program and to increase the critical mass, the impact and the quality of the individual cluster organizations. To varying degrees this motivation has also informed the decisions of program owners who have decided for strategic limitations with regard to the total number of cluster that should be supported.

With regard to the limitation of numbers of clusters per thematic area some program owners pointed out that one has to balance between the interest in concentrating resources for the benefit of efficiency and effectiveness and the potential economic benefits that result from competition between clusters in the same thematic area.

Table 10: Strategic objectives of cluster programs

COUNTRY	NAME OF THE PROGRAM	When looking at the overall cluster policy of the country and the program in particular is there a strategy/objective with regard to cluster landscape in terms of …		
		… THE TOTAL NUMBER OF CLUSTERS?	… LIMITATIONS IN NUMBERS PER THEMATIC AREA?	… OF COVERING THE MOST IMPORTANT BUSINESS SECTORS OF THE ECONOMY?
AUSTRIA	Cluster Program Lower Austria	Yes	Yes	Yes
BELGIUM	Competence Centres-Light Structures	No	No	Yes
	Cooperative innovation network integrated project	No	No	Yes
CZECH REPUBLIC	Cooperation–Clusters, Czech Republic	Yes	No	No
DENMARK	Innovation Networks Denmark	Yes	Yes	Yes
ESTONIA	Cluster Development Program	No	No	Yes

FINLAND	OSKE – Centres of Expertise Program	Yes	Yes	Yes
	SHOK – Strategic Centres for Science, Technology and Innovation	No	Yes	Yes
FRANCE	Grappe d'enterprises	No	No	No
	Les Pôles de Compétitivité	Yes	No	Yes
GERMANY	Competence Networks Germany	No	No	No
	Go-Cluster	No	No	No
	Cluster Offensive Bayern	No	Yes	No
	Cluster Policy Strategy of Hamburg	No	Yes	Yes
	Zentrales Innovationsprogramm Mittelstand – Netzwerkprojekte (ZIM NEMO)	No	No	No
HUNGARY	Cluster Development Program of the New Széchenyi Plan, Hungary	No	No	No
ICELAND	Regional Growth Agreements (Vaxtarsamningur)	No	No	No
	Strategic Research Program for Centres of Excellence and Research Clusters	No	No	No
ITALY	Innovation Clusters Piedmont	Yes	No	Yes
LATVIA	Cluster Program	No	No	Yes
LITHUANIA	InnoCluster LT	No	Yes	Yes
	InnoCluster LT+	No	Yes	Yes
LUXEMBOURG	Luxembourg Cluster Initiative	No	No	No
NORWAY	Norwegian Centres of Expertise (NCE)	Yes	No	Yes
	Arena Program	No	No	Yes
POLAND	Polish Cluster Support	No	No	No

PORTUGAL	COMPETE, Portugal	Yes	Yes	Yes
ROMANIA	Competitiveness Poles, Romania	No	Yes	Yes
	Clusters, Romania	Yes	No	Yes
SERBIA	Serbian Cluster Development Support Program	Yes	No	Yes
SLOVAKIA	Support to innovative industrial cluster organizations	No	No	Yes
SPAIN	Cluster Development, Spain	Yes	Yes	Yes
SWEDEN	Vinnväxt	No	No	No
TURKEY	Support for the Improvement of International Competitiveness (UR-GE)	No	No	No
UNITED KINGDOM	Knowledge Transfer Networks	n.a.	n.a.	n.a.

With regard to the strategic decision whether there should be a limit of the number of clusters per thematic area the discussion of this pattern with some of the program owners put a very interesting question on the table. According to Porter "[c]lusters promote competition and cooperation. Rivals compete intensively to win and retain customers. Without vigorous competition, a cluster will fail". [10] Porter's argument is focusing on competition between companies within the cluster. Why should not there be also competition between the cluster management organizations when they apply for public support? Competition for limited public funds due to the decision of the program agency to support only one cluster management organization in the thematic area of XYZ puts pressure on cluster management organizations to focus their efforts on areas and activities where they can create the most benefits for their cluster members. A wider spectrum and a higher frequency of services for the cluster members which in turn trigger economic activities e.g. of SME (for further details about the link between services and impact) would be one of the results of such a competition. Although there are certainly restrictions for such an approach – e.g. in larger countries it can make economic sense to have several clusters in a specific thematic area due to the regional concentrations of relevant cluster stakeholders -, limiting public means to a few eventual beneficiaries would definitely encourage cluster management organizations to think about how they can be better than their competitors. Competition is always good to encourage rethinking whether one is taking the right decisions.

2.2.4 TOP-DOWN OR BOTTOM-UP

Bottom-up is the approach of program implementation favored by the majority of the program owners (see table 11). Although setting the legal frame of the program through funding guidelines, most programs take only general decisions in terms of which sectors or projects should be developed by cluster management organizations. In this regard the implementation of the program is left to the cluster management organization. Program owners agreed on the opinion

10 Michael E. Porter, 1998: Clusters and the New Economics of Competition, in: Harvard Business Review, November 1998, p. 78

that cluster management organizations and their affiliated members know best which projects they should focus on to create value or which organizational models they should follow to ensure efficiency and effectiveness of operations.

In cases where program owners answered that they follow both a top-down and a bottom-up approach bottom-up implementation was clearly the dominating program rationale. In these cases the top-down element was motivated either because program owners had specific requirements with regard to the structure of the project consortium or they emphasized their interest in interfering in cluster operations e.g. to motivate mergers with other clusters or a strategic reorientation.

There are only three cluster programs, the "Cluster Offensive Bayern", the "Innovation Clusters Piedmont", and "Competence Centers – Light Structures" of Belgium which follow a dedicated top-down approach. Within "Cluster Offensive Bayern" both the industry areas in which clusters are supported as well as the organizations that are responsible for the development of the cluster were chosen by the ministry prior to the start of the program. However, in terms of their operations the cluster organizations act without interference from the supervising Ministry of Economic Affairs, Infrastructure, Transport and Technology.

The initiative "Innovative Clusters Piedmont" created 12 innovation clusters from 12 technological domains by benefitting from the ERDF Regional Operational Program. The cluster managing authorities needed to control the 12 domains were installed through a national call for proposals in 2009.

Table 11: Strategic approach: top-down or bottom-up

COUNTRY	NAME OF THE PROGRAM	TOP-DOWN	BOTTOM-UP
AUSTRIA	Cluster Program Lower Austria	X	X
BELGIUM	Competence Centres-Light Structures	X	
	Cooperative innovation network integrated project		X
CZECH REPUBLIC	Cooperation–Clusters	X	X
DENMARK	Innovation Networks Denmark	X	X
ESTONIA	Cluster Development Program	X	X
FINLAND	OSKE – Centres of Expertise Program		X
	SHOK – Strategic Centres for Science, Technology and Innovation	X	X
FRANCE	Grappe d'enterprises		X
	Les Pôles de Compétitivité	X	X

GERMANY	Competence Networks Germany	n.a.	n.a.
	Go-Cluster	n.a.	n.a.
	Cluster Offensive Bayern	X	•
	Cluster Policy Strategy of Hamburg	X	X
	Zentrales Innovationsprogramm Mittelstand – Netzwerk-projekte (ZIM NEMO)		X
HUNGARY	Cluster Development Program of the New Széchenyi Plan	X	X
ICELAND	Regional Growth Agreements (Vaxtarsamningur)		X
	Strategic Research Program for Centres of Excellence and Research Clusters		X
ITALY	Innovation Clusters Piedmont	X	
LATVIA	Cluster Program	X	X
LITHUANIA	InnoCluster LT		X
	InnoCluster LT+		X
LUXEMBOURG	Luxembourg Cluster Initiative	X	X
NORWAY	Norwegian Centres of Expertise (NCE)		X
	Arena Program		X
POLAND	Polish Cluster Support		X
PORTUGAL	COMPETE	X	X
ROMANIA	Competitiveness Poles		X
	Clusters, Romania		X
SERBIA	Serbian Cluster Development Support Program		X
SLOVAKIA	Support to innovative industrial cluster organizations		X
SPAIN	Cluster Development		X
SWEDEN	Vinnväxt	X	X
TURKEY	Support for the Improvement of International Competitive-ness (UR-GE)	X	X
UNITED KINGDOM	Knowledge Transfer Networks	X	

2.2.5 INSTRUMENTATION

Grant funding is the main instrument of nearly all cluster programs, while technical assistance for capacity development of cluster management organizations and its members is applied by only half of the programs (see table 12).
All program owners agreed that the provision of funding is not sufficient to develop cluster management organizations that are capable to drive the sustainable development of a cluster. However, not all program owners provide technical assistance for capacity development (e.g. through trainings and consultancy services) that goes beyond internet platforms and regular meetings between program owners and cluster managers. The Luxembourg Cluster Initiative and the Cluster Program Lower Austria do not provide grant funding at all, but only technical assistance for cluster management organizations through different workshops, working groups, benchmarking, matchmaking but also individual services.

In most cases where programs provide technical assistance this was done right from the start of the program being a part of the program strategy. Programs that do not provide technical assistance are either considering this (e.g. the Icelandic Strategic Research Program for Centres of Excellence and Research Clusters) or have to rely on other institutions that are not directly affiliated with the program (e.g. the French program Grappe d'entreprises).

The extent to which technical assistance can be provided depends on the resources available to the programs. While the German project "go-cluster" can rely on more than 15 people to organize trainings and workshops, other programs have smaller resources available which in turn results into a less frequent and rather small-scale provision of technical assistance.

Table 12: Instruments of cluster programs

COUNTRY	NAME OF THE PROGRAM	FUNDING	TECHNICAL ASSISTANCE (E.G. PROVISION OF TRAINING AND CONSULTANCY SERVICES)
AUSTRIA	Cluster Program Lower Austria		X
BELGIUM	Competence Centres-Light Structures	X	X
	Cooperative innovation network integrated project	X	X
CZECH REPUBLIC	Cooperation–Clusters	X	
DENMARK	Innovation Networks Denmark	X	X
ESTONIA	Cluster Development Program	X	X
FINLAND	OSKE – Centres of Expertise Program	X	
	SHOK – Strategic Centres for Science, Technology and Innovation	X	
FRANCE	Grappe d'enterprises	X	
	Les Pôles de Compétitivité	X	

GERMANY	Competence Networks Germany		X
	Go-Cluster		X
	Cluster Offensive Bayern	X	X
	Cluster Policy Strategy of Hamburg	X	
	Zentrales Innovationsprogramm Mittelstand – Netzwerkprojekte (ZIM NEMO)	X	
HUNGARY	Cluster Development Program of the New Széchenyi Plan	X	X
ICELAND	Regional Growth Agreements (Vaxtarsamningur)	X	
	Strategic Research Program for Centres of Excellence and Research Clusters	X	
ITALY	Innovation Clusters Piedmont	X	X
LATVIA	Cluster Program	X	X
LITHUANIA	InnoCluster LT	X	
	InnoCluster LT+	X	
LUXEMBOURG	Luxembourg Cluster Initiative		X
NORWAY	Norwegian Centres of Expertise (NCE)	X	X
	Arena Program	X	X
POLAND	Polish Cluster Support	X	X
PORTUGAL	COMPETE	X	
ROMANIA	Competitiveness Poles	X	X
	Clusters	X	X
SERBIA	Serbian Cluster Development Support Program	X	X
SLOVAKIA	Support to innovative industrial cluster organizations		X
SPAIN	Cluster Development	X	X
SWEDEN	Vinnväxt	X	X
TURKEY	Support for the Improvement of International Competitiveness (UR-GE)	X	X
UNITED KINGDOM	Knowledge Transfer Networks	X	X

2.2.6 TECHNICAL DETAILS: TERM AND FINANCIAL ASPECTS OF CLUSTER PROGRAMS

Table 13 (next page) provides an overview for each cluster program about its term, budget, and type of funding, technology focus, funding periods, maximum funding and financing structure of projects. Like in terms of their objectives cluster programs are also quite diverse with regard to their technical details. Programs very much differ in terms of the maximum amount of funding for a project and the duration of funding. Only a few programs support cluster initiatives to 100 per cent, most programs co-fund initiatives to 50 or 75 per cent of the total project budget.

Table 13: Term of cluster programs and financial aspects[11]

	Cluster Program Lower Austria	Competence Centres-Light Structures, Belgium	Cooperative innovation network integrated project, Belgium	Cooperation–Clusters, Czech Republic	Innovation Networks Denmark
TERM OF THE PROGRAM	2007-2013	2011 - ongoing	2010 - ongoing	2007-2013	2005 - ongoing
BUDGET	EUR 20.5 million in total	EUR 19 million p.a.	EUR 15 million p.a.	EUR 90 million in total	EUR 8 -10 million p.a.
TYPE OF FUNDING	Technical assistance (= Basic Support for Cluster Management)	Subsidies 80% of accepted costs	Subsidies 80% of accepted costs	Grant funding	Grant funding and technical assistance
DOES THE PROGRAM HAVE A SPECIFIC TECHNOLOGY FOCUS?	No	No	No	No	No
MAXIMUM FUNDING PERIOD FOR A PROJECT	n.a.	Four years	Six years	Up to three years	Four years per period (can be extended after a positive evaluation)
IS THERE A MAXIMUM AMOUNT OF FUNDING AN APPLICANT CAN APPLY FOR?	n.a.	EUR 2.5 million, depending on type of project	No	Max. EUR 3.5 million in total	Not formally. But in reality max EUR 1 million p.a.
FINANCING STRUCTURE OF PROJECTS	60% of regional fund of program, 28% ERDF, 12% fees	Coordination activities 80% of eligible costs are accepted	80% of eligible costs are accepted	Max. 60% funding from the program	Max. 50 % national government co-financing

	Cluster Development Program, Estonia	OSKE – Centres of Expertise Program, Finland	SHOK – Strategic Centres for Science, Technology and Innovation, Finland	Grappe d'entreprises, France	Les Pôles de Compétitivité, France
TERM OF THE PROGRAM	2007-2013	2007-2013	Since 2006	2009 -ongoing	2005-2012
BUDGET	EUR 10.4 million	n. a.	n.a.	EUR 24 million	EUR 1.5 milliard
TYPE OF FUNDING	Grant Funding	Grant funding	Grant funding and loans	Grant funding	Grant Funding
DOES THE PROGRAM HAVE A SPECIFIC TECHNOLOGY FOCUS?	To some extent. The following sectors are prioritized: biotechnology, ICT and material technology, energy, healthcare and environmental protection. A project that is directly or in-di-rectly involved with these sec-tors will get bonus points in the evaluation process (5% out of 100%).	No	Yes	No	No
MAXIMUM FUNDING PERIOD FOR A PROJECT	Preliminary applications: max. 12 months Full applications: max. 48 months	One year	Five years	Three years	For R&D pro-jects: No, normally 5-year projects. For innovation platforms: 5 years (possible extension) For the cluster management: Until the end of the second phase of the program 2012. A third phase should begin in 2013.
IS THERE A MAXIMUM AMOUNT OF FUNDING AN APPLICANT CAN APPLY FOR?	Preliminary applications: max. EUR 26.000 Full applications: no specific limit set	EUR 140,000	There is no maximum amount.	EUR 500,000	No
FINANCING STRUCTURE OF PROJECTS	Preliminary applications: max. 75% funding Full applications: max. 70% funding Entrepreneurs must provide at least 50% of the entire amount of self-financing.	Max. 50% from the OSKE program	Max. 75% for the establishment of the centers and for research programs carried out by them. Max. 50 % for cluster projects by companies.	Max. 25% funding from the program	For R&D projects: between 25% and 45 % For innovation platforms: from 15% to 50%

	Go-Cluster, Germany	Cluster Offensive Bayern, Germany	Zentrales Innovationsprogramm Mittelstand – Netzwerkprojekte (ZIM NEMO), Germany	Competence Networks, Germany	Cluster Development Program of the New Széchenyi Plan, Hungary
TERM OF THE PROGRAM	2012-2014	2006 - ongoing	2008-2013	1997-2012	2007-2013
BUDGET	EUR 1 million p.a.	EUR 6 million p.a.	EUR 52.2 million	EUR 1 million p.a.	EUR 600 million
TYPE OF FUNDING	Only the management agency is funded to provide technical assistance. No funding of individual clusters.	Grant funding and technical assistance	Grant funding	Only the management agency is funded to provide technical assistance. No funding of individual clusters.	Grant funding
DOES THE PROGRAM HAVE A SPECIFIC TECHNOLOGY FOCUS?	No	No	No	No	No
MAXIMUM FUNDING PERIOD FOR A PROJECT	n.a.	There is no maximum funding period.	Four years	n.a.	Three years
IS THERE A MAXIMUM AMOUNT OF FUNDING AN APPLICANT CAN APPLY FOR?	n.a.	There is no maxi-mum amount.	EUR 350,000	n.a.	EUR 500,000
FINANCING STRUCTURE OF PROJECTS	n.a.	Max. 75 % funding from the program, share is currently decreased as clusters are expected to increase the share of private co-financing	In the initial phase the project can be co-funded with up to 90% of eligible costs to develop a network concept, but the share of public funding will be decreased in three steps in the course of the project duration when the network concept is implemented (70% Ð 50% Ð 30%).	n.a.	Max. 50% funding from New Hungary Development plan and private sources

	Regional Growth Agreements (Vaxtarsamningur), Iceland	Strategic Research Program for Centres of Excellence and Research Clusters, Iceland	Innovation Clusters Piedmont, Italy	Cluster Program, Latvia	InnoCluster LT, Lithuania
TERM OF THE PROGRAM	2010-2013 (current period)	2009-2015	2007-2013	2007-2013	2007-2013
BUDGET	EUR 3.8 million	EUR 6.8 million	EUR 90 million in total	"Cluster program" (2012-2015): EUR 4.8 million (ERDF) "Cluster development program" (2009-2011): EUR 0,75 million (State budget)	EUR 9.5 million in total
TYPE OF FUNDING	Grant funding	Grant funding	Grant funding	Grant Funding	Grant funding
DOES THE PROGRAM HAVE A SPECIFIC TECHNOLOGY FOCUS?	No	No	No	No	No
MAXIMUM FUNDING PERIOD FOR A PROJECT	There is no maximum funding period.	Seven years	Up to one year	3 years	Up to 30 months
IS THERE A MAXIMUM AMOUNT OF FUNDING AN APPLICANT CAN APPLY FOR?	There is no maximum amount of funding.	EUR 3.4 million	Max. EUR 20 million	Yes. Max. EUR 0.42 million per one cluster and max. EUR 14 thousands for one collaboration partner.	Max. EUR 450.000
FINANCING STRUCTURE OF PROJECTS	Max. 50 % funding from the program	Max. 25% funding from the program	Max. 50% funding from the program	Cluster management activities: up to 90% Cluster services provided for collaboration partners: up to 85%	Up to 50%

	InnoCluster LT+, Lithuania	Luxembourg Cluster Initiative	Norwegian Centres of Expertise (NCE), Norway	Arena Program, Norway	Innovative Economy Operational Program, Measure 5.1 "Support of the Development of supra-regional clusters", Poland
TERM OF THE PROGRAM	2007-2013	2010 - ongoing	2006 - ongoing	2002 - ongoing	2007-2013
BUDGET	EUR 57 million in total	The Luxembourg Cluster Initiative has no allocated budget, but benefits from resources provided by Luxinnovation, the National Agency for Innovation and Research, to enable it to develop its various services.	EUR 8.3 million p.a.	EUR 5 million p.a.	EUR 104 million
TYPE OF FUNDING	Grant funding	Provision of technical assistance. No funding of individual clusters.	Grant funding and technical assistance	Grant funding and technical assistance	Grant funding
DOES THE PROGRAM HAVE A SPECIFIC TECHNOLOGY FOCUS?	No	No	No	No	No
MAXIMUM FUNDING PERIOD FOR A PROJECT	Up to three years	n.a.	Ten years	Up to five years	There is no maximum funding period.
IS THERE A MAXIMUM AMOUNT OF FUNDING AN APPLICANT CAN APPLY FOR?	Max. EUR 11 million	n.a.	Max. EUR 770.500 p.a.	Max. EUR 300,000 p.a.	EUR 5 million
FINANCING STRUCTURE OF PROJECTS	50%, 60%, 70% funding from the program depending on conditions	n.a.	50% funding from the NCE program	Max. 50% funding from the program	Up to 100% funding from the program

	Operational Program Development of Eastern Poland 2007-2013, Priority 1.4 "Promotion and cooperation" with Measure 1.4 "Co-operation – cluster creation and development", Poland	COMPETE, Portugal	Competitiveness Poles, Romania	Clusters, Romania	Serbian Cluster Development Support Program, Serbia
TERM OF THE PROGRAM	2009-2015	2007-2013	2012-2015	2012-2015	2007-2013
BUDGET	EUR 11 million	EUR 452 million	EUR 60 million in total	EUR 20 million in total	EUR 1.6 million
TYPE OF FUNDING	Grant funding	Public System of Incentives	Grant funding	Grant funding	Grant funding
DOES THE PROGRAM HAVE A SPECIFIC TECHNOLOGY FOCUS?	No	No	No	No	No
MAXIMUM FUNDING PERIOD FOR A PROJECT	There is no maximum funding period.	n.a.	Up to two years	Up to two years	Eight months
IS THERE A MAXIMUM AMOUNT OF FUNDING AN APPLICANT CAN APPLY FOR?	There is no maximum amount.	The maximum funding granted to each of the applicant is related with the number of project approved	Max. EUR 20 million	Max. EUR 1 million	EUR 25.000
FINANCING STRUCTURE OF PROJECTS	Up to 75% funding from the program.	n.a	From 25% up to 100% funding from the program depending on conditions	From 25% up to 100% funding from the program depending on conditions	Up to 50% eligible costs

	Support to innovative industrial cluster organizations, Slovakia	Cluster Development, Catalonia, Spain	Vinnväxt, Sweden	Support for the Improvement of International Competitiveness (UR-GE), Turkey	Knowledge Transfer Networks, UK
TERM OF THE PROGRAM	2011-2013	2005 - ongoing	2002-2015	2010	2005-2014
BUDGET	n.a.	EUR 5.1 million	EUR 8.8 million p.a.	EUR 5 million p.a.	EUR 21 Million p.a.
TYPE OF FUNDING	n.a.	Grant funding	Grant funding and technical assistance	Grant Funding	Grant funding
DOES THE PROGRAM HAVE A SPECIFIC TECHNOLOGY FOCUS?	n.a.	No	No	No	No
MAXIMUM FUNDING PERIOD FOR A PROJECT	n.a.	One year	Ten years	3 years	3 years with an option of an extension of 2 years
IS THERE A MAXIMUM AMOUNT OF FUNDING AN APPLICANT CAN APPLY FOR?	n.a.	No	Max. EUR 1.1 million p.a.	Max: EUR 1.6 mio	Overall expenditure needs to fit with programme envelope, individual budgets vary, max. currently EUR 2.1 Million p.a., but is not fixed
FINANCING STRUCTURE OF PROJECTS	n.a.	Max. 75% funding from the program	Max. 50% funding from the program	Need Analysis including training and joint consultancy for companies Trade Mission Buyers' Mission Employment (two project staff for each collaboration organization for 3 years) Consultancy (optional, after completion of joint 3 years)	100% grant funding for core programme, but extra income from public and private sources is encouraged (ranges from 0 to 100% currently).

11 The Cluster Policy Strategy of the Free and Hanseatic City and the Slovakian cluster program do not feature in this overview as it is no funding program in the narrow sense. It incorporates a wide array of different funding programs from different ministries and governance levels. For an introduction to the Cluster Policy Strategy please see the appendix of this report.

2.3 KEY FINDINGS

The benchmarking of cluster programs has yielded twelve key findings which are further detailed in this chapter (see Table 14). The key findings provide further insight in the specific characteristics of the different cluster programs and give guidance for the future development of cluster programs.

Table 14: Overview of key findings

KEY FINDINGS	
1.	Different types of cluster programs serve different purposes.
2.	Most cluster programs feature high on the government's agenda.
3.	Coordination with other funding programs shows room for improvement.
4.	Internationalization of clusters is considered to be important, but the relevance of supporting internationalization of clusters varies between the different programs.
5.	Program owners take over a more active role towards developing individual clusters.
6.	Cluster Management Excellence has become more and more important in recent years.
7.	Monitoring and evaluation is important, but difficult.
8.	Cluster policy has become more important with the EU enlargement.
9.	The European Regional Development Fund Approach has led to good linkages between innovation support programs and cluster programs.
10.	Independent from the kind of support they provide the cluster programs are equally integrated in national policies.
11.	The cluster programs' strategic focus of either launching new clusters or supporting matured ones towards excellence is equally integrated in the policy agendas of the EU Member States.
12.	The budget provided for cluster programs is independent from the gross domestic product p.c. of the respective country.

12 A functional region is a territorial unit resulting from the organisation of social and economic relations in that its boundaries do not reflect geographical particularities or historical events. It is thus a functional subdivision of territories. The most typical concept used in defining a functional region is that of labour markets (OECD, 2002: Redefining Territories. The Functional Regions, p. 11).

13 There is no commonly accepted definition of a regional system of innovation. Common to all understandings is a set of interacting public and private interests, formal institutions and other organizations that function according to organizational and institutional arrangements and relationships conducive to the generation, use and dissemination of knowledge. This set of actors produces pervasive and systemic effects that encourage companies within the region to develop specific forms for capital that is derived from social relations, norms, values and interaction within the community in order to reinforce regional innovative capability and competitiveness (Doloreux, David/Parto, Saaed, 2004: Regional Innovation Systems: A Critical Review, p. 9, United Nations University INTECH – Institute for New Technologies Discussion Paper Series, Maastricht).

2.3.1 DIFFERENT TYPES OF CLUSTER PROGRAMS SERVE DIFFERENT PURPOSES

There are four principle types of cluster programs. Of course, there are overlaps between the different types and a program can feature elements that are also typical of a different type of program. However, the analysis of the objectives and strategies of the different cluster program reveals the following main types of cluster programs:

- **I) Cluster programs that focus on regional economic development:**
  All programs that fit into this category aim at the promotion of regional growth through the development of business-driven clusters that are internationally competitive. Common to all these programs is a focus on specific regions that are geographically limited. There are different ways of setting such a limit: programs may set their geographical limit in terms of administrative borders (e.g. in Germany the cluster programs of the federal states) or they define regions from an economic geography perspective, e.g. by referring to "functional regions"[12] that do not have to be congruent with administrative regions and their borders. In this context the rationale of developing regional systems of innovation[13] is explicitly stressed by some programs (the Swedish Vinnväxt, Innovation Clusters Piedmont (Italy) and Cluster Development Catalonia (Spain)).

- **II) Cluster programs that focus on the development of national industries**
  Characteristic of this type of cluster program is the objective of developing business-driven clusters that represent national industries that are internationally competitive. This type of program supports already developed regional systems of innovation in their efforts to utilize their potential for further national and international growth. The national cluster champions are targeted by this kind of programs. Often rooted in a regional economic development rationale the programs go beyond the regional dimension as they try to overcome regional lock-in effects by promoting national and international collaboration with other clusters.

- **III) Cluster programs that focus on the commercial exploitation of the R&D potential of a country's economy**
  The third type of cluster programs is characterized by a focus on the establishment of clusters or centers of excellence that are either driven mainly by research actors or are aimed at bridging gaps between the research and the business sectors. Although these type of program shares the objective of promoting economic growth with

the other types of cluster programs, it is different as it puts more emphasis on the development of the research sector in terms of the commercialization of its R&D results.

- **IV) Network programs to support the competitiveness of national industries**
  This type of program is not a cluster program in the narrow sense as it promotes the establishment of industry-driven R&D networks that need not necessarily be rooted in regional environments, but can be organized nationwide. However, a network created through this kind of program may form the nucleus of a cluster.

The programs that have participated in the policy bench marking can be structured according to the different categories of programs as follows:

Table 15: Different categories of cluster programs

TYPE OF CLUSTER PROGRAM	NAME AND COUNTRY OF CLUSTER PROGRAM
CLUSTER PROGRAMS THAT FOCUS ON REGIONAL ECONOMIC DEVELOPMENT	• Cluster Offensive Bayern (Germany) • Cluster Strategy of Hamburg (Germany) • Vinnväxt (Sweden) • Arena (Norway) • Polish Cluster Support (Poland) • Regional Growth Agreements (Vaxtarsamningur) (Iceland) • Cluster Program Lower Austria (Austria) • Innovation Clusters Piedmont (Italy) • Cluster Development Catalonia (Spain)
CLUSTER PROGRAMS THAT FOCUS ON THE DEVELOPMENT OF NATIONAL INDUSTRIES	• Innovation Networks Denmark • OSKE – Centre of Expertise Program (Finland) • Competence Networks Germany • Go Cluster, Germany • Norwegian Centres of Expertise (Norway) • Polish Cluster Support (Poland) • Grappe d'entreprises (France) • Les Pôles de Compétitivité (France) • Competence Centres – Light Structures (Belgium) • Cooperative Innovation Network Integrated Project (Belgium) • Cooperation-Clusters (Czech Republic) • Cluster Development Program (Estonia) • InnoCluster LT and InnoCluster LT+ (Lithuania) • COMPETE (Portugal) • Competitivness Poles (Romania) • Clusters (Romania) • Serbian Cluster Development Program (Serbia) • Cluster Program, Latvia • Support for the Improvement of International Competitiveness (UR-GE), Turkey • Support to innovative industrial cluster organizations, Slovakia • Luxembourg Cluster Initiative
CLUSTER PROGRAMS THAT FOCUS ON THE COMMERCIAL EXPLOITATION OF THE R&D POTENTIAL OF A COUNTRY'S ECONOMY	• Strategic Research Program for Centres of Excellence and Research Clusters (Iceland) • Strategic Centres of Excellence (SHOK) (Finland) • Cluster Development Program of the New Széchenyi Plan (Hungary)
NETWORK PROGRAMS TO SUPPORT THE COMPETITIVENESS OF NATIONAL INDUSTRIES	• Zentrales Innovationsprogramm Mittelstand - Netzwerkprojekte (ZIM-NEMO) (Germany)

Norway and Germany, but also France are good examples of how different types of cluster programs with their corresponding purposes are linked with each other:

- According to the program strategies the Norwegian Arena program can act as a qualifying arena for the Norwegian Centres of Expertise program for regional clusters with a development potential which have not yet developed sophisticated cooperative and strategy fundamentals.
- Many clusters that are member of Go-Cluster (Germany) are supported by different regional cluster programs of the Federal States in Germany. Furthermore, many members of Go-Cluster are also funded by other programs of the Federal Government such as the Zentrales Innovationsprogramm Mittelstand (ZIM) of the Federal Ministry of Economics and Technology (BMWi).[14] Some clusters of Go-Cluster are also part of the Spitzencluster-Wettbewerb of the Federal Ministry of Education and Research; a program which supports leading research-driven clusters in Germany.[15] This program setting, which consists of a wide array of programs both from the federal and the regional level, complements technical assistance for cluster development through Go-Cluster with grant funding from other programs.
- Clusters that are members of Innovation Networks Denmark can also participate in other innovation support programs. There are several projects of cluster members which are financed by the Danish innovation consortium scheme, which is a scheme similar to the German Zentrales Innovationsprogramm Mittelstand (ZIM) – Netzwerkprojekte (ZIM-NEMO) program. Some clusters of the Innovation Networks Denmark initiative also participate in the three large Danish Strategic Platforms for Research and Innovation (the Danish SPIR Clusters).
- The French program Grappe d'entreprises was set up to bridge the gap between the program Pôle de Compétitivité that supports R&D-driven cluster development and the business sector through the establishment of business-driven cluster of Grappe d'entreprises with links to cluster of Pôle de Compétitivité.

Such linkages can create synergy effects through complementary objectives and funding lines, but in terms of overall efficiency and effectiveness as well as less bureaucracy special coordination efforts on behalf of the program agencies may be required.

2.3.2 MOST CLUSTER PROGRAMS FEATURE HIGH ON THE GOVERNMENT'S AGENDA

Asked how important their program features in the overall national or regional policy context[16] 24 out of 32 experts assessed its relevance as important or very important in relation to the overall economic/industrial development strategy (see Figure 20). Programs were rated high in terms of importance if they were either embedded in an overall national strategy or do matter in terms of their budget. Being embedded in an overall national or regional strategy seems to be a key factor for the relevance of a cluster program as program officials who have ranked their programs as either medium relevant or not relevant explained their assessment with the absence of such a strategy. Some program officials explained the low or medium relevance by referring to small program budgets.

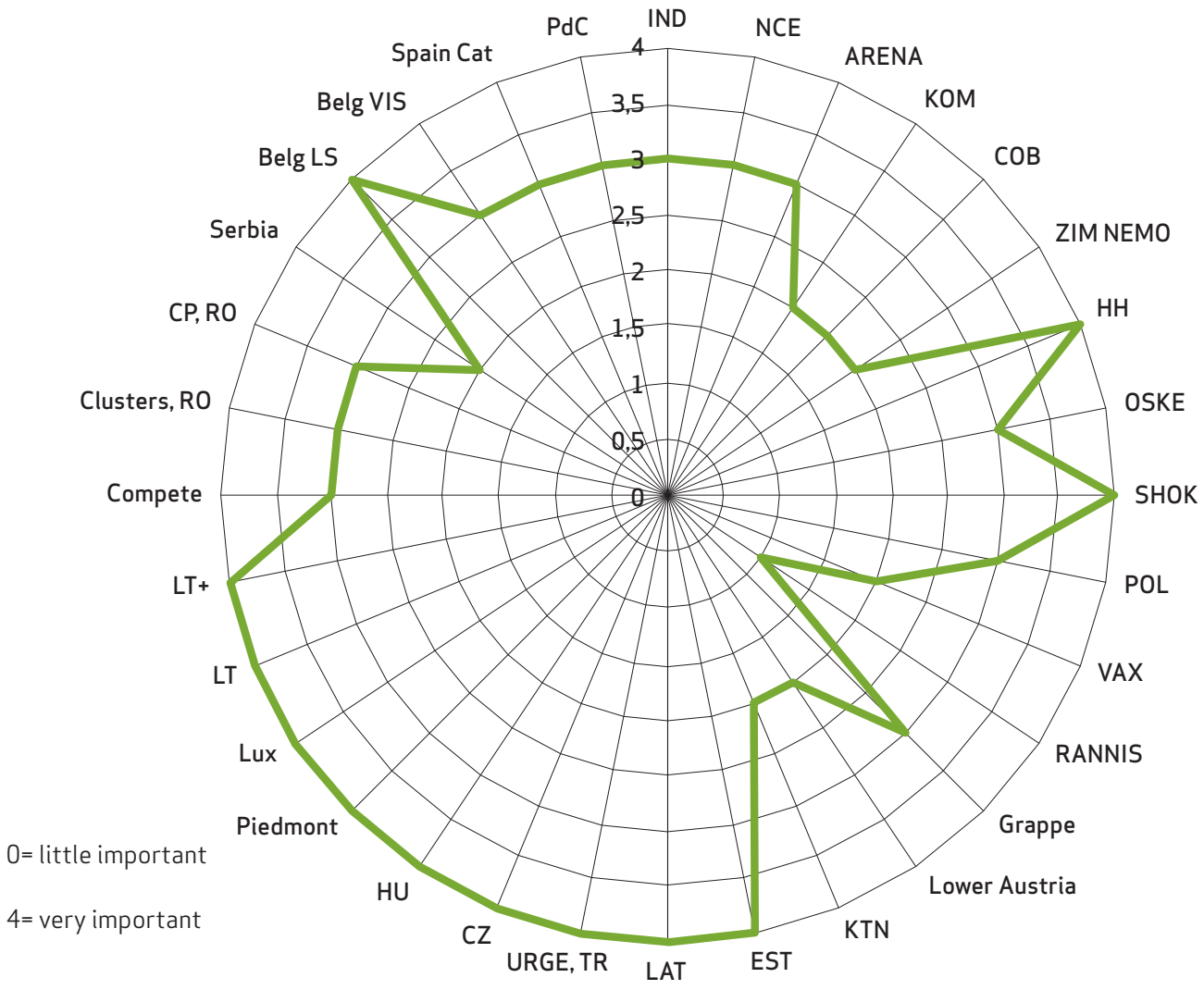
Against this backdrop the importance of a cluster program has to be understood – in the context of this analysis – in terms of being embedded in an overall policy strategy and availability of a significant budget. Low relevance should not be understood as "cluster programs do not matter from the government's point of view". All cluster programs that were benchmarked in this project matter from the government's point of view and are considered as being important from an economic policy point of view.

14 The Zentrale Innovationsprogramm Mittelstand (ZIM) (Central Innovation Program SME) of the Federal Ministry of Economics and Technology supports innovation activities through three sub-programs: 1) Support of collaborative projects (ZIM-KOOP), 2) Support of individual projects of SME (ZIM-Solo) and 3) Support of network projects (ZIM-NEMO). For further details on the ZIM program please see www.zim-bmwi.de. For further information about the third sub-program, Support of network projects (ZIM-NEMO), please see also the appendix to this report.

15 Four out of the ten current Spitzencluster are member of the Go-Cluster initiative. For more information about the Spitzencluster-Wettbewerb (Leading-edge cluster competition) please see www.bmbf.de/en/10726.php.

16 The majority of the programs that were benchmarked in this project are programs that were initiated or are implemented by national agencies or government departments. Exemptions from this rule include the German federal state programs Cluster Offensive Bayern and Clusterstrategie Hamburg.

Figure 20: How important is the cluster program in relation to the overall national or regional economic/industrial development strategy?

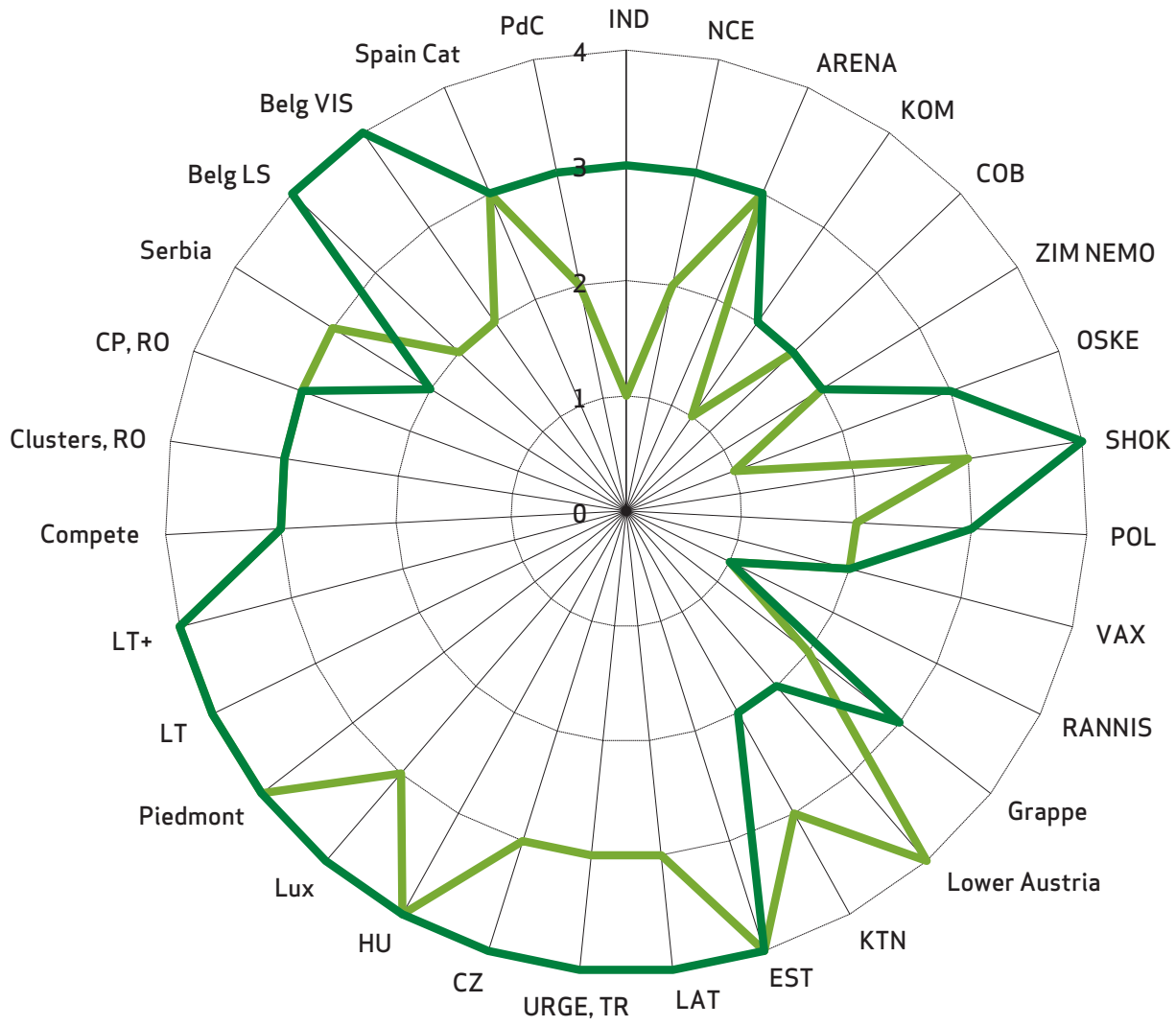


2.3.3 COORDINATION WITH OTHER FUNDING PROGRAMS SHOWS ROOM FOR IMPROVEMENT

High relevance of the cluster program does not necessarily translate into a good coordination with other funding programs that could provide additional support for the development of clusters through funding of business, R&D and infrastructure (including educational infrastructure) projects. Cluster programs seem to be much better coordinated with other R&D programs (20 programs out of 33 are rated as strongly coordinated with other R&D programs) than with business and infrastructure programs (11 programs out of 33 are rated as strongly coordinated with business and infrastructure programs) (see Figure 21-24).

Although the specific national policy context and the specific objectives of the cluster programs have to be kept in mind when analyzing the coordination with other programs in more detail, further attention should be paid in future analysis to this finding, as a well-coordinated framework of funding programs can be expected to increase the efficiency and effectiveness of public support measures. With a cluster support program at the core, additional individual R&D/innovation, business development and infrastructure programs can address the specific needs of the different actors within a cluster. In this regard strategies, instruments, time frames and target groups of programs should be coordinated and efforts should be made to limit administrative burdens for applicants as much as possible.

Figure 21: Coordination of cluster programs with other business development programs



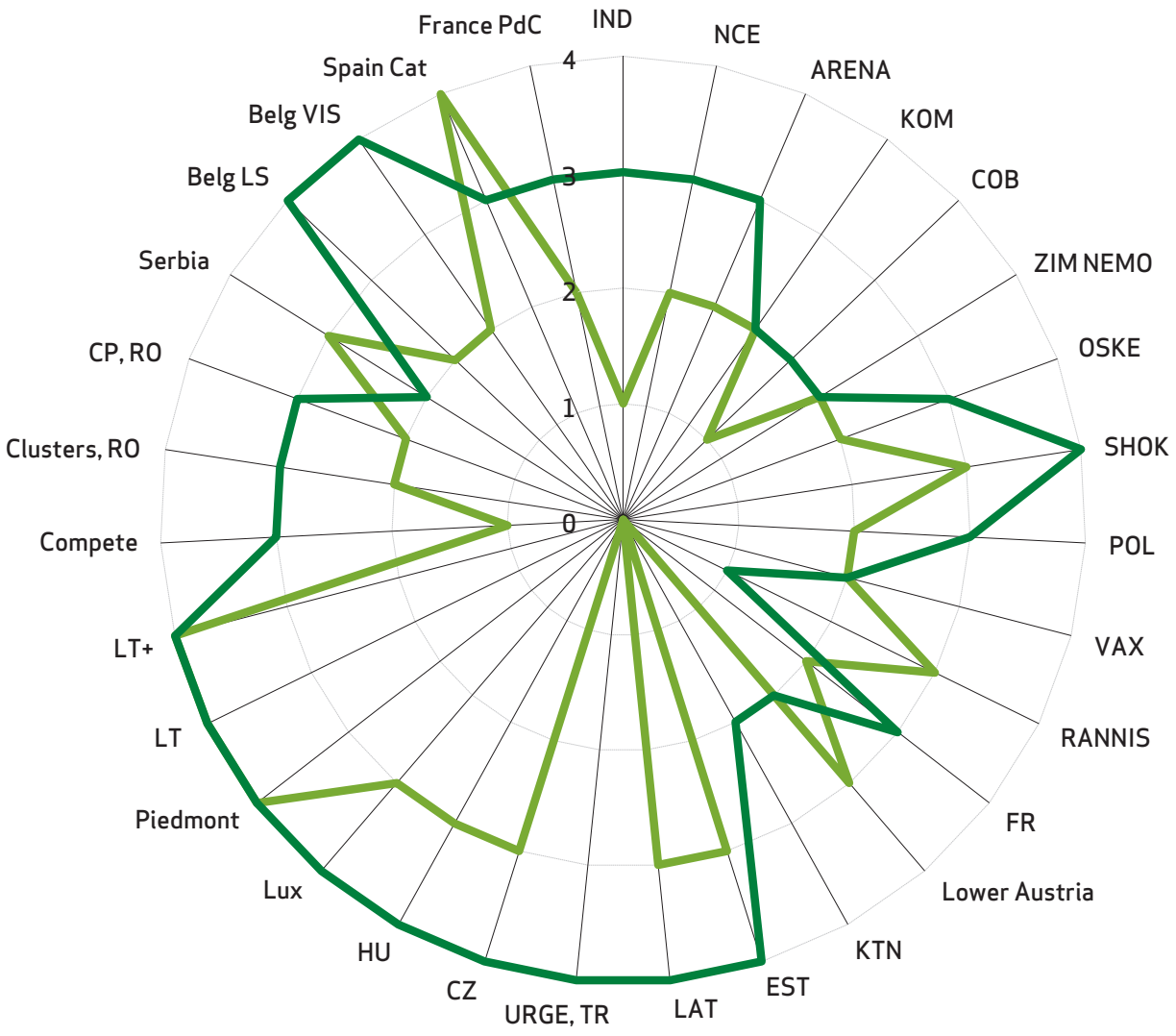
Coordination with business development programs

Relevance in relation to the overall economic/industrial development strategy

COORDINATION: 0= weak > 4= strong

RELEVANCE: 0= not important at all > 4 = very important

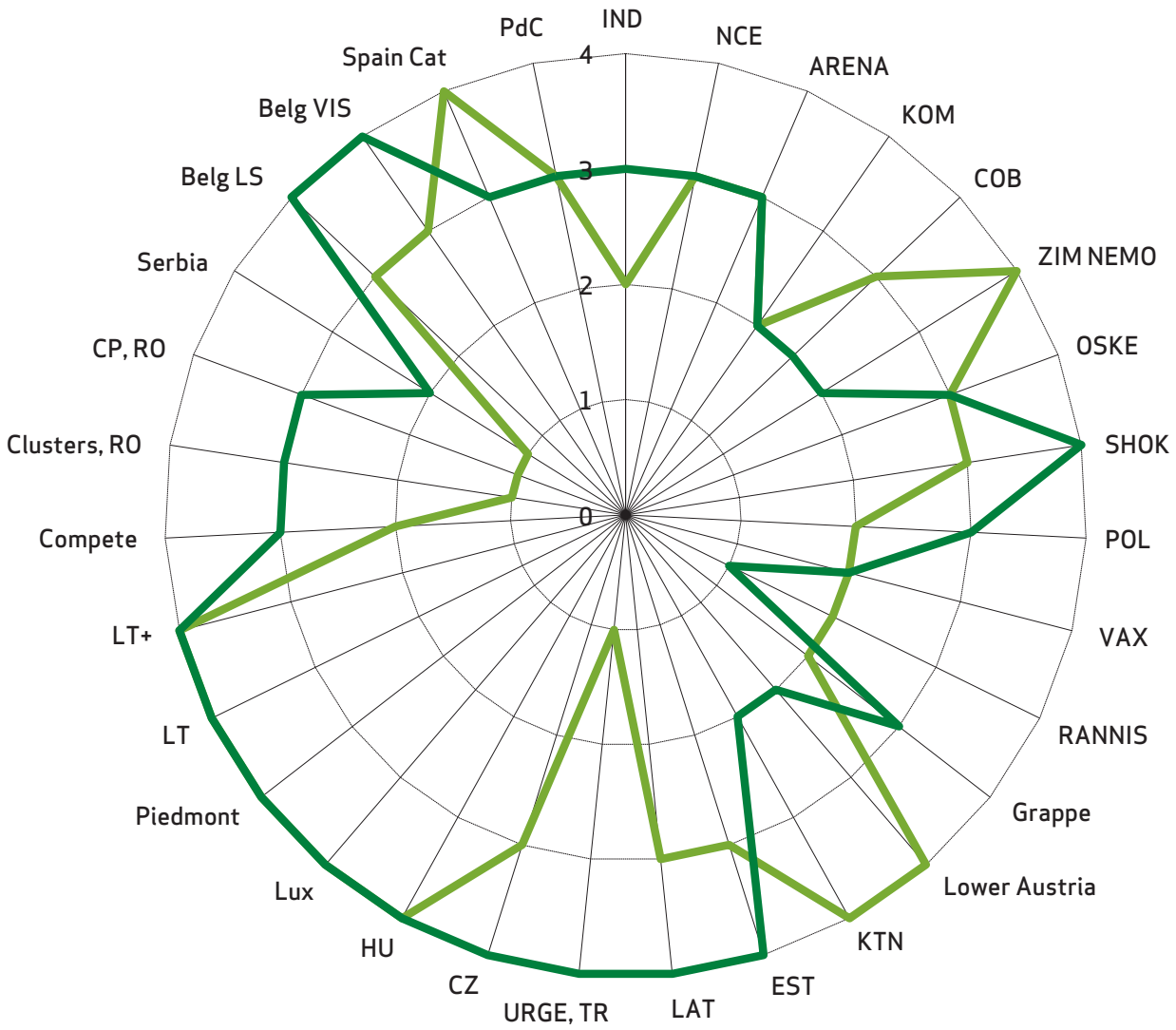
Figure 22: Coordination of cluster programs with infrastructure programs
(e.g. support of universities and other educational institutions)



COORDINATION: 0= weak > 4= strong

RELEVANCE: 0= not important at all > 4 = very important

Figure 23: Coordination of cluster programs with other R&D/innovation support programs



Coordination with R&D/innovation programs

Relevance in relation to the overall economic/industrial development strategy

COORDINATION: 0= weak > 4= strong

RELEVANCE: 0= not important at all > 4 = very important

2.3.4 INTERNATIONALIZATION OF CLUSTERS IS CONSIDERED TO BE IMPORTANT, BUT THE RELEVANCE OF SUPPORTING INTERNATIONALIZATION OF CLUSTERS VARIES BETWEEN THE DIFFERENT PROGRAMS

All program owners consider internationalization of clusters as an important objective of cluster programs. International competitiveness of clusters is considered to be a key element of maintaining and further developing the competitiveness of the country's economy in the global context. From the survey it can concluded that all program owners agree on the importance of internationalized clusters which has to be facilitated through support instruments that meet the needs of the clusters. Consequently, this is reflected by program guidelines and evaluation criteria for project proposals. However, the programs differ in terms of actual relevance of internationalization support and instruments that are used to facilitate internationalization of clusters.

Table 16 provides an overview of the self-assessment given by program officials (23 answers) in terms of the relevance attached to the support of international activities. They were asked to indicate how prominent the support of internationalization features in their program:

Table 16: Relevance of the support of international activities of clusters

RELEVANCE	NAME OF THE PROGRAM
HIGH	Norwegian Centres of Expertise
	Polish Cluster Support
	Grappe d'entreprises (France)
	Cluster Offensive Bayern (Bavarian Cluster Initiative)
	Competence Networks Germany
	Go-Cluster Germany
	Cluster Program, Latvia
	Cluster Development Program, Estonia
	Innovation Networks Denmark
	Cluster Development Program of the New Széchenyi Plan (Hungary)
	Cooperation-Clusters (Czech Republic)
	Innovation Clusters Piedmont (Italy)
	Support for the Improvement of International Competitiveness (UR-GE) (Turkey)
	Luxembourg Cluster Initiative
MEDIUM	Vinnväxt (Sweden)
	ARENA (Norway)
	OSKE – Centre of Expertise Program Finland
	Strategic Research Program for Centres of Excellence and Research Clusters (Iceland)
	Regional Growth Agreements (Vaxtarsamningur) (Iceland)
	Competitiveness Poles (Romania)
	Support to integration of enterprises in suppliers' chains or networks (Romania)
	Support to innovative industrial cluster organizations (Slovakia)
LOW	ZIM NEMO – Zentrales Innovationsprogramm Mittelstand - Netzwerkprojekt
NOT AT ALL	–

Table 17 gives an overview of the instruments that are used by the programs to support international activities of clusters:

Table 17: Instruments that are used to support international activities of clusters

		INSTRUMENTS TO SUPPORT INTERNATIONALIZATION ACTIVITIES OF CLUSTERS				
	Name of the program	Training	Funding	Match-making and study trips	Support through export promotion agencies or other offices abroad	Cooperation with other funding initiatives
CZECH REPUBLIC	Cooperation-Clusters		X	X	X	X
DENMARK	Innovation Networks Denmark	X	X	X	X	
ESTONIA	Cluster Development Program	X	X	X		
FINLAND	OSKE – Centre of Expertise Program Finland				X	
GERMANY	Competence Networks Germany	X		X		X
	Cluster Offensive Bayern (Bavarian Cluster Initiative)	X	X	X	X	
	ZIM NEMO – Zentrales Innovationsprogramm Mittelstand - Netzwerkprojekte			X		
HUNGARY	Cluster Development Program of the New Széchenyi Plan		X	X	X	X
ICELAND	Regional Growth Agreements (Vaxtarsamningur) (Iceland)			X	X	

ITALY	Innovation Clusters Piedmont		X	X		X
LATVIA	Cluster Program	X	X	X		
LUXEMBOURG	Luxembourg Cluster Initiative			X	X	X
NORWAY	Norwegian Centres of Expertise	X		X	X	
	ARENA (Norway)				X	
POLAND	Polish Cluster Support	X	X	X		
ROMANIA	Competitiveness Poles, Romania		X	X	X	
	Clusters, Romania		X	X	X	
SLOVAKIA	Support to innovative industrial cluster organizations			X		X
SWEDEN	Vinnväxt (Sweden)	X	X	X	X	X
TURKEY	Support for the Improvement of International Competitiveness (UR-GE)	X	X	X	X	X

N.B.: Not all cluster programs have provided information on the instruments in detail.

Programs that attach high relevance to internationalization activities of clusters typically follow a dedicated strategic international outlook in terms of their program objectives and instruments; although, due to e.g. the short period the program has been existing for now not in all cases this has translated in a huge number of corresponding activities yet. Two examples of program that have attached a high priority on internationalization activities from the very beginning are the Norwegian Centers of Expertise and the Luxembourg Cluster Initiative:

- Based on an international strategy the Norwegian Centers of Expertise program, for example, is directed towards regional clusters with an international growth potential. The focus of support is on adding value to the innovation and internationalization in the business sector. NCE clusters receive regular support with internationalization activities through services provided by the program management agency Innovation Norway.
- Likewise the Luxembourg Cluster Initiative has a dedicated internationalization strategy which includes:
  - o International Networking among the cluster members
  - o Fostering the collaboration with comparable and/or complementary clusters, both regionally and internationally
  - o Participating in international technology fairs and brokerage events
  - o Identifying new business and market opportunities worldwide
  - o Facilitating participation in EU projects.

These two examples reflect a commonality of all programs that attach high relevance to internationalization activities of clusters: the existence of a set of instruments to support international activities. Specific workshops and events are typical, but in some cases programs also make budgets for travel expenses of the cluster management, event organization and consultancy services available.

Innovation Networks Denmark, the Hungarian Cluster Development Program, the Cluster Offensive Bayern and the Polish cluster support are examples of programs that feature such instruments to different extents. In addition to program specific instruments such as workshops the Norwegian Centres of Expertise program and the Cluster Offensive Bayern network their clusters with the foreign trade agencies of their country respectively federal state to support the establishment and development of relationships to international counterparts of the clusters. This approach is also followed by programs that attach medium relevance to internationalization activities such as the Norwegian ARENA program, the Competitiveness Poles of Romania, and the Finnish OSKE program.

The reasons why program officials attach medium relevance to internationalization activities are diverse. In some cases the medium relevance is due to the young age of the program (e.g. Strategic Research Program for Centres of Excellence and Research Clusters and OSKE), but program officials indicated that relevance will increase in the future. In other cases such as ARENA, Vinnväxt the overall objective of the programs is to set up firstly regional clusters respectively to create regional systems of innovation which later then should develop into clusters that are internationally competitive. Also in those cases program officials indicated that internationalization activities are already becoming more important. However, the currently available set of support instruments appears to be smaller and less frequently implemented in contrast to programs that attach high relevance to international activities of clusters.

A similar finding can be stated for the program Innovation Networks Denmark. In the past internationalization activities of clusters have not played an important role in calls for proposals, but in 2010 it was decided by the government that the program should support internationalization through international collaboration projects, increased participation in EU's Seventh Framework Program (FP 7) and other international programs and collaboration with clusters and networks from other countries. This included also the allocation of money for internationalization activities of Innovation Networks clusters. With the establishment of NETMATCH in Denmark in the same year there is now also a dedicated agency in place that supports internationalization activities of program beneficiaries. NETMATCH is also partner in the European Enterprise Network.

The importance of tailor-made internationalization support for clusters through cluster programs is corroborated by the findings of a survey of international activities of clusters. [17] The survey analyzed clusters from different European countries including clusters that are supported in the programs Pôles de Compétitivité, Norwegian Centres of Expertise, ARENA and Vinnväxt. The study confirmed that international activities of cluster managements translate in an increased international visibility of the clusters. The study also highlights that good cluster management can overcome the barriers of internationalization (e.g. lack of financing or capacity); particularly, if an internationalization strategy exists for the cluster and is implemented by the cluster management. By being guided through an internationalization strategy cluster managers are able to implement successful activities for the cluster members. In turn this increases the willingness of companies and other stakeholders such as research institutions or government bodies to engage financially in international cluster activities. The development of international competences of cluster managements and members of the cluster is therefore an important task that should be at the heart of cluster programs if they want to support the internationalization of their clusters. There is a wide set of instruments available, but it is not the financial assistance for projects that matters in the first place, but rather the availability of technical assistance, e.g. in the form of workshops and trainings to support strategy development and competencies such as language or cross-cultural competencies.

The successful internationalization of clusters does not depend only on a professional and capable cluster management and on support from cluster programs. The legal framework of a country, both the home country of the cluster and its "target country", may also create barriers for internationalization. This applies in particular to areas such as tax legislation, labor law, immigration law and company law. Administrative burdens, e.g. in the case of the registration of a company, are also often barriers that are frequently mentioned by cluster managers.

17 Meier zu Köcker, Gerd/Müller, Lysann/Zombori, Zita, 2011: European Clusters Go International. Networks and Clusters as Instruments for the Initiation of International Business Cooperation

2.3.5 PROGRAM OWNERS TAKE OVER A MORE ACTIVE ROLE TOWARDS DEVELOPING INDIVIDUAL CLUSTERS

The majority of the interviewed experts confirmed that individual professional support of cluster managements through tailor-made services has gained more importance in recent years. Many program owners were - as a key element of their strategic approach to cluster development - from the very beginning of the program pro-active in terms of dialogue with clusters, specific criteria for support, provision of best practice and expert consulting. This includes in particular the Swedish program Vinnväxt, the Norwegian programs Norwegian Centres of Expertise and ARENA and the Polish cluster support scheme. In the case of the other programs program owners were also aware of the need of pro-active involvement, but did not put that much emphasize on it because it did not feature that high in terms of the strategy of the program. However, these program owners have become more actively involved in individual cluster development in the recent past respectively they plan to do so. There was no program owner who argued that there is no need for an active role in the development of individual clusters, but some argued that more attention should be paid to this in the context of future program and policy strategies.

The different programs have different sets of instruments available to influence the development of individual clusters:

- Regular meetings with clusters (both joint meetings with all clusters and bilateral meetings between clusters and program owners) and workshops are instruments that are frequently used by most program owners (e.g. Vinnväxt, Norwegian Centres of Expertise and ARENA, Cluster Offensive Bayern and Innovation Networks Denmark).

- In addition to these instruments the Norwegian programs NCE and ARENA also offer specific toolboxes for cluster managers in order to support cluster development. In the context of the Innovation Network Denmark program NETMATCH is currently developing similar toolboxes for cluster managers.

- Prior to the NGPExcellence cluster benchmarking project benchmarking of cluster to facilitate cluster development has been used by only two programs: the Polish cluster support scheme and the terminated initiative Competence Networks Germany.

- Competence Networks Germany also offered a wide array of different working groups and seminars for cluster managers. They cover topics such as sustainable financing, innovation management, quality management, IPR, internationalization, communication and services. In this regard the program Competence Networks Germany was different compared to other cluster programs as it did not provide funding to cluster managements, but only tailor-made services to facilitate individual cluster development. With the establishment of NETMATCH in 2010 the program Innovation Networks Denmark has set up a similar support organization. In France the association "France Clusters" offers similar services to clusters that are supported through the Grappe d'entreprises program, but the services are also available to other clusters.

Several program owners highlighted that cluster managers have to trust the program owners; otherwise the chances of having an influence on the development of individual clusters are limited. Cluster managers have to consider program owners as partners for development and vice versa. The transparent offer of services and the transparent implementation of instruments are important for trust building. The rationale behind a more active, dialogue and guiding role of program owners in individual cluster development can be summarized as follows: cluster support is no longer about the mere establishment of clusters in the first place, but about developing excellent clusters that are internationally competitive and that have an impact on the national economy.

In this regard an active involvement in the development of individual clusters has two principal dimensions:

- First, program owners are interested in improving the management performance of the cluster organization and;

- Second, program owners want to guide clusters in terms of their thematic and strategic focusing.

With regard to the latter cross-fertilization of clusters (bringing together clusters with complementary expertise) is also an important rationale for an increased pro-active role of program owners. However, yet the actual cross-fertilization efforts in the different programs are not based on detailed strategic parameters informed for example through a technological outlook of the program owners. Workshops, networking events and cluster manager forums, regular meetings of clusters with the program agency and in some cases dedicated calls for proposals and small funds (e.g. the French program Grappe d'entreprises, and the Finnish OSKE – Centers of Expertise Program) are typical instruments to facilitate inter-cluster cooperation for the benefit of cross-fertilization.

2.3.6 CLUSTER MANAGEMENT EXCELLENCE HAS BECOME MORE AND MORE IMPORTANT IN RECENT YEARS

Closely related to the interest of program owners in playing a more active role towards developing individual clusters is the increased relevance that is attached by program owners towards cluster management excellence. As already indicated in the previous key finding: Cluster support is not about the mere establishment of clusters in the first place, but about developing excellent clusters that are internationally competitive and that have an impact on the national economy.

Therefore, the majority of program owners argued to focus programs on cluster excellence instead of "numbers of clusters". Only clusters with a high potential of development and high performance should be supported. From the point of view of some program officials this requires at the same time continuous support of the cluster organization to assist them with quality assurance.

In this context program owners play an important role in the development of cluster management excellence as the survey revealed:

- Targeted, need-focused services such as related workshops and seminars, benchmarking as well as a continuous strategic dialogue with cluster organizations to question and further develop strategies and activities are important elements in this regard as most of the interviewed program owners indicated.

- Labeling of excellent cluster organizations was also referred to by several program officials as an instrument to promote cluster management excellence. Several programs are involved in developing such cluster excellence labels and therefore participated in the European Cluster Excellence Initiative to develop a meaningful set of quality indicators and peer-assessment procedures for cluster management. The intention is to develop training materials and to set up an approach for quality labeling of cluster management.[18]

- Financial support of cluster organizations should depend on their performance was often mentioned by program officials. Only excellent clusters should receive financial support and program owners should not hesitate to stop funding if cluster organizations do not live up to the agreed objectives. The Norwegian, Hungarian, Swedish and Danish programs are good examples how this idea can be put into practice: although they commit grant funding for a certain period of years, funding is provided by a series of installments (stage-funding). Prior to installments beneficiaries have to prove through an evaluation that they perform according to the grant agreement (in the Hungarian program a specific accreditation systems decides on further funding). If they do not perform, the program owner is entitled to stop funding.

Thus, the support of cluster management excellence through program owners has two dimensions: on the one hand they should support cluster organizations through the provision of services targeting cluster management excellence and on the other hand they should also execute pressure on cluster managements to motivate them to strive for cluster management excellence.

2.3.7 MONITORING AND EVALUATION IS IMPORTANT, BUT DIFFICULT

Almost all programs have evaluation instruments and processes in place, both with regard to the evaluation of the program itself and the supported cluster initiatives. All program experts consider evaluations as useful tools to improve the governance of a program and its effectiveness and efficiency. In this context many experts consider formative evaluations as more useful than ex-post evaluations as they provide relevant information in the course of the program implementation which can be used for "real-time" improvements of the program. In contrast to this, ex-post evaluations are considered to be of more use while planning a new program or analyzing long-term effects of the support.

The Innovation Network Denmark program and its program authority, the Danish Agency for Science, Technology and Innovation, is a very good example for using annual performance statistics and econometric impact studies for monitoring and evaluation purposes. Since 2006 the annual performance of the clusters that are supported through the program is measured through quantitative data, e.g. indicators on number of new services or products, number of participating companies and research institutions, number

18 For further information on the European Cluster Excellence Initiative please see www.cluster-excellence.eu; for specific information about the cluster management quality label please see www.cluster-excellence.eu/quality.html.

of collaboration projects, usage of services (e.g. matchmaking) offered by the cluster managements, etc.[19] The results of the annual performance assessment is not only used to monitor the program performance from a general angle, but also to identify specific weaknesses of the clusters which are then addressed by targeted measures developed by the program management (e.g. training courses or matchmaking activities). In 2011 the Danish Agency for Science, Technology and Innovation published an impact analysis of the program for the first time. This econometric analysis, which covered 1,225 companies participating in the supported clusters, proved - just to give one example of the results - that the participation of a company in a cluster increases its capacity to innovate significantly within a short period of time (compared to companies that do not participate in a cluster).[20]

While in principle the measurement of outputs and results of a cluster program is not difficult, it is challenging to measure the economic impact of a program. This applies both to the impact of the supported cluster initiatives - e.g. in terms of the cluster's total R&D budget generated by all its members or the number of innovations that are an effect of the cluster initiatives' activities - and the overall impact of the cluster support on the national economy. The challenge of measuring impacts lies in the complexity of the huge array of variables that decide on the actual effect of funding. Economic impacts can be measured e.g. through econometric impact analysis, but one has to be clear about the limitations: First, economic impacts of support programs can be measured only after a certain period of time. Normally the economic impact of activities can be measured after 5-7 years depending on the number of participating enterprises in the cluster with concrete registered activities. In other cases the economic impact using econometric impact analysis must wait longer and very probably sometimes until the program is already terminated. The results can in the latter case be used to verify the economic impact of the program, but not be used to redefine the strategy of the program.

Second, due to the complexity of impact measurement a lot of different information has to be collected from the beneficiaries of the program. As surveys and interviews always require involvement of the beneficiaries in terms of resources one has to balance the cognitive interest in economic impacts of a program with the interest in reducing the burden for the beneficiaries that results from such comprehensive analysis. In this context, Denmark may serve as an international best-practice example for measuring economic impacts of public support by utilizing central civil and business registration systems to collect relevant information for such analysis. Although this reduces the burden for companies and organization involved in the analysis, it cannot fully replace specific surveys and other types of evaluations as those databases do not contain all data in detail that is usually required for the analysis or evaluation of a certain program.

Another best practice example is the policy monitoring system of Lower Austria. The Lower Austrian regional Government, Department for Economy, Tourism and Technology has developed and implemented a system of different monitoring and evaluation tools for Lower Austria's innovation policy to receive an understanding of the results and the impact of state aids and further innovation support services with the aim to improve single innovation policy instruments as well as to coordinate the overall regional innovation system with all involved actors/intermediaries. It combines regional economic reports and analyses by economic research institutes, large scale surveys among companies in the region, evaluation of company projects and last but not least the monitoring of the regional programs implemented by intermediaries based on the Balanced Scorecard method.

Many program officials experienced in the course of the program implementation that there is always room for improvement when it comes to monitoring and evaluation of a program and of cluster initiatives. Although most of them were satisfied with their approach and instruments they indicated that they are in a continuous search for a system that balances the interest in obtaining program governance-related information with the interest in keeping the burdens for beneficiaries that derive from the participation in monitoring and evaluation as low as possible. However, none of them had a text-book-solution for the best system available.

Benchmarking of cluster programs and cluster initiatives was frequently indicated by program officials as a very good tool to support the further development of funding schemes and activities of beneficiaries. Benchmarking provides standards for performance assessment and thus

19 Danish Agency for Science, Technology and Innovation, 2011: Innovation Network Denmark. Performance Accounts 2011, Innovation: Analyse og evaluierung 08/2011

20 Danish Agency for Science, Technology and Innovation, 2011: The Impacts of Cluster Policy in Denmark. An Impact Study on Behavior and Economic Effects of Innovation Network Denmark

helps to identify potential for improvements and best practice through the comparison with peers. Benchmarking is an ideal supplement to a formative evaluation and is less resource intensive than a fully-fledged evaluation exercise. The benchmarking approach of the NGPExcellence project has over the years developed into a widely respected benchmarking standard in Europe.

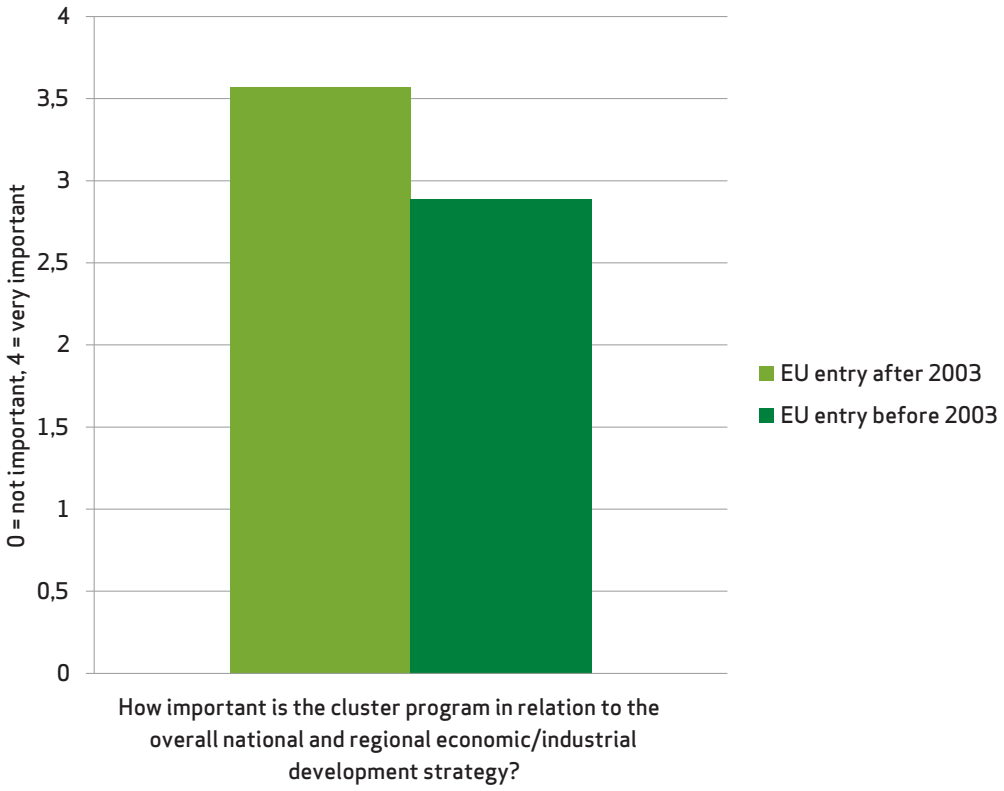
Benchmarking of cluster programs is a very important tool to facilitate cross-border learning in the European Union. Increased collaboration between policy makers on this topic can contribute to the further development of innovation and cluster policies in the European Union and thus contribute to the maintenance and further development of the global competitive position of the European Union and its Member States.

2.3.8 CLUSTER POLICY HAS BECOME MORE IMPORTANT WITH THE EU ENLARGEMENT

When looking at the cluster programs of those countries that have entered the European Union after 2003, it can be stated that for these "younger" EU member countries the importance of the cluster programs has increased within the national and/or regional economic/industrial development strategy in comparison to those countries that joined the EU before 2003. This can be interpreted as a very positive development, as spill-over effects from the "older" EU member states have "inflamed" the new countries' ideas on how to integrate cluster policy in the overall economic strategy. Especially newly started cluster programs, such as the Hungarian cluster program which has been integrated from the beginning in the new overall long-term economic development strategy, the New Széchenyi Plan, can become good practice examples. Also, Lithuania incorporated cluster policy into the regular innovation policy, trying to create a favorable environment for innovative clusters and to develop international clusters. This holistic approach can encourage the members of the clusters and the cluster management organizations as they receive more appreciation for their work.

The figure below compares the importance of cluster programs in relation to the overall national and regional economic/industrial development strategy among those countries that have entered the EU before and after 2003.

Figure 24: Importance of cluster programs in relation to the overall national or regional economic / industrial development strategy

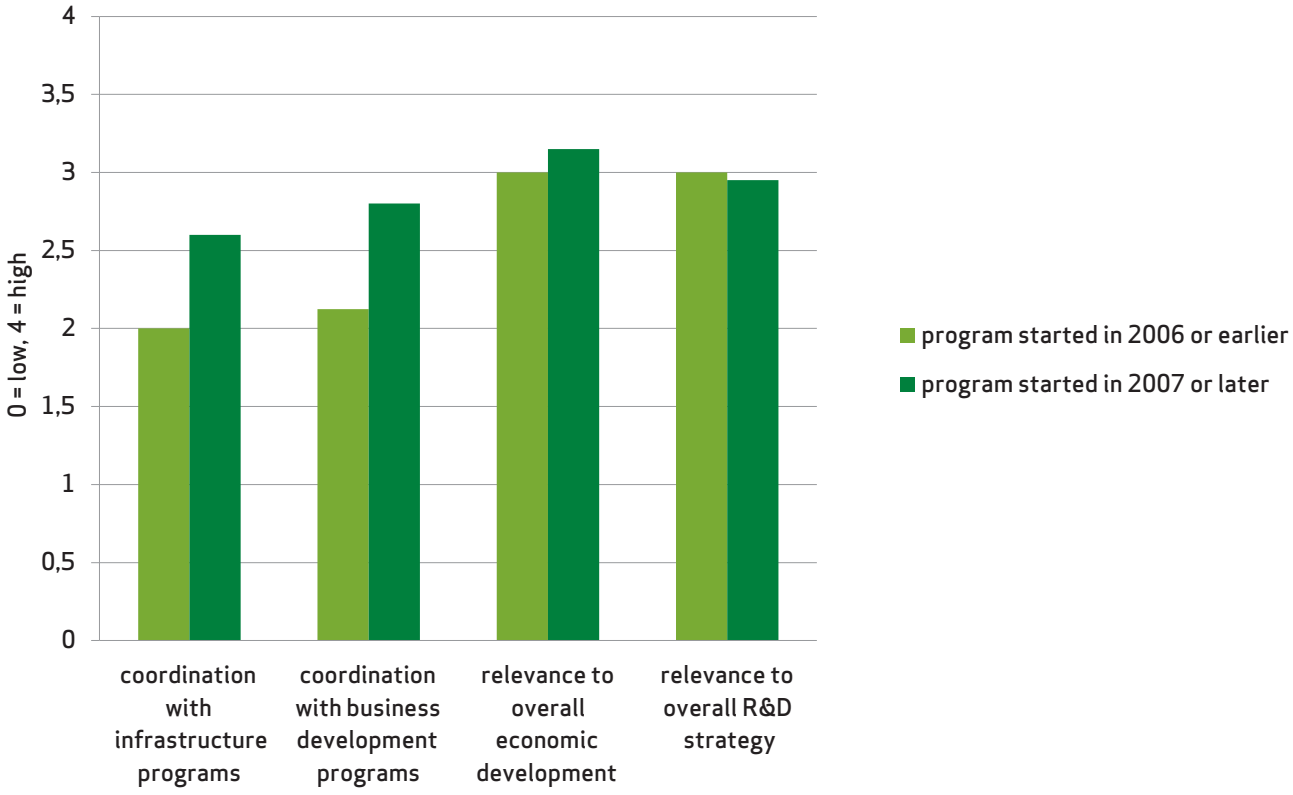


2.3.9 THE EUROPEAN REGIONAL DEVELOPMENT FUND APPROACH HAS LED TO GOOD LINKAGES BETWEEN INNOVATION SUPPORT PROGRAMS AND CLUSTER PROGRAMS

When looking at those cluster programs that have been launched in 2007 or later, it can be said that the coordination with business development programs and with other infrastructure programs of the country is higher as for those cluster programs that have been launched before 2007 (figure 25). This can be reasoned by the fact that within the European Regional Development Fund the support of business networks and clusters is one of the objectives in order to promote regional competitiveness and employment.[21] Many of the cluster programs that have started after 2007 are funded through ERDF and thus follow a highly designated approach with regards to the support of cluster development.

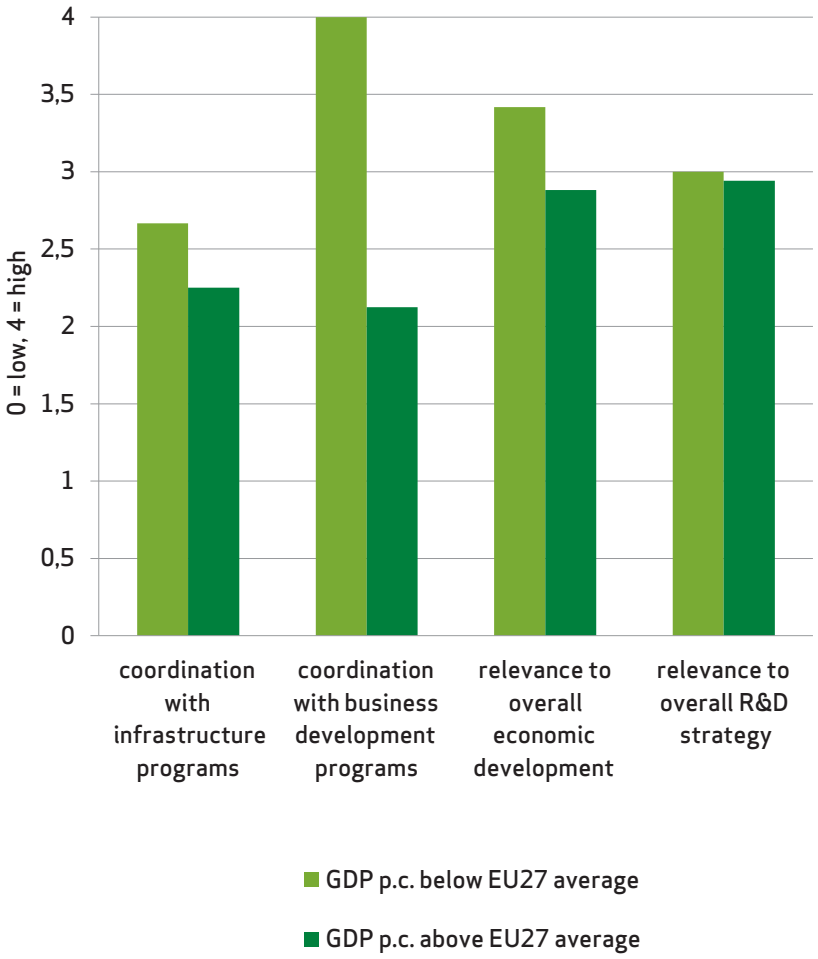
Another interesting result can be found when comparing EU countries below and above EU GDP p.c. average. Taking a look at the GDP p.c. of the countries whose cluster programs have been benchmarked, it appears that those countries that are below the EU GDP p.c. average evaluate their cluster programs as better coordinated with other business development programs and infrastructure programs. This does not mean that these cluster programs are "better", but they are linked more closely to other innovation support measures. Furthermore, these cluster programs rank higher within the overall economic agenda of the respective countries than the cluster programs of those countries above the EU GDP p.c. average.

Figure 25: Comparison of "older" and "younger" cluster programs with regard to the specific economic environment, and R&D strategy as well as other funding programs



21 Official Journal of the European Union (2006). Regulation (EC) No 1080/2006 of the European Parliament and of the Council of July 2006 on the European Regional Development Fund and repealing Regulation (EC) No 1783/1999. (Article 5).

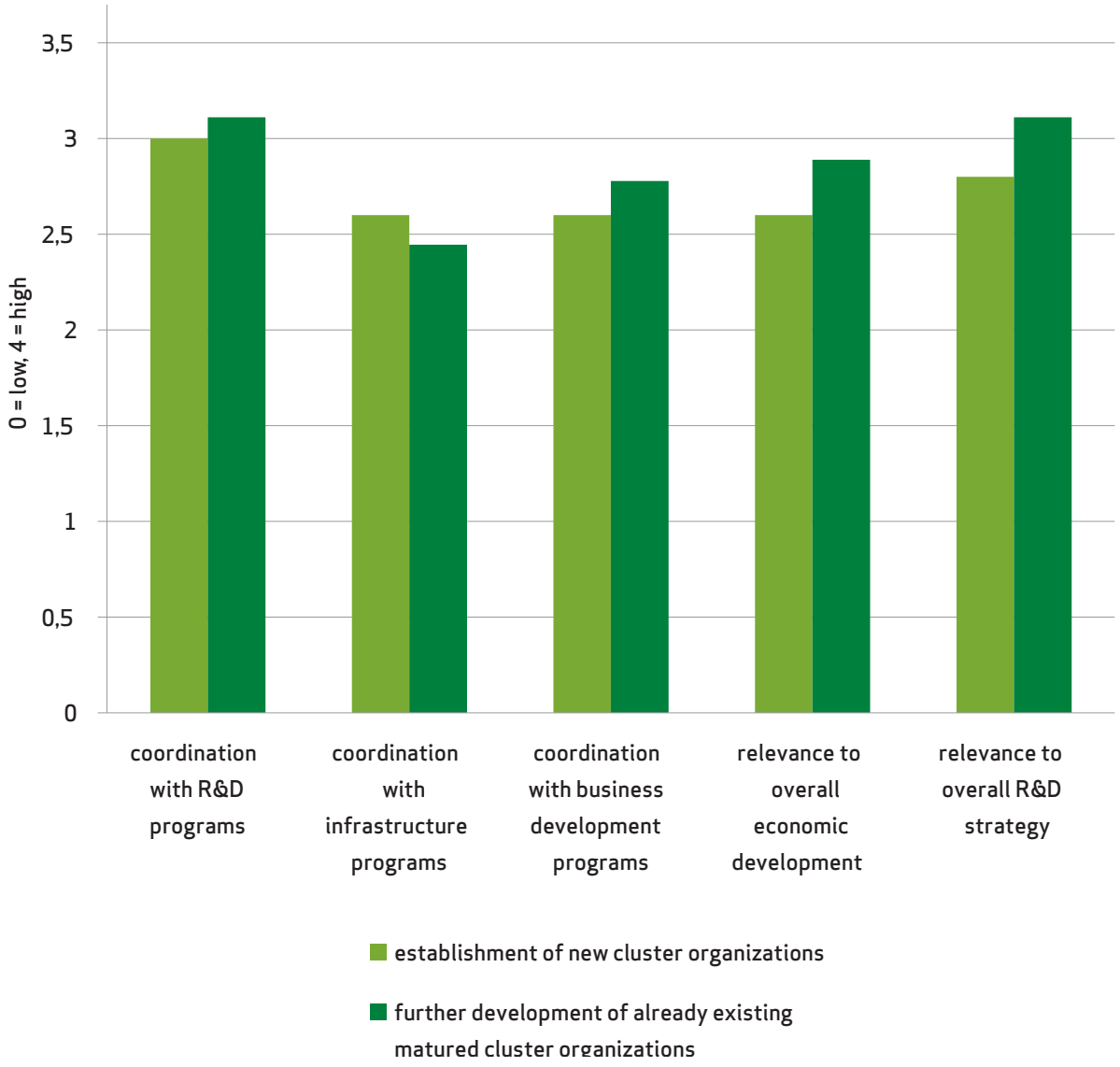
Figure 26: Embedment of cluster programs in the overall economic development and R&D strategy with regard to the GDP of the respective country



2.3.10 INDEPENDENT FROM THE KIND OF SUPPORT THEY PROVIDE THE CLUSTER PROGRAMS ARE EQUALLY INTEGRATED IN NATIONAL POLICIES

Different cluster programs provide different kind of support. Usually, this support is either given through the provision of funding or the supply of technical assistance. Many cluster programs provide both of these support services. Comparing the programs that exclusively provide funding-with those that supply technical assistance and funding, it can be stated that in terms of coordination with other funding programs it makes no difference, whether a cluster program focusses on funding only or provides funding and technical assistance to its clusters. Both types of support allow the cluster programs to be coordinated equally strong with other R&D programs, business development programs and infrastructure programs.

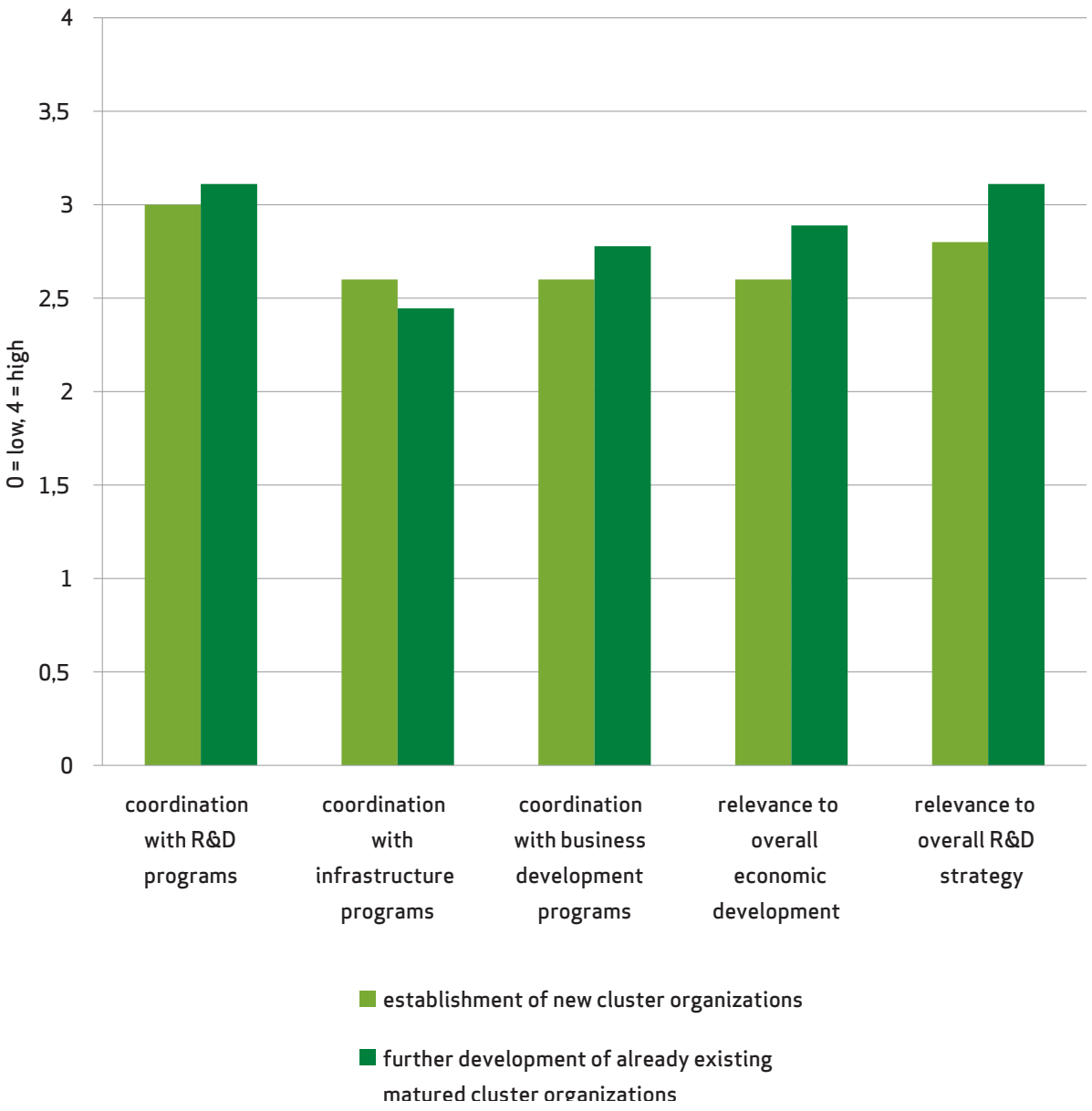
Figure 27: Comparison of cluster programs that provide funding only and cluster programs that provide funding and technical assistance



2.3.11 THE CLUSTER PROGRAMS' STRATEGIC FOCUS OF EITHER LAUNCHING NEW CLUSTERS OR SUPPORTING MATURED ONES TOWARDS EXCELLENCE IS EQUALLY INTEGRATED IN THE POLICY AGENDAS OF THE EU MEMBER STATES

Cluster programs can focus on elevating new clusters or on strengthening matured ones towards excellence, or cluster programs can provide both services. When comparing the cluster programs that focus exclusively on the establishment of new clusters with those that focus exclusively on the further development of matured clusters towards excellence clusters, it can be asserted that both approaches rank high on the respective countries' innovation policy agendas. This is confirmed by the figure below showing only very slight differences between the two groups.

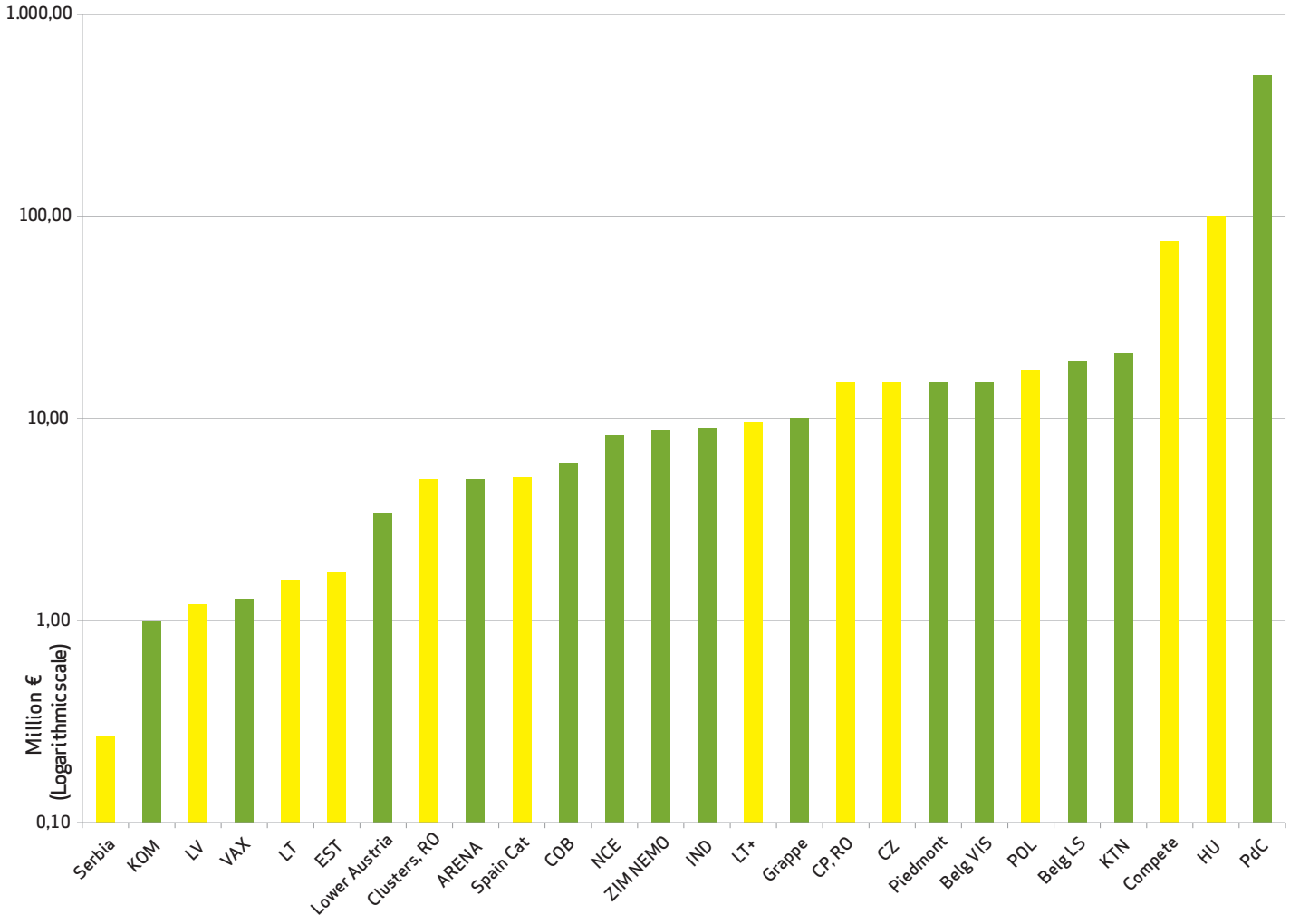
Figure 28: Comparison of cluster programs that focus exclusively on the establishment of new cluster organization and cluster programs that focus exclusively on the further development of already existing cluster organizations



2.3.12 THE BUDGET PROVIDED FOR CLUSTER PROGRAMS IS INDEPENDENT FROM THE GROSS DOMESTIC PRODUCT P.C. OF THE RESPECTIVE COUNTRY

The cluster programs analyzed in this study dispose of at least 1 Million Euros per year (except for Serbia). Most of them have a budget of between 5 and 12 Million Euros per year. Three programs come close or are above 100 Million Euros in their yearly budget. The budget that is spent for the cluster programs is independent from the gross domestic product p.c. of the respective country. The figure below shows that the countries below the EU GDP p.c. average (marked yellow) and the countries above the EU GDP p.c. average (marked green) are equally spread with regard to their yearly budget of the cluster programs. However, comparing the budgets of the different programs is rather difficult as the objectives of the programs are very different from each other, e.g. some of the cluster programs provide extensive budget for R&D investment, others supply budget for the development of cluster management organizations only.

Figure 29: Estimated yearly budget of the cluster programs (in Million €), (Cluster programs of countries below EU GDP average are marked yellow. Cluster programs of countries above EU GDP average are marked green.)[22]



2.4 LESSONS LEARNED AND THE IMPACT ON PROGRAM DEVELOPMENT

Program officials were asked to report the three key lessons that they have learned since the inception of their program. Although lessons learned are always program-specific as the national policy and economic context and the age of the program matter, one can nonetheless identify some general key lessons learned that apply to all programs. Those key lessons learned can be differentiated into key lessons that have been learned in terms of the program strategy (see Table 18) and into key lessons that have been learned in terms of instruments (see Table 19).

22 Please be aware that this figure displays the budget for individual cluster programs only. It does not show the total budget that each country spends for cluster programs.

Table 18: Lessons learned with regard to the program strategy

KEY LESSONS LEARNED WITH REGARD TO THE PROGRAM STRATEGY	
1.	Long-term support is key when clusters should be set up sustainably
2.	The cluster program should be embedded in a regional and/or national cluster policy respectively economic development strategy.
3.	Funding schemes should be flexible in order to be able to adjust support to changing economic environments smoothly and quickly.
4.	Clusters have different characteristics depending on their context (e.g. history of origin, emerging vs. traditional industries). This requires different support mechanisms.
5.	Funding of clusters should depend on their performance.

Table 19: Lessons learned with regard to the instrumentation of the program

KEY LESSONS LEARNED WITH REGARD TO THE INSTRUMENTATION OF THE PROGRAM	
1.	Mutual exchange between cluster managements and networks of cluster managers should be supported through adequate instruments.
2.	Cluster managements should get support for the development of value-adding services that can be offered to the cluster members.
3.	Cluster managements should get support with the development of cluster strategies.
4.	Long-term commitment among the cluster members should be supported.
5.	Internationalization of clusters should be part of the cluster strategy and be supported by the program owner.
6.	Evaluation and monitoring is crucial for the success of the cluster program. Measuring economic and other types of impacts is very difficult, but should be pursued.
7.	Other funding instruments than grants should be also used to support cluster development; e.g. technical assistance or capital investments in organizations.
8.	Quality labeling of cluster organizations should feature as an integral part of cluster programs
9.	The program should activate competition among the clusters benefitting from the program by setting up e.g. annual contests.

The majority of program officials reported in the survey that they have already translated their corresponding lessons learned into adaptations of their programs. This concerned in particular

- The implementation of new support tools and measures;
- An increased attention towards cluster management excellence, e.g. through a more pro-active engagement with cluster managements by means of dialogue or benchmarking exercises;
- Consolidation of the supported "cluster landscape" and reduction of funding rates for cluster managements.

Most cluster programs will continue in the next years without significant changes. In some cases parliamentary elections and ongoing or upcoming elections may have an impact on the program configuration.

3 POLICY RECOMMENDATIONS

Clusters are individuals who need individual support for sustainable growth and enhanced competitiveness in order to become world-class clusters that maintain and extend the global competitiveness of the European Union's economy – that is the most important conclusion from the benchmarking of 261 cluster management organizations.

Support of cluster development by means of cluster programs should therefore be more than just providing grants for office and staff funding of cluster management organizations. It is also about providing tailor-made technical assistance for cluster management organizations in order to support their efforts with the provision of needs-driven and value-adding products and services for the cluster members. And it is also about developing favourable frame-work conditions in which clusters can flourish through the coordination of cluster policies and programs with other relevant policy areas and programs. Last, but not least: cluster programs should focus on the support of cluster management excellence. Only cluster management organizations that are excellently managed can develop and offer the support to cluster members that they need to maintain and extend their global competitiveness.

The results of the benchmarking of 34 cluster programs from 24 countries, which are Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Iceland, Italy, Latvia, Lithuania, Luxembourg, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Spain, Sweden, Turkey and United Kingdom demonstrate that there are many good cluster programs not only in the European Union Member States but also in Associated States. All these programs support the above briefly sketched objectives forward looking cluster programs should have. However, there is always room for improvement. In order to improve their effectiveness and efficiency these programs can both learn from each other from the results cluster program benchmarking and from the results of the cluster benchmarking. Certainly, these results provide also inspiration for many other cluster programs that have not participated in the NGPExcellence project.

In the following seven policy recommendations are presented that are based on the findings of the cluster and cluster program benchmarking. They provide guidance for the further development of cluster programs and shall contribute to the evolution of outstanding clusters that are driven by excellent cluster management organizations:

1. **Improve coordination of cluster programs and other relevant funding programs. Ideally there should be only a limited number of coordinated cluster support programs** that target different types of clusters. With a limited number of cluster support programs that support the establishment of cluster management organizations at the core of an overall cluster development strategy additional individual R&D/innovation, business development and infrastructure (e.g. in the educational sector) programs can address the specific needs of the different actors within a cluster. In this regard program strategies, instruments, time frames and target groups of programs should be coordinated and efforts should be made to limit administrative burdens for applicants as much as possible. Programs should also be aligned with policies that pursue an improvement of the framework conditions which have an impact on the development of a cluster (e.g. educational or labour policies).

2. **Tailor-made assistance for clusters should have a high relevance in the program strategy.** The economic impact of a cluster depends not only on its size and maturity. It is also the technology domain of the cluster that matters in terms of the structure, the governance and the performance of a cluster. Cluster programs therefore should take the different frame-work conditions of industries and technology domains into account through assistance that is tailor-made according to the specific needs of a cluster.

3. **Programs should put emphasis on cluster management excellence.** Cluster support is not about the mere establishment of clusters, but about developing excellently managed clusters that are internationally competitive and that have an impact on the national economy. In this context is it important to support cluster management through targeted, need-focussed services such as relevant workshops and seminars, benchmarking as well as a continuous strategic dialogue to question and further develop strategies and activities. Labelling of excellent cluster managements is another important aspect in this context; not only because it creates more visibility for a cluster, but also because it encourages cluster managements to provide excellent management in order to earn and preserve the label.

4. **Cluster programs should develop world-class clusters in industry sectors that are internationally competitive**. Without limiting the attention to the development of clusters for the purpose of regional economic development, there should also be programs that support

the development of clusters that are internationally competitive. The support should focus on those industries in which a country's economy shows pronounced comparative advantages on the global market. Cluster management excellence should be a key priority of such programs.

5. **Long-term, but flexible support of clusters is required.** In order to meet the specific development conditions of clusters support should be provided on a long-term basis of five to ten years. Furthermore, program requirements and processes should not only be less bureaucratic, but also flexible enough to respond quickly to changing economic and technology environments in which clusters are operating in.

6. **Monitoring and evaluation of the results and impacts of a program is important and should be done in a smart and purposeful manner**. From the very beginning the program should be based on clear targets that can be measured through a purposeful set of indicators that provides information relevant to the implementation processes. The implementation of a program should be accompanied by a formative evaluation which provides recommendations for program adaptation on a continuous basis. It is important that there is a balance between the cognitive interest of program owners and policy makers and the burdens for beneficiaries that result from monitoring and evaluation.

7. **Different industry sectors need different support for internationalization activities.** There are huge differences between industry sectors when it comes to the effect of the work of cluster managements on international activities of SME. The promotion of cluster management activities for internationalising the cluster should therefore take the specific framework conditions of industry sectors into account. Corresponding instruments should be developed by program owners to provide need-based support for cluster managements.

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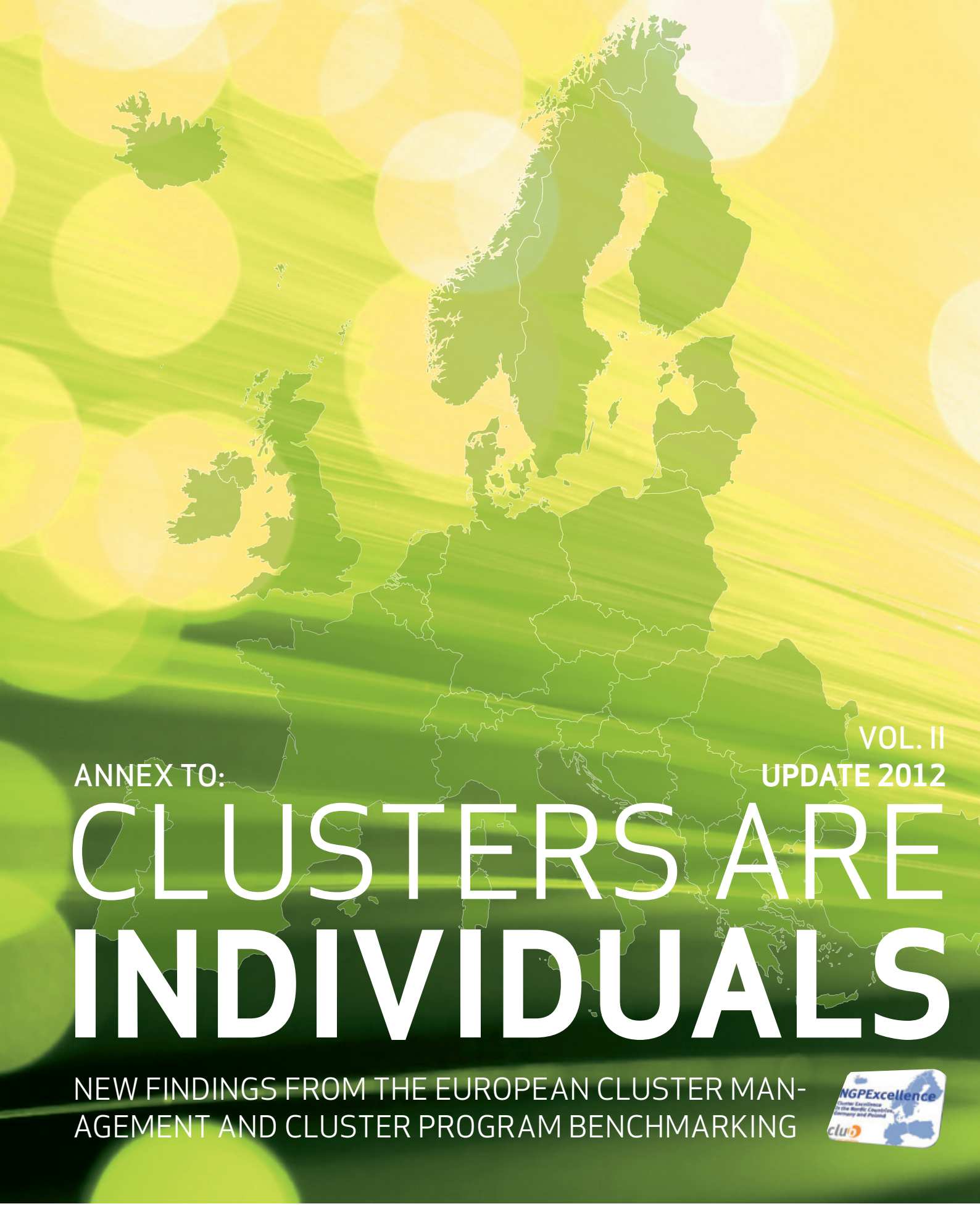

VOL. II

ANNEX TO: **UPDATE 2012**

CLUSTERS ARE INDIVIDUALS

NEW FINDINGS FROM THE EUROPEAN CLUSTER MANAGEMENT AND CLUSTER PROGRAM BENCHMARKING

Ministry of Science, Innovation and Higher Education

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Bundesministerium für Wirtschaft und Technologie

COLOPHON

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The benchmarking of cluster programs covers 34 cluster programs from 24 countries, which are Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Iceland, Italy, Latvia, Lithuania, Luxembourg, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Spain, Sweden, Turkey and United Kingdom. While different in terms of rationales, objectives and instruments all these programs have the support of clusters through the establishment and/or development of cluster management organizations in common.

General characteristics of these programs and key findings from the benchmarking are presented in chapter 3 of the main report. This appendix gives a more detailed overview of each program in terms of

- Objectives and rationale;
- Target group;
- Term of the program, financial aspects and application procedure;
- Instruments;
- Results and impact;
- Monitoring and evaluation system;
- Context.

The information was originally collected through an online survey for program officials (in November-December 2010), telephone interviews with program officials (March-April 2011) and the analysis of program guidelines and evaluation reports that were provided by program officials.

In 2012 this information was updated and complemented by including more countries and programs. Cluster program experts or program officials were asked to describe the specific cluster program(s) of their country by filling in a questionnaire. The portfolio now contains 34 cluster programs from 24 countries in Europe. Many countries from Eastern Europe have been added to the benchmarking portfolio. They come up with programs that are often part of the overall national economic strategy and as such often well-adjusted to other R&D funding programs, business development mechanisms and strategy agendas for the improvement of business and R&D infrastructures within their country. But let's have a look at all cluster programs benchmarked so far. Enjoy reading.

2.1 AUSTRIA, REGION: LOWER AUSTRIA

2.1.1 CLUSTER PROGRAM LOWER AUSTRIA

NAME OF PROGRAM	CLUSTER PROGRAM LOWER AUSTRIA
COUNTRY	Austria
CONTACT DETAILS	Ecoplus. The Business Agency of Lower Austria Ltd. Simone Hagenauer Cluster Manager Niederösterreichring 2 3100 St. Pölten Tel.: +43 2742 9000-19657 E-Mail: s.hagenauer@ecoplus.at
INTERNET	www.ecoplus.at/en/ecoplus/cluster

2.1.1.1 OBJECTIVES AND RATIONALE OF THE PROGRAM

The Cluster Program Lower Austria 2007-2013 is partly co-funded by ERDF Regional Competitiveness and Employment (Regional Operational Program 2007+).

The Program is based on the Regional Innovation Strategy with its six strategic pillars: technology and innovation, qualification, cooperation, internationalization, start-ups / entrepreneurship, and sustainability. The main aim of the cluster program is to foster innovation through cooperation of companies in the region's fields of economic strength.

Currently the program supports 5 cluster initiatives: Green Building, Food, Plastics, Mechatronics and Logistics.

2.1.1.2 TARGET GROUP OF THE PROGRAM

There are three primary target groups that are addressed with this program:

- Companies in the respective sectors or thematic areas. (The initial focus of SMEs was slightly shifted according to the regional innovation strategy towards an additinal involvement of innovative big lead companies in the region in order to enable linkages between SMEs and lead companies, enable learning and joint innovation and foster regional value chain creation),
- Related university institutes and other R&D institutions in Lower Austria, Vienna or other neighboring regions,
- Related intermediaries (chamber of commerce, innovation support providers).

2.1.1.3 TERM OF THE PROGRAM, FINANCIAL ASPECTS AND APPLICATION PROCEDURE

TERM OF THE PROGRAM	2007-2013
Budget	EUR 20.5 Million
Type of funding	Technical assistance (Basic Support for Cluster Management) SOURCES: - Public (regional funds & ERDF RCP) & - Private (membership fees, service fees, sponsoring) The program includes no direct funding for companies. There is a separate regional funding scheme for collaborative innovation projects of companies (open to all sectors and technologies) besides national and European programs.
Does the program have a specific technology focus?	No
Are there calls for proposals?	No
Is there a dialogue with applicants about the improvement of their application prior to the final submission of the application?	The program supports the basic cluster management provided by the Regional Business Agency of Lower Austria ecoplus. There is a continuous dialogue between the regional government and ecoplus to improve and further develop cluster management organizations and services. The performance of the cluster initiatives is monitored on a regular basis.
Maximum funding period for a project	Not applicable
Is there a maximum amount of funding an applicant can apply for?	Not applicable
Financing structure of projects	Financing structure of the program: Public: - Regional funds: EUR 12.3 Million - ERDF RCP: EUR 5.6 Mio Private (membership fees, service fees, sponsoring): EUR 2.6 Million
Most important evaluation criteria for project proposals	Not applicable

2.1.1.4 INSTRUMENTS

The Lower Austrian Cluster Program is funded by regional funds, the ERDF Regional Operational Program „Strengthening Regional Competitiveness of Lower Austria 2007-2013" involving European Community support for Lower Austria within the framework of „Regional Competitiveness and Employment" objective and private sources (membership fees, service fees, sponsoring).

The total budget of the ERDF ROP is around EUR 91.2 Million and the Community assistance through the ERDF amounts to EUR 145.6 Million (approximately 10% of the total EU money invested in Austria under Cohesion policy 2007-2013). The principal objectives of the Strengthening Regional Competitiveness of Lower Austria 2007-2013 Program are: enhancing regional competitiveness and increasing attractiveness of all regions of the region and enhancing regional competitiveness through innovation and knowledge economy. It supports a wide range of activities from establishing the company up to the Cluster Program Lower Austria.

The implementing body of the Cluster Program Lower Austria is the Lower Austrian Business Agency ecoplus, a regional development agency owned by the regional government of Lower Austria. Based on comprehensive cluster potential analyses carried out by external experts and the decision of the regional government to support a cluster initiative, ecoplus manages the cluster initiatives on behalf of the regional government.

The individual instruments are:

Step 1: Mapping of the cluster potential (by external experts)

- Analysis of secondary data:
    - SWOT-analysis, identification of the fields of competencies in Lower Austria; number and structure of enterprises; employment trend; development of sales and income; R&D-ratio; export-ratio; relevant R&D organizations and other facilities; technological challenges and potentials of target-companies; the previous use of promotional-programs for R&D-projects; R&D activities and R&D potentials with in the enterprises; framework conditions (energy-costs, laws, public assistance, promotional programs, etc.).
- Interviews / Workshops with stakeholders:
    - relation among stakeholders (quality, quantity), behavior concerning cooperation, innovation, use of technology, collective labor market, internationalization and founding activities; identification of leading companies and leading innovators; core competences and main interests; motivations for networking and collective projects with other companies; definition of specific target-groups with similar challenges and interests (characteristics of the group, project-approaches, etc.); need for political action in this sector (cooperation, innovation, growth, internationalization and founding-activities); other actions more important, e.g. legal adjustments, reduction of restraints of competition
    - Assessment of a possible cooperation with another region, e.g. Upper Austria (currently two joint cluster initiatives: Plastics Cluster, Mechatronics Cluster)

Step 2: Stop/Go decision of the regional government of Lower Austria

Step 3: Employment of a cluster manager / cluster management team by ecoplus

Step 4: Setting-up of an advisory board / focus group of entrepreneurs and R&D representatives to steer the cluster initiative

The cluster management teams support the cluster members by providing services in the following fields:

- Innovation through cooperation:
    - Initiating, guiding and managing R&D-related col laborative projects; providing guidance and advice on subsidies; acting as interface to funding providers; helping broker cooperation partners, etc.
- Qualification:
    - Organizing sector-specific trainings, professional events with focus on sector-specific themes and study trips; initiating, guiding and managing of qualifications projects

- Information:
  - Offering a comprehensive communication platform and current information about cluster partners, topics, projects and activities via website and newsletters; cluster partner and project database

- Public relations:
  - Offering the dissemination of sector information as well as project and topic-related PR for Cluster partners; press conferences; company and product pre sentations; presentations at national and international trade fairs

- Internationalization:
  - Providing assistance for internationalization efforts in collaboration with the ecoplus internationalization department; bringing companies together with topic-specific international networks, etc.

2.1.1.5 RESULTS AND IMPACT OF THE PROGRAM

A study carried out by the economic research institute ECONOMICA in 2011 evaluated the overall economic effect of the funded (from various regional/national/European public and private sources) projects initiated by the Lower Austrian Cluster initiatives using input-output analysis.

Input: The cumulated project volume of the five clusters is equal to EUR 52.2 Million as of 30 June 2011, with nearly two-thirds (65%) invested by the companies themselves, and over a third (€18.3 Million to be exact) obtained through financial assistance by the public sector. The project volume of those projects receiving public funding is equal to EUR 37.6 Million.

Output: The overall effect triggered by funded Lower Austrian clusters projects, combining both direct and multiplier value added effects, is equal to EUR 27.3 Million. The total value added effect of Lower Austrian Clusters, calculated as the sum of direct and multiplier value added effects in Lower Austria, in the other Austrian provinces (Bundesländer), and abroad, is EUR 47.8 Million. The total employment effect is equal to 624 jobs in person-years, also expressed as 560 full-time equivalents (FTE).

The study concludes that the Lower Austrian Cluster Program stimulates cooperative projects with the effect that the willingness among companies to cooperate has increased. This has made the value creation chain in Lower Austria more robust. In addition, the willingness of companies to adapt and change has also increased. The program has led to a rejuvenation and improvement of business processes and structures. Qualification measures have also been encouraged and organized. Thanks to the Lower Austrian Clusters program, companies now have more contact with research institutions. What is more, companies have also been able to take advantage of new funding instruments.[1]

Additionally, Lower Austria uses the national initiative "FuE Vollerhebung" (complete R&D inventory count) for further analyses of the innovation performance of Lower Austrian firms by enlarging the R&D inventory count sample of firms, which is usually not representative on the regional level, to a representative one for Lower Austria. The additional analyses with the enlarged Lower Austrian sample are done by Statistik Austria, which is also responsible for execution of the R&D inventory count. The complete R&D inventory count and the enlarged Lower Austrian survey are carried out every 2 years in the odd calendar years

The number of new products / service / systems development projects of cluster members initiated with the support of the cluster organization in 2011 was 28.

Furthermore, the regional government of Lower Austria conducts a large scale questionnaire survey every 5 years. Beside structural company data over years (turnover, employment, export share, R&D share, qualification) the questionnaire tackles also future companies' key activities, their needs for external services and innovation support, planned initiatives, collaboration behavior and satisfaction with public innovation services. So far this was done for three times in the years 1998, 2003 and 2008 with a response rate of approximately 10%. The next survey is planned for 2013. There is no separate evaluation of turnover development neither for cluster companies nor for growth of employment of the cluster member companies so far.

The export rates highly depend on the sector / thematic topic of the cluster. Internationally very active are: Plastics

1 Further information: http://www.ecoplus.at/en/node/14681

Cluster, Logistics Cluster, Mechatronics Cluster. Rather active on the national/regional level are: Green Building Cluster, Food Cluster. Five international collective research projects managed by the cluster organization (financed by companies and the CORNET program) are a direct effect of the cluster activities and would not exist without the cluster.

In 2011 61 qualification projects were completed. Especially the Green Building Cluster initiated a training scheme in cooperation with other Austrian players qualifying and certifying companies in the construction sector in the fields of refurbishment of old buildings to low energy standards. So far 500 companies participated. In 2011 the membership of the five clusters increased from 640 to 781 members.

With regard to the growth of clusters, the skills development of cluster members, the Cluster Program Lower Austria achieved high impacts. With regard to the international activities of cluster members, the program yielded medium impact (see figure 1).

2.1.1.6 MONITORING AND EVALUATION SYSTEM

The Lower Austrian regional government, Department for Economy, Tourism and Technology, has developed and implemented a comprehensive system of different monitoring and evaluation tools for Lower Austria's innovation policy to gain deep insight into the results and the impact of state aids and further innovation support services with the aim to improve single innovation policy instruments as well as to coordinate the overall regional innovation system with all involved actors/intermediaries.

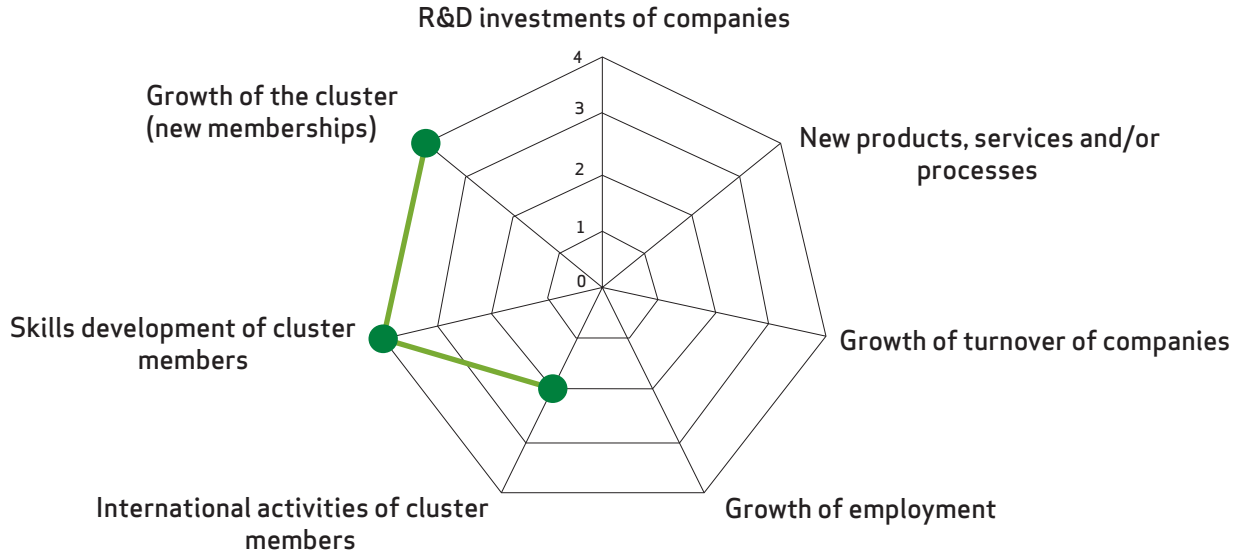
It combines regional economic reports (e.g. a regional evaluation of the Community Innovation Survey) and analyses by economic research institutes, large scale surveys among companies in the region, evaluation of company projects and last but not least the monitoring of the regional programs implemented by intermediaries based on the Balanced Scorecard method (BSC).

An overall Balanced Score Card for the economic resort sets the strategic framework for the economic policy defining targets and 1-10 indicators to measure each target.

For each program, such as the Cluster Program, there have been defined individual targets and measurable indicators that relate to the overall economic targets and can be influenced by the program.

The BSC indicators for the Cluster Program are listed below (see output). Further Information on the Lower Austrian BSC is to be found on: http://www.scinnopoli.eu/Results.html

Figure 1: Results of the program that were achieved in 2011



0 = results are poor ==> 4 = results are excellent

Missing values are due to the fact that there is no evidence available yet. This does not mean that there are no effects at all.

INDICATORS	
OUTPUT	• Number of cluster members • Number of cluster companies with more than 250 employees • Number of product and system solutions developed (number of related projects) • Rate of participation in qualification initiatives (number of cluster companies involved in related projects) • Rate of participation in productivity-enhancing initiatives (number of cluster companies involved in related projects) • Number of lead initiatives (=aiming at developing a mid or long term focus / specialization within a cluster, combining several activities: events, trainings, series of R&D projects, etc.; example: Bio Plastics Initiative of the Plastics Cluster) • Number of multi-annual R&D projects with high impact on regional vale added ("lead projects") initiated • Rate of participation in collaborative projects initiated (number of newly involved companies in projects) • Number of documented success stories among cluster projects up to 2013 • Customer satisfaction (Annual survey among cluster companies regarding satisfaction with standard services) • Number of cross-organization projects, collaboration with other innovation service providers in Lower Austria
RESULTS	• 5 cluster initiatives • In total 640 cluster members (of which 522 SMEs) • In total 72,810 employees of cluster companies • in total 23,5 billion EUR turnover of cluster companies • 345 collaborative (min. 3) company projects initiated • 323 other projects (e.g. trainings) (status 31.12.2011)
IMPACT	• The macro-economic effects of the Lower Austrian Cluster Program have been evaluated by an economic research institute in 2011 (results: please see above text)

2.1.1.7 CONTEXT OF THE PROGRAM

The cluster program is considered as highly important with regard to other R&D programs. With regards to the embedment in the Austrian overall national economic and industrial development the cluster program takes on a medium position, whereas the importance in relation to other R&D programs is very high.

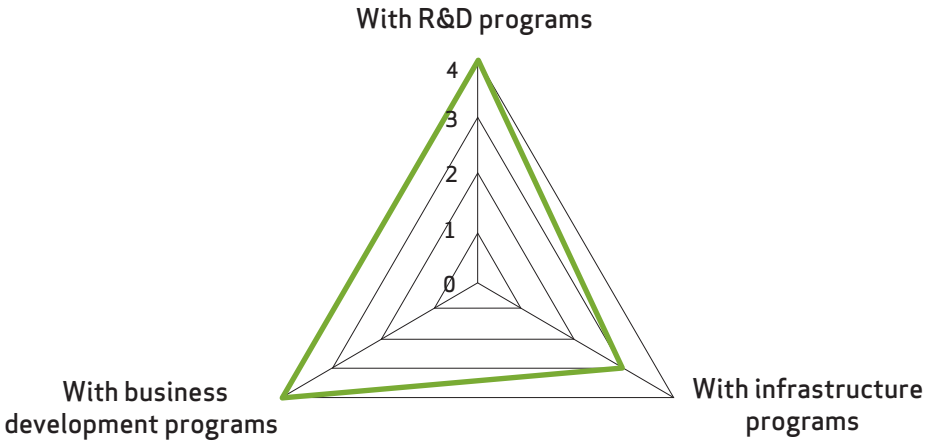
Table 1: Relevance of Cluster Program Lower Austria in the overall policy setting

How important is the cluster program in relation to…	0	1	2	3	4
…the overall national economic/industrial development strategy?	•	•	X	•	•
…other R&D/innovation programs?	•	•	•	•	X

0 = not important at all ==> 4 = very important

The coordination of the Cluster Program Lower Austria with other Austrian funding programs is consistently strong (see figure 2).

Figure 2: Coordination of the Cluster Program Lower Austria with other Austrian funding programs



0 = coordination is weak ==> 4 = coordination is strong

2.2 BELGIUM

2.2.1 COMPETENCE CENTERS - LIGHT STRUCTURES

NAME OF PROGRAM	COMPETENCE CENTERS - LIGHT STRUCTURES
COUNTRY	Belgium
CONTACT DETAILS	Government Agency for Innovation by Science and Technology - IWT Eric Sleeckx /Annie Renders Koning Albert II-laan 35 1030 Brussels Tel.: +32 (0)24 32 42 34 E-Mail: esl@iwt.be / ar@iwt.be
INTERNET	Not yet available

2.2.1.1 OBJECTIVES AND RATIONALE OF THE PROGRAM

Competence Centers LS are demand driven projects to support innovation for a large group of companies with focus on SMEs. These projects should bring companies and knowledge providers together and contribute to the solution of major socio-economic challenges.

Within these projects 2 basic types of activities are funded:

- Coordination activities
- Specific projects: (basic) research, innovation stimulation, innovation advice, networking and transfer of knowledge projects are allowed.

2.2.1.2 TARGET GROUP OF THE PROGRAM

The following organizations can apply for funding for the coordination activities:

- consortia (networks) of companies, or organizations representing at least 20 companies can apply. A consortium should reflect the bigger target group of the initiative and should be open for all interested parties.
- research organization in cooperation with a group of companies

2.2.1.3 TERM OF THE PROGRAM, FINANCIAL ASPECTS AND APPLICATION PROCEDURE

TERM OF THE PROGRAM	2011 - ONGOING
Budget	EUR 19 Million for 2012
Type of funding	80% of accepted costs for the coordination activity, for the projects funding. The percentage depends on the type of project.
Does the program have a specific technology focus?	No
Are there calls for proposals?	Consortia are invited to enter proposals
Is there a dialogue with applicants about the improvement of their application prior to the final submission of the application?	Yes, applicants can ask to discuss their project ideas. After submission the proposal is discussed with the applicant and he is given about 10 working days to improve his proposal before final evaluation.
Maximum funding period for a project	Four years
Is there a maximum amount of funding an applicant can apply for?	Max. EUR 2.5 Million for coordination activities, for max. 6 FTE and max. 4 years; budget for individual projects are decided case by case, no specific maximum
Financing structure of projects	For coordination activities 80% of eligible costs are accepted. The maximum subsidy can only be claimed in case of an average of 6 FTE for 4 years. Project costs vary on type of project.
Most important evaluation criteria for project proposals	Evaluation criteria focus on: relevance, collaborative and open character vision and strategy target group: impact on enhancement of competences and innovations in companies in particular SMEs; demand drive character; economic impact contribution to cooperation and synergies quality of work plan, including budget and timelines

2.2.1.4 INSTRUMENTS

The instruments are mainly cluster project funding and technical assistance for the projects. Assistive services are: advice, validation of a concept, assistance during innovation implementation process, partner matching.

2.2.1.5 RESULTS AND IMPACT OF THE PROGRAM

Results and impacts of the program cannot be demonstrated yet as it is too early. The first interim evaluation is planned for 2013.

2.2.1.6 MONITORING AND EVALUATION SYSTEM

For the coordination activities every year a more detailed report is send in. It includes the status of the deliverables (Output). The project specific KPI are defined during contract negotiation (depending on the specific project objectives), typically 5 to 10 indicators, mostly a mix of input, output, effect and impact. Every 4 to 6 years an impact assessment of the program is done.

For initiatives starting in 2013 and later, the following KPI's are obligatory:

- number of different Flemish companies or company federations that financially contributes to the coordination activities,
- number of new, unique companies and research organizations that actively participate in the projects,
- size of financial contribution of companies to projects,
- number of unique companies or organizations that use results of the LS in commercial follow up activities or R&D projects,
- number of strategic networks and projects in which the LS actively participates or participates with additional finances.

INDICATORS	
OUTPUT	• Yield of the projects 1-to-1 (how many companies did receive an innovation support service from the Competence Centers-Light Structures, company-service is uniquely registered, services are : advice, validation of a concept, assistance during innovation implementation process, partner matching) • Yield of the projects collective (how many companies were involved in collective activities like seminars, workshops) • Number of cooperation with other innovation support actors (e.g. common seminars) • Share of new companies that used the services
RESULTS	• Direct use of services by company that received the service • Direct use of knowledge provided by the company • Innovation plan by the company • (Funded) innovation project by the company • New cooperation • Good practice cases or success stories
IMPACT	• After two years a mid-term evaluation is performed, based on the yearly reports, a self-evaluation, and an updated work plan.)

2.2.1.7 CONTEXT OF THE PROGRAM

The Competence Centers-Light Structures program is considered as highly important with regard to the Belgium's overall national economic/industrial development strategy and also with regard to other R&D programs.

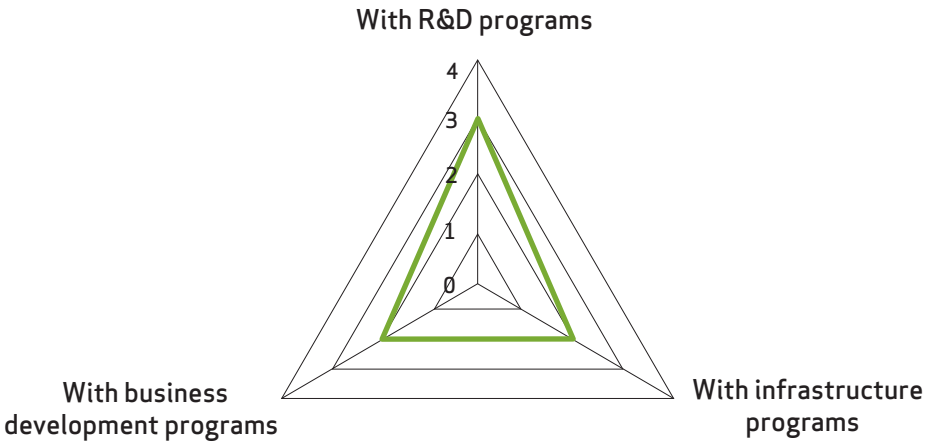
Table 2: Relevance of Competence Centers-Light Structures in the overall policy setting

How important is the cluster program in relation to…	0	1	2	3	4
…the overall national economic/industrial development strategy?	•	•	•	•	X
…other R&D/innovation programs?	•	•	•	X	•

0 = not important at all ==> 4 = very important

In line with this high importance also the coordination with other Belgian funding programs is strong.

Figure 3: Coordination of the Competence Centers-Light Structures with other Belgian funding programs



0 = coordination is weak ==> 4 = coordination is strong

NAME OF PROGRAM	COOPERATIVE INNOVATION NETWORK INTEGRATED PROJECT (VIS-TRAJECTEN)
COUNTRY	Belgium
CONTACT DETAILS	Government Agency for Innovation by Science and Technology - IWT Ria Bruynseels Koning Albert II-laan 35 1030 Brussels Tel.: +32 (0)2 432 42 25 E-Mail: vis-trajecten@iwt.be
INTERNET	http://www.iwt.be/subsidies/vis-trajecten

2.2.2 COOPERATIVE INNOVATION NETWORK INTEGRATED PROJECT (VIS-TRAJECTEN)

2.2.2.1 OBJECTIVES AND RATIONALE OF THE PROGRAM

VIS-trajecten is a program with demand driven projects to support innovation for a group of at least 20 companies with focus on SMEs. These projects should result in innovative solutions that can have a short term implementation and should result in visible changes in the companies involved.

Many companies do not have sufficient innovation capabilities on individual basis to develop and implement innovative solutions, by defining a common innovation challenge the network of companies can obtain funding to involve knowledge centers so that high level innovations become available for these companies (mainly SMEs).

Within these projects activities of research, innovation stimulation, innovation advice, networking and transfer of knowledge are allowed.

2.2.2.2 TARGET GROUP OF THE PROGRAM

Only consortia (networks) of at least 20 companies or organizations representing at least 20 companies can apply.

2.2.2.3 TERM OF THE PROGRAM, FINANCIAL ASPECTS AND APPLICATION PROCEDURE

TERM OF THE PROGRAM	2010 -ONGOING
Budget	EUR 15 Million p.a.
Type of funding	Subsidies: 80% of accepted costs
Does the program have a specific technology focus?	No
Are there calls for proposals?	Yes, one annual call
Is there a dialogue with applicants about the improvement of their application prior to the final submission of the application?	Yes, applicants can ask to discuss their project ideas. After submission the proposal is discussed with the applicant and he is given 10 working days to improve his proposal before final evaluation.
Maximum funding period for a project	6 years
Is there a maximum amount of funding an applicant can apply for?	Per project max 8 FTE for 6 years
Financing structure of projects	80% of eligible costs are accepted (personnel costs + fix working cost of max. EUR 37.000/FTE)
Most important evaluation criteria for project proposals	Relevance, size of the potential (SME) target group; transfer of knowledge, change/transition at target group, economic impact, quality of the proposal (planning, activities, available expertise, KPI's)

2.2.2.4 INSTRUMENTS

The instruments are mainly cluster project funding and technical assistance for the projects. Assistive services are: advice, validation of a concept, assistance during innovation implementation process, partner matching.

2.2.2.5 RESULTS AND IMPACT OF THE PROGRAM

The impacts of this program have not been measured yet. The first evaluation is planned for 2013.

2.2.2.6 MONITORING AND EVALUATION SYSTEM

- Every six months the project sends in a status report (is the project on track Y/N, specific changes in the work program Y/N, are the objectives still standing Y/N). Every 6 months a 'users' group (representative group of companies) is asked about their satisfaction and potential use in their company regarding the developments from the project. Every year a more detailed report is send in.
- Project specific KPI define the contract negotiation (de pending on the specific project objectives), typically 5 to 10 indicators, mix of input, output, effect and impact
- Activity report per person funded by the project (time spend on project management, networking, research, collective dissemination, individual services) (input)
- Every 2 year an intermediate evaluation is done (with go/ no go decision)
- Financial report (input)
- Every 4 to 6 years an impact assessment of the program is done (first interim evaluation is planned for 2013).

INDICATORS	
OUTPUT	• Status of deliverables • Reach of the projects 1-to-1 (how many companies did receive an innovation support service from the project, company-service is uniquely registered, services are : advice, validation of a concept, assistance during innovation implementation process, partner matching) • Reach of the projects collective (how many companies were involved in collective activities like seminars, workshops; …) • No of cooperation's with other innovation support actors (e.g. common seminars) • Share of new companies that used the services • Update of work plan
RESULTS	• Direct use of services by company that received the service • Direct use of knowledge provided by the company • Start of innovation plan by the company • Start (funded) innovation project by the company • New cooperation • Some cases or success stories • Customer survey • Self-evaluation
IMPACT	• Not yet measured

2.2.2.7 CONTEXT OF THE PROGRAM

Asked to assess the importance of the program on a scale from 0 (not important at all) to 4 (very important) in relation to the overall economic/industrial development strategy and in relation to other R&D/innovation programs the program authority assigned a 4 to the first dimension and a 3 to the second dimension (see table below). Thus, the program is an important element of the Belgian economic and R&D support policy.

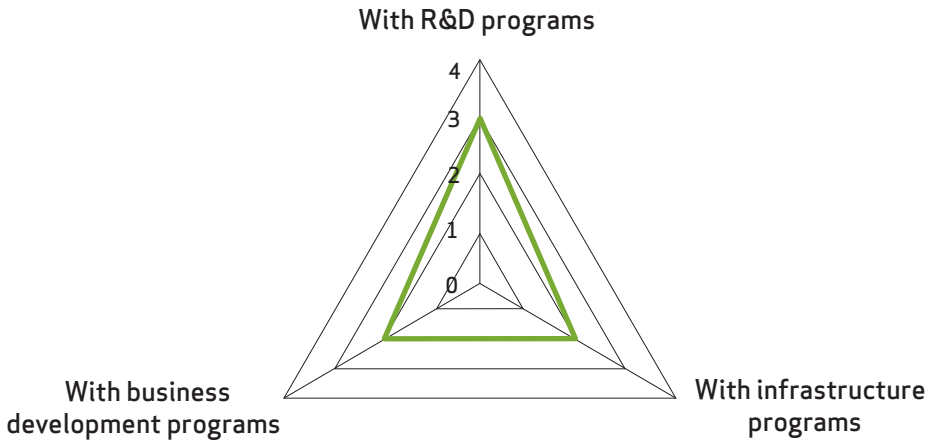
Table 3: Relevance of Cooperative Innovation Network in the overall policy setting

How important is the cluster program in relation to…	0	1	2	3	4
…the overall national economic/industrial development strategy?	•	•	•	•	X
…other R&D/innovation programs?	•	•	•	X	•

0 = coordination is weak ==> 4 = coordination is strong

This finding is in line with the intensity of coordination with other funding programs, which is relatively high.

Figure 4: Coordination of the Cooperative Innovation Network with other Belgian funding programs



2.3 CZECH REPUBLIC

2.3.1 COOPERATION CLUSTERS

NAME OF PROGRAM	COOPERATION CLUSTERS
COUNTRY	Czech Republic
CONTACT DETAILS	CzechInvest's Headquarters Martina Fronkova Stepanska 15 120 00 Prague Tel.: +420 296 342 500 E-Mail: martina.fronkova@czechinvest.org
INTERNET	www.czechinvest.org

2.3.1.1 OBJECTIVES AND RATIONALE OF THE PROGRAM

The general objective of the program is continuous creation of a favorable business climate, improving conditions for business development and innovations and building a sustainable competitive advantage by enhancing the quality of relationships among research institutions, universities and business sector.

The specific objective of this program is to support establishment and development of cooperative sectoral alliances – clusters, on regional and national level as a tool for stimulation of international competiveness and acceleration of economic growth.

2.3.1.2 TARGET GROUP OF THE PROGRAM

The main target group is SMEs in supported areas. Secondary target groups are research and development organizations as well as tertiary education institutions.

2.3.1.3 TERM OF THE PROGRAM, FINANCIAL ASPECTS AND APPLICATION PROCEDURE

TERM OF THE PROGRAM	2007 - 2013
Budget	EUR 90 Million
Type of funding	Grant funding
Does the program have a specific technology focus?	No, but joint projects in the field of • technical infrastructure and innovation • marketing and promotion • human resource development • networking, sharing know-how and capacities
Are there calls for proposals?	Yes, the first one was opened in 2008 and the second one in 2010.
Is there a dialogue with applicants about the improvement of their application prior to the final submission of the application?	Yes
Maximum funding period for a project	Max. 3 years
Is there a maximum amount of funding an applicant can apply for?	Yes, EUR 3.2 Million (in the current phase max. EUR 2.4 Million)
Financing structure of projects	Max 60% grants (but in the South West Region max. 50%)
Most important evaluation criteria for project proposals	Focus on the development of innovation and international competitiveness Proof the cluster's permanent ties to a research and development base and educational institution

2.3.1.4 INSTRUMENTS

The development of clusters in years 2007 – 2013 is characterized by the program of support "Cooperation". This program is included in the Operational Program Enterprise and Innovation (OPEI). OPEI is the main programming document of the Ministry of Industry and Trade for drawing support from the European Regional Development Fund (ERDF) in the period 2007-2013.

The development of clusters within the year 2007–2013 has been characterized by the program "Cooperation – Clusters". In the Program OPEI "Cooperation – Clusters" two calls were announced up till 2011. (The third call was announced in January 2012).

The 1st Call of the program Cooperation – Clusters represents support of clusters was opened in October 2008 and closed in May 2009. The main target group was SMEs in supported areas. Secondary target groups are research and development organizations as well as tertiary education institutions.

There were several conditions that a cluster had to meet to obtain the subsidy:

- activities of the cluster must have focused on the development of innovations and international competitiveness, and seen in this light clusters must have proved their permanent ties to a research and development base and educational institution.
- cluster must have had at least 15 independent members that were authorized to do business in the Czech Republic.
- a university or R&D institution must have been a member of the cluster.
- at least 60% of cluster members must have been SMEs.
- the cluster must have had a clearly defined industrial sector.
- the cluster organization must have had a legal form - civic association, an interest grouping of legal persons, a limited liability company, a public limited company, or a cooperative.

The aid beneficiary is only the cluster organization. The a location of the 1st Call of Cooperation - Clusters program was EUR 40 Million.

The program was to support establishment and development of sustainable and efficient clusters which contribute to the increase of competitiveness and economic growth. It was expected that the support will lead to the development of up to 50 cluster organizations.

Supported activities were joint projects of the cluster. Each joint project must be approved by the majority of the cluster members and minimum three cluster members had to participate in each joint project.

The types of supported joint projects could have been:

- Joint projects in the field of technical infrastructure and innovation
- Supported activities are e.g.: establishment of labs or its rental, purchase of R&D equipment, purchase of hardware & software, purchase of intellectual property.
- Joint projects in the field of marketing and promotion
- Supported activities are e.g.: participation in fairs, exhibitions or conferences and also organizing of workshops and seminars, preparation of cluster promotional materials, advertising and publicity in the press, PR activities and web design.
- Joint projects in the field of human resource development
- Supported activities are e.g.: staff training connected with cluster research activities
- Joint projects in the field of networking, sharing know-how and capacities

Supported activities are e.g.: common access to information and databases, consultancy and advisory services used exclusively for research purposes or innovation activities.

The 2nd Call of program Cooperation – Clusters was opened in January 2010 and closed in September 2010. The 2nd Call is divided in two parts. The first part of the program was opened for newly established clusters or cluster established in the past, but which had not received support from the 1st Call. The second part of the program was aimed at clusters which have already achieved support from the 1st Call and wanted to expand the portfolio of cluster projects with transnational R&D cooperation projects, e.g. in the network CORNET. The total allocation for the 2nd Call was EUR 30 Million.

The program was to support the establishment and development of sustainable and efficient clusters which contributed to the increase of competitiveness and economic growth. The program supported successful involvement of Czech clusters in transnational R&D cooperation projects.

The core supported activities were the same as in the 1st Call. The additional activities supported in the 2nd Call were support of involvement of Czech clusters in international cluster cooperation, cluster enlargement and furthering cooperation within the cluster members.

The new call for cluster development project proposals was launched in January 2012. The 3rd call of the program Cooperation – Clusters is providing support for projects running up to the end of 2014. The active support of cluster development is currently linked to the period of 2007 – 2013.

The 3rd call is focusing on projects of collective research, establishment and development of cluster technology

centers for research, development and innovation, internationalization activities including the participation in international networks, creating and implementing strategies to increase international competitiveness, marketing and promotion, networking and training for cluster managers. The target group of the 3rd call is clusters which have already received support from OPIE and/or OPEI for their development in the past, these clusters have to demonstrate added value in their activities and present indicators showcasing the positive effects of the previous support. The amount of subsidy which could be obtained by 1 cluster is max. EUR 2.4 Million. Clusters which have not so far received any financial support for their development can be also supported. In this case the amount of subsidy which could be obtained by 1 cluster is max. EUR 1.6 Million. The allocated funds for the 3rd call will be EUR 20 Million.

2.3.1.5 RESULTS AND IMPACT OF THE PROGRAM

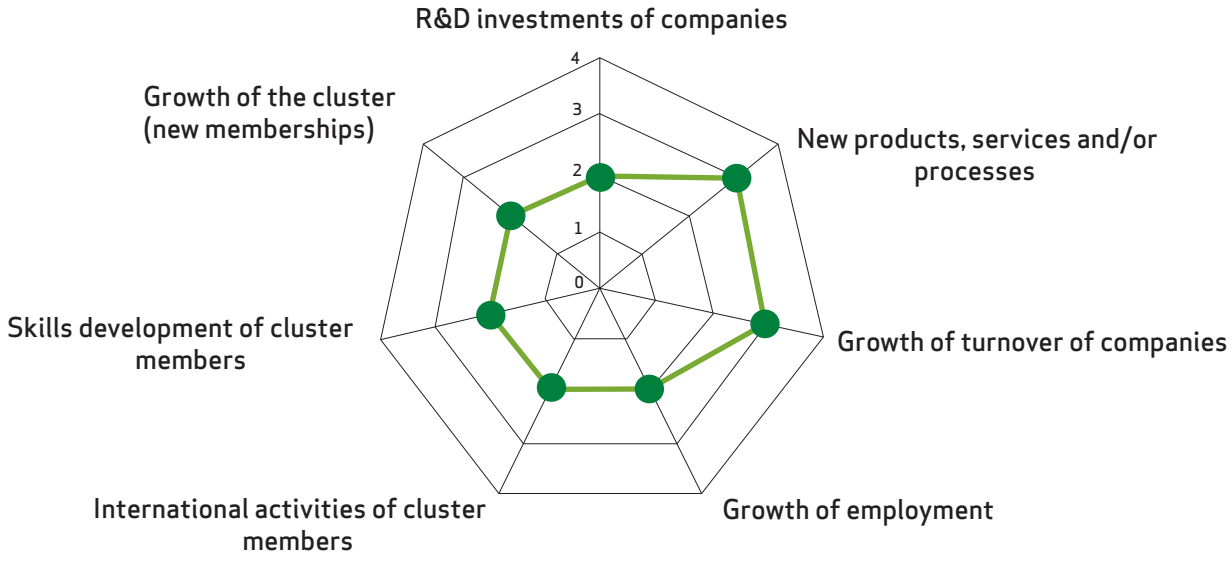
The Cluster development 2007 – 2013 has not been finished yet. Clusters which were supported in both of the above mentioned programs are still carrying out their activities.

During the 1st Call 18 clusters have been supported in total amount of EUR 24.3 Million (the allocated fund was EUR 40 Million). The subsidy has been granted for maximum 3 years. The highest amount of subsidy gained OMNIPACK, Engineering Cluster and IT Cluster Ostrava - over EUR 3 Million each.

Through the cluster development program Czech Republic made an effort to encourage business cooperation mostly in the field of common applied research and innovation. The results proved that R&D is really core cluster activity. Among others the other activities were common marketing projects and HR projects.

The Cooperation-Clusters program shows impact in several categories as indicated in the figure 5. A high impact has been achieved on the development of new products and services and on the growth of turnover of companies.

Figure 5: Results of the program that were achieved in 2011



0 = results are poor ==> 4 = results are excellent
Missing values are due to the fact that there is no evidence available yet.
This does not mean that there are no effects at all.

The active cluster development policy supporting the implementation of the cluster concept in the regions, the establishment of clusters after the mapping and facilitation phase followed by targeted support for the sustainable development of clusters has significantly contributed to the development of more than 30 active clusters in the Czech Republic.

2.3.1.6 MONITORING AND EVALUATION SYSTEM

INDICATORS	
OUTPUT	• number of partners and participants • number of networks • number of R&D projects • number of internationalization projects • EU funding
RESULTS	• 30 active clusters • 80 trained cluster facilitator • total - EUR 35 Million approved support • identification of potential clusters based on mapping • establishment of R&D laboratories • cooperation with cluster representatives in development of cluster supporting policy • continuality in cluster supporting action • sustainable cluster projects focused on competitiveness strengthening and innovation
IMPACT	• regional development • growth of employment • strengthening and creation of linkages among universities, business sector and R&D sector • increasing of technology transfer followed by increase of technological level

2.3.1.7 CONTEXT OF THE PROGRAM

Asked to assess the importance of the program on a scale from 0 (not important at all) to 4 (very important) in relation to the overall economic/industrial development strategy and in relation to other R&D/innovation programs the program authority assigned a 4 to each of the two dimensions (see table below). Thus, the program is an important element of the Czech economic/industrial development strategy and of the R&D support policy.

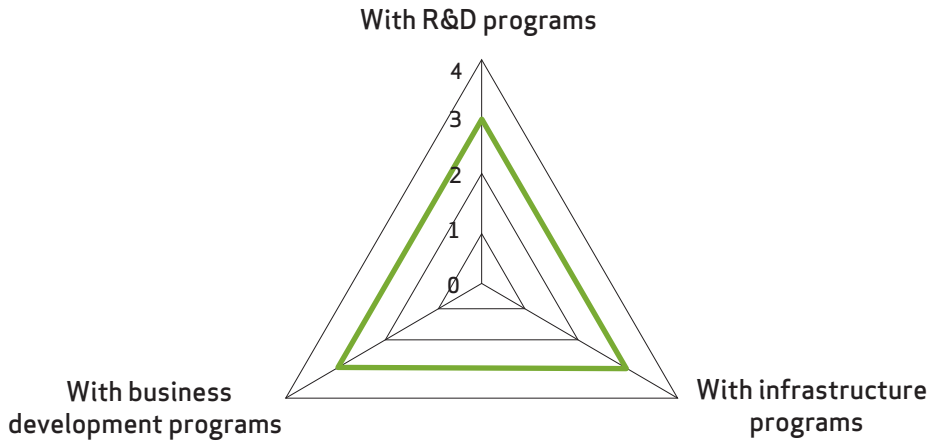
Table 4: Relevance of Czech "Cooperation Clusters" in the overall policy setting

How important is the cluster program in relation to…	0	1	2	3	4
…the overall national economic/industrial development strategy?	•	•	•	•	X
…other R&D/innovation programs?	•	•	•	•	X

0 = not important at all ==> 4 = very important

This finding corresponds to the relatively strong coordination of the Czech Cooperation Clusters program with other funding programs.

Figure 6: Coordination of Cooperation Clusters Czech Republic with other Czech funding programs



1 = coordination is weak ==> 4 = coordination is strong

2.4 DENMARK

2.4.1 INNOVATIONSNETVÆRK DANMARK (INNOVATION NETWORKS DENMARK)

NAME OF PROGRAM	INNOVATIONSNETVÆRK DENMARK (INNOVATION NETWORKS DENMARK)
COUNTRY	Denmark
CONTACT DETAILS	Agency for Science, Technology and Innovation (DASTI) Thomas Alslev Christensen, PhD Head of Division Bredgade 40 1260 Copenhagen Tel.: +45 33 92 93 73 E-Mail: tac@fi.de
INTERNET	www.innovationsnetvaerk.dk

2.4.1.1 OBJECTIVES AND RATIONALE OF THE PROGRAM

Innovation Networks are a key instrument in supporting private sector research and development activities in order to ensure that Danish companies and public institutions are among the most innovative in the world. In this context Innovation Networks serve **two overall objectives:**

- To strengthen innovation and research in Danish companies, and thereby promote knowledge-based growth in business and industry.
- To strengthen public-private interaction and knowledge sharing and development of research and innovation between knowledge institutions and companies.

In order to meet these overall objectives the following **operational objectives** have to be fulfilled by Innovation Networks:

- Establishing environments for knowledge development and knowledge sharing between companies, knowledge institutions and other relevant players, which can strengthen innovation and growth in areas that show commercial growth and development potential.
- Establishing effective matchmaker functions that can serve as an easy way for companies to gain access to research and knowledge in a specific professional area from a range of existing knowledge institutions.
- Creating permanent cooperation between companies and knowledge institutions and any other relevant partners (for example in the public sector) in order to increase the use of research-based knowledge in business and industry.
- To a greater extent coordinating and designing the knowledge institutions' research and education in line with the needs of business and industry.
- Bringing relevant knowledge from abroad to Denmark.

2.4.1.2 TARGET GROUP OF THE PROGRAM

There are two primary target groups for innovation networks:

- Companies within the network's focus area, especially small and medium-sized enterprises.
- Research and knowledge institutions and technological intermediaries that operate within the network's focus area. Vocational university colleges and other educational establishments will also be able to join networks.

The secondary target group is national or regional business promotion players, the regional authorities, municipalities, industry organizations, professional organizations, etc. that can contribute to supporting the development in the primary target group.

It is up to each innovation network to define the exact target group for the network. The target group must have critical mass in terms of the number of companies.

2.4.1.3 TERM OF THE PROGRAM, FINANCIAL ASPECTS AND APPLICATION PROCEDURE

TERM OF THE PROGRAM	YEAR OF INCEPTION: 2005, NO DATE OF TERMINATION
Budget	EUR 8 - 10 Million p.a.
Type of funding	Grant funding and technical assistance
Does the program have a specific technology focus?	No
Are there calls for proposals?	Yes, once every fourth year. Calls do not have a specific thematic focus.
Is there a dialogue with applicants about the improvement of their application prior to the final submission of the application?	Yes
Maximum funding period for a project	Innovation Networks receive funding for a four year period. If the evaluation is positive an Innovation Network can apply for the continuation of funding from the program for another four year period. There are no max numbers of years an innovation network can receive funding.
Is there a maximum amount of funding an applicant can apply for?	Not formally. But in reality max EUR 1 Million p.a.
Financing structure of projects	Max. 50 % national government co-financing (Innovation Network Denmark) Min. 40% private sector co-financing Other co-financing, e.g. from other public sources (local, regional or EU)
Most important evaluation criteria for project proposals	Impact on industry sector and companies SME focus/SME participation in activities Knowledge and/or technology transfer Budget (incl. share of private co-financing) Structure and members of consortia

2.4.1.4 INSTRUMENTS

Beside grant funding that is intended for the establishment and management of the Innovation Network and to carry out network activities the Danish Agency for Science, Technology and Innovation has set up a dedicated agency, NETMATCH that is expected to support the further development of the individual Innovation Networks.

The **grant funding** is provided for

- The establishment and management of a secretariat of the Innovation Network. Activities that can be supported in this context include i.a. preparation of strategies and analysis within the focus area of the network, networking activities and public relations.

- Matchmaking and knowledge dissemination activities, including i.a. identification of cooperation partners, conferences, seminars and other events, advice on public innovation support programs and preparation of application.

- Development projects. Within the framework of the innovation network a number of concrete cooperation or development projects can be established. The projects must focus on strengthening innovation and growth potential in the target group for the innovation network, and on strengthening the companies' interaction and exchange of knowledge with research and knowledge institutions.

With the establishment of **NETMATCH** (www.netmatch.nu) by the Danish Agency for Science, Technology and Innovation in the beginning of 2010 a dedicated **agency for technical assistance** to the Innovation Networks was created.

NETMATCH is expected to develop and provide services for the networks that support their further development. A particular focus of NETMATCH activities lies on supporting the networks as national points of contact within their area of expertise, branding of the Innovation Networks as well as supporting the networks in their international activities.

2.4.1.5 RESULTS AND IMPACT OF THE PROGRAM

Today there are 22 Innovation Networks in a vast array of industry areas, including energy/environment, food, ICT, fashion and design, experience economy/entertainment, production technology and new materials, health/pharma/biotechnology, transport as well as in cross-disciplinary fields.[2]

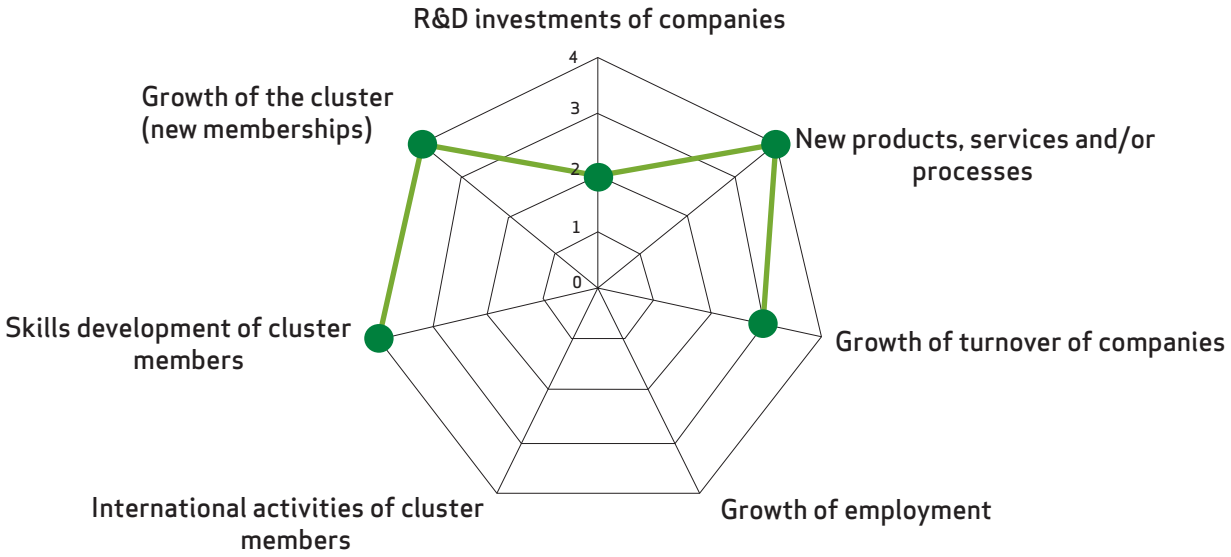
In recent years the number of networks has been actively decreased by the Danish Agency for Science Technology and Innovation from 36 in 2007 to 22 in 2009 in order to increase the size of the networks for the benefit on an increased efficiency.[3] Program officials reported for 2011 some 5,900 members of the 22 Innovation Networks, including 4,100 SMEs – a number which has increased by 250 per cent in the period 2007-2011.

The figure below indicates the program performance in terms of the results achieved in 2011 based on an assessment made by program officials. The figure shows a very good performance of the program particularly in regard to the growth of the cluster in membership, new products, services and/or processes, growth of turnover of companies and skills development of cluster members. According to information provided by program officials 174 R&D projects of companies and research institutions were supported by the program in 2009.

2 For a full list of the Danish Innovation Networks please see http://en.fi.dk/innovation/innovation-networks-denmark/the-danish-innovation-networks-and-clusters.pdf

3 Danish Agency for Science, Technology and Innovation, 2012: Competence Networks in Denmark. Performance Accounts 2012.

Figure 7: Results of the program that were achieved in 2011



0 = results are poor ==> 4 = results are excellent
Missing values are due to the fact that there is no evidence available yet.
This does not mean that there are no effects at all.

The assessment is backed by the findings of the 2009 Performance Account of the program which report impressive effects on innovation-driven business activities. Public investments of EUR 8 Million (DKK 59.6 Million) in basic network grants in 2008 triggered an estimated annual increase of sales of EUR 214,517 Million (DKK 1.6 Billion).

In 2011 728 companies in the Innovation Networks have developed new products and services, 1218 companies generated innovation ideas on which they will work in the future and further 1885 companies have benefited from the participation in the Innovation Networks by developing skills or obtaining specific methods or tools which significantly increase their ability to work with innovation.[4]

2.4.1.6 MONITORING AND EVALUATION SYSTEM

Monitoring of the program performance is a key element of the Danish program. A performance report which is based on an elaborated system of indicators[5] is published on an annual basis.

4 Ibid., pp. 23, 28 and 35

5 Ibid., pp. 64-66

The following main indicators are used to measure the performance of the program:

INDICATORS	
OUTPUT	• Numbers of networks • Share of private co-financing • Share of public co-financing • Relevant combination of partners (research institutions, private companies, public partners)
RESULTS	• Numbers of collaborative R&D projects • Numbers of participating private companies in networking activities (and share of SME in these) • Numbers of participating private companies in joint R&D projects with research institutions (and share of SME in these) • Numbers of companies which have developed new products, services or processes
IMPACT	• regional development • growth of employment • strengthening and creation of linkages among universities, business sector and R&D sector • increasing of technology transfer followed by increase of technological level

Beneficiaries are monitored by means of regular written reports and independent benchmarking exercises. Independent evaluations of the program are carried out every 5 years.

In 2011 a separate econometric impact assessment of the Innovation Network Denmark program was conducted.[6] The study shows that the participation in innovation networks increases the probability to innovate by more than 4.5 times one year after participation. Companies participating in innovation networks have an increased probability of being innovative with the effects on innovation showing from the first year of participation. The probability of being innovative is 4.5 times higher for innovation network participating companies in innovation networks compared to a control group composite of other similar companies not

6 see The Impact of Cluster Policy in Denmark from The Danish Agency of Science, Tech-nology and Innovation 2011

participating in networks (found through propensity matching score).

The impact study also document that network participation increases the probability of R&D collaboration by 4 times one year after participation. The year after participating in an innovation network, the probability of entering R&D collaboration is almost 300 per cent higher than other similar companies not participating in networks.

2.4.1.7 CONTEXT OF THE PROGRAM

Asked to assess the importance of the program on a scale from 0 (not important at all) to 4 (very important) in relation to the overall economic/industrial development strategy and in relation to other R&D/innovation programs the program authority assigned a 3 to each of the two dimensions (see table below). Being an element of the overall national development strategy the program is an important element of the Danish economic and R&D support policy.

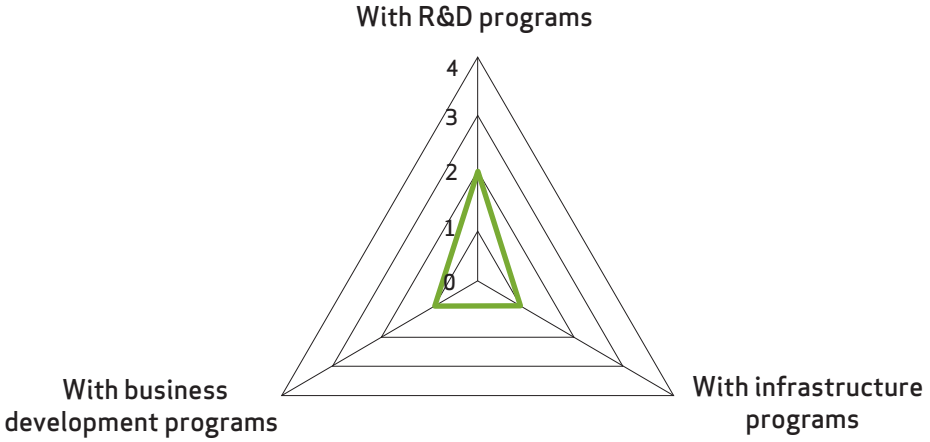
Table 5: Relevance of Innovation Networks Denmark in the overall policy setting

How important is the cluster program in relation to…	0	1	2	3	4
…the overall national economic/industrial development strategy?	•	•	•	•	X
…other R&D/innovation programs?	•	•	•	X	•

0 = not important at all ==> 4 = very important

Although the program is of high importance in the context of overall policies its coordination with other programs is rather suboptimal. Asked about the coordination of the cluster programs with other support programs of the country program officials indicated that it is rather weak.

Figure 8: Coordination of Innovation Networks Denmark with other Danish funding programs



0 = coordination is weak ==> 4 = coordination is strong

2.5 ESTONIA

2.5.1 CLUSTER DEVELOPMENT PROGRAM

NAME OF PROGRAM	CLUSTER DEVELOPMENT PROGRAM
COUNTRY	Estonia
CONTACT DETAILS	Enterprise Estonia (EAS) Tiiu Evert Lasnamäe 2 11412 Tallinn Tel.: ++372-6279 745 E-Mail: tiiu.evert@eas.ee
INTERNET	www.eas.ee

2.5.1.1 OBJECTIVES AND RATIONALE OF THE PROGRAM

The main objective of the program, as stated in regulation governing the program implementation[7], is to increase the international competitiveness of entrepreneurs through implementing the co-operation projects of a cluster.

Business focus:
As a result of implementing the program, the entrepreneurs operating in a cluster will have

- increased added value;
- increased export turnover;
- increased turnover from new products and services;
- created or strengthened long-term periodical co-operation between entrepreneurs and education and research institutions;
- improved strategic planning of long-term development in co-operation with partners.

Policy focus:
The program has been developed in line with the Estonian RD&I strategy. The strategy is mainly focused on a) uptake of prioritized key technologies (ICT, biotech and material technology) and b) dealing with key socio-economic challenges (environment, energy, security, health care). The cluster program does not solely address high technology areas; the emphasis is on co-operation between low and high technology sectors. One of the key objectives is to increase the innovation capacity of Estonian relatively low-tech traditional industry through intertwining it with more high-tech and knowledge-intensive sectors of economy. The program does not focus strongly on collaborative R&D but encourages collaboration in broader sense (including e.g. common training activities, development of common standards, common marketing and fulfillment of large orders).[8]

7 Regulation no. 71 of the Minister of Economic Affairs and Communications of 13 August 2008 "Conditions and procedure for the financing of the development of clusters", § 2.

8 Oxford Research AS (2007) "Country Report: Estonia". Report written as part of the Europe INNOVA Cluster Mapping Project.

Cluster development under the program is to a great extent aimed at improving the international competitiveness of Estonian companies and attracting more FDI in parts of the value chain that account for more added value. For this reason, Estonia views cluster development in a trans-national context and the Cluster Program encourages cross-border development of the existing and new clusters. In analyses of the background of the Estonian Cluster Program, it has been pointed out (Oxford Research, 2007) that the Program aims to address the challenge of how Triple Helixes and sectoral industrial value chains can be reorganized or better linked to achieve higher competitiveness on the global market; for that reason inter-cluster cooperation is encouraged and international co-operation is an important issue.

The program has been designed by the Ministry of Economic Affairs and Communications and is implemented by Enterprise Estonia (one of the main institutions responsible for the implementation of the EU structural funds in Estonia). The program budget in the EU programming period 2007-2013 amounts to EUR 10.39 Million; the program is implemented as part of the structural assistance measures in Estonia (based on the Operational Program for the Development of Economic Environment) and is co-financed by the European Regional Development Fund.

The Cluster Development Program grants are provided based on open application procedure. The maximum size of the support in the stage of preliminary application is 26 000 EUR and up to 75% of the eligible costs - i.e. training and study trips for cluster teams, conducting feasibility studies of (potential) clusters, enrolment of external expertise, etc. – are compensated. In case of the full scale applications, collaborative activities like joint marketing, joint training, capacities for joint fulfillment of orders etc. are supported. No specific limit is set for the budgets of full applications, max. 70% of the eligible project costs are compensated.

2.5.1.2 TARGET GROUP OF THE PROGRAM

The target groups of the program are:

- SMEs, large companies (certain sectors are excluded because of the State Aid Regulations (i.e. primary production, fishing and water cultivation, retail and wholesale)
- R&D and higher education institutions
- Other potential cluster partners (science and technology parks, industry unions, local government organizations, etc.)

2.5.1.3 TERM OF THE PROGRAM, FINANCIAL ASPECTS AND APPLICATION PROCEDURE

TERM OF THE PROGRAM	2007-2013
Budget	EUR 10.4 Million
Type of funding	Grant funding
Does the program have a specific technology focus?	To some extent. The following sectors are prioritized: biotechnology, ICT and material technology, energy, healthcare and environmental protection. A project that is directly or indirectly involved with these sectors will get bonus points in the evaluation process (5% out of 100%).
Are there calls for proposals?	Yes (for preliminary applications; full applications can be submitted at any time (until the program stays open))

Is there a dialogue with applicants about the improvement of their application prior to the final submission of the application?	Yes (counseling, advisory services)
Maximum funding period for a project	Preliminary applications: max. 12 months Full applications: max. 48 months
Is there a maximum amount of funding an applicant can apply for?	Preliminary applications: max. EUR 26 000 Full applications: no specific limit set
Financing structure of projects	Preliminary applications: max. 75% funding Full applications: max. 70% funding Entrepreneurs must provide at least 50% of the entire amount of self-financing.
Most important evaluation criteria for project proposals	Evaluation criteria in the full applications phase: Impact of the project in terms of achieving the objective of the measure (proportion 30%) including: • macro-economic impact of the project (incl. on sectors and economy as a whole) (15%) • Impact on the development of the involved companies (incl. growth in added value and export sales) (15%) Sustainability of the project (weight 20%) including: • ambition, integrity and long-term view of the cluster strategy (10%) • relation of the project with the cluster strategy and action plan (10%) Organizational capability of consortium/ project team in implementing the project (weight 20%) including: • capability and competence of the project team in implementation of the project and involvement of the partners (5%) • competence of the project manager (knowledge and experience) (10%) • financial capability of the partners participating in the project (5%) Project quality (proportion 20%) including: • clarity and measurability of the objectives and results (10%) • Integrity of the action plan of the project and relevance of the activities in achievement of the objectives of the project (5%) • adequacy and cost-effectiveness in budget-ing (5%) Relation to priority sectors (proportion 10%) including: • an educational or research establishment has been involved in the implementation of the project and the implementation of the project is carried out in the cooperation between the sectors (5%) • the project contributes to the application of a key technology (ICT, bio- and material technology) and contributes to the development of the sector of energy, healthcare and/or environmental protection (5%)

2.5.1.4 INSTRUMENTS

Eligible activities in the phase of preliminary applications are:

- mapping the common interests of partners and studying the feasibility of co-operation, including joint study visits to learn from other countries' cluster initiatives,
- searching for partners,
- development of a cluster strategy and action plan.

Eligible activities in the phase of full applications are:

- coordinating joint marketing, including carrying out market research and searching for partners;
- coordinating the distribution of production capacities;
- mapping the need for human resources necessary for implementing the joint activities of a cluster, including estimating the labor need, identifying training needs and participating in the development of curricula;
- initiating and coordinating other joint development projects.

Acceptance of the project in the preliminary application phase does not automatically lead to participation in the full stage. A cluster initiative can also enter the cluster program directly in the full stage, without going through the preliminary application phase.

In preliminary application stage, an applicant may be either a company that is a member of a consortium planning to create a cluster or a non-profit association or foundation acting as a representative of the cluster. In full application stage, only a non-profit association or foundation can apply for the grant.

It is recommended that in preliminary application stage there are at least 5 companies participating in a project and in full application stage at least 10 companies should be participating.

2.5.1.5 RESULTS AND IMPACT OF THE PROGRAM

Since its opening in 2008, the national Cluster Program has driven a considerable increase in clustering efforts in Estonia. By 2012, 49 applications have been financed within two rounds of preliminary applications (out of a total of 56 applications submitted for evaluation). The first call for applications was carried out in 2008 and the second round in 2009, resulting respectively in 23 and 26 approved projects.

This means a very high success rate at the preliminary application phase: 87,5% of submitted applications have been supported. It was a conscious policy of the program authorities to be relatively liberal in the allocation of the relatively small-sized preliminary grants – as structured cluster co-operation was a rather unknown phenomenon in Estonia (as was the concept of a cluster as such), it was necessary to create motivation and context for potential cluster initiatives to emerge. The preliminary phase was primarily meant to bring the potential cluster stakeholders together, to facilitate meaningful discussion and to identify the possibilities for deeper co-operation. There was a dual goal of 1) giving all potential cluster initiatives access to the program and 2) awareness raising about the activities supported by the program so that enterprises would become more knowledgeable about the possibilities to use the cluster program for their development goals. It was acknowledged and accepted that all pilot initiatives will not result in the formation of actual clusters.

19 full scale applications have been supported out of a total of 25 applications as of July 2012. Two projects were approved in 2009, six in 2010, five in 2011 and six in 2012. In reality there have been more potential applicants that have gone through pre-counseling by Enterprise Estonia´s staff. In cases that the program staff has seen that the application/ co-operation strategy still needs considerable work, they have made suggestions that the applicants would submit the application in a later phase, after it has been developed further. Some of the groups that have received such feedback have indeed submitted a successful application later but some have not returned.

The approved projects cover a wide field of sectors. The priority areas are well represented, particularly ICT and health/medicine; other sectors include wood industry, furniture production, alternative energy, recycling, logistics, film industry, defense technologies, etc.

The Cluster Program has without a doubt facilitated co-operation of companies and given a certain "push" to the clustering efforts in Estonia. However, at this point of time it is too early to evaluate the long-term impacts of the program (Enterprise Estonia will be able to evaluate some indicators only after at least two years have passed since a project has been finalized – there are currently no projects that would have crossed this timeline). In general it can be said that a lot of work still remains to be done. Professional

cluster management structures are still in the development phase and the time will tell how many of the existing cluster initiatives will develop into mature clusters.

2.5.1.6 MONITORING AND EVALUATION SYSTEM

As it is too early to provide numeric values in relation to most criteria, the table below primarily gives an overview of what kind of indicators are used to evaluate the outputs, results and impacts of the cluster development program.

It also has to be noted that there is no explicit description of indicators in any specific document related to the program – however, some key indicators logically derive from the program goals and from the evaluation methodology in the applications phase. Regarding other indicators listed below (particularly related to impact evaluation) a program representative was consulted. The list is not exhaustive; the methodology will be revised and developed further in the context of a future comprehensive impact evaluation.

INDICATORS	
OUTPUT	• number of project applications and approved projects • number of partners and participants (approx. 280) • number of foreign organizations as partners • number of R&D and higher education institutions as partners • number of cluster initiatives focused on specific industrial sectors
RESULTS	• 18 clusters (19 full applications, one of the cluster initiatives, Estonian ICT cluster, has received funding twice related to different phases of cluster development) • At the level of cluster members (in most cases to be evaluated 2 years after completion of the project) • increase in added value (expectations: at least 10%-15% compared to the sectoral average) • increase in export turnover (expectations: at least 10%-15% compared to the sectoral average) • increase in turnover from new products and services • strengthened long-term co-operation between entrepreneurs and education and research institutions created/ strengthened (evaluation of the continuation of co-operation activities after the project period) • improved strategic planning of long-term development of businesses in cluster co-operation • intensity of cluster co-operation (incl. how many new initiatives and projects have been started and carried out as a result of cluster co-operation) • attractiveness of cluster to potential new members (how many new partners have been interested in joining)

IMPACT	At the level of national economy/society: • increased productivity and added value of Estonian companies • increased international competitiveness of Estonian companies • increased level of cross-sectoral co-operation • increased application of key technologies (ICT, bio- and material technology) and contribution to the development of the sectors of energy, healthcare and environmental protection • increased private investments in R&D • increased innovativeness and innovation investments of enterprises

2.5.1.7 CONTEXT OF THE PROGRAM

Asked to assess the importance of the program on a scale from 0 (not important at all) to 4 (very important) in relation to the overall economic/industrial development strategy and in relation to other R&D/innovation programs the program authority assigned a 4 to the first of the two dimensions and a 3 to the second dimension (see table below). Being an element of the overall national development strategy the program is an important element of the Estonian economic and R&D support policy.

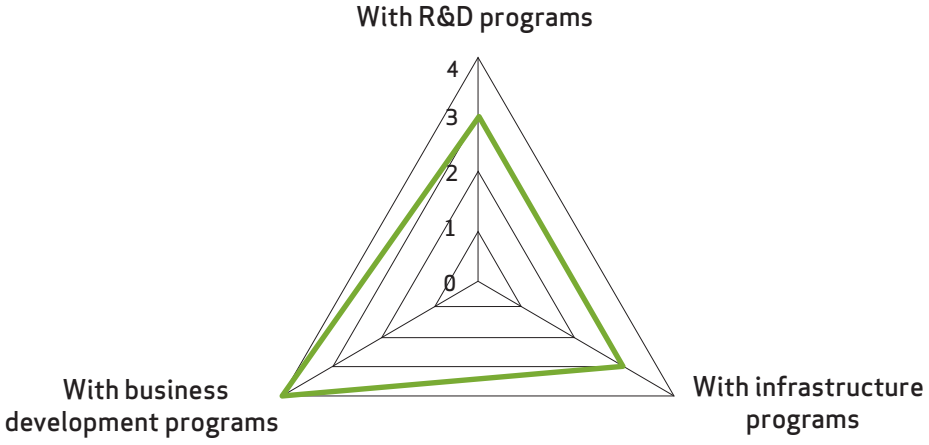
Table 6: Relevance of the Cluster Development Program in the overall policy setting

How important is the cluster program in relation to…	0	1	2	3	4
…the overall national economic/industrial development strategy?	•	•	•	•	X
…other R&D/innovation programs?	•	•	•	X	•

0 = not important at all ==> 4 = very important

This finding corresponds to the quite strong coordination with R&D programs, with business development programs and with infrastructure programs as indicated in figure 9.

Figure 9: Coordination of Cluster Development Program with other Estonian funding programs



0 = coordination is weak ==> 4 = coordination is strong

2.6 FINLAND

2.6.1 THE CENTER OF EXPERTISE PROGRAM (OSKE, OSAAMISKESKUSOHJELMA)

NAME OF PROGRAM	CENTER OF EXPERTISE PROGRAM (OSKE, OSAAMISKESKUSOHJELMA)
COUNTRY	Finland
CONTACT DETAILS	Ministry of Employment and the Economy Riikka Pellikka P.O. Box 32 00023 Government Tel.: +358 50 302 7671 E-Mail: riikka.pellikka@tem.fi
INTERNET	www.oske.net

2.6.1.1 OBJECTIVES AND RATIONALE OF THE PROGRAM

Based on the Regional Development Act (602/2002) the Center of Expertise (OSKE) program aims at focusing regional resources and activities on new areas of strategic importance. It shall improve the conditions for investment in and development of internationally competitive business and re search operations that demand a high level of expertise. The program history dates back until 1994 and can be distinguished in two periods:

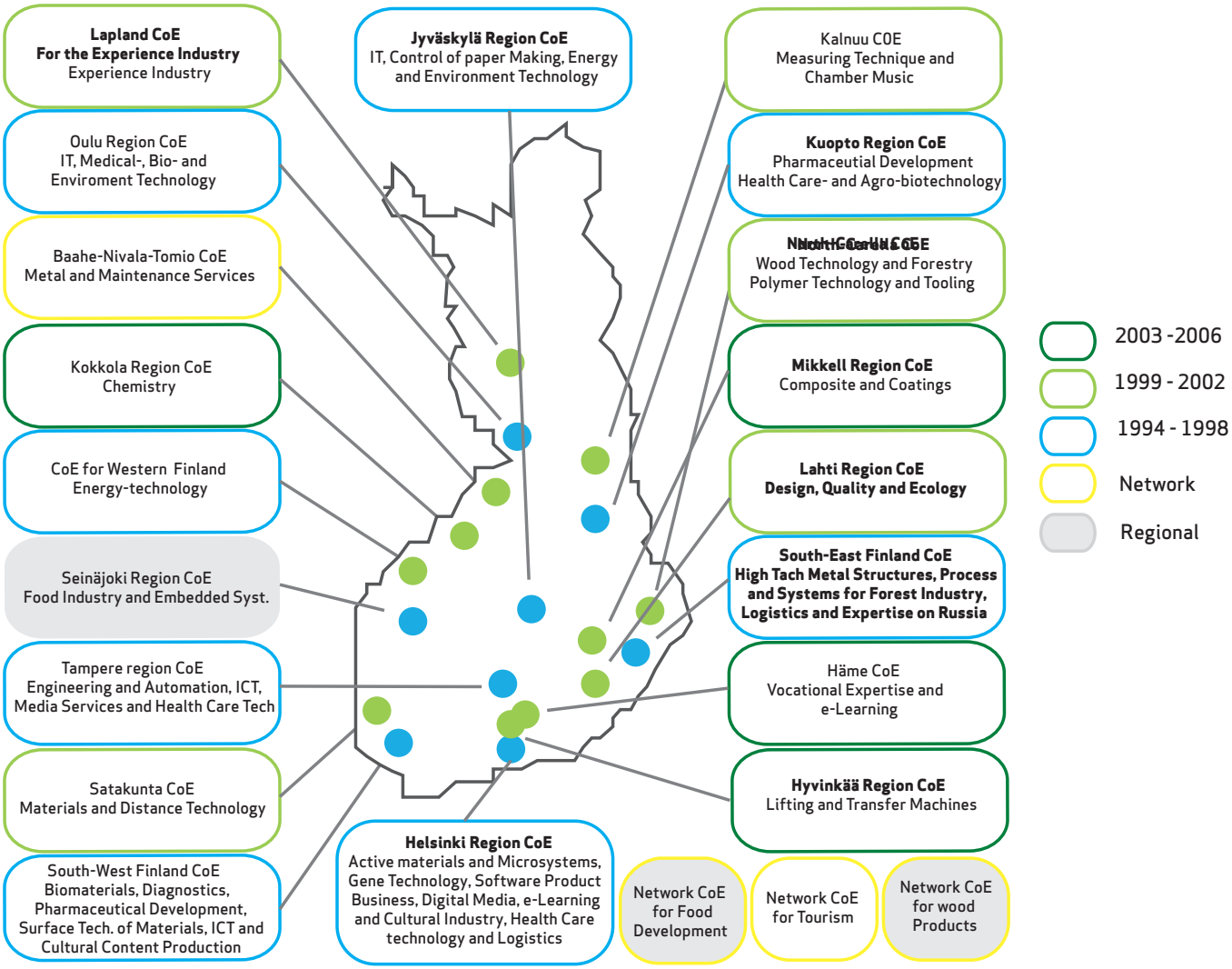
The OSKE program 1994-2006

The overall objective of the OSKE program in this period was to support regional economic development through the support of centers of expertise. The core function of a center of expertise was to initiate and coordinate cooperation among research institutes, universities, technology center, the business sector and various providers of funding in selected fields of expertise. The centers were usually managed by non-profit public body. Each center implemented its own program based on the development needs of companies and other institutions within the regional system of innovation it was located in. Thus, strategies and objectives of the programs implemented by centers of expertise were different depending on the regional situation.

The program, which supported 22 centers of expertise throughout the country, was successful as it has encouraged regions to focus their limited resources on their specific strengths and opportunities. The program had a significant impact of job growth, skills development and the regional capacity to utilize research and development resources through the creation of competence-based clusters. In this context the program also contributed to the creation of permanent operating models that boosted cooperation among different organizations.

9 Government of Finland, 2005: Osaamiskeskuhsohjelma 2007-2013, Valtioneuvoston erit sohjelmat: Alueiden kehittämislaki (602/2002), Valtioneuvoston (1224/2002) (Center of Expertise Program 2007-2013). Special Government Programs: Regional Development Act (602/2002), Government Decree (1224/2002))

Figure 10: Centers of Expertise



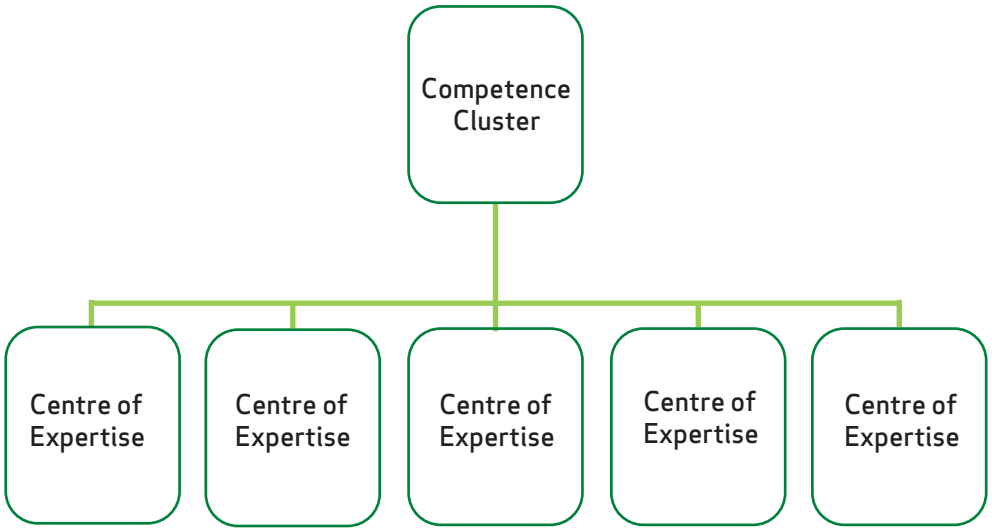
In the course of the years the nature of centers of expertise has changed. While at the beginning the centers focused on the development of regional resources they have transformed from development organizations into expert organizations in their corresponding areas of competence. They have achieved a strong position not only regionally, but in many cases also nationally. However, collaboration among centers from different regions has remained weak and from an international perspective they were still relatively minor players.

The OSKE program 2007-2013

Started as regional development program the OSKE program therefore needed to be adapted in order to overcome the challenges faced by the centers of expertise. Key challenges included the effective utilization of regional synergies, the development of common operating models, the identification and development of internationally significant clusters as well as international cooperation in research and development projects. In its current term the OSKE program is expected to focus activities and create synergies between centers of expertise.

The key feature of the new OSKE program is not to create new clusters, but to coordinate already existing regional clusters, the Centers of Expertise that were created until 2006, through a new "umbrella organization" called Competence Cluster.

Figure 11: The organization of a Finnish Competence Cluster



Competence Clusters as Umbrella Organizations for Centers of Expertise

Superordinated to the centers of expertise the program established competence clusters that gather the key organizations at centers of expertise located in different regions, to collaborate and implement strategic development programs. A competence cluster will enable the more effective utilization of fragmented national expertise-based resources and, at the same time, increase the ‚critical mass' required for research and product development thereby creating more attractive centers of expertise. Competence clusters will collect currently fragmented regional resources, make their utilization more efficient, and create a new, effective channel for the dissemination of knowledge and expertise for the benefit of regional business and research. A national, cluster-based alliance of the best centers of expertise will channel the attention of the regions away from competition with each other and towards intensifying international competition. Cluster-based collaboration among centers of expertise will also sharpen regional specialization and the division of duties. Networking will also encourage universities to specialize in strong fields of research, and thereby also to increase co-operation between institutes located in different regions.

Managed by a cluster coordinator, who is based at a Center of Expertise, a competence cluster comprises complementary fields of expertise of at least two centers of expertise located in different areas. Today the program is implemented by 13 national competence clusters (see Figure 12), each of which comprises four to seven regional centers of expertise. Rather than aiming comprehensively to develop entire industrial sectors, a competence cluster seeks to develop its more functional fields of top-level expertise or promising new sectors worthy of development, through which the centers can work together to develop the competitiveness and business of the whole cluster. The fields of expertise contained in the clusters may include not only technology-based sectors but also other areas such as the service sectors or the so-called creative sectors.

A competence cluster must have a management team that controls and supervises cluster (and coordinator) activity. If necessary, a cluster may also have a broader-based committee that meets less often, and which sets operational targets and encourages the commitment of different organizations.

10 For further information about the different competence clusters please see www.oske.net/en/competence_clusters/.

Figure 12: Competence Clusters

The role of the Centers of Expertise in a Competence Cluster

A Center of Expertise represents top-class expertise in terms of a nationally significant and high-level cluster of skills. A Center of Expertise is a network of organizations in a region, which, together with other parties in the competence cluster, implements the national Center of Expertise Program, relying in its operations on the region's network of companies, universities, research institutes and technology centers. The objectives and procedures of centers of expertise are defined based on the needs and opportunities of companies and other participants in the innovation system, both at a regional and cluster level.

The functions of a Center of Expertise include:

- To utilize and disseminate top-class expertise within their competence cluster and region,
- To increase collaboration among companies, high-level research and education and other public bodies in strategically important fields of expertise,
- To create a long-term strategy for innovation based on the needs and opportunities in the region together with other centers of expertise in the cluster,
- To prepare a wide range of company-based public-private projects for the implementation of innovation strategy (Competence Cluster Program) and to accelerate regional development,
- To catalyze growth and internationalization in existing companies with development potential, and to boost the use of public and private innovation services, and
- To promote the development of creative innovation environments, characterized by effective collaboration and a dynamic of constant development.

A center of expertise must have a management team that controls and supervises the activity of the implementing organization during the program. A center of expertise may also have a committee that sets operational targets and encourages the commitment of different organizations in the region.

The objectives of the OSKE Program
The overall objective of the OSKE program is

- To create new innovations, products, services, companies and jobs based on top-class expertise,
- To support inter-regional specialization and division of duties in order to create internationally competitive centers of expertise and
- To increase the attraction of regional innovation environments in order to lure international companies, investments and leading experts to the region.

In order to achieve these objectives the OSKE program

- Will focus on the development of selected competence clusters and internationally high-level centers of expertise,
- Will utilize top-class regional expertise to strengthen the longer-term competitiveness of companies and to create new business,
- Will increase the national and international networking of centers of expertise,
- Will collect any regional, national and EU resources available for the development of selected key sectors and
- Will ensure the regions are better prepared to utilize nationally and internationally tendered R&D funding.

2.6.1.2 TARGET GROUP OF THE PROGRAM

Target group of the program are Centers of Expertise.

2.6.1.3 TERM OF THE PROGRAM, FINANCIAL ASPECTS AND APPLICATION PROCEDURE

TERM OF THE PROGRAM	2007-2013
Budget	n.a.
Type of funding	Grant funding
Does the program have a specific technology focus?	No.
Are there calls for proposals?	No
Is there a dialogue with applicants about the improvement of their application prior to the final submission of the application?	Yes
Maximum funding period for a project	12 months
Is there a maximum amount of funding an applicant can apply for?	EUR 140,000
Financing structure of projects	Combination of public funding from different national ministries and regional authorities. Max. 50% from the OSKE program
Most important evaluation criteria for project proposals	Impact on industry secto r and companies Knowledge and/or technology transfer

2.6.1.4 INSTRUMENTS

Basic funding is intended for the development of competence clusters and their related centers of expertise approved for the program. Basic state funding can be used for the co-ordination of competence clusters and centers of expertise (the organization, administration and communication of co-operation between organizations), as well as for the preparation of projects based on the program aims and for partial funding of top-level projects.

2.6.1.5 RESULTS AND IMPACT OF THE PROGRAM

The OSKE program strengthens collaboration between Centers of Expertise and thus contributes to the further strengthening and exploitation of regional innovation potentials. The program has activated the regions to focus on their strengths and helped them to understand themselves as a part of the national system of innovation. Although expectations regarding larger and more "powerful" projects have not been fully met yet (it is expected that the expectations will be met in the future as the development of such projects takes some time), the program has been already successful in facilitating cross-sectoral projects.[11] The reason for the small number of projects that reflect a critical mass for "large-scale" innovations might be found in the fact that "many stakeholders do not consider all Centers of Expertise in the competence clusters to be of excellent quality. Regional policy considerations have led to the selection of clusters that are not considered to be excellent. […] The difference in quality hampers the collaboration between the Centers of Expertise within a particular Competence Cluster".[12] Thus, the program supports a number of "sub-critical clusters […] which cannot (yet) be labeled as excellent clusters ready for international competition".[13] However, "[the] umbrella function of the OSKE program helps fostering the linkages between companies in more 'remote' areas and companies in the more advanced urban areas". [14]

2.6.1.6 MONITORING AND EVALUATION SYSTEM

The following main indicators are used to measure the performance of the program:

INDICATORS	
OUTPUT	• Jobs • New networks • Products • Services • Processes
RESULTS	• Competitive funding from national and international networks and resources
IMPACT	• Better employment • Economic growth

11 E-Mail information from Riikka Pellikka and Pirjo Kutinlathi, Ministry of Employment and the Economy

12 Patries Boekholt, 2010: The OSKE Program in International Perspective, in: Ministry of Employment and the Economy, 2010: Osaamisklusterit alueiden voimien yhdistäjänä. Osaamiskeeskusohjelman (2007-2013) väliarviointi, pp. 35-36)

13 Ibid., pp. 37-38

14 Ibid. p. 38

Beneficiaries are monitored by means of regular written reports, regular meetings with the program owner, regular independent evaluations and regular independent benchmarking exercise.

Independent evaluations of the program are carried out every three years.

2.6.1.7 CONTEXT OF THE PROGRAM

The OSKE program is an important pillar of the national innovation policy and in particular if the national regional development strategy. It is the key program in terms of developing regions by using a cluster approach. The program is a mix of supporting bottom-up driven regional cluster development and a centralized approach in which the national government supports specific national industries by using technological criteria or network-quality criteria as a basis for a decision on support. [15]

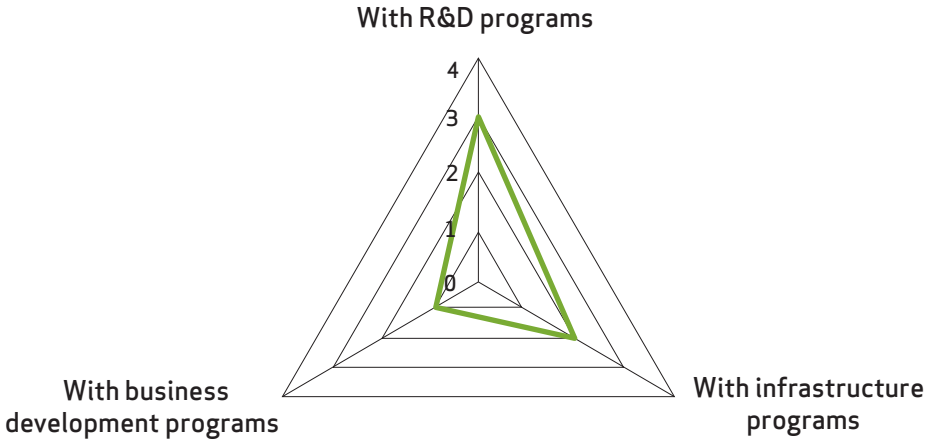
Table 7: Relevance of the OSKE program in the overall policy setting

How important is the cluster program in relation to…	0	1	2	3	4
…the overall national economic/industrial development strategy?	•	•	•	•	X
…other R&D/innovation programs?	•	•	X	•	•

0 = not important at all ==> 4 = very important

The coordination of the program with other funding programs depends on the policy field. While coordination with other national R&D programs is assessed as good, coordination with infrastructure programs and in particular with business development programs should be improved in order to have increased synergies between the different programs.

Figure 13: Coordination of the OSKE program with other Finnish funding programs



0 = coordination is weak ==> 4 = coordination is strong

15 Ibid., p. 35

2.6.2 STRATEGIC CENTERS FOR SCIENCE, TECHNOLOGY AND INNOVATION (SHOK, STRATEGISEN HUIPPUOSAAMISEN KESKITTYMÄT)

NAME OF PROGRAM	STRATEGIC CENTERS FOR SCIENCE, TECHNOLOGY AND INNOVATION (SHOK, STRATE-GISEN HUIPPUOSAAMISEN KESKITTYMÄT)
COUNTRY	Finland
CONTACT DETAILS	Tekes – The Finnish Funding Agency for Technology and Innovation Marita Paasi Kyllikinportti 2 00101 Helsinki Tel.: +358 1060 55 724 E-Mail: marita.paasi@tekes.fi
INTERNET	www.tekes.fi/en/community/Strategic Centres for Science_ Technology and Inno-vation/360/Strategic Centres for Science_ Technology and Inno-vation/1296

2.6.2.1 OBJECTIVES AND RATIONALE OF THE PROGRAM[16]

The SHOK program's roots are in a Government resolution of April 7th, 2005 concerning the structural development of the public research system. This resolution called for a national strategy to create and consolidate internationally competitive centers of excellence in science, technology and innovation (STI) under the supervision of the Science and Technology Policy Council of Finland. The strategy to set up the Strategic Centers for Science, Technology and Innovation (SHOK) program was presented in June 2006. The overall objective of the program is to establish international Strategic Centers of Excellence in STI in key competence areas with regard to future needs of the business sector and society. The centers are expected to renew industry clusters and to create radical innovations. It was decided to establish Strategic Centers in the areas of energy and environment, metal products and mechanical engineering, forest cluster, built environment innovations, health and well-being and ICT industries/services.

In order to achieve the overall objective the following operational objectives have to be achieved by the program:

1. Leading Finland-based enterprises, universities, research institutes and financing organizations commit themselves to the activities and objectives of the Centers and allocate resources in the long term to strategically chosen, top-quality Centers of an international standard.

2 Centers engage in dynamic and interactive RDI activities, the results of which will be exploited efficiently and extensively. Research activities of the Centers will anticipate the needs of society and the business sector over a time span of five to ten years.

3 High quality competence in STI and its reputation attract innovative and globally leading enterprises and top-ranking experts to Finland.

Strategic Centers for Science, Technology and Innovation are selected for support from the SHOK program if they meet the following criteria:

- The Strategic Centers of Excellence in STI have to be very significant with regard to their potential for the national economy and society as well as their R&D investment.
- The centers must have sufficient human and financial

16 Science and Technology Policy Council of Finland, 2006: Strategic Centers of Excellence in STI and Tekes website (www.tekes.fi/en/community/Strategic_Centres_for_Science_Technology_and_Innovation_(SHOK)/360/Strategic_Centres_for_Science_Technology_and_Innovation_(SHOK)/1296).

resources at their disposal. As soon as their operation has been established and stabilized, the overall financial volume of each center should be some EUR 50–100 Million per annum, depending on the subject area and activities.

- The centers must be based on applications that are vital with regard to the future of the field in question. Application-based approach means that the RDI activities of each center are based on a combination of a variety of competences. The important role of innovation activities also presumes that the centers are supplemented by operational environments, where new applications and ideas can be piloted and tested in circumstances that are as real as possible.

- The core competence for the centers must be found in Finland. All centers must have the potential to be among the best in the world. The centers must be internationally credible and renowned, and they must be able to attract the best experts and enterprises in the field throughout the world. Therefore, they must be globally networked and co-operate actively in the international framework.

- The centers are based on the strong commitment of the key enterprises, universities, research institutes, financiers and ministries in the respective subject areas. Their operations and funding are long-term by nature. This facilitates the centers to maintain their competitive edge. The centers and parties involved must have a clear, shared and goal-oriented vision and a focused strategy.

2.6.2.2 OPERATION OF THE STRATEGIC CENTERS FOR SCIENCE, TECHNOLOGY AND INNOVATION

Each Strategic Center has a multidisciplinary outlook and involves different sectors industry and society. Research and its commercialization through new technologies and innovations are at the core of the center's work that is guided by a center-specific research program. Through their research programs, which are jointly developed by the stakeholders of the centers, the centers are expected to generate sufficient critical mass and combine versatile competences for achieving world-class expertise and global breakthroughs. They should facilitate long term strategic research and contribute to speeding up of the innovation process. Research carried out by the centers is strategic, pre-commercial and as a rule not associated with short-term market goals. The research aims to meet the needs of Finnish industry and society within a five-to-ten-year period.

The activities of a center are coordinated by a non-profit limited company that is jointly owned by the stakeholders of the center including relevant companies, universities and research institutes. In addition each center hosts also a virtual research organization. Centers provide a permanent cooperation and interaction forum for companies and research organizations. Technology and service providers and end-users cooperate in the research programs of the individual centers, which promote demand and user orientation of innovation processes. Centers will also act as gateways to international cooperation and as avenues for training and recruitment. The relevant ministries, the Ministry of Employment and the Economy and the Ministry of Education and Culture, main funding bodies, Tekes and the Academy of Finland as well as other stakeholders participate in coordination and the development of the SHOK program.

Public funding organizations have made a commitment to providing funding for the centers in the long term. Tekes and the Academy of Finland are key public funding providers of the centers. While Tekes supports the center's research programs and projects initiated by companies, the Academy of Finland funds research carried out in the areas of the center's fields of activity.

2.6.2.3 TARGET GROUP OF THE PROGRAM

The target group includes groups of relevant companies, universities and research institutes.

2.6.2.4 TERM OF THE PROGRAM, FINANCIAL ASPECTS AND APPLICATION PROCEDURE

TERM OF THE PROGRAM	SINCE 2006
Budget	The financial volume of each center, when fully established, some EUR 50-100 Million p.a.
Type of funding	Grant funding

Does the program have a specific technology focus?	Yes (energy and environment, metal products and mechanical engineering, forest cluster, built environment innovations health and well-being and ICT industries/services).
Are there calls for proposals?	No. Project applications can be submitted at any time.
Is there a dialogue with applicants about the improvement of their application prior to the final submission of the application?	Yes
Maximum funding period for a project	60 months
Is there a maximum amount of funding an applicant can apply for?	There is no maximum amount.
Financing structure of projects	Up to 75% public funding for the establishment of the centers and research programs carried out by them. Up to 50 % public funding for cluster projects by companies. In addition, research and innovation projects may be funded from various public and private sources. Overall companies are expected to co-fund an average of 40% of the research.
Most important evaluation criteria for project proposals	Impact on industry sector and companies Impact on society Knowledge and/or technology transfer

2.6.2.5 INSTRUMENTS

Financial support is provided for the establishment of the centers and the research carried out by them. In addition, a cooperation forum of relevant stakeholders supports the SHOK program.

2.6.2.6 RESULTS AND IMPACT OF THE PROGRAM

There are six Strategic Centers for Science, Technology and Innovation in the areas of energy and environment, metal products and mechanical engineering, forest cluster, built environment innovations, health and well-being and ICT industries/services.[18] ,128 companies are involved in the centers which have set up a total of 13 research programs (figures of 2009). Within each Strategic Center, some EUR 40-60 Million annually are invested in research.[19] As the first SHOK center was established in 2007 and the sixth only in 2009 the evidence on the results and impact of the program is based on the monitoring and follow-up of the programs and projects. However, an evaluation of the results and the impact of the program will be carried out in 2012.

18 For an overview of the centres please see www.tekes.fi/en/community/Strategic_Centres_for_Science_Technology_and_Innovation_%28SHOK%29/360/Strategic_Centres_for_Science_Technology_and_Innovation_%28SHOK%29/1296.

19 www.tekes.fi/en/community/How_do_Strategic_Centres_work/631/How_do_Strategic_Centres_work/1557

2.6.2.7 MONITORING AND EVALUATION SYSTEM

The following main indicators are used to measure the performance of the program:

INDICATORS	
OUTPUT	• Creation of new public-private partnerships • Creation of joint long-term strategic research • Increase in R&D investments and resources • Increase in quality, risk level and areas of RTI activities • New products and services, process innovations, patents, internationalization and networking effects, growth and innovations in businesses
RESULTS OF THE SHOK RTI PROGRAMS:	• Increased cooperation and visibility of clusters, speeding-up of innovation processes
IMPACT	• Renewal of clusters and industries • Creation of new national competence areas • Promotion of economic growth and employment

Beneficiaries are monitored by means of regular written reports, regular meetings with the program owner and regular independent evaluations.

An evaluation of the whole SHOK program as well as of individual SHOK clusters takes place in 2012. The objective of the evaluation is to provide an independent assessment of the SHOK policy, strategy and activities. Its point of view will be forward-looking and focused on key findings to improve the strategy, activities and the utilization of the results.

Tekes is charge of the evaluation. The evaluation has been divided into two main processes. A consortium of internationally linked evaluators has been contracted to focus on questions related to the innovation environment and international benchmarks. Whereas six panels of independent experts will evaluate each SHOK, their strategies, programs and activities as well as their implementation. The evaluation report on the Finnish Strategic Centers for Science, Technology and Innovation is expected at the end of 2012.

2.6.2.8 CONTEXT OF THE PROGRAM

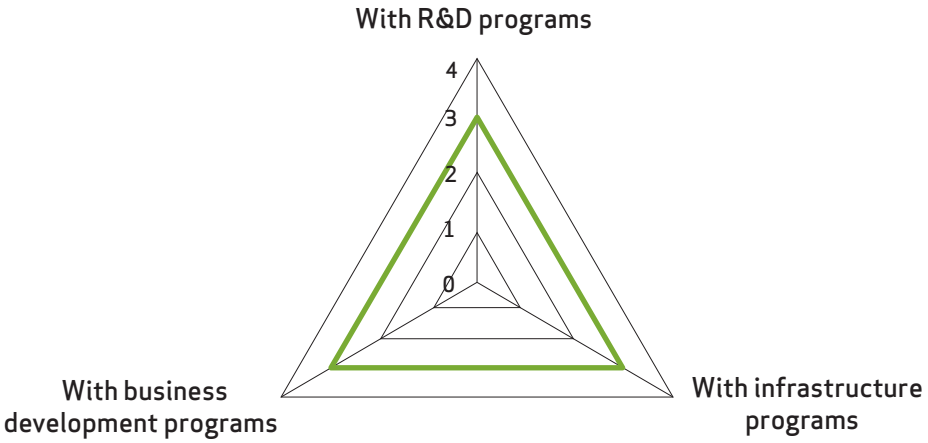
The relevance of the SHOK program in the overall policy setting is very high which also reflects in a good coordination with other programs (see table 8 and figure 14)

Table 8: Relevance of the SHOK program in the overall policy setting

How important is the cluster program in relation to…	0	1	2	3	4
…the overall national economic/industrial development strategy?	•	•	•	•	X
…other R&D/innovation programs?	•	•	•	•	X

0 = not important at all ==> 4 = very important

Figure 14: Coordination of the SHOK program with other Finnish programs



0 = coordination is weak ==> 4 = coordination is strong

2.7 FRANCE

2.7.1 GRAPPE D'ENTREPRISES

NAME OF PROGRAM	GRAPPE D'ENTREPRISES
COUNTRY	France
CONTACT DETAILS	DATAR – Délégation interministérielle à l'Aménagement Territoire et à l'Attractivité Régionale Constance Arnaud Cluster Policy Manager 8, rue de Penthièvre 75800 Paris Cedex 08 Tel. +33 1 40 65 10 87 E-Mail: constance.arnaud@datar.gouv.fr
INTERNET	www.franceclusters.fr

2.7.1.1 OBJECTIVES AND RATIONALE OF THE PROGRAM

The program Grappe d'entreprises pursues the overall objective of developing business clusters in economic sectors with weak R&D activity. These sectors are either not covered by clusters of the Pôles de compétitivité program[20] or do not have the critical mass to be a Pôles de compétitivité.

In order to increase efficiency and effectiveness of support clusters from both programs, Grappe d'entreprises and Pôles de compétitivité, are expected to collaborate. Grappe d'entreprises clusters will benefit from cooperation in terms of R&D, while Pôles de compétitivité clusters can benefit in terms of additional opportunities to commercialize R&D results.

The terms business cluster has to be understood as a generic term for a particular category of clusters. Business clusters targeted by the program can be defined as follows:

- They mainly consist of micro-enterprises/SMEs that are active in the same sphere of activity; where relevant, they integrate large businesses; they work with or integrate training, job and skills management, innovation and research organizations, according to their particular contexts and initiatives;
- They have a „hard core" anchored within one territory which facilitates easy and close relationships between their members and which is relevant to the business network concerned;
- They provide services to businesses which can handle all of their needs through pooling or collective actions, particularly in relation to innovation in all of its forms[21] , jobs and skills, work organization, international development, communication, environmental aspects;
- They have a specific governance structure, in which the entrepreneurs play a driving role, with a collectively developed strategy implemented through a concerted action plan;
- All businesses are included (production businesses, liberal professions, service providers, craft-based manufacturing, etc.), in all activities (commercial, industrial, crafts, tourism, artistic, agricultural, service, etc.) and in all the territories (urban, periurban, rural), both metropolitan and overseas;

20 Pôles de compétitivité refers to clusters that are funded within the government program of the same name. For further details about the pôles de compétitivité program see http://competitivite.gouv.fr/.

21 Technological, organizational (corporate structure, work organization, knowledge management, relationships with external partners, etc.) marketing, service, social, territorial, etc.

- They forge links and cooperate with public and private actors from within their territorial ecosystem.

The selection of the beneficiaries was carried out in two stages. Following a first call for proposals 42 out of 112 applications were selected for support. They share the following characteristics:

- Over 30 per cent of these business clusters are positioned in future activity sectors related to the e-economy, the green economy, cultural and creative industries or the services industry. The other sectors that currently form the basis of the French economy, like the food-processing industry, mechanics, construction, health and pharmacy, represent about 60 per cent of the selected applications.

- The business clusters selected are exemplary in the quality of their interactions with other actors in their region, the services they provide to their member businesses, their market objectives and proposed strategy and finally the efficiency of their governance structures.

- Over half of the business clusters selected has already developed partnerships with competitiveness clusters.

2.7.1.2 TARGET GROUP OF THE PROGRAM

Target group of the program are groups of companies, research and innovation actors, training institutions and other actors that want to collaborate in a business cluster. The governance structure of the cluster must be independent from public authorities and professional/consular organizations and chaired by an entrepreneur. Clusters that already receive support from the Pôles de compétitivité program are not eligible.

2.7.1.3 TERM OF THE PROGRAM, FINANCIAL ASPECTS AND APPLICATION PROCEDURE

TERM OF THE PROGRAM	2009, NO DATE OF TERMINATION
Budget	EUR 24 Million
Type of funding	Grant funding
Does the program have a specific technology focus?	No
Are there calls for proposals?	There were calls for proposals at the beginning of the program.
Is there a dialogue with applicants about the improvement of their application prior to the final submission of the application?	Yes
Maximum funding period for a project	36 months
Is there a maximum amount of funding an applicant can apply for?	EUR 500,000
Financing structure of projects	Up to 25 % grant funding from the program
Most important evaluation criteria for project proposals	Impact on industry sector and companies

2.7.1.4 INSTRUMENTS

The program awards grant funding for tangible and intangible investments, staff and general operating costs with regard to coordination and management activities of the cluster and collaborative projects carried out by cluster members. Projects have to be indicated in the action plan of the project proposals.

2.7.1.5 RESULTS AND IMPACT OF THE PROGRAM

The program is very young (it started in 2009), so that results and impacts cannot be measured until now.

2.7.1.6 MONITORING AND EVALUATION SYSTEM

The program management agency is currently working on an indicator system to measure the performance of the program.

2.7.1.7 CONTEXT OF THE PROGRAM

According to program officials the program is a very important program in the overall national policy context as it complements the Pôles de compétitivité program in terms of supporting in particular SME.

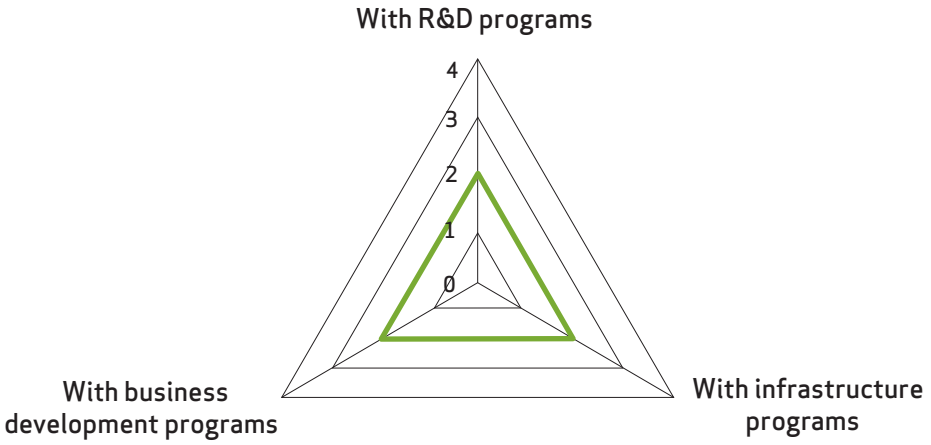
Table 9: Relevance of the Grappe d'entreprises program in the overall policy setting

How important is the cluster program in relation to…	0	1	2	3	4
…the overall national economic/industrial development strategy?	•	•	•	X	•
…other R&D/innovation programs?	•	•	X	•	•

0 = not important at all ==> 4 = very important

Figure 15: Coordination of the Grappe d'entreprises program with other funding programs

Notwithstanding the high relevance of the program in the overall national policy context, the coordination of the program is rather average, according to program officials.



0 = coordination is weak ==> 4 = coordination is strong

2.7.2 PÔLES DE COMPÉTITIVITÉ

NAME OF PROGRAM	PÔLES DE COMPÉTITIVITÉ
COUNTRY	France
CONTACT DETAILS	DATAR – Délégation Interministérielle à l'Aménagement Territoire et à l'Attractivité Régionale Aurelie Faitot 8, rue de Penthièvre 75800 Paris Cedex 08 Tel. +33 1 40 65 10 87 E-Mail: aurelie.faitot@finances.gouv.fr
INTERNET	http://competitivite.gouv.fr/accueil-3.html

2.7.2.1 OBJECTIVES AND RATIONALE OF THE PROGRAM

A Pôle de compétitivité (a competitiveness cluster) brings together large and small firms, research laboratories and educational establishments, all working together in a specific region to develop synergies and cooperative efforts. All these actors work in the same sector. Other partners may be brought in, such as public authorities, either local or national, as well as firms providing business services.

The goal of "Pôles de Compétitivité" is to build on synergies and innovative, collaborative projects in order to give partner firms the chance to become first in their fields, both in France and abroad.

The objectives are to boost the competitiveness of the French economy and to help develop growth and jobs in key markets, by accelerating innovation efforts, by providing support for high-tech and creative activities, primarily industrial, in the various regions of France, as well as by improving the attractiveness of France via greater international visibility.

Each cluster draws up a five-year strategic plan based on the shared vision of various participants. This allows the cluster to:

- set up collaborative R&D projects, as well as structuring projects such as innovation platforms that can benefit from public subsidies. An innovation platform provides a structure that is open to various innovative stakeholders, particularly cluster members, in which participants have access to high-quality facilities and services. The goal is to facilitate R&D projects, testing, and the development of pre-series and prototypes. A platform can even serve as a „living lab„.

- promote an overall environment that fosters both innovation and growth among the cluster's members. This is done by providing leadership, exchange and support for members in areas such as private funding for firms, industrial property, forward-looking management of jobs and needs for new skills and qualifications, developing international technological partnerships, regional synergies, etc.

- establish partnerships between participants with recognized, complementary skills.

2.7.2.2 TARGET GROUP OF THE PROGRAM

The main target groups are SMEs in supported areas as well as other size companies, research laboratories and educational establishments. Other beneficiaries are public authorities, either local or national, as well as firms providing business services.

2.7.2.3 TERM OF THE PROGRAM, FINANCIAL ASPECTS AND APPLICATION PROCEDURE

TERM OF THE PROGRAM	2005 - 2012
Budget	EUR 1.5 Milliard
Type of funding	Grant funding
Does the program have a specific technology focus?	No
Are there calls for proposals?	Yes
Is there a dialogue with applicants about the improvement of their application prior to the final submission of the application?	Yes
Maximum funding period for a project	For R&D projects: No, normally 5-year projects. For innovation platforms: 5 years (possible extension) For the cluster management: Until the end of the second phase of the program 2012. A third phase should begin in 2013.
Is there a maximum amount of funding an applicant can apply for?	No
Financing structure of projects	For R&D projects: between 25% and 45 % de-pending on the size of the companies / research institution (co-financing from the private sector and other public sources) For innovation platforms: investment (between 15% and 35% depending on the size of the exploiting structure) / management (max 50%) (co-financing from the private sector and other public sources) For the cluster management: partial financing: in the middle term, the financing of the management structures of the poles should be good balanced between public funding and other private financing sources.
Most important evaluation criteria for project proposals	For R&D projects: • Innovation content • Economic impact • Successful commercialization of new innovative products / services / processes at least 5 years after project end • SME focus / SME participation in project activities (the project coordination is by a company) • Structure and members of consortia (at least 2 companies and 1 research institution • Labeling of the project through at least one pôle de compétitivité (the R&D activities should be as a majority executed in the territory of the pole)

2.7.2.4 INSTRUMENTS

France is committed to creating a conducive environment for both firms and innovation. It offers assistance for cluster-based research and development, particularly via the Single Interministerial Fund (FUI), which provides support for cluster policy and for the forward-looking investments that are part of France's National Loan Program.

The State provides support for cluster development, at both national and regional levels:

- by allocating financial aid to the best R&D projects and innovation platforms, through calls for projects from the Single Interministerial Fund and the Investments for the Future Program
- through partial financing of cluster governance structures, alongside local authorities and firms
- by providing financial aid for theme-based collective actions, through the intermediary of decentralized government departments. These actions, initiated by the competitiveness clusters in a wide range of areas, involve cluster members, particularly SMEs, with the aim to promote innovation and improve their competitiveness.
- by bringing additional partners on board : the French National Research Agency and OSEO provide financing for R&D projects carried out by cluster members; the Caisse des Dépôts et Consignations (CDC) supports innovation platform projects;
- by relying on local authorities, who may also provide financial support for cluster projects (both R&D and innovation platforms)
- by helping competitiveness clusters and their member firms find the best international partners and set up technological partnerships with them focused on value creation
- by bringing to bear new resources from the Investments for the Future Program earmarked for competitiveness clusters.

The Investments for the Future Program contains two competitiveness clusters specific measures: development of structuring R&D projects (EUR 300 Million) and pooled innovation platforms (EUR 200 Million). Other cluster-related measures include the future technology research institutes and excellence centers for low carbon energy sources, both designed to „boost cluster established ecosystems „.

2.7.2.5 RESULTS AND IMPACT OF THE PROGRAM

France's competitiveness clusters count 7,200 firms employing 760,000 people, which represent 72% of the members (2011). Of these, around 80% are SMEs. Cluster SMEs have benefited from 64% of financial support to businesses allocated by the Single Interministerial Fund and OSEO.

Since 2005, 1,042 R&D collaborative projects have received EUR 1.8 Million in public-sector financing, of which EUR 1.2 Million was provided by the Government (Single Interministerial Fund). These projects, amounting to around EUR 5 Million in R&D expenditure, involved nearly 15,000 researchers.

Results of the Evaluation 2005-2008:

- The budget for the implementation of innovation projects and the operating costs of the office have been mobilized as planned. Many „Pôles" have until now developed very dynamically (especially through cooperation between the actors). Nevertheless, an uneven development between the „Pôles" exists and is strongly dependent on the regional context (economic environment, local innovation potential and previous co-operation between the actors).
- The number of research projects that have been filed, has grown steadily. As a consequence, the number of innovation projects should grow alike in the future. The share of SMEs in research projects is high, so that they will also receive a significant share of development funds. The variety of topics, as well as the size of partnerships involved in the projects is large, and no conclusions about the sustainability of projects can be made yet.
- The „Pôles" are not active enough in the context of education and training. Financial partners are not enough involved as participants of the „Pôles". The grant funds are well distributed.

The evaluation report divided the „ Pôles de Compétitivité" into three categories:

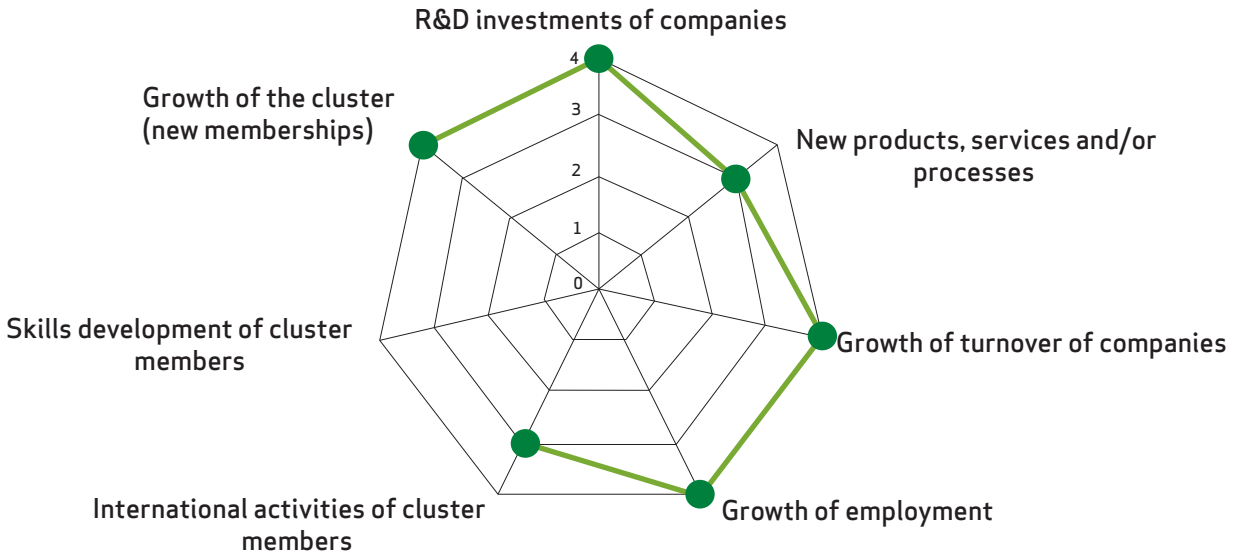
- 39 have achieved good results and are proposed for further funding
- 19 need to improve their performance, but they are not short-term threated
- 13 could lose the „Pôles de Compétitivité" label if they cannot improve their results within a year.

Results of the national evaluation 2009-2012:

- Major Poles have successfully developed their activities and created new relations between companies and academic actors.
- The "Pôles de Compétitivité" policy is now mature and remains attractive for companies. There are numerous positive economic impacts: new innovations, membership increase, job creation, etc.
- The "Pôles de Compétitivité" is an effective tool for territorial attractiveness.
- The Poles support R&D projects more than the commercialization of R&D results.
- The support (by the Poles or by public institutions) in the last stage of innovation is not sufficient
- Poles still need to increase cooperation between clusters.
- The Poles business model is their main weakness.

With regard to the outcome of the Pôles de Compétitivité it has achieved high impacts on several business fields, such as the growth of clusters, the R&D investments of companies, new products, services and processes, the growth of turnover of companies, the growth of companies and the international activities of cluster members.

Figure 16: Results of the program that were achieved in 2011



0 = results are poor ==> 4 = results are excellent

Missing values are due to the fact that there is no evidence available yet. This does not mean that there are no effects at all.

2.7.2.6 MONITORING AND EVALUATION SYSTEM

INDICATORS	
OUTPUT	• 71 clusters • 7,200 firms employing 760,000 people • Almost 80% are SMEs. • Cluster SMEs have benefited from 64% of financial support to businesses allocated by the Single Interministerial Fund and OSEO. • Since 2005, 1042 R&D projects have received EUR 1.8 billion in public-sector financing, of which EUR 1.2 billion was provided by the State. These projects, amounting to some around EUR 5 billion in R&D expenditure, involved nearly 15,000 researchers
RESULTS	• Many „Pôles“ have developed very dynamically (Creation of added value for the cluster participants especially through cooperation between the actors). • Increase of R&D activities in enterprises (mostly SMEs). • The number of research projects has grown steadily. As a consequence, the number of innovation projects should grow alike in the future. • The variety of topics, as well as the size of partnerships involved in the projects is large. • Strengthening and creation of linkages among universities, business sector and R&D sector. • Increasing of technology transfer followed by increase of technological level. • Coordinated action of the state with the regions and local authorities. • Better international visibility • New patents • New jobs creation • Creation of new companies
IMPACT	• Regional development / Growth of local innovation potential • Attractiveness and competitiveness of regions • Growth of national R&D potential • Growth of employment • Improvement of the National and Regional Innovation Systems

The evaluation criteria (2005-2008) were grouped as follows:

For the cluster program:

Relevance / coherence
- Does the French cluster initiative have increase the R&D activities in enterprises (SMEs and big companies)?
- How does the French cluster initiative collaborate with other initiatives that are working for the promotion of innovation (other cluster initiatives, regional clusters, and research networks)?
- Contribution to the overall sustainability of the measures.

Implementation
- Necessary adjustment of the plans based on the current state of practical implementation
- Effectiveness of management measures and regional offices
- Conditions for the cluster selection
- Efficiency of the project financing / funding
- Geographical distribution
- Use of monitoring and evaluation systems in the „Pôles"
- Relevance and visibility of specific classification, such as "world class cluster"

First macro-economic effects:
- Development of France in the selected areas of innovation,
- Attractiveness and competitiveness of regions,
- Effect on the actors and their cooperation (companies, laboratories, universities)

Project Funding:
- Strengthening of R&D activities in companies with higher use of resources (professionals and auto financing)
- Better cooperation between firms and research institutions and other companies.
- Has the French cluster initiative increased the willingness to invest in the French regions (no shifting of the location to other countries)?

In the future:
- Successful commercialization of new innovative products / services / processes resulting from R&D projects of the clusters
- Patents
- Creation of added value for the cluster participants
- New jobs
- Creation of new companies

For the „Pôles"
- Economic and Technological Strategy
- Growth 2005-2008 compared to the objective
- Office / management
- Service / support for SMEs and Entrepreneurship,
- R&D projects
- Cooperation between enterprises, research and educational institutions,
- Local cooperation with regional actors and their first effects on the structure and attractiveness of the regions
- Business development partnerships and internationalization via research,
- Education and training
- Infrastructure
- Environmental and sustainability.

2.7.2.7 CONTEXT OF THE PROGRAM

The cluster program "Pôles de Compétitivité" is highly ranked in the overall economic strategy of France and very important among French R&D and innovation programs.

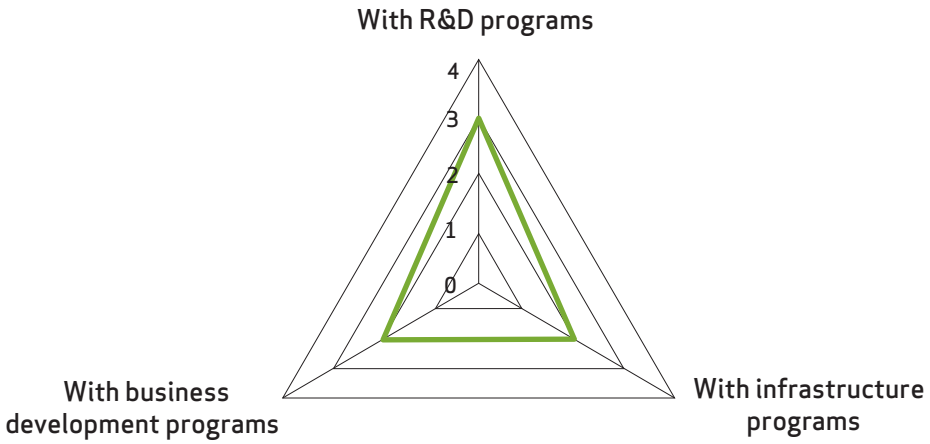
Table 10: Relevance of the Pôles de Compétitivité program in the overall policy setting

How important is the cluster program in relation to…	0	1	2	3	4
…the overall national economic/industrial development strategy?	•	•	•	X	•
…other R&D/innovation programs?	•	•	•	•	X

0 = not important at all ==> 4 = very important

In line with the high relevance of the program in the overall national policy context, the coordination of the program is strong (with R&D programs) to medium (with business development programs and infrastructure programs) (see figure 17).

Figure 17: Coordination of the Pôles de Compétitivité program with other funding programs



0 = coordination is weak ==> 4 = coordination is strong

2.8 GERMANY

2.8.1 INITIATIVE KOMPETENZNETZE DEUTSCHLAND (COMPETENCE NETWORKS GERMANY)

NAME OF PROGRAM	INITIATIVE KOMPETENZNETZE DEUTSCHLAND (COMPETENCE NETWORKS GERMANY)
COUNTRY	Germany
CONTACT DETAILS	Management Agency Competence Networks Germany VDI/VDE Innovation + Technik GmbH Dr. Gerd Meier zu Köcker Steinplatz 1 10623 Berlin Tel. +49 30 31 00 78 118 E-Mail: mzk@vdivde-it.de
INTERNET	www.kompetenznetze.de The initiative was terminated in April 2012. However, for informatory reasons the description of this program remains in this report.

2.8.1.1 OBJECTIVES AND RATIONALE OF THE PROGRAM

The underlying rationale of the Competence Networks Germany was to create a "League of the best innovation networks of Germany". Being member of this initiative as a cluster was a quality label. The overall objective of the program was to

- Facilitate intensive networking between industry and science to increase the innovation capacity and international competitiveness of German industry;
- Increase international visibility of the clusters and by this market Germany as an international innovation hub.

To put this into practice the Federal Ministry of Economics and Technology (BMWi) had established a dedicated management agency that supports members of the program with tailor-made services. The specific feature of the program was that it did not provide grant funding or any other kind of financial assistance to clusters or cluster management organizations. Support of clusters and in particular cluster management organizations was provided by the management agency through a wide array of different services and technical assistance measures. They included for example working groups and individual support, workshops and conferences, benchmarking, marketing and public relations and support with internationalization activities. Services and technical assistance measures were offered only to the members of the program and were provided free of charge.

In order to become a member cluster management organizations had to apply for membership. Criteria for membership were history and development momentum of the cluster, a clear thematic focus, degree of institutionalization, tasks and activities of the cluster management organization, composition and interaction of members and degree of internationalization.[22] Members could also be excluded from the program if they did not meet the quality standards. The decision, whether membership is granted or not, was taken once a year by an independent advisory council whose members are appointed by the Federal Ministry of Economics and Technology (BMWi). Members were well-

22 For a detailed overview of membership criteria please see www.kompetenznetze.de/initiative/die-aufnahme/aufnahmekriterien_initiativekompetenznetzedeutschland.pdf

2.8.1.2 TARGET GROUP OF THE PROGRAM

The target groups of the program included well-developed and matured clusters represented by a cluster management organization that have a sound potential for innovation and growth.

2.8.1.3 TERM OF THE PROGRAM, FINANCIAL ASPECTS AND APPLICATION PROCEDURE

TERM OF THE PROGRAM	1997 - 2012
Budget	EUR 1 Million p.a. for the operation of the management agency
Type of funding	Technical assistance
Does the program have a specific technology focus?	No
Are there calls for proposals?	n.a.
Is there a dialogue with applicants about the improvement of their application prior to the final submission of the application?	Yes
Maximum funding period for a project	n.a. as the program did not support clusters through direct funding
Is there a maximum amount of funding an applicant can apply for?	n.a. as the program did not support clusters through direct funding
Financing structure of projects	n.a. as the program did not support clusters through direct funding
Most important evaluation criteria for project proposals	n.a.

respected representatives from industry and research. The advisory council also participated in the strategic development of the program as such.

2.8.1.4 INSTRUMENTS

The program provided neither grant funding, nor any other kind of financial assistance to clusters or cluster management organizations. It provided only technical assistance for cluster management organizations and cluster members through its management agency. The wide range of technical assistance support included the following measures:

- Thematic working groups on financing (e.g. service development, controlling), innovation Management (development of a tool box for innovation management), ICT Clusters (international competence atlas), cluster management excellence and quality and impact assessment of clusters in the field of energy and environment. The working groups meet on a regular basis and respond to the interests expressed by the cluster management organizations. The program is flexible and can set up additional working groups any time.

- Individual support for cluster management organizations, including support with strategy development, advise on restructuring and mergers and cooperation.

- Workshops and conferences on topics such as public relations, further education and training, cluster management excellence, intellectual property rights, sustainability of cluster development or cluster cooperation with emerging economies. Like the working groups workshops and conferences respond to the interests expressed by the cluster management organization.

- International networking with other clusters or relevant stakeholders; recent examples include a joint workshop of Competence Networks Germany with the Norwegian Centers of Expertise on internationalization of clusters, participation in the South Korea – Korean Scientific Cooperation Network with the European Research Area (KORANET), a meeting with an economic delegation from Shanghai, presentations of competence networks at international conferences, cooperation with other funding initiatives, e.g. Energy Efficiency Export Initiative of the Federal Ministry of Economics and Technology, and ad-hoc contact brokering for members of competence networks.

- Benchmarking and quality labeling since 2007. The program is also participates through its management agency in the European Cluster Excellence Initiative.

- Publications and studies, e.g. on cluster management excellence, development of cluster management organizations and internationalization activities. [23]

2.8.1.5 RESULTS AND IMPACT OF THE PROGRAM

There were approx. 100 clusters in the program. They were represented by their cluster management organizations; through the clusters more than 450 Non-SME and more than 6,000 SME, more than 1,600 R&D institutions and universities and more than 1,000 service providers benefitted from the program.

The program had a number of positive effects that contributed to the achievement of the program objectives. An evaluation of the program made the following conclusions:[24]

- The quality of the cluster management organization's work has improved and has contributed to an improved collaboration between the cluster members through exchange of information and guidance.

- The reputation of individual members and of the cluster as whole improved which translated into a greater visibility and recognition among policy makers and potential partners.

- Cooperation with other clusters and stakeholders both from Germany and abroad has increased.

- Members of the cluster experienced a boost of their motivation and contribute more actively to the work of the cluster.

2.8.1.6 CONTEXT OF THE PROGRAM

Although the program was an important cluster program of the Federal Government its relevance in the overall policy context was, according to program officials, rather limited (see Table 11), which was also reflected in its coordination with other funding programs (see figure 18).

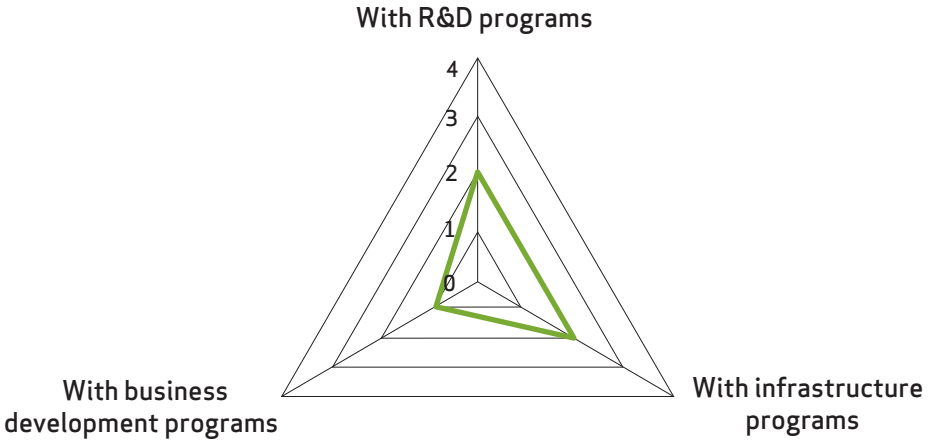
Table 11: Relevance of Kompetenznetze Deutschland in the overall policy setting

How important is the cluster program in relation to…	0	1	2	3	4
…the overall national economic/industrial development strategy?	•	•	X	•	•
…other R&D/innovation programs?	•	•	X	•	•

0 = not important at all ==> 4 = very important

23 For a list or download of publications that are available in English see www.kompetenznetze.de/the-service/order-service.
24 Federal Ministry of Economics and Technology, 2009: Endbericht Evaluation von Konzeption und Wirkungen der BMWi-Initiative "Kompetenznetze Deutschland", pp. 37-41

Figure 18: Coordination of Kompetenznetze Deutschland with other funding programs



2.8.2 PROJECT „GO-CLUSTER“

NAME OF PROGRAM	PROJECT „GO-CLUSTER“
COUNTRY	Germany
CONTACT DETAILS	VDI/VDE Innovation + Technik GmbH Steinplatz 1 10623 Berlin Tel. +49 30 31 00 78 118 E-Mail: mzk@vdivde-it.de
INTERNET	www.go-cluster.de

2.8.2.1 Objectives and Rationale of the Program

The Federal Ministry of Economics and Technology started with the new cluster policy project “Go-Cluster” on 1 July 2012. The project is based on the success and outcomes of the Competence Networks Germany. Furthermore, it includes new findings concerning national and international cluster policy as well as the progress the best regional clusters in Germany made in the last few years.

The project “Go-Cluster“

- represents a future-oriented cluster policy
- gives an impetus to the improvement of cluster managements.
- encourages innovative services.
- increases the international visibility of clusters.
- actively shapes cluster processes in Germany and Europe.

2.8.2.2 TARGET GROUP OF THE PROGRAM

The target groups of the program are well-developed and matured clusters represented by a cluster management organization that have a sound potential for innovation and growth.

2.8.2.3 TERM OF THE PROGRAM, FINANCIAL ASPECTS AND APPLICATION PROCEDURE

TERM OF THE PROGRAM	2012 - 2014
Budget	EUR 1 Million p.a. for the operation of the management agency
Type of funding	Technical assistance
Does the program have a specific technology focus?	No
Are there calls for proposals?	n.a.

Is there a dialogue with applicants about the improvement of their application prior to the final submission of the application?	Yes
Maximum funding period for a project	n.a. as the program did not support clusters through direct funding
Is there a maximum amount of funding an applicant can apply for?	n.a. as the program did not support clusters through direct funding
Financing structure of projects	n.a. as the program did not support clusters through direct funding
Most important evaluation criteria for project proposals	n.a.

2.8.2.4 INSTRUMENTS

The program does not provide financial assistance to clusters or cluster management organizations. Instead, it provides technical assistance for cluster management organizations and cluster members.

Activities/instruments within the project include:

- The national and international networking among cluster managements and at program level
- The implementation of an online-based "national cluster platform" for a transparent presentation of the federal and state cluster policy
- The implementation of regular, standardized performance comparisons in analogy to the quality criteria the European Cluster Excellence Initiative
- The development of qualification measures for the achievement of the required European quality level for excellent cluster managements
- The implementation of the process for funding innovative, risky service concepts, which are developed by cluster managements in the framework of their own cluster development and alternatively for the support of the cluster actors.

VDI/VDE Innovation + Technik GmbH is the program manager for the implementation of the objectives of "Go-Cluster".

2.8.2.5 RESULTS AND IMPACT OF THE PROGRAM

Results and Impact of the program will be measured with the first evaluation first. As the program has started only recently, no results are available yet.

2.8.2.6 CONTEXT OF THE PROGRAM

Although the program is an important cluster program of the Federal Government, its relevance – similar to what has been stated for the preceding initiative Competence Networks - in the overall policy context is, according to program officials, rather limited, which also reflects in its coordination with other funding programs.

Table 12: Relevance of Go-Cluster in the overall policy setting

How important is the cluster program in relation to…	0	1	2	3	4
…the overall national economic/industrial development strategy?	•	•	X	•	•
…other R&D/innovation programs?	•	•	X	•	•

0 = not important at all ==> 4 = very important

2.8.3 ZENTRALES INNOVATIONSPROGRAMM MITTELSTAND – FÖRDERMODUL NETZ-WERKPROJEKTE (ZIM-NEMO) (CENTRAL INNOVATION PROGRAM SME – FUNDING MODULE NETWORK PROJECTS (ZIM-NEMO))

NAME OF PROGRAM	ZENTRALES INNOVATIONSPROGRAMM MITTELSTAND – FÖRDERMODUL NETZWERKPRO-JEKTE (ZIM-NEMO) (CENTRAL INNOVATION PROGRAM SME – FUNDING MODULE NETWORK PROJECTS (ZIM-NEMO))
COUNTRY	Germany
CONTACT DETAILS	Project Agency of the Federal Ministry of Economics and Technology (BMWi) VDI/VDE Innovation + Technik GmbH Ute Bornschein Steinplatz 1 10623 Berlin Tel. +49 30 31 00 78 382 E-Mail: ute.bornschein@vdivde-it.de
INTERNET	www.zim-bmwi.de

2.8.3.1 OBJECTIVES AND RATIONALE OF THE PROGRAM

The Zentrale Innovationsprogramm Mittelstand (Central Innovation Program SME) was incepted by the Federal Government in 2008 to cushion the effects of the global economic crisis by supporting SME in their efforts to maintain and develop international competitiveness. As a result of the support SME are expected to increase their near-to-market R&D activities and to commercialize R&D results in a shorter period of time. Furthermore, an increased collaboration between SME and research institutions is also expected as a result of the program.

The program consists of three funding modules, including the support of collaborative projects of SME (ZIM-KOOP), the support of individual projects of SME (ZIM-SOLO) and the support of network projects (ZIM-NEMO). The latter funding module, ZIM-NEMO, will be presented by this chapter in more detail as it supports the development of clusters.

The overall objective of ZIM-NEMO is to support the development of innovative networks that consists of at least six companies. In the context of this program networks are defined as contract-based collaboration between companies and institutions that support and complement each other in technology development activities.

2.8.3.2 TARGET GROUP OF THE PROGRAM

Target group of the program are SME that collaborate with other SME or research institutions in a network project.

2.8.3.3 TERM OF THE PROGRAM, FINANCIAL ASPECTS AND APPLICATION PROCEDURE

TERM OF THE PROGRAM	2008-2013
Budget	EUR 52.2 Million
Type of funding	Grant funding
Does the program have a specific technology focus?	No
Are there calls for proposals?	Project applications can be submitted at any time
Is there a dialogue with applicants about the improvement of their application prior to the final submission of the application?	Yes
Maximum funding period for a project	Three years
Is there a maximum amount of funding an applicant can apply for?	EUR 350,000
Financing structure of projects	Financial support from the program is declining in the course of the project: in the initial phase the project can be co-funded by public means with up to 90% of eligible costs to develop a network concept, but the share of public funding will be decreased in three steps in the course of the project duration when the network concept is implemented (70%→ 50% → 30%).
Most important evaluation criteria for project proposals	Impact on industry sector and companies SME focus or SME participation in activities Knowledge and/or technology transfer Budget (including share of private co-funding) Structure and members of consortium Market opportunities for innovation

2.8.3.4 INSTRUMENTS

ZIM-NEMO provides grant funding for management services that are related to the development of a network concept and for its implementation. The support can be granted for activities such as acquisition of network partners and corresponding contract negotiations, analysis of strengths and weaknesses of network partners, coordination of R&D projects and market research.

R&D projects that are direct result of these activities can be funded under the funding modules ZIM-KOOP and ZIM-SOLO of the Zentrale Innovationsprogramm Mittelstand (Central Innovation Program SME).

2.8.3.5 RESULTS AND IMPACT OF THE PROGRAM

There are no evaluation results available at the moment. Until 2009 50 network organizations have received financial support. They represent a total number of 29 Non-SME, 515 SME, 29 universities, 39 R&D institutions and 18 other stakeholders.

2.8.3.6 MONITORING AND EVALUATION SYSTEM

The program is evaluated on a regular basis.
The following indicators are used to monitor the performance of the program:

INDICATORS	
OUTPUT	• Number of networks • Number of participants • Activities • Work plan • Number of R&D projects • Continuation of the network after funding terminates
RESULTS	• Realized work plan • Number of R&D projects which resulted in new products, technical services and processes
IMPACT	• Market position and economic development: • Increased turnover and profit • Increased turnover and export of products that were developed in the course of the project • Number of created jobs

Beneficiaries are monitored by regular written reports prepared by the beneficiary.

2.8.3.7 CONTEXT OF THE PROGRAM

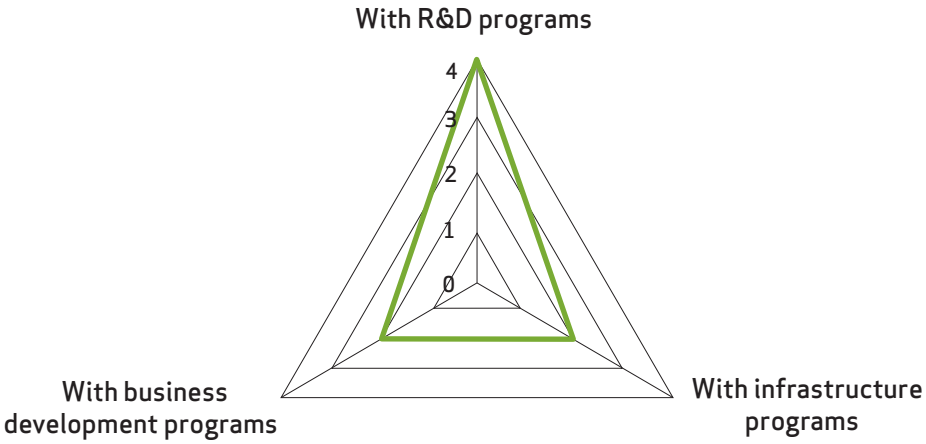
Although the program does not feature high in the overall policy context (see Table 13), its coordination with other R&D programs is excellent (see figure 19).

Table 13: Relevance of ZIM-NEMO in the overall policy setting

How important is the cluster program in relation to…	0	1	2	3	4
…the overall national economic/industrial development strategy?	•	•	X	•	•
…other R&D/innovation programs?	•	•	X	•	•

0 = not important at all ==> 4 = very important

Figure 19: Coordination of ZIM-NEMO with other funding programs



0 = coordination is weak ==> 4 = coordination is strong

2.8.4 CLUSTER OFFENSIVE BAYERN (BAVARIAN CLUSTER INITIATIVE)

NAME OF PROGRAM	CLUSTER OFFENSIVE BAYERN (BAVARIAN CLUSTER INITIATIVE)
COUNTRY	Germany, Free State of Bavaria (Federal State)
CONTACT DETAILS	Bavarian Ministry for Economic Affairs, Infrastructure, Transport and Technologie Dept. for Cluster Initiatives and Fraunhofer Society Dr. Rolf Bommer Prinzregentenstr. 28 80538 München Tel.: 0049 89 2162 22 79 E-Mail: rolf.bommer@stmwivt.bayern.de
INTERNET	www.cluster-bayern.de

2.8.4.1 OBJECTIVES AND RATIONALE OF THE PROGRAM

Through the Cluster Offensive Bayern the state government of the Free State of Bavaria supports the establishment and development of cluster management organizations in 19 industry fields that are key sectors of the Bavarian economy. The overall objective of the program is support the competitiveness of the Bavarian companies. This is to be achieved by pursuing the following operational objectives:

- Strengthening of the innovation capacity and dynamic through cooperation and improved and faster knowledge and technology transfer between science and industry for the benefit of commercialization of R&D results
- Increased productivity through cooperation and competition
- Strengthening of the attractiveness of the Free State of Bavaria and development of a brand

As a result of a comprehensive survey involving government departments and independent experts 19 industry areas were identified for the establishment of cluster management organizations. These industry areas are clustered in thematic areas and include within

- The thematic area "Mobility": automotive, railway technology, logistics and aerospace;
- The thematic area "Materials Engineering": new materials, chemical industry;
- The thematic area "Environment": biotechnology, medical technology, energy technologies, environmental technologies, forestry and wood, food industry;
- The thematic area "IT and electronics": information and communication technologies, sensor technologies, power electronics, mechatronics and automation;
- The thematic area "Services and Media": financial services and media.

Potential organizations for cluster managements were approached by the government in 2005/2006. In 2006 19 cluster organizations were established as a result of this top-down-process. In 2012 an external evaluation led to changes with respect to the single cluster organizations. However, the number of 19 field of cluster management is still unchanged.

2.8.4.2 TARGET GROUP OF THE PROGRAM

Target group of the program are companies that are located in the Free State of Bavaria.

2.8.4.3 TERM OF THE PROGRAM, FINANCIAL ASPECTS AND APPLICATION PROCEDURE

TERM OF THE PROGRAM	YEAR OF INCEPTION: 2006, NO DATE OF TERMINATION
Budget	EUR 6 Million p.a.
Type of funding	Grant funding and technical assistance
Does the program have a specific technology focus?	No
Are there calls for proposals?	There are no calls for proposals.
Is there a dialogue with applicants about the improvement of their application prior to the final submission of the application?	n.a.
Maximum funding period for a project	There is no maximum funding period.
Is there a maximum amount of funding an applicant can apply for?	No
Financing structure of projects	Max. 75 % funding from the program, share is already decreased in the course of implementation as clusters are expected to increase the share of private co-financing
Most important evaluation criteria for project proposals	Impact on industry sector and companies Share of private co-financing Structure and members of consortium

2.8.4.4 INSTRUMENTS

The key element of the program is grant funding for the operation of a cluster management organization. This includes financial support for staff and material costs as well as travel expenses and events. Over the years the program has included a preferential access for clusters to R&D money provided by a special cluster fund.

In addition to the grant funding the program owner is very active in accompanying the development of the individual cluster initiatives through different technical assistance and advisory measures. Meetings with cluster managers are held every two months to discuss challenges and progress of the clusters; in addition all cluster managers gather with the program owner for several days at an annual break away. The program owner also relies on external consultancy services, e.g. a work-shop on internationalization activities for cluster managers.

2.8.4.5 RESULTS AND IMPACT OF THE PROGRAM

The program is evaluated on a regular basis. An external evaluation in 2011 has analyzed the performance of the cluster organizations and has provided guidance for the further development of the program until 2015. The evaluation attests a good performance of the program. After five years of support the majority of the cluster organizations had yielded results in terms of the establishment of network structures and improved collaboration between industry stakeholders. The clusters played also an important role for the local respectively regional economic development. [25]

25 Fraunhofer Institut für System- und Innovationsforschung / Pöchhacker Innovation Consulting, 2011: Evaluation der Cluster-Offensive Bayern. Abschlussbericht Januar 2011

According to the program owners the program shows good results in terms of the growth of the clusters (which reflects their attractiveness for economic and research players), new products, services and/or processes as well as growth of turnover of companies.

2.8.4.6 MONITORING AND EVALUATION SYSTEM

The program is evaluated by independent consultants on a regular basis. A mid-term evaluation was carried out in 2008, followed by an evaluation in 2011.

The following indicators are used to monitor the performance of the program:

INDICATORS	
OUTPUT	• Number of members • Number of conferences and participants • Number of projects, participants and project volume • Acquired federal and EU funds • Number of meetings with members • Website visits
RESULTS	• Share of self-financing • Success stories
IMPACT	• Beneficiaries are monitored by regular written reports prepared by the beneficiary, IT-based monitoring through the program owner, regular independent evaluations and benchmarking exercises.

2.8.4.7 CONTEXT OF THE PROGRAM

The program is part of the innovation policy strategy of the regional government of the Free State of Bavaria. However, program officials assessed its relevance rather as average due to the relatively small budget of the program compared to its scope and duration.

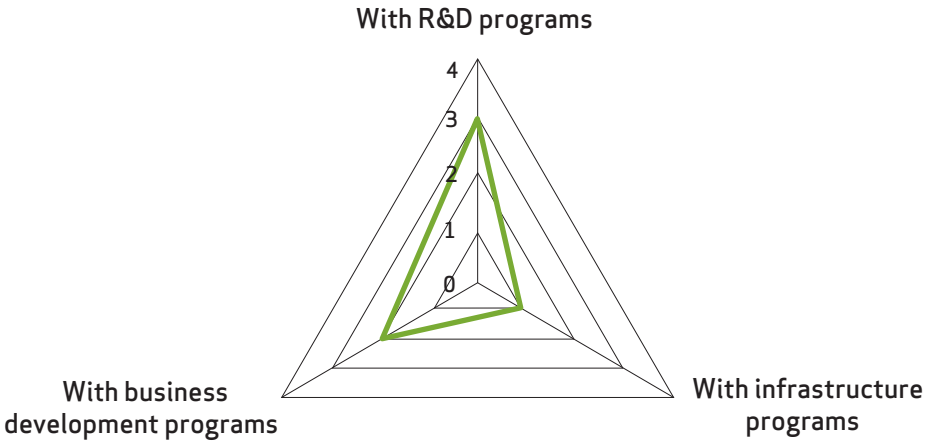
Table 14: Relevance of Cluster Offensive Bayern in the overall policy setting

How important is the cluster program in relation to…	0	1	2	3	4
…the overall national economic/industrial development strategy?	•	•	X	•	•
…other R&D/innovation programs?	•	•	•	X	•

0 = not important at all ==> 4 = very important

Asked about the coordination of the program with other funding programs program officials reported a good coordination with other R&D and business development programs, while the coordination with infrastructure programs was assessed as rather weak.

Figure 20: Coordination of Cluster Offensive Bayern with other funding programs



0 = coordination is weak ==> 4 = coordination is strong

2.8.5 CLUSTER POLICY STRATEGY OF THE FREE AND HANSEATIC CITY OF HAMBURG (GERMANY)

NAME OF PROGRAM	CLUSTERPOLITISCHE GESAMTSTRATEGIE (CLUSTER POLICY STRATEGY)
COUNTRY	Germany, Free and Hanseatic City of Hamburg (Federal State)
CONTACT DETAILS	Behörde für Wirtschaft, Verkehr und Innovation der Freien und Hanse-stadt Hamburg (Ministry of Economics, Transport and Innovation) Stabsstelle Clusterpolitik (Staff Unit Cluster Policy) Gönke Tetens Alter Steinweg 4 20459 Hamburg Tel: +49 40 428 41 1429 E-Mail: goenke.tetens@bwvi.hamburg.de
INTERNET	www.hamburg.de/cluster

The foundation for The Free and Hanseatic City of Hamburg's cluster policy strategy was laid in 2002 in the overall concept of economic development "Metropole Hamburg – Wachsende Stadt" (Metropolis of Hamburg – A Developing City). This long-term concept calls for the further development of those cluster initiatives which were already established in 1997 (cluster initiative "IT and Media") and in 2001 (cluster initiative "Aerospace") as public-private-partnerships of the city's government and stakeholders from the science sector and industry. The Life Science and Logistics cluster initiatives were founded in 2004 respectively 2006. As a result of the further development of the overall concept of economic development in 2008 (new title: "Hamburg. Wachsen mit Weitsicht" (Hamburg. Growth with Foresight), further cluster initiatives were established in 2009 (Health Care industry), 2010 (Creative Industries and Renewable Energies) and 2011 (Maritime Industries). All eight cluster initiatives are public-private-partnerships and are focused on industries - both traditional (such as maritime and aerospace) and new (such as creative industries) - that are considered to be key industrial sectors for the future economic development of the city of Hamburg.
In April 2010 the Senate (cabinet) of the Free and Hanseatic City of Hamburg approved the "Clusterpolitische Gesamtstrategie" (Cluster Policy Strategy) to utilize cluster initiatives for economic development even more. To achieve the overall objective of the strategy - medium and long term support of economic growth and employment - the strategy consists of six elements that are displayed in the figure below:

Figure 21: Elements of the cluster policy strategy

CLUSTER POLICY STRATEGY					
Guidelines for cluster initiatives	Standardized evaluation system	Further development of the cluster initiative portfolio	General cluster policy public relations	Cross-cluster networks	Cross-cluster projects

Source: Behörde für Wirtschaft, Verkehr und Innovation, 2011

According to responsible government officials, cluster policy is a very important element both in the context of the overall economic development strategy of the City of Hamburg and with regard to the existing R&D and innovation programs (see table 8).

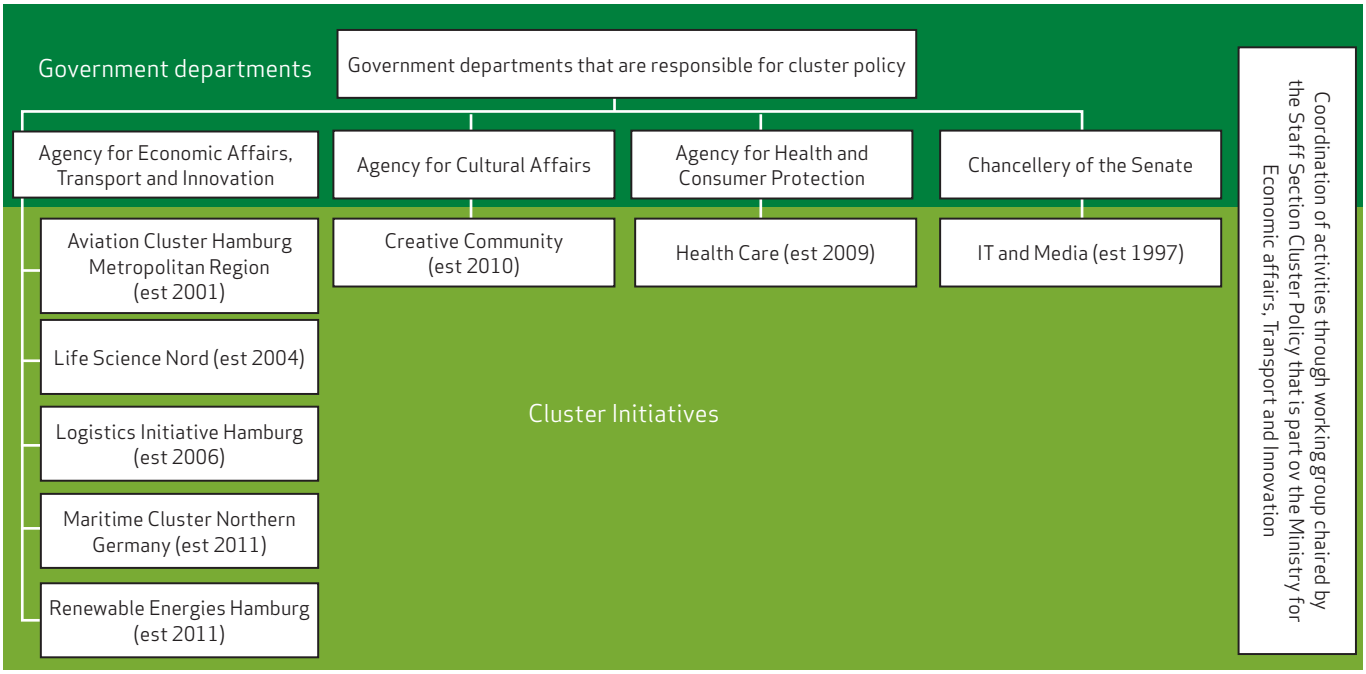
Table 15: Relevance of the cluster policy strategy in the overall policy setting

How important is the cluster program in relation to…	0	1	2	3	4
…the overall national economic/industrial development strategy?	•	•	•	•	X
…other R&D/innovation programs?	•	•	•	•	X

0 = not important at all ==> 4 = very important

Responsibility for cluster policy is shared between different government ministries within the Free and Hanseatic City of Hamburg (see figure below). While technical steering and financing of the cluster initiatives lies with various government ministries, overall coordination of cluster policy is the responsibility of the Staff Unit Cluster Policy within the Ministry of Economics, Transport and Innovation. To coordinate activities and facilitate best-practice sharing between the different government departments and cluster initiatives, a working group was established in 2010, chaired by the Staff Unit Cluster Policy of the Ministry of Economics, Transport and Innovation. The working group focuses in particular on thematic issues such as R&D and innovation, training and education, internationalization and strategy and controlling. It further coordinates inter cluster-projects to facilitate cross-fertilization for the development of new innovations and markets.

Figure 22: Organizational Framework of Cluster Policy in the Free and Hanseatic City of Hamburg



Cluster initiatives defined within the context of the cluster policy strategy are generally public-private-partnership projects involving the respective government department and relevant stakeholders from science and industry. While this opens access to funding e.g. for cluster management agencies, cluster projects are financed either through other cluster specific or noncluster specific programs from the Free and Hanseatic City of Hamburg, the Federal Government or the European Union; or they are financed and supported by other means. An excellent example is the Hamburg Center of Aviation Training (HCAT) of the Aviation Cluster Metropolitan Region Hamburg (www.hcat-hamburg.de), which is funded in cooperation between government ministries and industry. The Ministry of Economics, Transport and Innovation has developed a standardized evaluation system to evaluate cluster policy, cluster initiatives and cluster management – the implementation of the system is expected to start in 2012.

2.9 HUNGARY

2.9.1 CLUSTER DEVELOPMENT PROGRAM OF THE NEW SZÉCHENYI PLAN

NAME OF PROGRAM	CLUSTER DEVELOPMENT PROGRAM OF THE NEW SZÉCHENYI PLAN
COUNTRY	Hungary
CONTACT DETAILS	MAG - Magyar Gazdaságfejlesztési Központ Zrt. (Közreműködű Szervezet) Dr. Csaba Novák 1539 Budapest, Postafiók 684 Tel.: + 40 200-617 E-Mail: novak.csaba@magzrt.hu
INTERNET	http://en.magzrt.hu

2.9.1.1 Objectives and Rationale of the Program

The Hungarian Pole Program was a complex economic development program which was strongly built on the Pole cities in Hungary. The Pole cities are basically the regional capitals of the 7 Hungarian regions, the biggest towns in Hungary. It is important to note that Budapest and the Central Hungarian region has a very big share of the Hungarian GDP and R&D potential, therefore the Pole Program aimed at a balanced and leveled economic growth in all regions of Hungary.

From one hand the Pole Program meant the development of the business environment focusing on the Pole cities. The aim was to develop R&D and innovation infrastructure, improve the facilities of higher education institutes. Potential beneficiaries were companies, municipalities, universities or R&D institutes because the government strongly believed in the Triple Helix model.

From the other hand the Pole Program meant the cluster development, where support was targeted to motivate the cooperation of companies, clusters. The Pole Program Office ("PPO") worked out a four stage model to support clusters. The objective was to have 5-10 successful pole innovation clusters by 2013-2015 that have a significant market share in their respective market in Europe. These clusters should have strong and live international relations with foreign business and academia and should contribute substantially to the competitiveness of the Hungarian economy.
The first stage is to give support for start-up initiatives to start co-operation and to set up and operate a management organization. The subsidy for the projects was relatively low (max. EUR 0.15 Million) at this stage as compared to the other stages but it was sufficient for a two-year-long project focusing on cluster management.

The second step is the developing stage. Besides giving support to cluster management the focus is more on joint investments of cluster members with support reaching EUR 0.8 Million. These first two stages of the model are financed from the Regional OPs.

After the second stage there is an accreditation. The accreditation is a call that gave the cluster the right to move further up in the model. Having the accreditation title does not mean any financial support but it brings special rights for the cluster to apply for certain dedicated sources and earning plus points in various calls.

So the third stage is the level of accredited clusters. There the focus is already on joint innovation investments of clusters. It is important to note that only joint innovation investments are supported at this stage and not just joint investments, thus it is a real must to have innovation element in the projects. Support for projects could reach EUR 6 Million at this level.

The highest stage could have been the pole innovation clusters. This level would have been open only for those clusters that were successful in accreditation. The entry criteria for the 4th level were finally not issued. At this level it was intended to give support to joint R&D projects of cluster

members and clusters up to EUR 17 Million. The third stage of the model is financed from the Economic Development OP and the fourth one would have been financed from the Economic Development OP as well.

The Hungarian Accreditation System is in fact a measurement of cluster performance and not the measurement of cluster management. Although the PPO had certain expectations for cluster managers to comply with if they would like to go for the subsidies in the Pole Program, it was found that the PPO had developed a good system in the area of measuring cluster performance and of qualifying clusters in Hungary. The "Accredited Innovation Cluster" title had become an internationally known brand.

The Cluster Accreditation system was recognized as a good-practice by the European Commission.

The aim of the accreditation has been to select clusters that are able to reach significant international and domestic performance and are export-oriented and innovative and produce high added value. The accreditation has been a rigorous evaluation system. The structure of the evaluation system contained five categories: level and member of co-operation, business performance, R&D performance and strategic and operational plan. The accreditation certificate has been valid for 2 years, after that it needs to be renewed. The accreditation certificate entitles the clusters for advantages in a few calls for proposals at the Economic Development Operational Program but it did not mean any financial support for them.

In January 2011 a new overall long-term economic development strategy, the New Széchenyi Plan was announced in Hungary. Cluster development policy became part of the New Széchenyi Plan and the cluster development model underwent some changes in order to align with the new strat egy.

In the framework of the New Széchenyi Plan, new calls for application were launched in January 2011 in the Regional OPs supporting the start-up and developing stages of clusters.

As the third stage, the accreditation system of innovative clusters was also re-launched, key elements of modification were that that more emphasis on job creation and collaboration among members was given.

In the framework of Hungary's Economic Development Operational Program there has been grant programs also available for accredited clusters (Support for complex technological innovation of accredited clusters' member companies, Support for the joint technological innovation of Accredited Innovation Clusters).

In line with the simplification of the implementation system, Hungarian Pole Program Office under-went organizational changes, too. Since April 2011 it has become the part of her mother company, MAG - Hungarian Economic Development Center. A division which is called Cluster Development Office was set up within the organization of MAG and it took over the tasks from Pole Program Office.

2.9.1.2 TARGET GROUP OF THE PROGRAM

The following organization should benefit from the program: universities, R&D institutions, chamber of commerce, municipalities, companies (but mostly SME's)

2.9.1.3 TERM OF THE PROGRAM, FINANCIAL ASPECTS AND APPLICATION PROCEDURE

TERM OF THE PROGRAM	2007-2013
Budget	EUR 0.6 Billion
Type of funding	Grant funding and technical assistance
Does the program have a specific technology focus?	No
Are there calls for proposals?	Yes

Is there a dialogue with applicants about the improvement of their application prior to the final submission of the application?	Yes
Maximum funding period for a project	Max. 3 years
Is there a maximum amount of funding an applicant can apply for?	Yes, it is a 4 stage development system and at each development stage the max. amount of funding is different.
Financing structure of projects	Max. 50% funding from New Hungary Development plan (Economic Development OP, Regional Ops, Social Renewal OP) and private sources.
Most important evaluation criteria for project proposals	Structure and members of the cooperation and clusters Content of the joint investment SME participation Focus on innovation

2.9.1.4 INSTRUMENTS

The framework of the Hungarian Pole Program was the National Strategic Reference Framework, the New Hungary Development Plan for 2007-2013 financed from Structural Funds and the Cohesion Fund. The Pole Program was basically a coordination mechanism among the various operational programs of the New Hungary Development Plan. So it built on all those operational programs that are concerned directly or indirectly with economic development and infrastructure development of higher education institutions (mainly Economic Development OP, 7 Regional OPs, Social Infrastructure OP and Social Renewal OP).

Total financial sources of the Program building on the concerned operational programs reached EUR 1.7 billion in the seven-year-long time span from 2007 to 2013.

However, the Pole Program has only ensured a coordination mechanism between the different measures of the different OPs related to the development of Pole cities and clusters. Roughly EUR 1.1 billion was allocated for the horizontal economic development leg (the pole cities) of the Program and approx. EUR 0.6 billion to the cluster development leg. By mid-2010 (when a new government entered into power) approx. EUR 1 billion has been committed under the frame of the Pole Program.

The core idea behind the 4-stage development model was that clusters at different level of their maturity need different kind of assistance or support.

GRANTS UNTIL MID-2010:

Start-up cooperation - grant was available for the set-up and operation of the cluster management organizations and to limited joint investments. Cluster management organizations were eligible to apply for the open call. In the cluster at least 5 companies should have been members to make the cluster management organization eligible for application. It can be seen that this minimum eligibility criterion is very loose and the applicants represented rather start-up co-operations than clusters. The grant amount per project was approx. EUR 200,000. The rate of support was 80% for the cluster management and maximum 50% for the joint investments.

Developing clusters - grant was available for the operation of the cluster management organizations for deepening the business relations of cluster members and for joint investments. In this call, compared to the call for the start-up co-operation the joint investment was in the focus. The cluster needed to have at least a 1-year-long track record so that the cluster management organization can apply. The grant amount reached EUR 800,000, from which the support to the cluster management organization was limited to EUR 200,000; the rest of the grant amount had to serve the joint investment of the cluster members. The rate of support was 80% for the cluster management and max. 50. for the joint investments.

Accredited cluster member companies

- grants were available for member companies of accredited clusters for joint innovation projects (EDOP-1.3.1/B). Only those innovation projects were eligible, in which companies co-operated in the innovation of new product/service. The grant amount per project was be-tween EUR 0.06-1.4 Million. The rate of support varied between 40%-60% based on the size of companies involved in the project (SME status). Eligible costs were R&D staff costs, purchase of know-how and services and marketing.

- grants were available for member companies of accredit clusters if they decided to set-up jointly a project company implementing an innovation project (EDOP-1.2.1). The beneficiary was the jointly established project company. The grant amount per project was between EUR 1-6 Million. The rate of support was between 40%-50% depending on the size of the project company (SME status). Eligible costs were R&D staff costs, purchase of know-how and services, investment and marketing.

GRANTS AFTER MID 2010:

Start-up cooperation

- grants are available for the set-up and operation of the cluster management organizations and to limited joint investments. Cluster management organizations are eligible to apply for the call. In the cluster at least 10 companies should have been members to make the cluster management organization eligible for application. It can be seen that this minimum eligibility criterion is still fairly loose and the applicants can represent rather start-up co-operations than clusters. The grant amount per project is approx. EUR 200,000. The rate of support is 80% for the cluster management and max. 50% for the joint investments (Grant value and rate of support varies in the different Hungarian regions).

Developing clusters

- grants are available for the operation of the cluster management organizations for deepening the business relations of cluster members and for joint investments. In this call, compared to the call for the start-up cooperation the joint investment is in the focus. The cluster needs to have at least a 1-year-long track record so that the cluster management organiza tion can apply. The grant amount reaches EUR 800,000, from which the support to the cluster management organization is limited to EUR 200,000; the rest of the grant amount had to serve the joint investment of the cluster members. The rate of support is 80% for the cluster management and max. 50. for the joint investments. (Grant value and rate of support varies in the different Hungarian regions.)

Accredited cluster member companies

- grants are available for member companies of accredited clusters for joint innovation projects (EDOP-1.3.1/B). Only those innovation projects are eligible, in which companies co-operate in the innovation of a new product/service. The grant amount per project is between EUR 0.05-1.7 Million. The rate of support is max 55%. Eligible costs are R&D staff costs, purchase of know-how and services, investment in infrastructure and machinery and marketing.

- grants are available for member companies of accredited clusters if they decided to set-up jointly a project company implementing an innovation project (EDOP-1.2.1). The beneficiary is the jointly established project company. The grant amount per project was between EUR 0.3-3.3 Million. The rate of support is maximum 60%. Eligible costs are R&D staff costs, purchase of know-how and services, investment in infrastructure and machinery and marketing.

The utilization of innovation results for SMEs - grant is available for SMEs for innovation projects (EDOP-1.3.1C). This call is open for all SMEs that satisfy at least 3 innovation-type eligibility criteria from a set of 15. Being the member of an accredited cluster is such an eligibility criterion – this way accredited cluster member companies are preferred in the call. The grant amount per project is EUR 17,000 – 83,000 whereas the rate of support is maximum 65%. Eligible costs are R&D staff costs, purchase of machinery and costs related to the intellectual property rights.

2.9.1.5 RESULTS AND IMPACT OF THE PROGRAM

Support worth of close to EUR 280 Million had been approved in the calls belonging to the cluster development pillar. Calls for proposals for the support of start-up and developing clusters had been published in May 2008 in the Regional OPs. There had been substantial interest in all regions for the calls, as a result of which altogether 100 start-up and developing clusters were granted support. The approved sum of support was EUR 13.2 Million. The accreditation call for innovation clusters had been published in May 2008, too. The Accreditation Committee had accredited 25 clusters altogether.

There is significant interest for the innovation calls dedicated solely to the accredited clusters. Until mid-2010 63 pro-

jects of 12 accredited clusters had been granted support. The support amount reaches EUR 45 Million.

Pole Coordination Bodies:

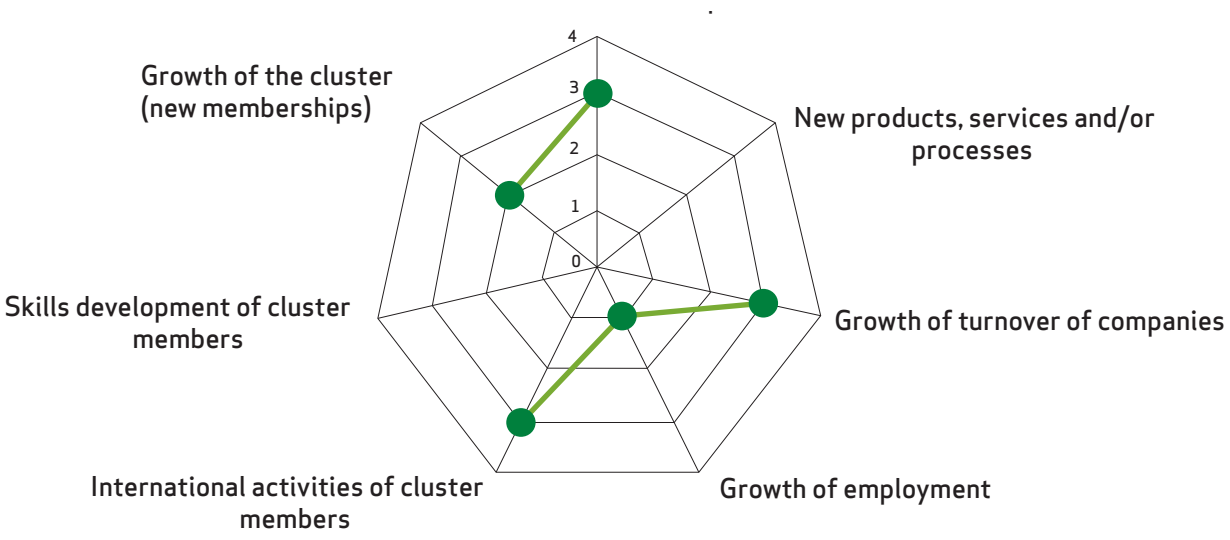
- Coordination Bodies had been set up in the pole cities in order to facilitate better information flow related to the investments and to have a forum for the functional level. These co-ordination bodies have an important role in the local implementation of the Pole Program in many aspects. On the one hand, they were a forum to harmonize the developments, to filter overlaps and to find synergies of the R&D infrastructure developments of the horizontal pillar of the Program. On the other hand, with respect to the economic development objective of the Program, the coordination body was a linkage between the two pillars of the Program, i.e. the favorable business environment of the pole cities and the companies operating in clusters. Clusters in Europe international cluster conferences were organized in January 2009 and 2010.

Inter-pole cooperation:

- In February 2009 a cooperation agreement had been signed by pole cities of Pécs, Szeged and Debrecen. Two Cluster Manuals were published.

The Hungarian cluster program has achieved an impact on several business indicators. A high impact could be observed with regard to the R&D investment of companies, with regards to the turnover of companies and with regard to the international activities of the cluster members (see figure 23).

Figure 23: Results of the program that were achieved in 2011



0 = results are poor ==> 4 = results are excellent

Missing values are due to the fact that there is no evidence available yet
This does not mean that there are no effects at all

2.9.1.6 MONITORING AND EVALUATION SYSTEM

INDICATORS	
OUTPUT	• Number of cluster initiatives • Number of partners and participants • Number of R&D&I projects • Number of international partners • More than 100 workshops, meetings, fora • "Clusters in Europe" international cluster conferences
RESULTS	• The 4 stage development system of which principles did not change. • Support worth of close to EUR 280 Million had been approved in the calls belonging to the cluster development pillar. • 100 start-up and developing clusters were granted support. The approved sum of support was EUR 13.2 Million. • The Accreditation Committee had accredited 25 clusters altogether. • 63 projects of 12 accredited clusters had been granted support. The support amount reaches EUR 45 Million. • Pole Coordination Bodies • Inter-pole co-operation • 2 Cluster Manuals • The Cluster Accreditation system was recognized as a good-practice by the European Commission.
IMPACT	• 25 accredited cluster • The total number of members of the cluster member companies was 728, of which there were 554 SMEs. • The aggregate revenue of the cluster member companies amounted to EUR 10.7 billion, which is approx. 10% of the GDP. • Aggregate number of employees in the accredited clusters reached 83,738, which is 2.2% of the total labour Hungarian labour force. • The accredited clusters together represented a fair share of the Hungarian economy and they jointly had an influence on the performance of the Hungarian economy.

2.9.1.7 CONTEXT OF THE PROGRAM

Asked to assess the importance of the program on a scale from 0 (not important at all) to 4 (very important) in relation to the overall economic/industrial development strategy and in relation to other R&D/innovation programs the program authority assigned a 4 to each of the two dimensions (see table below). Being an element of the overall national development strategy the program is an important element of the Hungarian economic and R&D support policy.

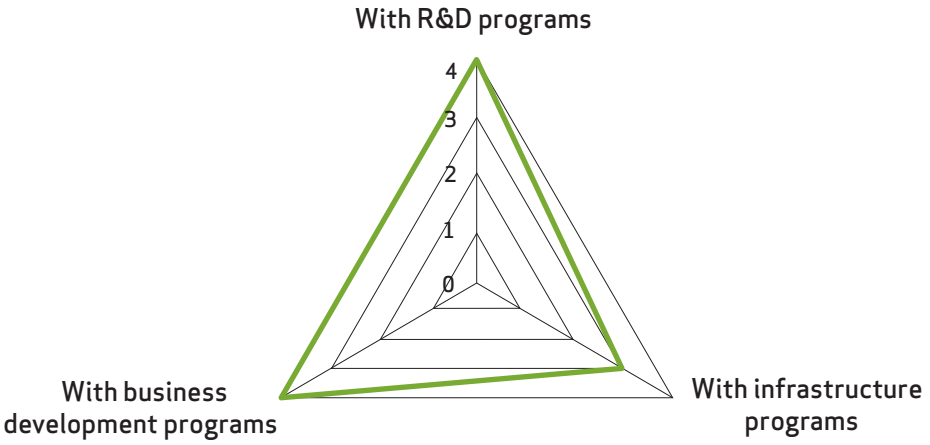
Table 16: Relevance of Hungarian Cluster Development Program in the overall policy setting

How important is the cluster program in relation to…	0	1	2	3	4
…the overall national economic/industrial development strategy?	•	•	•	•	X
…other R&D/innovation programs?	•	•	•	•	X

0 = not important at all ==> 4 = very important

This result is also reflected in the strong coordination with other funding programs as indicated in figure 24.

Figure 24: Coordination of the Cluster Development Program with other Hungarian funding programs



0 = coordination is weak ==> 4 = coordination is strong

2.10 ICELAND

2.10.1 VAXTARSAMNINGUR (GROWTH AGREEMENTS)

NAME OF PROGRAM	VAXTARSAMNINGUR (GROWTH AGREEMENTS)
COUNTRY	Iceland
CONTACT DETAILS	Ministry of Industry, Energy and Tourism Elvar Knútur Valsson Arnarhvoli 150 Reykjavík Tel. +354 545 8500 E-Mail: elvar.knutur.valsson@idn.stjr.is
INTERNET	www.vaxvest.is, www.vaxtarsamningur.is

2.10.1.1 OBJECTIVES AND RATIONALE OF THE PROGRAM

The overall objective of the program is to promote innovation and strengthen the competitiveness of regions through networking and cluster co-operation among firms, R&D institutions, universities, municipalities and the government. In order to achieve this objective the program pursues the following operational objectives:

- Strengthening of cooperation among companies, universities and government agencies to enhance innovation and development for companies and industries;
- Promotion and support of clusters and cluster initiatives in the region and regional expertise in predefined strongholds;
- Increasing the number of companies, jobs and supply of regional products and services;
- Support of export promotion activities;
- Participation in international projects with the aim of supporting regional strongholds;
- Attracting foreign direct investment and expertise knowledge.

The program puts specific emphasis on the support of regional competitive advantages, such as renewable energy, food, tourism, fisheries, agriculture, health technology, clean-tech and biotech.

In order to implement the program the Ministry of Industry concludes so-called "Growth Agreements" with regional development agencies. These growth agreements detail responsibilities of both ministry and regional development agency. While the ministry's role is restricted to supervising and the provision of funds for projects, the actual implementation lies with the regional development agency:

- The Ministry of Industry appoints five persons to a management board of each growth agreement and finances up to 50 per cent of eligible costs of individual projects that are developed in the context of the growth agreements.
- The regional development agency is responsible for the execution of the growth agreement. They publish open calls for proposals, process grant applications and propose projects to the management board for final evaluation. Administrative costs of the growth agreements shall be paid from the annual budget of the regional development agency that is financed through the state general budget.

2.10.1.2 TARGET GROUP OF THE PROGRAM

The target group of the program includes companies, R&D institutions, universities and municipalities that collaborate in joint initiatives for the benefit of regional development.

2.10.1.3 TERM OF THE PROGRAM, FINANCIAL ASPECTS AND APPLICATION PROCEDURE 2.10.1.3 TERM OF THE PROGRAM, FINANCIAL ASPECTS AND APPLICATION PROCEDURE

TERM OF THE PROGRAM	2010-2013 (CURRENT FUNDING PERIOD)
Budget	EUR 3.8 Million (ISK 645 Million)
Type of funding	Grant funding
Does the program have a specific technology focus?	No
Are there calls for proposals?	Three times a year
Is there a dialogue with applicants about the improvement of their application prior to the final submission of the application?	Yes
Maximum funding period for a project	There is no maximum funding period.
Is there a maximum amount of funding an applicant can apply for?	There is no maximum amount.
Financing structure of projects	Up to 50% funding from the program
Most important evaluation criteria for project proposals	Impact on industry sector and companies SME focus or SME participation in activities Structure and members of consortium

2.10.1.4 INSTRUMENTS

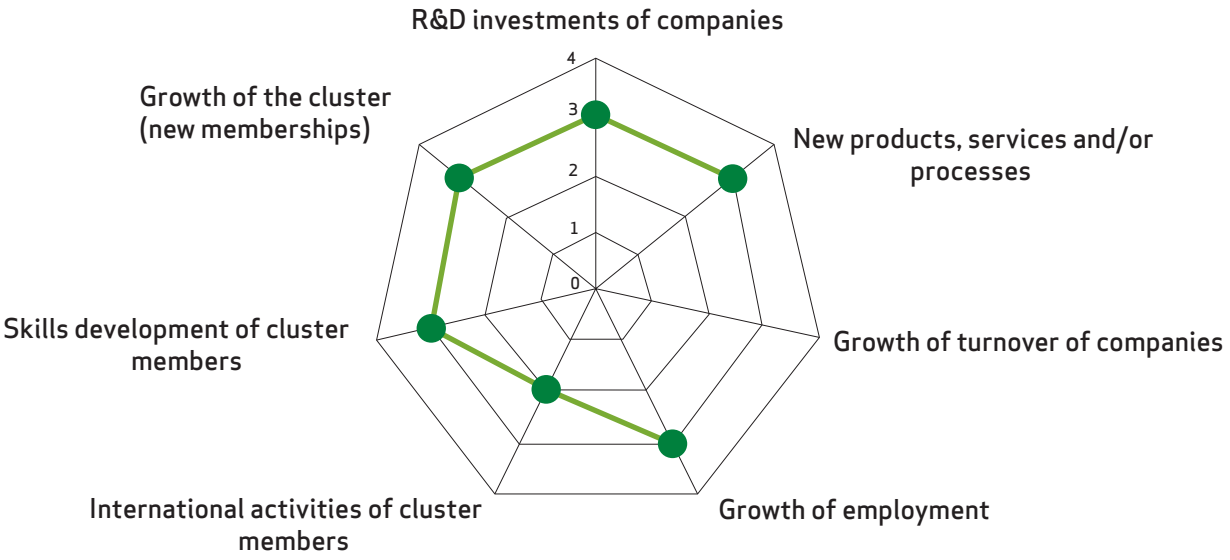
The program provides grant funding for projects that focus on innovation, research and development with clear focus of marketing/sale/exporting new or improved product and/or services.

Eligible costs include for example wages and benefits, external services, travel and meeting costs, marketing research, business planning, product/service development and export activities. The growth agreement does not finance investment in materials, equipment or other inputs which is part of product for sale as well as investment in production processes incl. buildings and related equipment.

2.10.1.5 RESULTS AND IMPACT OF THE PROGRAM

As of 2009 15 cluster organizations benefited from the program. 300 SME and 10 Non-SME as well as three universities and nine research institutions and 30 public entities participated in the one of the clusters. 16 R&D projects were supported by the program in 2009. Program officials label the program as quite successful in terms of R&D investment, new products/services, growth of employment, skills development and growth of the cluster initiatives (see figure).

Figure 25: Results of the program that were achieved in 2009



0 = results are poor ==> 4 = results are excellent

Missing values are due to the fact that there is no evidence available yet.
This does not mean that there are no effects at all.

2.10.1.6 MONITORING AND EVALUATION SYSTEM

The program is evaluated every 24 months.
The following indicators are used to monitor the performance of the program:

INDICATORS	
OUTPUT	• Number of new products and/or services • Number of PhD projects beneficial to private sector/cluster initiative in the region • Number of spin-offs • Qualitative measures: measuring of the economic value of the above mentioned indicators
RESULTS	• Number of cooperative/joint projects between companies • Number of triple-helix projects • Total number of companies actively participating in projects • Average number of participating companies in supported projects • Participating companies matching grant: private vs. public funding in per cent • Total amount of international grants/funding received (competitive calls for example) • Average budget of supported projects
IMPACT	• Number of jobs created linked to cluster initiatives • Number of spin-offs/start-up companies • Effect on unemployment rate • Qualitative indicator: perception of benefits (participants, stakeholders)

Beneficiaries are monitored by regular written reports prepared by the beneficiary, by regular meetings with the program owner and regular independent evaluations.

2.10.1.7 CONTEXT OF THE PROGRAM

Although the program is an important regional development program of the Ministry of Industry, Energy and Tourism, it has a rather medium relevance in the context of the overall national policy setting.

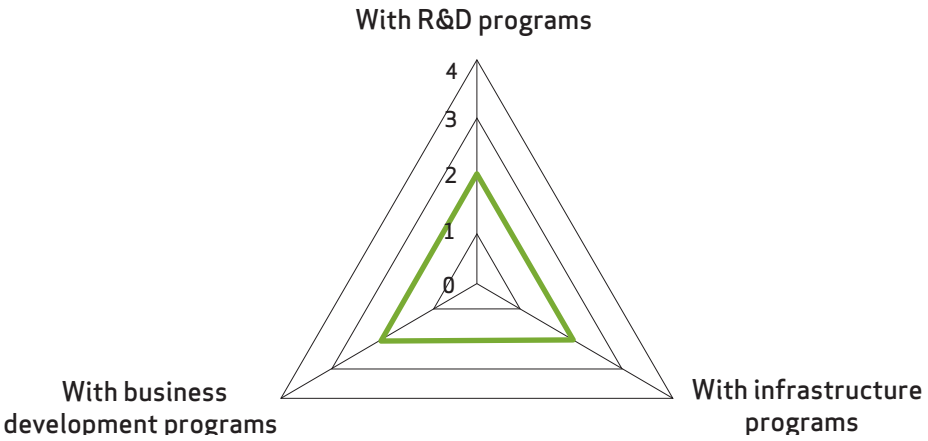
Table 17: Relevance of Vaxtarsamningur in the overall policy setting

How important is the cluster program in relation to…	0	1	2	3	4
…the overall national economic/industrial development strategy?	•	•	X	•	•
…other R&D/innovation programs?	•	•	X	•	•

0 = not important at all ==> 4 = very important

According to program officials the coordination of the program is neither weak nor strong. However, improvements in terms of effectiveness and efficiency of the program might be achieved through an improved coordination.

Figure 26: Coordination of Vaxtarsamningur with other national funding programs



0 = coordination is weak ==> 4 = coordination is strong

2.10.2 STRATEGIC RESEARCH PROGRAM FOR CENTERS OF EXCELLENCE AND RE-SEARCH CLUSTERS (RANNIS)

NAME OF PROGRAM	STRATEGIC RESEARCH PROGRAM FOR CENTERS OF EXCELLENCE AND RESEARCH CLUSTERS (RANNIS) COUNTRY ICELAND
COUNTRY	Iceland
CONTACT DETAILS	The Icelandic Center for Research (RANNIS) Thorvaldur Finnbjörnsson Head of Analysis, Evaluation and Indicators Laugarvegi 13 101 Reykjavik Tel. +354 515 5808 E-Mail: thorvald@rannis.is
INTERNET	www.rannis.is

2.10.2.1 OBJECTIVES AND RATIONALE OF THE PROGRAM

In December 2007 the Icelandic Science and Technology Policy Council (STPC) issued a decision that identified scientific and economic areas in which the country has the potential to achieve global competitiveness.[26] The collaboration of companies, universities, public institutions and social groups was considered as a key success factor in this regard. The STPC also concluded that high quality manpower, facilities and equipment is not available across all fields of science in a community counting approx. 5 thousand FTE's in research. International cooperation and interdisciplinary efforts are important countermeasures.

The STPC decision identified the following areas respectively actions as important spheres of activity:

- Reinforcing research on education with a view to develop the educational system and make it respond more swiftly to increasing demands of knowledge, efficiency, creativity, initiative and flexibility.
- Promoting innovation as a feasible alternative for investment and to encourage domestic and foreign investors to engage in the support of innovative companies including SMES.
- Facilitating research on the national heritage its old manuscripts, literary culture, language and contemporary culture along with the present emphasis on international efforts and image of Iceland as a dynamic forward-looking nation.
- Boosting research into successful alternatives in preventive efforts against social epidemics as well as in health improvement, rehabilitation, novel approaches in health services, pharmaceuticals and safe food.
- Increasing research in support of a sustainable utilization of natural resources on land, offshore and in the ocean.
- Increasing multidisciplinary research with extensive private support into the probable and extensive impacts on the natural and social environment through global warming.
- Increasing research on the infrastructures of our society with emphasis on its characteristics and uniqueness.
- Increasing attention towards creative industries in which innovation, on-the edge information technology, cultural activities and entertainment merge with economic activities and investment, creating new companies and job opportunities.

26 The Science and Technology Policy Council of Iceland: Challenges and Objectives in Science, Technological Development and Innovation, December 2007

In this context the Icelandic Center for Research (RANNIS), a government agency that reports to the Ministry of Education, Science and Culture, set up the program "Strategic Research Program for Centers of Excellence and Research Clusters" in 2008. The overall objective of this program is to reinforce science and technology research, encourage successful collaboration between different parties nationally, as well as internationally, and actuate value creation and investment in research and innovation in the economy. The centers of excellence or the research clusters that will receive financial support should have the chance to be outstanding internationally.

In a first round RANNIS called for proposals for centers of excellence or research clusters. To further develop these proposals up to ten of them could be supported with a grant of EUR 5,600 (ISK 1,000,000). They were offered to submit full proposals by October 2008. As of 2009, two to four grants will be offered for research and innovation collaboration. The maximum grant amount is 80 Million ISK per year for up to seven years. Funding was eventually granted to three Centers of Excellence and Research clusters: GEORG – Geothermal Research Group, IIIM – Icelandic Institute for Intelligent Machines and EDDA – Center of Excellence in Critical Contemporary Research at the University of Iceland.

2.10.2.2 TARGET GROUP OF THE PROGRAM

Target group of the program includes cluster-like collaborations between companies, universities and research institutions.

2.10.2.1 TERM OF THE PROGRAM, FINANCIAL ASPECTS AND APPLICATION PROCEDURE

TERM OF THE PROGRAM	2009-2015
Budget	EUR 6.8 Million (ISK 1.12 billion)
Type of funding	Grant funding
Does the program have a specific technology focus?	No
Are there calls for proposals?	Yes (there was a call at the beginning of the program)
Is there a dialogue with applicants about the improvement of their application prior to the final submission of the application?	Yes
Maximum funding period for a project	7 years
Is there a maximum amount of funding an applicant can apply for?	EUR 3.4 Million (ISK 560 Million)
Financing structure of projects	Up to 25 per cent
Most important evaluation criteria for project proposals	Impact on industry sector and companies Impact on society (non-economic effects) SME focus or SME participation in activities Technology or scientific area of cluster Knowledge and/or technology transfer

2.10.2.4 INSTRUMENTS

The program provides grant funding to support the establishment/operation of a cluster management organization, collaborative R&D projects, and commercialization of research results, SME participation, training and education and internationalization activities.

2.10.2.5 RESULTS AND IMPACT OF THE PROGRAM

Due to the young age of the program (it started in 2009) there are no results and impacts measur able at the moment. Funding is provided for three Centers of Excellence and Research clusters: GEORG – Geothermal Research Group, IIIM – Icelandic Institute for Intelligent Machines and EDDA – Center of Excellence in Critical Contemporary Research at the University of Iceland. All in all they include eight SME, three Non-SME, two universities, two R&D institutions and three training and education providers.

2.10.2.6 MONITORING AND EVALUATION SYSTEM

The program will be evaluated after three years. The following indicators are used to monitor the performance of the program:

Beneficiaries are monitored by written reports, regular meetings with the program owner and by regular independent evaluations.

INDICATORS	
OUTPUT	• Publications • Trainees • Start-ups
RESULTS	• Increased number of scientists in specific fields • Increased number of jobs • Increased number of start-ups • Educational benefits • International cooperation
IMPACT	• Sustainable clusters in the supported areas • Social and economic impact • Increased competitiveness in supported areas • International networking

2.10.2.7 CONTEXT OF THE PROGRAM

According to program officials the program is due to its "cluster nature" at an experimental stage. Although quite important from a policy point of view the moderate budget limits its relevance in terms of the overall policy setting.

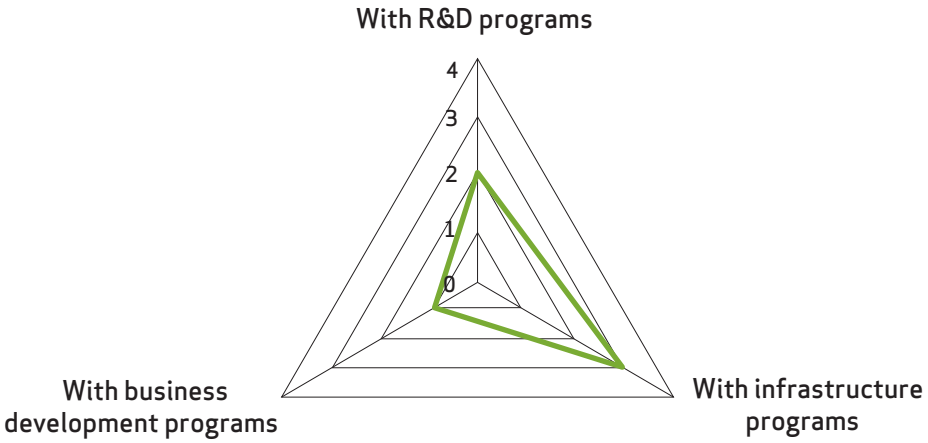
Table 18: Relevance of the Strategic Research Program for Centers of Excellence and Research Clusters in the overall policy setting

How important is the cluster program in relation to…	0	1	2	3	4
…the overall national economic/industrial development strategy?	•	•	X	•	•
…other R&D/innovation programs?	•	•	X	•	•

0 = not important at all ==> 4 = very important

Asked about the coordination of the program with other funding programs program officials reported a good coordination with infrastructure programs, while the coordination with business development programs was assessed as rather weak.

Figure 27: Coordination of the Strategic Research Program for Centers of Excellence and Research Clusters with other funding programs



0 = coordination is weak ==> 4 = coordination is strong

2.11 ITALY, REGION: PIEDMONT

2.11.1 REGIONAL OPERATIONAL PROGRAM - INNOVATION CLUSTERS PIEDMONT

NAME OF PROGRAM	REGIONAL OPERATIONAL PROGRAM - INNOVATION CLUSTERS PIEDMONT
COUNTRY	Italy, Region: Piedmont
CONTACT DETAILS	Regione Piemonte Elisa Peinetti Piazza Castello 165 Torino Tel: +39(0)114321660 E-Mail: UE.ricerca@regione.piemonte.it
INTERNET	www.regione.piemonte.it

2.11.1.1 OBJECTIVES AND RATIONALE OF THE PROGRAM

The Piedmont region was going to set up innovation poles in the territory, both in traditional sectors as well as high-tech sectors. The poles are composed of firms, research centers active in a specific sector and of a ‚management entity'. The objective is to promote innovation, not only through the interaction and the exchange of knowledge, experience and information among firms, but also through the use of common infrastructures. In addition, the innovation poles have the challenging role of interpreting and identifying firms' technological needs in order to guide future regional policy actions in support of research and innovation. With this initiative, the Piedmont region is stimulating R&D and innovation in its firms, valorizing the present assets, developing the internationalization processes and increasing the attraction of productive investments in the region.

2.11.1.2 TARGET GROUP OF THE PROGRAM

There are three target groups of the program. These are SMEs, large companies, and R&D&I service providers.

2.11.1.3 TERM OF THE PROGRAM, FINANCIAL ASPECTS AND APPLICATION PROCEDURE

TERM OF THE PROGRAM	2007-2013
Budget	Approx. EUR 90 Million
Type of funding	Grant funding
Does the program have a specific technology focus?	No
Are there calls for proposals?	Yes
Is there a dialogue with applicants about the improvement of their application prior to the final submission of the application?	Yes
Maximum funding period for a project	Max. 12 months
Is there a maximum amount of funding an applicant can apply for?	Max. EUR 20 Million
Financing structure of projects	Max. 50% funding
Most important evaluation criteria for project proposals	research projects innovation content investment for the acquisition of services

2.11.1.4 INSTRUMENTS

The ERDF Regional Operational Program aims at improving and steering Piedmont competitiveness and innovation capacities, broadening technology transfer to SMEs, promoting long term environmental sustainability while assuring economic growth, increasing production from renewable sources, energy efficiency, development of distracted areas, and requalification of deprived urban areas with a view to social inclusion. The model relies on a new technological paradigm, based on theories of growth-centered innovation processes and the strong cooperation between institutions (understood in their broadest sense, and not exclusively governments) and innovation.

The program is structured around three priorities:

Priority 1: Innovation and Production Transition
This priority aims at strengthening the regional innovation system, increasing technological transfer and cooperation among firms and research institutions.

This priority supports „Innovative platforms", promoted by groups of firms and research institutions, in strategic fields such as life sciences and biotechnologies, nanotechnologies, new materials, new energy sources and renewable energies.

It also supports „Innovation clusters", as well as industrial research projects, eco-innovation and ICT services for SMEs.

Priority 2: Sustainability and Energy Efficiency
This priority promotes greater efficiency in the use of energy resources (long-term sustainability) throughout the energy chain and supports production based on renewable sources (both form supply and demand side).

Priority 3: Territorial Development
This priority is characterized by a strong territorial approach and is implemented through integrated territorial programs focused on environmental and cultural heritage and integrated urban development programs for urban requalification and development.

The Priority 1 supports the following measures:

- innovation platform,
- innovation cluster,
- SME's innovation,
- eco-innovation,
- environment technologies adoption,
- innovation informatics services,
- ICT for SMEs.

Within this Priority 1, a specific measure was included for the creation of innovation clusters (called "Poli di Innovazione"). This measure was allocated an initial budget of EUR 60 Million and led to the creation of 12 innovation clusters, corresponding to 12 technological domains (Agro-food industry, Biotech and Biomedicine, Sustainable chemistry, New materials, Digital creativity and multimedia industry, Sustainable building and Hydrogen, Renewable Energies and Minihydro, Renewable Energies and Biofuel, Equipment, systems and components for renewable energies, Information & Communication Technology, Mechatronics and advanced production systems, Textile).

Each innovation cluster is coordinated by a managing authority responsible of running the cluster's activities. They are related to main reference territories, clusters members anyway are from the whole regional territory.

Innovation cluster was devised as a tool of development policy, aiming at creating, mobilizing and strengthening specific sectors (both traditional and emerging sectors), reflecting where the region wished to position itself in global competition with a mid-term perspective, building upon existing strengths and mobilizing the necessary commitment from all innovation stakeholders.

With a dedicated call for proposal, launched in 2009, Piedmont Region selected one cluster managing authority for each of the 12 domains previously identified.

Candidates submitted a candidature dossier containing a description of members, actions to be carried out through the clusters and an annual program, containing the technological frontier to be reached, the position of the planned cluster with regards to the foreseen development trends in the specific domain. The annual programs were also asked to propose a set of research and innovation projects to be developed by clusters members (alone or in partnership), to reach the technological frontier and assure the maintenance of the adequate development trends.

The first annual programs submitted by the 12 managing authorities received a total funding of 54 Million Euros, while 6 Million Euros were awarded to the managing authorities for setting-up the internal structures and organizing the innovation clusters activities.

In November 2010 a second call was launched for supporting the second annual programs of clusters. In addition to research and innovation projects, the second call also offered the opportunity for clusters and clusters members of applying for innovative services in the following fields:

- High quality services for widespread innovation: open innovation, IPR management, technology intelligence and living labs;
- Knowledge transfer services: PhDs fellowships, PhDs hiring, mobility between firms and universities, technology scouting and checkup;
- Entrepreneurial technology services: intangibles evaluation, proof of concept, financial and corporate consulting and financial networking;
- Pervading technology support: ICT and design.
- The second call for proposal awarded EUR 28 Million.

The Multi-year Plan for Piedmont Competitiveness (2011-2015) ("the Plan") is a re-programming exercise, aimed at jointly planning the activities to fund via ERDF ROP (the last resources available) and via the Regional Law 4/2006 "Regional system for research and innovation" (funds allocated by the Research and Innovation Plan 2011-2013).

Clusters remain one of the main tools of policy intervention, the concept of innovation cluster is adopted in the new plan.

The broader scope of the Plan had been reported to a set of three objectives:

- foster the internationalization of Piedmont economic system,
- enhance firms cooperation and aggregation
- achieve a deeper simplification in measures implementation.

The Plan introduced new measures for supporting innovation clusters and technology platforms, living lab and Smart&Clean technologies. An important point is dedicated to support the enterprises more affected and hit by the economic crisis (both for structural reasons, both due to the specific sector of activity).

The Plan sets out the Regional Government priorities for the next four years in terms of industrial and economic policy, research and innovation policy and higher education policy.

The Plan articulates detailed and integrated measures for each field of action. It is basically structured in the three areas:

- Support to firms competitiveness
- Finance and new forms of entrepreneurship
- Research, University and Innovation

Each area declined in a set of measures, the support to firms competitiveness has the follows:

- Innovation clusters
- Insurance fund for intellectual property rights exploitation
- Support to the adoption of innovations in production processes
- Support to the acquisition of companies in critical situation
- Re-industrialization fund
- Indirect support to new technologies and new materials demand
- Clusters and firms agglomerations
- Demonstrator projects

The whole allocation of the Plan amounts to EUR 500 Million, shared among the three areas as follow:

- companies competitiveness: EUR 200 Million
- new entrepreneurship and finance: EUR 100 Million
- research, university and innovation: EUR 200 Million

2.11.1.5 RESULTS AND IMPACT OF THE PROGRAM

Innovation clusters provide high added value infrastructures and services and, enable regional authorities to better identify technological needs of enterprises and consequently better shaping regional policies for research and innovation.

Piedmont was the first Italian Region to support the creation of Innovation clusters as a new policy tool to support the competitiveness of enterprises, promoting the sharing of knowledge between companies to develop innovative products and services.

8 out of 12 innovation clusters are managed by scientific and technological parks that in the past years received strong investments by the Region. These parks offered physical infrastructures, agglomerating different economic actors and offering both research and knowledge transfer services. They were conceived as a prop to the traditional industrial system and now they renewed their role in generating and maximizing clusters externalities.

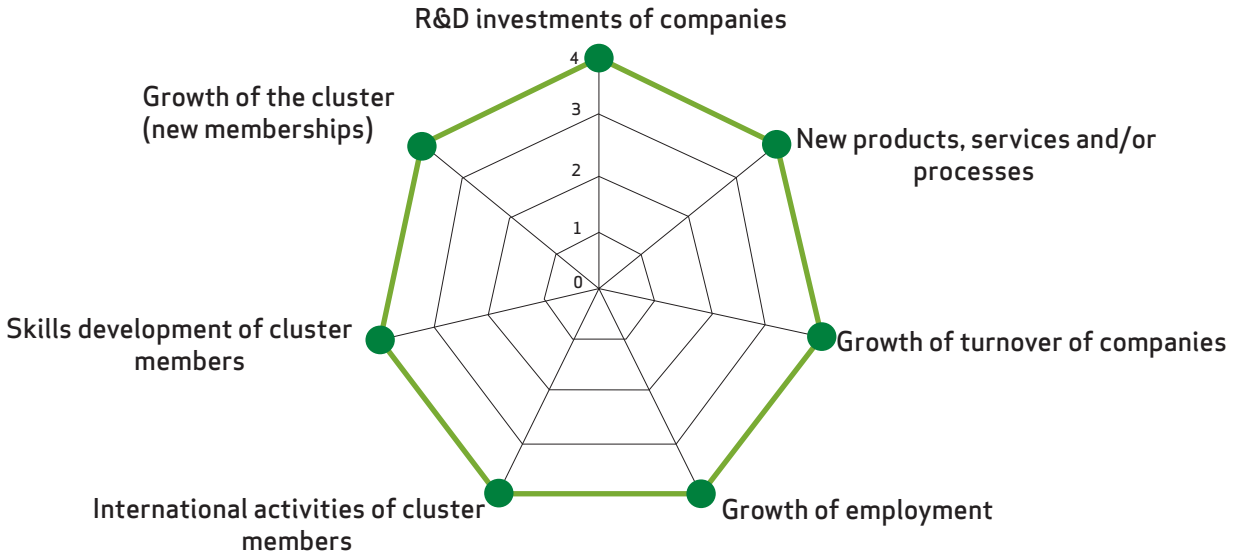
Between the first and second year from the launching of the first call, Innovation clusters activities grew by 30%, reaching nearly 1200 Piedmont firms associated to the 12 clusters, with an average of about 100 members per cluster and 95.000 employees involved.

The ERDF funds were essential to support the set-up of formal clusters in an economic and industrial environment characterized by non-formalized clusters and agglomerations still bounded to the model of industrial districts, mainly not focused on innovation and with low degree of coordination and integration.

Some factors could assure the clusters success in the future. First of all clusters are focused on specific industrial sectors and collect important players in their field. Secondly, the

actors involved in the measure are highly specialized in specific industrial activities. Lastly, many clusters can rely on scientific and technology parks as managing authorities, research infrastructures and R&D&I service providers.
The high impact of the cluster program can also be recognized on the indicators presented in figure 28.

Figure 28: Results of the program that were achieved in 2011



0 = results are poor ==> 4 = results are excellent

Missing values are due to the fact that there is no evidence available yet.
This does not mean that there are no effects at all.

2.11.1.6 MONITORING AND EVALUATION SYSTEM

INDICATORS	
OUTPUT	• number of partners and participants • number of networks • number of projects • number of innovation projects • number of competence projects • clusters are focused on specific industrial sectors • many clusters can rely on scientific and technology parks as managing authorities, research infrastructures and R&D&I service providers.
RESULTS	• 12 clusters • cluster-activities grew by 30%, • 222 projects • nearly 1200 Piedmont firms associated to the 12 clusters • with an average of about 100 members per cluster • 95.000 employees involved
IMPACT	• The actors involved in the measure are highly specialized in specific industrial activities. • In many industrial sectors (ICT, aerospace, automotive, biotech) there is a good technological level: export of technology (not incorporated in any good, patents, labels, know how, etc.) is worth each year at least half a billion Euros. The export from Piedmont is worth 15% of the total national export. • A strong and sound innovation generation system, wide variety of intermediaries and brokers, with strong reliability, several science parks and industrial parks. • Private level of R&D investment higher than the national average. • Piedmont ranks between the first and second position in Italy with respect to many innovation indicators (OECD). • Good level of internationalization of the economic system. • Compared to the other regions of the country, Piedmont has a good number of foreign multinational companies: there are 600 foreign companies with operative base in Piedmont.

2.11.1.7 CONTEXT OF THE PROGRAM

Asked to assess the importance of the program on a scale from 0 (not important at all) to 4 (very important) in relation to the overall economic/industrial development strategy and in relation to other R&D/innovation programs the program authority assigned a 4 to each of the two dimensions (see table below). Thus, the program is an important element of the Piedmont economic and R&D support policy.

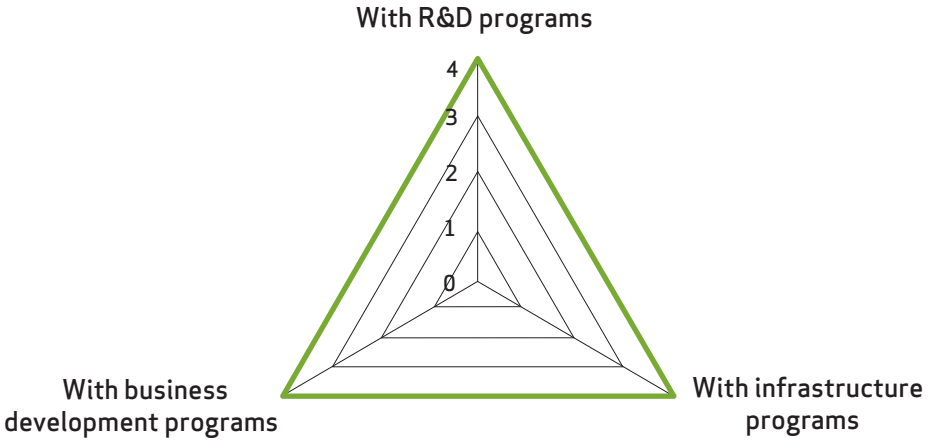
Table 19: Relevance of Innovation Clusters, Piedmont, Italy in the overall policy setting

How important is the cluster program in relation to…	0	1	2	3	4
…the overall national economic/industrial development strategy?	•	•	•	•	X
…other R&D/innovation programs?	•	•	•	•	X

0 = not important at all ==> 4 = very important

This corresponds to the very strong coordination of the Innovation Clusters program in Piedmont with other funding programs (see figure 29).

Figure 29: Coordination of Innovation Clusters, Piedmont, Italy with other funding programs of the Piedmont region



0 = coordination is weak ==> 4 = coordination is strong

2.12 LATVIA

2.12.1 CLUSTER PROGRAM

NAME OF PROGRAM	CLUSTER PROGRAM
COUNTRY	Latvia
CONTACT DETAILS	Investment and Development Agency of Latvia Daina Cālīte Pērses 2 1442 Riga Tel.: + 371 67039425 E-Mail: daina.calite@liaa.gov.lv
INTERNET	www.liaa.lv/lv/es_fondi/projektu_istenosana/klasteru_programma/

2.12.1.1 OBJECTIVES AND RATIONALE OF THE PROGRAM

The main objective of the "Cluster Program" (2012-2015), as stated in regulation governing the program implementation[27], is to promote cooperation between unrelated companies operating in specified sectors and research, educational and other institutions, thus promoting increase of export volumes and competitiveness of entrepreneurs as well as development of new products.

The "Cluster program" (2012-2015) is a follow-up of activities initiated by the Latvian Ministry of Economics in years 2009, 2010 and 2011 aimed to support elaboration of industrial cluster development strategies under the state budget program "Cluster development program". In the years 2009-2011 support was provided for development of cluster strategies and clustering activities in sectors like: electronics, chemistry and pharmacy, metalworking and machinery, ICT, transports & logistics, space.

Policy focus:

The "Cluster Program" has been developed in line with the "Latvian Entrepreneurship Competitiveness and Innovation Promotion Program for 2007-2013" as well as with the "National reform program of Latvia for implementation of the "Europe 2020" strategy".

The "Cluster Program" (2012-2015) has been designed by the Latvian Ministry of Economics and is implemented by Investment and Development Agency of Latvia. The program budget in the period 2012-2015 amounts to 4.8 Million euros. The program is implemented as part of the Operational Program "Entrepreneurship and Innovation" and is co-financed by the European Regional Development Fund (ERDF).

The "Cluster Program" (2012-2015) grants will be provided based on open application procedure. The support will be provided according to the de minimis rules. Support intensity for the cluster management activities[28] is 90% and for providing cluster services to collaboration partners[29] is 85% of the total costs.

27 Regulation No.788 of the Cabinet of Ministers of 11 October 2011 http://www.likumi.lv/doc.php?id=238455 (In Latvian)

28 Coordination of cluster and cluster partners activities; promotion of international cooperation of cluster; visibility and marketing activities of the cluster, including market research activities and industry development studies; trainings of cluster coordinator and specialists, if knowledge is regularly transferred to a wide range of cluster members; measures to foster cooperation between educational and scientific institutions; training of collaboration partners (entrepreneurs), identification of research and infrastructure needs.

29 Planning and development of new products, technologies and services; marketing and trade cooperation promotion activities; measures that focus on resource efficiency and productivity of the industry or value chain; other measures to boost competitiveness of collaboration partners

2.12.1.2 TARGET GROUP OF THE PROGRAM

- Industry unions, SMEs, large companies;
- R&D and higher education institutions, vocational education institutions;
- Other potential cluster partners (local authorities (e.g. city municipalities), governmental institutions, NGOs etc.)

2.12.1.3 TERM OF THE PROGRAM, FINANCIAL ASPECTS AND APPLICATION PROCEDURE

TERM OF THE PROGRAM	2007-2015
Budget	"Cluster program" (2012-2015): EUR 4.8 Million (ERDF) "Cluster development program" (2009-2011): EUR 0.75 Million (State budget)
Type of funding	Grant funding
Does the program have a specific technology focus?	No
Are there calls for proposals?	No. There was just 1 call in spring 2012 but in the previous "Cluster development program" (2009-2011) support was provided also for development of cluster operation strategies.
Is there a dialogue with applicants about the improvement of their application prior to the final submission of the application?	Yes (counseling, advisory services)
Maximum funding period for a project	3 years
Is there a maximum amount of funding an applicant can apply for?	Yes. Max. EUR 0.42 Million per one cluster and max. EUR 14,000 or one collaboration partner.
Financing structure of projects	Cluster management activities up to 90% • Cluster services provided for collaboration partners up to 85%

Most important evaluation criteria for project proposals	Eligibility Criteria: • Project shall represent at least 20 single or related industries enterprises as partners; • Total number of workers in enterprises (collaboration partners) is not less than 200; • Total net sales in average for the last three years in enterprises (collaboration partners) is not less than 45 Million euros per year; • Involvement of at least one educational or research institution. Quality Criteria • Relevance of the project in terms of defined priority sectors; • Impact of the project in terms of achieving the objective of the Latvian cluster program and impact on the development of the involved companies (incl. growth in export sales); • Previous experience of the project team in implementa tion of the collaborative activities; • Quality of the cluster strategy and action plan; • Competence of the project manager (knowledge and experience).

2.12.1.4 RESULTS AND IMPACT OF THE PROGRAM

Evaluation of the project proposals submitted is currently on going (June-July, 2012). It is planned that contracts with selected clusters for funding will be signed in August-September 2012.

2.12.1.5 MONITORING AND EVALUATION SYSTEM

INDICATORS	
OUTPUT	• Number of project applications and approved projects; • Number of partners and participants; • Number of R&D and higher education institutions as partners; • Number of cluster initiatives focused on specified priority sectors.
RESULTS	• Increase of the cluster collaborative partners export volume; • Productivity of cluster collaboration partners labor force (added value/number of employees); • Increase of cluster collaboration partners R&D investment.

IMPACT	At the level of national economy/society: • Increased export volume; • Increased labor force productivity; • Increased level of cross-sectoral co-operation in R&D; • Increased private investments in R&D.

2.12.1.6 CONTEXT OF THE PROGRAM

Asked to assess the importance of the program on a scale from 0 (not important at all) to 4 (very important) in relation to the overall economic/industrial development strategy and in relation to other R&D/innovation programs the program authority assigned a 4 to the first of the two dimensions and a 3 to the second dimension (see table below). Being an element of the overall national development strategy the program is an important element of the Latvian economic and R&D support policy.

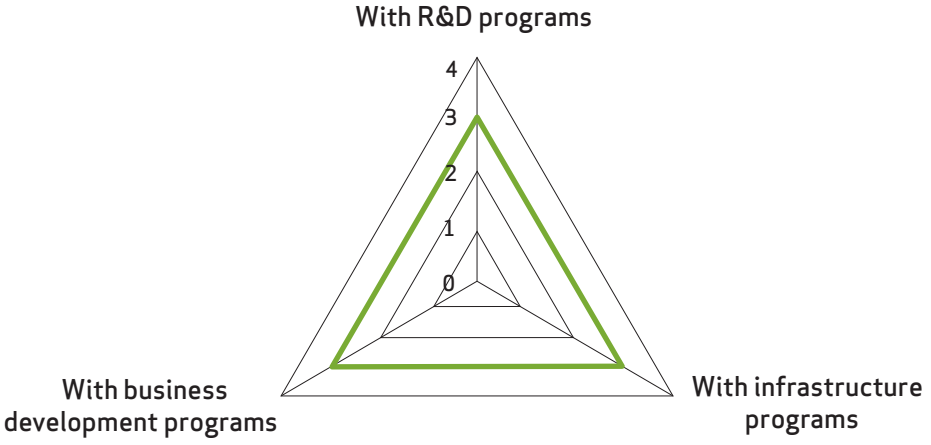
Table 20: Relevance of the Cluster Program in the overall policy setting

How important is the cluster program in relation to…	0	1	2	3	4
…the overall national economic/industrial development strategy?	•	•	•	•	X
…other R&D/innovation programs?	•	•	•	X	•

0 = not important at all ==> 4 = very important

This results corresponds to the strong coordination of the Latvian Cluster Program with other funding programs in Latvia (see figure 30).

Figure 30: Coordination of Cluster Program with other Latvian funding programs



0 = coordination is weak ==> 4 = coordination is strong

2.13 LITHUANIA

2.13.1 INNOCLUSTER LT

NAME OF PROGRAM	CLUSTER PROGRAM
COUNTRY	Lithuania
CONTACT DETAILS	Ministry of Economy of the Republic of Lithuania Rima Putkienė, Inga Steponavičienė Gedimino ave. 38 / Vasario 16-osios str. 2 01104 Vilnius Tel.: +370 8 706 64783 E-Mail: rima.putkiene@ukmin.lt, inga.steponaviciene@ukmin.lt
INTERNET	www.ukmin.lt/web/en/eu_support/2007_2013_EU_assistance/r_and_d

2.13.1.1 OBJECTIVES AND RATIONALE OF THE PROGRAM

Cluster policy has been integrated in the regular innovation policy of Lithuania. It mainly aims at fostering innovative clusters with special focus on developing international clusters. The InnoCluster LT program addresses the specific needs of innovative enterprises, especially SMEs with a high growth potential, with the aim to improve their innovation performance and to increase its competitiveness. The current potentials of Lithuanian enterprises lie in the fields of photo electronics technology, engineering/machinery, lumber-furniture, creative industry, laser technology, ICT, textile and clothing, food and drinks, biotechnology, chemistry, healthcare and wellness.

2.13.1.2 TARGET GROUP OF THE PROGRAM

The target group is enterprises (private juridical personalities), associations and public entities.

2.13.1.3 TERM OF THE PROGRAM, FINANCIAL ASPECTS AND APPLICATION PROCEDURE

TERM OF THE PROGRAM	2007-2013
Budget	EUR 9.5 Million (EU structural funds)
Type of funding	Grant funding
Does the program have a specific technology focus?	No
Are there calls for proposals?	Yes
Is there a dialogue with applicants about the improvement of their application prior to the final submission of the application?	Yes
Maximum funding period for a project	Up to 30 months

Is there a maximum amount of funding an applicant can apply for?	EUR 450.000
Financing structure of projects	50 % funding rate
Most important evaluation criteria for project proposals	InnoCluster LT cluster operator activities, related to: 1) surveys needed for the cluster expansion; 2) marketing of the cluster to recruit new companies to take part in the cluster; 3) management of the cluster's open-access facilities; 4) organization of training programs, workshops and conferences to support knowledge sharing and networking between the members of the cluster.

2.13.1.4 INSTRUMENTS

The instruments depend on the project activities. However, all instruments are based on EU structural funds. There are 11 projects that have been funded under this program. All of them are still running. The total value of the projects is

2.13.1.5 MONITORING AND EVALUATION SYSTEM

INDICATORS	
OUTPUT	product indicators: • R&D and innovation environment development projects, number • Marketing activities dedicated to the members of the cluster, number • Marketing surveys made for the growth of the cluster
RESULTS	result indicators: • New members of the cluster, number • Members of the cluster who have used accomplished surveys and information from all members who have got this information, percent • Growth of the consolidated turnover of the cluster's members, in 3 years after project completion, percent • Growth of the consolidated R&D activities expenditure of the cluster's members, in 3 years after project completion, percent • Growth of the consolidated export of the cluster's members, in 3 years after project completion, percent
IMPACT	• The impact has not been measured yet

EUR 6.2 Million. Results and impacts are not yet available.

2.13.1.6 CONTEXT OF THE PROGRAM

Asked to assess the importance of the program on a scale from 0 (not important at all) to 4 (very important) in relation to the overall economic/industrial development strategy

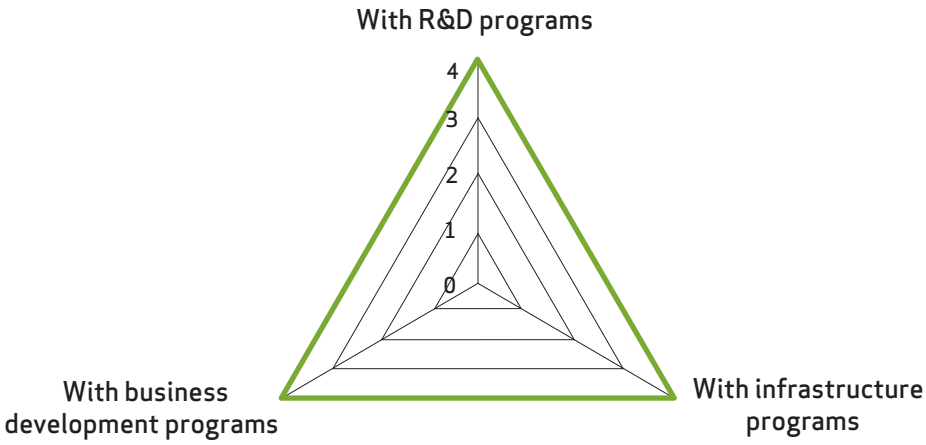
Table 21: Relevance of InnoCluster LT in the overall policy setting

How important is the cluster program in relation to…	0	1	2	3	4
…the overall national economic/industrial development strategy?	•	•	•	•	X
…other R&D/innovation programs?	•	•	•	•	X

0 = not important at all ==> 4 = very important

This result corresponds to the very strong coordination of InnoCluster LT with other funding programs in Lithuania (see figure 31).

Figure 31: Coordination of InnoCluster LT with other Lithuanian funding programs



0 = coordination is weak ==> 4 = coordination is strong

2.13.2 INNOCLUSTER LT+

NAME OF PROGRAM	INNOCLUSTER LT+
COUNTRY	Lithuania
CONTACT DETAILS	Ministry of Economy of the Republic of Lithuania Inga Steponavičienė, Rima Putkienė Gedimino ave. 38 / Vasario 16-osios str. 2 01104 Vilnius Tel.: +370 8 706 64783 E-Mail: inga.steponaviciene@ukmin.lt, rima.putkiene@ukmin.lt
INTERNET	www.ukmin.lt/web/en/eu_support/2007_2013_EU_assistance/r_and_d

and in relation to other R&D/innovation programs the program authority assigned a 4 to each of the two dimensions (see table below). Thus, the program is an important element of the Lithuanian economic and R&D support policy.

2.13.2.1 OBJECTIVES AND RATIONALE OF THE PROGRAM

Lithuania incorporated cluster policy into the regular innovation policy, trying to create favorable environment for innovative clusters and to develop international clusters. The importance of cluster policy in terms of fostering innovation and excellence and addressing the specific needs of innovative enterprises, especially SMEs with a high growth potential, improving its innovation performance and increasing its competitiveness. The actual potentials of Lithuanian enterprises for clustering lie in the fields of photoelectronics technology; engineering/machinery and lumber-furniture sectors; creative industry; laser technology; ICT; textile and clothing, food and drinks, biotechnology; chemistry; healthcare and wellness.

2.13.2.3 TERM OF THE PROGRAM, FINANCIAL ASPECTS AND APPLICATION PROCEDURE

TERM OF THE PROGRAM	2007-2013
Budget	EUR 56 Million
Type of funding	Grant funding
Does the program have a specific technology focus?	No
Are there calls for proposals?	Yes
Is there a dialogue with applicants about the improvement of their application prior to the final submission of the application?	Yes
Maximum funding period for a project	3 years

Is there a maximum amount of funding an applicant can apply for?	Up to 36 months from the start of project activities
Financing structure of projects	From EUR 30.000 to EUR 11 Million Financing structure of projects Depending on project type: 70 % /60 % /50 %
Most important evaluation criteria for project proposals	Cluster operator investments, related to: 1) facilities for training and research center; 2) open-access research infrastructures (laboratory, testing facility, etc).

There are 4 projects that have been funded under this Program. All of them are still running. The total value of the projects is approximately EUR 11 Million. Results and impact of the program are not yet available.

2.13.2.4 MONITORING AND EVALUATION SYSTEM

INDICATORS	
OUTPUT	• R&D and innovation environment development projects, number • Created and active cluster's training and research centers, number • Created and active cluster's R&D infrastructure facilities, number
RESULTS	• Attracted private investment • Working places created for researchers and supporting staff • Growth of the consolidated R&D activities expenditure of the cluster's members, in 3 years after project completion, percent • Number of undertakings who have used services at the R&D center in 3 years after project completion • Studies programs in the training center, number • Employees of the cluster members who have improved their skills in the training center in 3 years after project completion
IMPACT	• The impact has not been measured yet

2.13.2.2 TARGET GROUP OF THE PROGRAM

The target group of this program consists of entrepreneurs, associations and public entities.

2.13.2.5 CONTEXT OF THE PROGRAM

Asked to assess the importance of the program on a scale from 0 (not important at all) to 4 (very important) in relation to the overall economic/industrial development strategy and in relation to other R&D/innovation programs the

Table 22: Relevance of InnoCluster LT+ in the overall policy setting

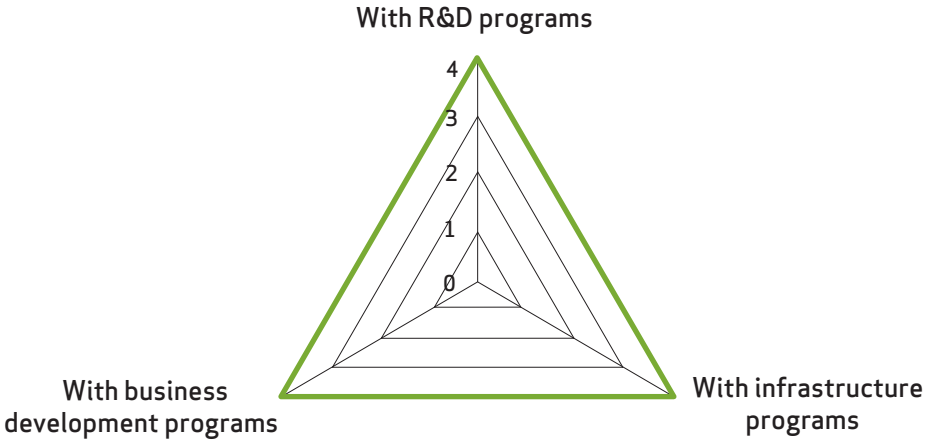
How important is the cluster program in relation to…	0	1	2	3	4
…the overall national economic/industrial development strategy?	•	•	•	•	X
…other R&D/innovation programs?	•	•	•	•	X

0 = not important at all ==> 4 = very important

program authority assigned a 4 to each of the two dimensions (see table). Being an element of the overall national development strategy the program is an important element of the Lithuanian economic and R&D support policy.

This result corresponds to the very strong coordination of InnoCluster LT+ with other funding programs in Lithuania (see figure 32).

Figure 32: Coordination of InnoCluster LT+ with other Lithuanian funding programs



0 = coordination is weak ==> 4 = coordination is strong

2.14 LUXEMBOURG

2.14.1 LUXEMBOURG CLUSTER INITIATIVE

NAME OF PROGRAM	LUXEMBOURG CLUSTER INITIATIVE
COUNTRY	Luxembourg
CONTACT DETAILS	Luxinnovation G.I.E The National Agency for Innovation and Research Laurent Federspiel 7, rue Alcide de Gasperi 1615 Luxembourg - Kirchberg Tel: +352 43 62 63 - 1 E-Mail: laurent.federspiel@luxinnovation.lu
INTERNET	www.clusters.lu

2.14.1.1 OBJECTIVES AND RATIONALE OF THE PROGRAM

The Luxembourg Cluster Initiative is one key element of the National R&D and Innovation Policy, which brings together the various clusters established at the request of the Luxembourg Ministry of the Economy and Foreign Trade. It is an efficient instrument to concentrate resources and means in order to achieve a critical mass and to accelerate the transfer of knowledge and good practice. The Luxembourg Cluster Initiative is managed by Luxinnovation, the National Agency for Innovation and Research. These Clusters have no legal status.

The Luxembourg Cluster Initiative aims to jointly develop cutting-edge technologies whilst supporting Luxembourg's current technological expertise and providing impetus for the further development of national centers of excellence. The main objectives of the Luxembourg Cluster Initiative are therefore to:

- Develop a shared vision for the future orientation of the clusters concerned
- Foster communication and exchange of knowledge and know-how between cluster members
- Stimulate the development and implementation of collaborative projects on a national, European and an international level
- Enhance the visibility of the technological excellence and the innovation potential of cluster members
- Encourage the uptake of new technologies and the identification of potential business opportunities.

2.14.1.2 TARGET GROUP OF THE PROGRAM

The target group concludes SMEs and large companies, public research organizations, RDI service providers.

2.14.1.3 TERM OF THE PROGRAM, FINANCIAL ASPECTS AND APPLICATION PROCEDURE

TERM OF THE PROGRAM	2010 - ONGOING
Budget	The Luxembourg Cluster Initiative has no allocated budget, but benefits from resources provided by Luxinnovation, the National Agency for Innovation and Research, to enable it to develop its various services.
Type of funding	Technical assistance
Does the program have a specific technology focus?	No
Are there calls for proposals?	n.a.

2.14.1.4 INSTRUMENTS

The fact that the Luxembourg Cluster Initiative is managed by Luxinnovation, the National Agency for Innovation and Research, this means that very strong links exist with respect to:

- Obtaining national or European financing (FP7, ESA, Eureka!).
- Supporting start-ups or spin-offs (access to specialized support services plus incubator facilities).
- Accessing specialized knowledge in terms of technology transfer, valorization of research results and intellectual property.

This helps to considerable increase the scope of the clusters and their potential impact. The achievement of agency objectives specific to these subjects is therefore linked to cluster activities.

2.14.1.5 RESULTS AND IMPACT OF THE PROGRAM

As previously mentioned, the Luxembourg Cluster Initiative has given rise to 5 separate Clusters, each dedicated to a specific business sector. These Clusters are now well established, each with a defined governance system and a growing membership base. The two most recently established Clusters (Luxembourg BioHealth Cluster and Luxembourg EcoInnovation Cluster) are elements of a National Plan to develop each of these sectors. All 5 Clusters have been recognised as being the National platforms that bring together the various actors (private companies, public research organisations and institutional actors) in order to develop or reinforce the National strategy for the development of the respective sectors. The Luxembourg Cluster Initiative, which provides the framework for the development of individual clusters, continues to develop in response to the demands of the various members. As from 2011, the Luxembourg Cluster Initiative is also fully integrated into the activities of Luxinnovation, the National Agency for Innovation and Research and therefore contributes to the overall objectives of the Agency.

INDICATORS	
OUTPUT	• Number of collaborative RDI projects resulting from cluster activities • Number of collective actions organized per cluster • Cluster member satisfaction and participation of activities • Increasing number of cluster members
RESULTS	• Strong contribution of sectors with cluster activities to the number of projects obtaining National RDI funding (particularly Materials and ICT) • High level of integration and acceptance of clusters as efficient and effective networking platforms • Strong contribution of cluster activities to newly developing sectors (BioHealth and EcoInnovation)

2.14.1.7 CONTEXT OF THE PROGRAM

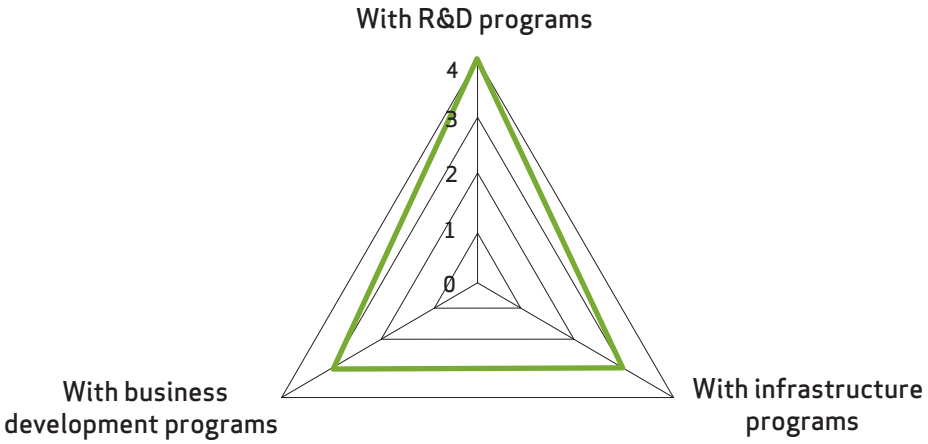
Asked to assess the importance of the program on a scale from 0 (not important at all) to 4 (very important) in relation to the overall economic/industrial development strategy and in relation to other R&D/innovation programs the program authority rates the relevance of the Luxembourg Cluster Development Program in the overall policy setting as very high which is also reflected in a good coordination with other programs (see table and figure below).

Table 23: Relevance of Luxembourg Cluster Development Program in the overall policy setting

How important is the cluster program in relation to…	0	1	2	3	4
…the overall national economic/industrial development strategy?	•	•	•	•	X
…other R&D/innovation programs?	•	•	•	•	X

0 = not important at all ==> 4 = very important

Figure 33: Coordination of the Luxembourg Cluster Development Program with other funding programs in Luxembourg



0 = coordination is weak ==> 4 = coordination is strong

2.15 NORWAY

2.15.1 NORWEGIAN CENTERS OF EXPERTISE (NCE)

NAME OF PROGRAM	NORWEGIAN CENTERS OF EXPERTISE (NCE)
COUNTRY	Norway
CONTACT DETAILS	Innovation Norway Olav Bardalen P.O. Box 448 Sentrum 0104 Oslo Tel.: +47 958 58 649 E-Mail: olav.bardalen@innovasjonnorge.no
INTERNET	www.nce.no

2.15.1.1 OBJECTIVES AND RATIONALE OF THE PROGRAM

The program is directed towards regional clusters that are company-based and have a potential for international growth. The clusters should function as drivers for industry development by creating regional business environments through cooperation between companies, researchers and public authorities.

In this context, the overall objective of the NCE program is to facilitate growth by generating and reinforcing cooperation-based innovation and internationalization processes within clusters with clear ambitions and substantial national and international growth potential. The overall objective is supported by the following operational objectives of the program:

- The program will create interest and commitment for development of clusters with growth potential.
- The program will contribute to clear effects through: a markedly improved cooperation and infrastructure within the cluster, increased innovation capabilities, higher level of internationalization, higher level of attractiveness and increased competitiveness and value-creation for the cluster.
- The program will contribute important insights into cooperation-based development processes in regional clusters, resulting in development of operational models and improved policy learning.

In order to contribute to the achievement of the program objectives NCE clusters have to perform according to the following cluster-specific objectives:

- Increased cooperation between participants within a cluster and between the cluster and external individuals, companies, organizations, etc.
- Increased innovation capabilities and activities, based on cooperation between businesses and R&D.
- Increased international involvement in the form of expansion into international markets, increased cooperation with knowledge hubs; foreign investments, etc.
- Development of the numbers and composition of participants in the cluster, including the number of new companies established.
- Increased level of competitiveness and valuecreation based on innovation and internationalization processes

Each NCE cluster is defined by the following criteria:

1. Business and technological focus:
Each individual NCE shall be established around a cluster's technological and business-related core activities. Focused on continued innovation-based growth nationally and internationally, these activities are related to a well-positio-

ned current competitive position that can be continually developed. Core activities may be based on:

- A particular type of technology or field of expertise, or combinations of both, with established or potential applications in one or more market segments.
- A defined business sector, or combinations of one or more such sectors, directed at a defined market segment.
- Cooperation within an efficient value chain.

2. Geographical concentration:
Each individual NCE is established within a geographically limited cluster. This close proximity shall reflect:

- A physical concentration of the most important companies and related development organizations and institutions in the cluster.
- A naturally functionally interplay between cluster participants, specific cooperative relations, and within a natural community area/radius
- A natural common culture for dialogue and cooperation, common social networks – in other words, a socio-cultural network between cluster members/participants.

3. Groups of cluster participants:
Each NCE is based on a concentration of companies and relevant support functions with a broad composition. With this as a fundamental principle, clusters are additionally defined on the basis of:

- The number of companies and the composition of company groups
- Relevant suppliers of research, education and other knowledge-related services
- Relevant financial institutions
- Relevant government/public developmental bodies and agencies
- Established relations between such cluster participants, including intermediary institutions

2.15.1.2 TARGET GROUP OF THE PROGRAM

Main target group of the program are groups of companies that form the core of a regional cluster. This includes in particular companies representing the major proportion of innovation activities and value creation in each cluster's core area of business and that are the key drivers of the cluster. In addition to these so-called "core companies" the main target group also includes "related companies" that supply goods and services to the "core companies".
In addition to the main target group the program also supports organizations that directly contribute to the development of the cluster. This secondary target group includes R&D institutions, educational institutions (schools and institutions from the junior level upwards), institutions that support cooperation within the cluster, government agencies and developmental bodies as well as the financial sector.

2.15.1.3 TERM OF THE PROGRAM, FINANCIAL ASPECTS AND APPLICATION PROCEDURE

TERM OF THE PROGRAM	YEAR OF INCEPTION: 2006, NO TERMINATION DATE
Budget	EUR 8.3 Million p.a. (NOK 65 Million p.a.)
Type of funding	Grant funding and technical assistance
Does the program have a specific technology focus?	No
Are there calls for proposals?	There were calls for proposals in 2006, 2007 and 2009. They did not have specific thematic foci.
Is there a dialogue with applicants about the improvement of their application prior to the final submission of the application?	No
Maximum funding period for a project	10 years. The project period is divided into three contract periods (3.5, 3 and 3.5 years). At the end of each contract period an external evaluation is carried out as a basis for renewal of the contract period of the following period.
Is there a maximum amount of funding an applicant can apply for?	Yes, max. EUR 770.500 p.a. (NOK 6 Million p.a.)
Financing structure of projects	• 50% funding from the NCE program • 50% private means (can be provided through value-in-kind contributions from participating companies)
Most important evaluation criteria for project proposals	• Impact on industry sector • Impact on society (non-economic effects) • Knowledge and/or technology transfer • Structure and members of consortium • International orientation • Focus on innovation • Existing linkages

2.15.1.4 INSTRUMENTS

Beside grant funding for the establishment and management of the NCE cluster organization the program also offers technical assistance to individual NCE clusters. Grant funding is provided for the following activities:

- Process management: This is comprised of people engaged to manage processes, implement agreed activities, as well as document and report regarding activities and results.
- Network-building: Activities designed with the goal of strengthening the dialogue and cooperation of companies and knowledge environments within the individual cluster and in relation to the external environment.
- Analysis and strategy processes: Processes aimed at developing insight into and specific fundamental aspects of NCE project work.

- Communication: Marketing and communication activities directed towards potential new members for each individual cluster; as well as potential customers, knowledge environments (education, research) and investors.

- Learning & Education Activities: Development of various competence-building activities in cooperation with educational institutions and other knowledge environments.

- Project ideas and suggestions can be developed within the NCE program up to the point when an owner for the project is designated and the project can be evaluated for financing from ordinary financing sources. This can include development of concept and pre-projects for collaborative based innovation projects or for new business ideas; development of application for larger research.

In addition to the grant funding technical assistance is provided by experts of Innovation Nor way. The target group consists mainly of project managers and teams of the cluster organization, but company groups or knowledge/ education/R&D participants may also benefit from special services. Key elements of the technical assistance are:

- Organizing and coordination of a regular joint meeting place for dialogue and cooperation development between NCE projects.

- Planning and staging of courses and seminars; also developing projects related to key topics in conjunction with NCE project activities.

- On-going dialogue with and follow-up of individual NCEs by the program management.

- Facilitating communication with relevant national and international services in the agency system.

- Facilitating communication with relevant international specialist networks.

- Standardized management and reporting tools.

- Communication and information through a common website.

- Active national and international profiling through the agencies' various channels.

2.15.1.5 RESULTS AND IMPACT OF THE PROGRAM

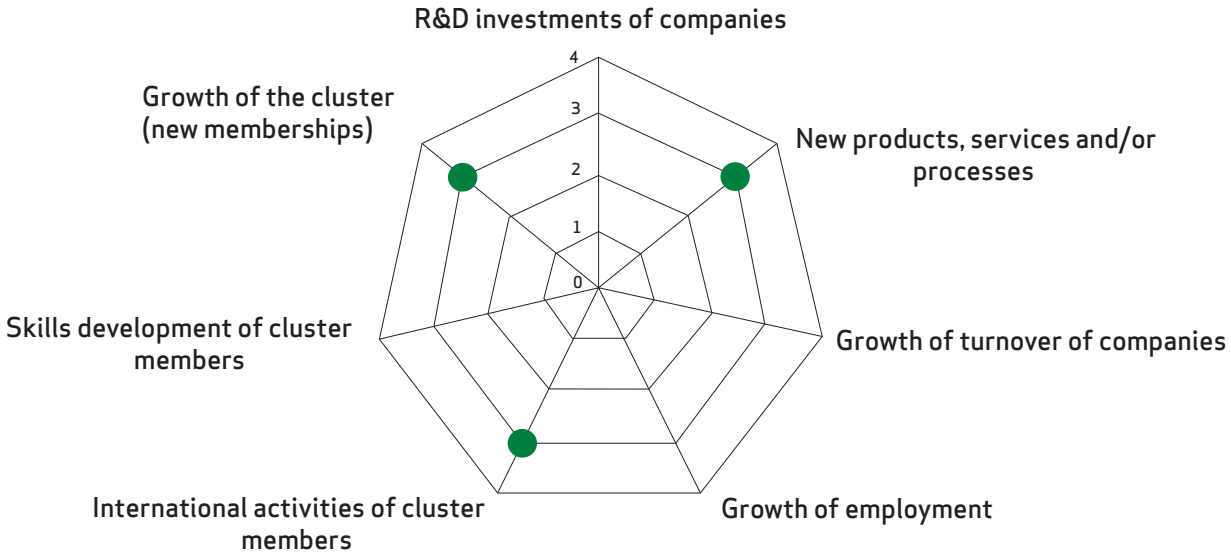
Today there are 12 Norwegian Centers of Expertise in different industry fields, including instrumentation, maritime, micro and nanotechnology, production and engineering, health, oil and energy, tourism and aquaculture.[30]

In 2011, the NCE's had 1 411 companies as partners/members (2010: 1188). 220 innovation projects were started (2010: 187) of which 154 were in cooperation with the 113 (2010: 103) R&D Institutions/Universities which are partners in the clusters within the program, 62 of the innovation projects had international partners. The innovation projects released 265 Million NOK in public R&D/ innovation funds, and 13 Million NOK in EU funds.

The figure below indicates the program performance in terms of the results achieved in 2009 based on an assessment made by program officials. The figure shows a very good performance of the program. It had significant effects with regard to the development of new products, services and/or processes, the growth of the clusters and international activities of cluster members.

30 For further details on the Norwegian Centres of Expertise please see http://ekstranett.innovasjonnorge.no/templates/Page_Meta___56536.aspx.

Figure 34: Results of the program that were achieved in 2011



0 = results are poor ==> 4 = results are excellent
Missing values are due to the fact that there is no evidence available.
This does not mean that there are no effects at all.

2.15.1.6 MONITORING AND EVALUATION SYSTEM

At the program level the following evaluation activities take place:

- A process evaluation of the program is implemented to provide the program management with recommendations for improvements in the strategic development of the program on an on-going basis.
- A main evaluation of the program was carried out in 2011 to analyze the results and effects that have been achieved. On an annual basis a program report is published which is informed by the annual reports of the NCE clusters.

The following main indicators are used to measure the performance of the program:

INDICATORS	
OUTPUT	• Number of partners and participants (companies, R&D, others) • Number of international partners • Number of networks/forums/meeting places • Number of participants in the before mentioned activities • Number of innovation projects: a) with R&D partners and b) with international partners • Funding from R&D programs • EU funding • Number of internationalization projects • Number of competence/knowledge projects

RESULTS	• Increased collaboration • Improved infrastructure for collaboration • Improved innovation capabilities • Increased international orientation • Better access to knowledge resources • Improved attractiveness for investors
IMPACT	• Increased value creation • Increased competitiveness

Beside regular meetings with the cluster initiatives their performance is monitored and evaluated as follows:

- At the end of each year projects shall submit an annual report with the following contents: project activities (based on standardized activity indictors), project results (based on standardized result indicators), specific project activities and results (based on the project plan), a self-assessment of the quality and progress of the development process (based on standardized self-evaluation procedures) and a d discussion of interesting results, adapted for external presentations.

- Evaluation of the results achieved as a basis for contract renewal. The program's renewal of contracts with individual NCE projects will take place on the basis of two reports: a) At the end of a contract period, individual NCE projects submit their own assessment of results achieved and a description of the positive effects to which the project has contributed. Those aims, strategies and activity plans which have formed the basis of the original contract will form the basis of these assessments; b) The NCE program will also implement an external evaluation of the individual project's activities and results. The project's own documentation will form the basis for such evaluations, but they may also gather their own data to provide a basis for their assessments.

2.15.1.7 CONTEXT OF THE PROGRAM

Asked to assess the importance of the program on a scale from 0 (not important at all) to 4 (very important) in relation to the overall economic/industrial development strategy and in relation to other R&D/innovation programs the program authority assigned a 3 to each of the two dimensions (see table below).

The NCE program has its foundation in overall strategic policy documents. This includes in particular the Norwegian White Paper No. 20 (2004-2005) on Commitment to Research which has emphasized the stimulation of innovation through cooperation between companies and knowledge leaders within a limited geographic or business area. The NCE program is one the key initiatives in this regard. In a 2005 status report of the government on innovation policy the program was specifically referred to as a new tool of innovation policy. In addition the Norwegian Whitepaper No. 22 (2011-2012) on Innovation Norway and SIVA emphasized the importance of innovation milieus, where the cluster programs in particular are mentioned and highlighted as important policy tools

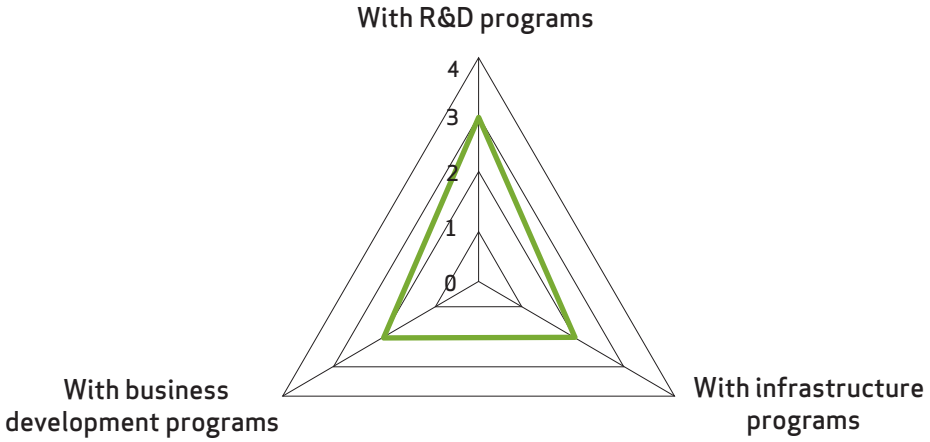
Table 24: Relevance of the NCE program in the overall policy setting

How important is the cluster program in relation to…	0	1	2	3	4
…the overall national economic/industrial development strategy?	•	•	•	X	•
…other R&D/innovation programs?	•	•	•	X	•

0 = not important at all ==> 4 = very important

Asked about the coordination of the NCE program with other support programs of the country program officials reported a good coordination with R&D programs, while coordination with busi ness development programs and infrastructure programs seems to bear potential for further improvement (see figure below).

Figure 35: Coordination of the NCE program with other Norwegian funding programs



0 = coordination is weak ==> 4 = coordination is strong

Established as a joint effort of the government agencies Innovation Norway, the Industrial Development Cooperation of Norway (SIVA) and the Research Council of Norway the NCE program enjoys as a result of this cooperation a well-developed coordination with other related cluster development programs including

- The "Centers for Research-based Innovation (SFI)" program of the Research Council of Norway which has the objective to build up and strengthen Norwegian research groups that work in close collaboration with partners from innovative industry and innovative public enterprises.[31] In some NCE clusters Centers for Research-based Innovation (SFI) are involved that are supported by the Research Council of Norway. This creates a synergy effects between an industry-oriented cluster program - the NCE program - on the one hand, and a more research-oriented program – the Centers for Research-based Innovation program - on the other hand; and

- The ARENA cluster development program, which is also a joined effort of the three agencies, but in contrast to the NCE program it supports a broader range of clusters and support is typically provided in the early stages of development of a cluster. This program can act as a qualifying arena for the NCE program for regional clusters with a development potential which have not yet developed sophisticated cooperative and strategy fundamentals.

31 The purpose of the Centers for Research-based Innovation (SFI) is to build up and strengthen Norwegian research groups that work in close collaboration with partners from innovative industry and innovative public enterprises. For further details please see www.forskningsradet.no/servlet/Satellite?c=Page&cid=1224067021109&p=1224067021109&pagename=sfi%2FHovedsidemal.

2.15.2 ARENA-PROGRAMT (THE ARENA PROGRAM)

NAME OF PROGRAM	ARENA-PROGRAMT (THE ARENA PROGRAM)
COUNTRY	Norway
CONTACT DETAILS	Innovation Norway Olav Bardalen P.O. Box 448 Sentrum 0104 Oslo Tel.: +47 958 58 649 E-Mail: olav.bardalen@innovasjonnorge.no
INTERNET	www.arenaprogramt.no

2.15.2.1 OBJECTIVES AND RATIONALE OF THE PROGRAM

Originating from several regional pilot projects which pursued the objective of improving interaction between industry, R&D institutions and the public sector the Arena program was established in 2002 to support multi-annual development processes in regional business environments. The overall objective of the program is to strengthen the capability of regional business environments for innovation and value creation by intensifying alliances between business environments, educational institutions and the public sector. The overall objective of the program is supported by a number of operational objectives including:

1. Increased internal and external collaboration through

- Fixed, organized conferences and meeting points,
- Added trust and reduction in barriers between participants
- New or strengthened relations with external participants, both nationally and internationally.

2. Focus on innovation and collaboration

- Groups working together in order to achieve innovation
- Specific innovation projects based on collaboration between several participants
- Participating companies possessing a high degree of innovative talent and activity

3. Focus on business-oriented R&D and educational institutions

- Increased involvement from the R&D institutions in development processes and development projects
- Increased involvement from educational institutions to help long-term access to qualified personnel

4. Increased awareness about the importance of long-term cooperation within the industry, educational institutions and the public sector through specific co-operative initiative and processes inspired by Arena's experience and work methods.

5. Increased expertise and involvement from the public support system

- Increased knowledge about government initiatives
- Increased interaction and use of means among the public support system
- Increased focus on cluster development within the regions

Open to project initiatives in all Norwegian regions and sectors (including cross-regional and cross-sector projects) the program can support regional business environments that are in an early development stage with respect to the market and a technology. It may also support more matured regional business environments which have an ambition to renew themselves with regard to established markets

or technologies. A key selection criterion for support is the potential for development a project has and the project's possibilities to initiate and strengthen the development process.

If a project initiative originates from a well-established business sector it has to be rooted in regional development strategies. This is not required if the project initiative is in a sector or an environment which is still at an early-stage of its development.

that form the core of a regional business cluster. The group has to be characterized by a regional concentration of its members, a common association to a business sector, a value chain, a market and an area of expertise. Its members have to identify common interests, which form a basis for increased interaction and cooperation. Companies have to be at the center of this group, while R&D and educational institutions and government institutions are supporters for the companies.

2.15.2.2 TARGET GROUP OF THE PROGRAM

The target group of the program includes groups of companies, relevant knowledge provides and public institutions

2.15.2.3 TERM OF THE PROGRAM, FINANCIAL ASPECTS AND APPLICATION PROCEDURE

TERM OF THE PROGRAM	YEAR OF INCEPTION: 2002, NO DATE OF TERMINATION YET
Budget	EUR 5 Million p.a.
Type of funding	Grant funding and technical assistance
Does the program have a specific technology focus?	No
Are there calls for proposals?	Yes, once a year. Calls for proposals do not have a specific thematic focus.
Is there a dialogue with applicants about the improvement of their application prior to the final submission of the application?	Yes
Maximum funding period for a project	Max. 5 years. Funding is provided for three years, but can be extended by two years.
Is there a maximum amount of funding an applicant can apply for?	Max. EUR 300,000 p.a.
Financing structure of projects	Max. 50% funding from the Arena program Min. 50% private means (can be provided through value-in-kind contributions from participating companies)
Most important evaluation criteria for project proposals	Impact on industry sector and companies Impact on society (non-economic effects) Knowledge and/or technology transfer Structure and members of the consortium

2.15.2.4 INSTRUMENTS

Support for the development of clusters is provided by the Arena program through grant funding and technical assistance.

Grant funding is provided for the following activities:

- Management of the development processes
- Development of meeting places and networks
- Development of strategies and analytic support
- Communication and branding
- Knowledge development
- Early phase idea and project development (pre-studies and pre-projects)

Actual development processes as well as the establishment and management of physical infrastructure are not eligible under the Arena program. Funding for these activities has to be sourced from other private and public financial schemes.

Technical assistance instruments include:

- Professional meeting places for project managers/project partners, project meetings, workshops and study trips
- Support tools as handbook and working models
- Exchange of experience via the program's website and in other settings
- Advisory service for project managers including professional consultancy (one-to-one), colleague-based guidance and coaching
- Courses in cluster development (with other target groups)
- Alliances with other relevant services; nationally and internationally

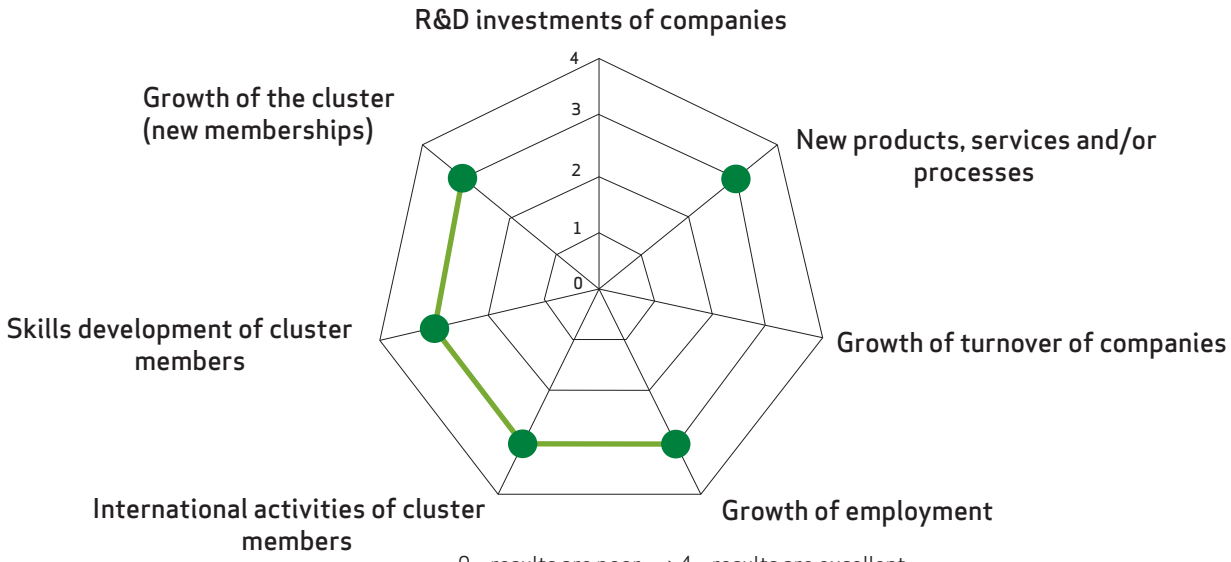
This professional support is organized through the program's "training arena".

2.15.2.5 RESULTS AND IMPACT OF THE PROGRAM

As of June 2012 23 cluster organizations are part of the Arena Program. In total more than 1200 companies. 96 R&D Institutions/ Universities and 76 other development partners participated in the clusters associated with the program. Within the clusters 142 R&D projects involving both companies and research institutions/universities were carried out in 2011.

According to program officials the program yielded very good results with respect to new products, processes and/or services, growth of company turnover, growth of employment, international activities of cluster members, skills development of cluster members and growth of the cluster in terms of membership (see figure below).

Figure 36: Results of the program that were achieved in 2011



0 = results are poor ==> 4 = results are excellent
Missing values are due to the fact that there is no evidence available yet.
This does not mean that there are no effects at all.

2.15.2.6 MONITORING AND EVALUATION SYSTEM

The program is regularly evaluated to assess its organization, implementation and results/effects. Evaluations were conducted for the periods 2003-2005 and 2006-2007, and a program evaluation was carried out in 2011.

The following main indicators are used to measure the performance of the program:

INDICATORS	
OUTPUT	• Number of cluster initiatives applying for support of the program • Number of forums, networks and meeting places • Number of collaborative innovation projects/ • Number of companies • Number of internationalization projects • Number of competence/training projects • Number of communication/profiling activities
RESULTS	• Reduced barriers for collaboration/increased trust within the cluster • New and stronger linkages with external partners nationally • New and stronger linkages with international partners • Increased innovation capabilities and activities in partner companies • Increased involvement from R&D institutions in the development of the cluster • Increased involvement from educational institutions/improved educational schemes
IMPACT	• Increased capabilities in the cluster for innovation and value creation • Increased knowledge and improved methods and tools for cluster development • Contribution to policy learning

Beside regular meetings with program officials monitoring and evaluation of the performance of the cluster initiatives is based on regular reporting. This includes:

- An annual report containing a summary and evaluation of activities and results, quantitative and standardized data about the project's participants, activities and results, as well as a report about two selected activities or results that might be of interest to others.
- A result report, as a basis for yearly renewals of funding and contracts. The result reports are focused on realization of agreed targets.

- A final report that summarizes and evaluates the project's activities and results at the end of the project. The report shall also include how the development processes can be continued after the Arena period.

- A final evaluation, which is an external evaluation of the project when finished. The evaluation is ordered and paid by the project.

2.15.2.7 CONTEXT OF THE PROGRAM

Asked to assess the importance of the program on a scale from 0 (not important at all) to 4 (very important) in relation to the overall economic/industrial development strategy and in relation to other R&D/innovation programs the program authority assessed the program as important with regard to the overall national economic/industrial development strategy, while it is considered as being less important with regard to other R&D/innovation programs (see table below).

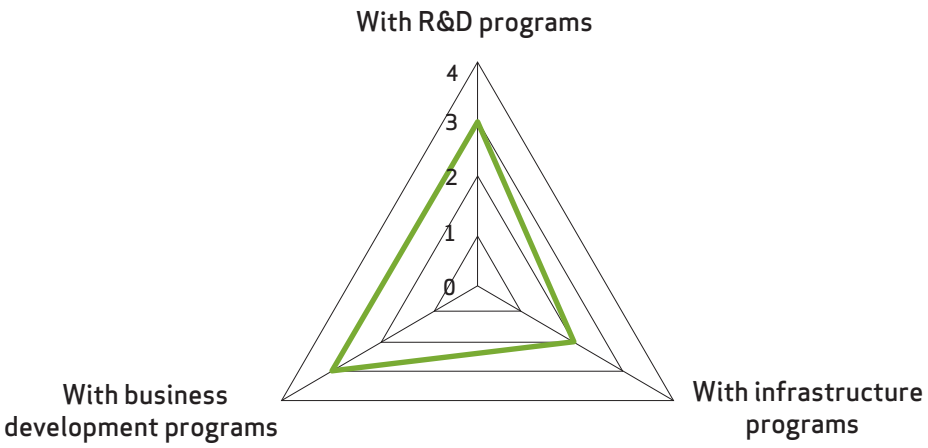
Table 25: Relevance of Arena program in the overall policy setting

How important is the cluster program in relation to…	0	1	2	3	4
…the overall national economic/industrial development strategy?	•	•	•	X	•
…other R&D/innovation programs?	•	•	X	•	•

0 = not important at all ==> 4 = very important

From the perspective of program officials the Arena program is well coordinated with other Norwe-gian funding programs. The joint ownership of the program of Innovation Norway, the Research Council of Norway and the Industrial Development Cooperation of Norway (SIVA) is certainly an asset in this regard. As already indicated in the analysis of the Norwegian Centers of Expertise program the Arena program can act as a qualifying arena for the NCE program for regional clusters with a development potential which have not yet developed sophisticated cooperative and strategy fundamentals.

Figure 37: Coordination of the Arena program with other Norwegian funding programs



0 = coordination is weak ==> 4 = coordination is strong

2.16 POLAND

2.16.1 POLISH CLUSTER SUPPORT

NAME OF PROGRAM	POLISH CLUSTER SUPPORT (DIFFERENT PROGRAMS)
COUNTRY	Poland
CONTACT DETAILS	Polish Agency for Enterprise Development Grażyna Buczynska Chief Expert Innovation and Technology Unit ul. Pańska 81/83 00-834 Warszawa Tel. +48 22 432 80 80 E-Mail: grazyna_buczynska@parp.gov.pl
INTERNET	www.parp.gov.pl

2.16.1.1 OBJECTIVES, RATIONALE, TARGET GROUPS AND INSTRUMENTS

The Polish government considers the support of clusters as "an important component element in several spheres of economic policy, most especially those connected with innovation, regional development and industry".[32] A specific feature of cluster policy in Poland is the interest of the government in linking clusters and cluster policy more closely with the development of special economic zones.[33] These are areas in which business activity may be conducted under preferential conditions defined by the Act on Special Economic Zones of 20 October 1994.[34] On September 4th 2006 the government adopted the "Strategy for Increasing the Innovativeness of the Economy, 2007-2013" that identified the need of support for clusters.

The support of clusters is provided by a set of different grant funding and technical assistance programs respectively projects. They include:

- The Innovative Economy Operational Program, Measure 5.1 "Support of the Development of supraregional clusters", addresses cluster coordinators to support investments, training, advisory services and internationalization activities. The budget of this program (only Measure 5.1 of the Innovative Economy Operational Program) is EUR 104.3 Million in the period 2007-2013).
- The overall objective of this measure is to support the development of national clusters and to enhance the competitive position of companies through supporting collaborative relationships between companies and between companies and business environment institutions, including scientific institutes. Support is available to coordinators of such collaborations (cluster coordinators) who do not operate for profit or allocate the profit for objectives relating to tasks pursued by the Polish Agency for Enterprise Development. Beneficiary may be a foundation, registered association, joint-stock company, limited-liability company, R&D institution or an organization of entrepreneurs. To be eligible a project should involve at least 10 companies of which are at least 50 per cent SME and at least one R&D institution and one business support institution. In order to facilitate the development of supra-regional clusters project participants have to come from at least two voivodeships (provinces) and their total share in sales outside this region must be at least 30 per cent.
- The maximum amount of co-financing per project (can be up to 100 per cent of total project costs) is EUR 5 Million (PLN 20 Million) for investments, EUR 250,000 (PLN 1 Million) for training that is related to the investments, 5 per cent of the total eligible expenditure for operational and administrative expenses, EUR 100,000 (PLN 400,000) for advisory services.

32 Ministry of Economy, 2010: National Reform Program: Europe 2020 – Clusters: Cluster-based Economic Development Policy, p. 2

33 Ibid., p. 13

34 For an overview see Polish Information and Foreign Investment Agency (PAIiZ), 2009: A Guide to Special Economic Zones in Poland

- To support the development of regional clusters the government has set up the Operational Program Development of Eastern Poland 2007-2013, Priority 1.4 "Promotion and cooperation" with Measure 1.4 "Cooperation – cluster creation and development". The program is restricted to the Eastern part of the country, namely on the voivodeships of Warmińsko-Mazurskie, Podlaskie, Lubelskie, Świętokrzyskie and Podkarpackie. Main beneficiary is a cluster manager who coordinates a cluster consisting of entrepreneurs, universities and innovation and regional development agencies. The program has a budget of EUR 11 Million and supports projects with a minimal value of EUR 500,000 (PLN 2 Million) with a maximum share of program co-funding of 75 per cent.

- In order to support the establishment and development of clusters through grant funding in the context of the programs that were briefly described above, there is also a range of different technical assistance projects. These projects are like the grant programs part of a nationwide development program which in this particular case is the Operational Program Human Capital, Measure 2.1.3 "Development of adaptation potential of human resources and enterprises". Completed and still on-going technical assistance measures are:

o To provide clusters and their managers with information on the possibilities for improved performance and to deepen the knowledge on the development status and potential of Polish clusters PARP commissioned a benchmarking project in 2008. The results were published in 2010.[35]

o PARP has organized numerous regional conferences, cluster exhibitions and working groups dealing with cluster issues to facilitate the exchange of information and the creation of projects. Furthermore, PARP has published reports and translated foreign cluster publications into Polish language.

o In the context of the PARP project "Cooperation linkages of Polish enterprises" trainings and advisory services were offered for cluster coordinators and employ-ees of companies that are cluster members or potential cluster members.

2.16.1.2 TERM OF THE PROGRAMS, FINANCIAL ASPECTS AND APPLICATION PROCEDURES

The following tables provide information on the two grant programs:

- Innovative Economy Operational Program, Measure 5.1 "Support of the Development of supra-regional clusters"

- Operational Program Development of Eastern Poland 2007-2013, Priority 1.4 "Promotion and cooperation" with Measure 1.4 "Cooperation – cluster creation and development".

NAME OF THE PROGRAM	INNOVATIVE ECONOMY OPERATIONAL PROGRAM, MEASURE 5.1 "SUPPORT OF THE DEVELOPMENT OF SUPRA-REGIONAL CLUSTERS"
TERM OF THE PROGRAM	2007-2013
Budget	EUR 104 Million
Type of funding	Grant funding
Does the program have a specific technology focus?	No
Are there calls for proposals?	Twice a year

35 Polish Agency for Enterprise Development, 2010: Benchmarking klastrów w Polsce – 2010

Is there a dialogue with applicants about the improvement of their application prior to the final submission of the application?	Yes
Maximum funding period for a project	There is no maximum funding period.
Is there a maximum amount of funding an applicant can apply for?	EUR 5 Million
Financing structure of projects	Up to 100 per cent grant funding
Most important evaluation criteria for project proposals	Impact on industry sector and companies SME focus or SME participation in activities Knowledge and/or technology transfer Budget Structure and members of consortium Potential for innovation

NAME OF THE PROGRAM	OPERATIONAL PROGRAM DEVELOPMENT OF EASTERN POLAND 2007-2013, PRIORITY 1.4 "PROMOTION AND COOPERATION" WITH MEASURE 1.4 "COOPERATION – CLUSTER CREATION AND DEVELOPMENT"
TERM OF THE PROGRAM	2009-2015
Budget	EUR 11 Million
Type of funding	Grant funding
Does the program have a specific technology focus?	No
Are there calls for proposals?	Once a year
Is there a dialogue with applicants about the improvement of their application prior to the final submission of the application?	No
Maximum funding period for a project	There is no maximum funding period.
Is there a maximum amount of funding an applicant can apply for?	There is no maximum amount.
Financing structure of projects	Financing structure of projects Up to 75 per cent grant funding
Most important evaluation criteria for project proposals	SME focus or SME participation in activities Knowledge and/or technology transfer Structure and members of consortium

2.16.1.3 CONTEXT OF THE PROGRAMS

The Polish cluster programs are rather an instrument for economic development in Poland, than instruments for the facilitation of R&D activities as their relevance in the overall policy setting indicates. However, this should not imply that R&D activities do not matter in the context of economic development strategies.

Table 26: Relevance of Polish cluster programs in the overall policy setting

How important is the cluster program in relation to…	0	1	2	3	4
…the overall national economic/industrial development strategy?	•	•	•	X	•
…other R&D/innovation programs?	•	•	X	•	•

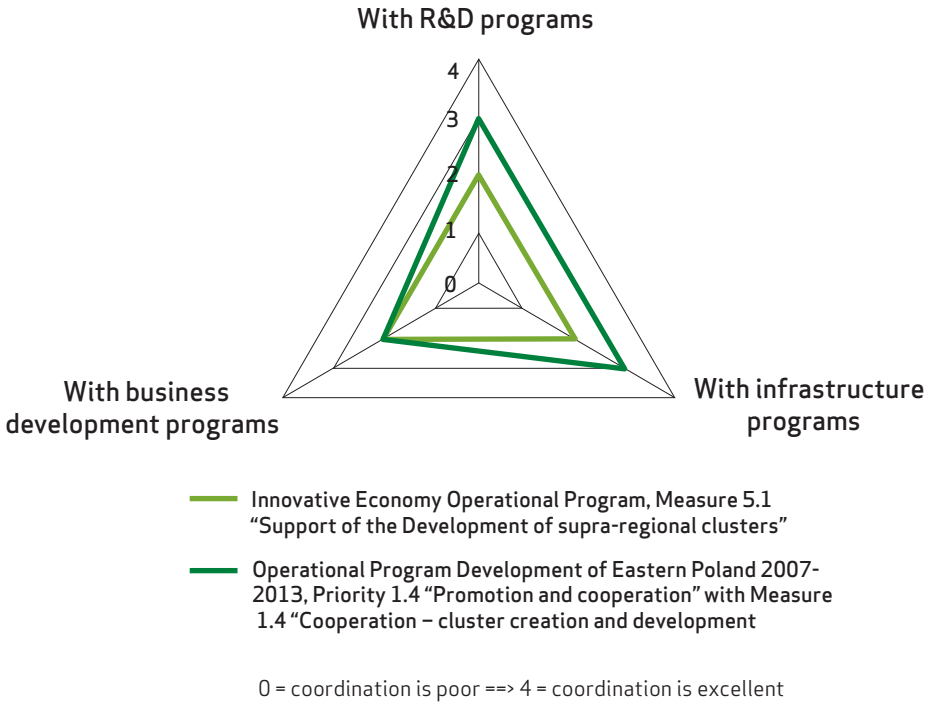
0 = not important at all ==> 4 = very important

The coordination of the Polish cluster programs with other funding programs can be described as good which is not surprising giving the importance that the government attaches to clusters as tools for economic development.

Red line: Innovative Economy Operational Program, Measure 5.1 "Support of the Development of supra-regional clusters"

Green line: Operational Program Development of Eastern Poland 2007-2013, Priority 1.4 "Promotion and cooperation" with Measure 1.4 "Cooperation – cluster creation and development"

Figure 38: Coordination of Polish cluster programs with other national programs



2.17 PORTUGAL

2.17.1 PORTUGUESE OPERATIONAL COMPETITIVENESS PROGRAM - COMPETE

NAME OF PROGRAM	PORTUGUESE OPERATIONAL COMPETITIVENESS PROGRAM - COMPETE
COUNTRY	Portugal
CONTACT DETAILS	Autoridade de Gestão do COMPETE |Programa Operacional Factores de Competitividade Franquelim Fernando Garcia Alves (Programme Manager) Edifício Expo 98 Av. D.João II Lote 1.07.2.1 - 3º Piso 1998-014 Lisboa Tel: 211 548 700 E-Mail: pofc@gabprime.org
INTERNET	www.pofc.qren.pt

2.17.1.1 OBJECTIVES AND RATIONALE OF THE PROGRAM

In Portugal, the Portuguese Operational Competitiveness Program - COMPETE was implemented as part of the National Strategic Reference Framework for 2007-2013. Within that program, the COMPETE Management Authority is responsible for manage and execute the program and to establish formal Competitiveness Poles (recognized clusters at specific business and industrial sectors connected with R&D national networks institution). The COMPETE Management Authority is also responsible for the process of recognizing, monitoring and assessing the official clusters.

A collective efficiency strategy (CES) is a coherent and strategically justified set of initiatives in an action program aimed at innovation, qualification and modernization of economic business conglomerate located nationwide or in a particular region.

The Compete Program aims to improve the sustained competitiveness of the Portuguese economy in the context of the global market, intervening on strategic dimensions such as innovation, scientific and technological development, internationalization, entrepreneurship and modernization of public administration.

The objectives of the implementation of recognized Competitiveness and Technological Poles and Other Clusters are:

- Strategic focus - to develop a strategic vision that accounts for the challenges of the future, that is market-oriented and that generates effectiveness and efficiency gains;
- International competitiveness - international recognition of national and regional enterprises, products and technologies, with a view to contributing to increases in exports and market shares, to improving the national technological parity, and to increasing productivity and creating high-skilled employment;
- Structural projects - to develop structural projects with significant national impact, that can provide the support needed for development of new products and solutions, qualification of traditional industries and generation of new future-oriented business;
- Investment in R&D and Innovation – to develop Research and Technological Development projects that will lead to increasing the added value of national products and their exports; simultaneously, this investment will promote a higher level of cooperation between the institutions of the National Innovation System;
- Cooperation between actors – to stimulate and promote collective projects - joint projects and cooperation projects involving enterprises and support bodies - which

will introduce new approaches based on creativity and innovation and which will focus on multiplying and sharing the results created by the confluence of different areas of knowledge.

2.17.1.2 TARGET GROUP OF THE PROGRAM

The program "COMPETE" has two main groups of measures: "company incentives" and "collective efficiency strategies". The collective efficiency strategy is constituted by strategic programs that explore agglomeration, proximity or scale economies envisioning innovation, qualification or modernization of an agglomeration of companies, located in a territory or in a pole, cluster or line of inter-connected activities. In this context the recognition contracts of 19 clusters within the Collective Efficiency Strategies framework were signed in July 2009. According to this classification, out of the 19 contracts signed, 11 were classified as Competitiveness and Technology Centers/Poles, and 8 as Other Clusters.

Competitiveness and technology poles are highly oriented towards markets and international visibility and the action program is firmly anchored to activities with a high TR&D, innovation and knowledge content. Other clusters are highly market-oriented, but improvement in their competitiveness results from their closer sharing of common assets and the creation of critical mass that makes it possible to undertake innovative projects and orient companies towards international markets.

2.17.1.3 TERM OF THE PROGRAM, FINANCIAL ASPECTS AND APPLICATION PROCEDURE

TERM OF THE PROGRAM	2007 - 2013
Budget	According to the public available data, the support value given to the recognised clusters was EUR 452 Million, from a total of EUR 734.8 Million. This budget is granted for the period of 2007-2013.
Type of funding	Public System of Incentives
Does the program have a specific technology focus?	Yes. Program SI I&DT and Support System for Scientific and Technology Entities
Are there calls for proposals?	Yes
Is there a dialogue with applicants about the improvement of their application prior to the final submission of the application?	Yes
Maximum funding period for a project	2007-2013. Still the program officially started in 2009.
Is there a maximum amount of funding an applicant can apply for?	Yes. The maximum funding granted to each of the applicant is related with the number of project approved.
Financing structure of projects	Total illegible induce budget for the period of 2007-13: EUR 734.8 Million Incentives: EUR 452 Million, of which EUR 142.5 Million are engaged to structural projects.
Most important evaluation criteria for project proposals	According to the Collective Efficiency Strategies Framework only projects that are assessed by recognised cluster will have access to incentives provided under their national specific regulations, and specific competitions or with specific budgetary allocations in competition procedures.

2.17.1.4 INSTRUMENTS

To accomplish the established objectives and priorities four operational instruments were produced:

- Systems of incentives for business investments - direct public funding for the implementation of production investments, aiming for the promotion of innovation and competitiveness, that can or cannot be refundable and be associated with achievement bonuses;

- Financial engineering mechanisms - promotion of financing solutions of own capital of the firms (venture capital) or debt capital (financing, interest subsidy, guaranties, etc);

- Support to collective action - indirect supports to economy, by promoting the collective competitiveness factors; the projects must be promoted by public institutions or by private non-profit entities, which results cannot be subjected to private appropriation; instead, they must be subjected to disclosure, dissemination or public display, ensuring universal access. This may involve target companies, that must be in significant number, independent and should not receive any direct financial support;

- Support for public actions - support to public administration projects as part of qualification procedures and enhancement of the efficiency of the public administration and by public entities with specific responsibilities in infrastructural endowment of the territory for competitiveness and technological services and assets appropriated by the economy; this results in investments in firms surroundings and therefore can be considered as indirect support to companies, by services or other forms of scientific, technological, training, information or market intelligence nature that they can benefit; the support is channeled to training in human and material resources of their own infrastructure and for supporting programs or projects.

The program can be divided into three policy instruments:

Axis 1: Knowledge and Technological Development with two main incentive systems that include – the Research and Technological Development Support System, and the support system for the main structures of the scientific and technological system.

Axis 2: Innovation and Renewal of Business Models and Specialization Pattern. This Axis includes, besides an important amount of projects ‚transferred' from the Third Community Support Framework, two relevant incentive systems – the Innovation Incentive System and the SME Skills Support System (SIQPME). The most relevant measure seems to be the 'Innovation projects', which so far has concentrated almost 50% of the amount of funds granted under Axis 2.

Axis 3: Financial engineering Instruments for Innovation Funding and Risk-sharing. This axis comes as a sequence to earlier support activities on financial innovation included in the previous CSFs. These instruments played an important role in the response to the credit crash. So far, the main policy measure under this Axis is the Innovation Financing Support Fund (FINOVA).

With regard to the results and impact of the program the information is not available yet.

2.17.1.5 CONTEXT OF THE PROGRAM

Asked to assess the importance of the program on a scale from 0 (not important at all) to 4 (very important) in relation to the overall economic/industrial development strategy and in relation to other R&D/innovation programs the program authority assigned a 3 to the first dimension and a 4 to the second dimension (see table below). Being an element of the overall national development strategy the program is an important element of the Portuguese economic and R&D support policy.

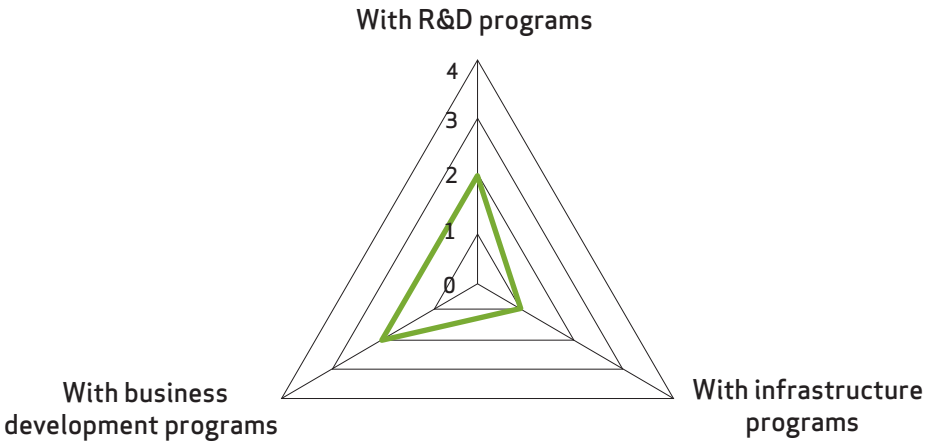
Table 27: Relevance of COMPETE in the overall policy setting

How important is the cluster program in relation to…	0	1	2	3	4
…the overall national economic/industrial development strategy?	•	•	•	X	•
…other R&D/innovation programs?	•	•	•	•	X

0 = not important at all ==> 4 = very important

Despite this rather high relevance of the Portuguese cluster program on the policy agenda of Portugal, it is rather medium coordinated with other funding programs (see figure below).

Figure 39: Coordination of COMPETE with other Portuguese funding programs



0 = coordination is weak ==> 4 = coordination is strong

2.18 ROMANIA

2.18.1 SUPPORT TO THE INTEGRATION OF SMES IN VALUE CHAINS AND CLUSTERS

NAME OF PROGRAM	SUPPORT TO THE INTEGRATION OF SMES IN VALUE CHAINS AND CLUSTERS
COUNTRY	Romania
CONTACT DETAILS	Ministry of Economy, Commerce and Business Environment, MECMA Autoritatea de Management pentru Programul Operaţional Sectorial Creşterea CompetitivitĐĐii Economice Christina Leucuta Str. Dr. Ernest Juvara nr. 3-7, sector 6 Bucureşti, cod 060104 Tel.: 031 413 27 62
INTERNET	http://amposcce.minind.ro/

2.18.1.1 OBJECTIVES AND RATIONALE OF THE PROGRAM

The aim of the project is the development of specific business structures (clusters) around productive activities aiming at increasing the added value of competitive products on national and international markets.

2.18.1.2 TARGET GROUP OF THE PROGRAM

The target group are cluster management entities (associations).

2.18.1.3 TERM OF THE PROGRAM, FINANCIAL ASPECTS AND APPLICATION PROCEDURE

TERM OF THE PROGRAM	2012 – 2015
Budget	EUR 20 Million
Type of funding	Grant funding
Does the program have a specific technology focus?	No, however in the sense of the call only clusters comprising at least 10 SMEs with the main NACE code corresponding to “productive” activities will be financed.
Are there calls for proposals?	No
Is there a dialogue with applicants about the improvement of their application prior to the final submission of the application?	Yes: helpdesk
Maximum funding period for a project	24 months
Is there a maximum amount of funding an applicant can apply for?	Between 200.000 (emerging clusters) and EUR 1 Million (innovative clusters)

Financing structure of projects	De minimis projects: 100% State aid: consultancy for SMEs: 50% R&D&I projects: large enterprises: 50% industrial research, 25% experimental development medium enterprises: 60% industrial research, 35% experimental development small enterprises: 75% industrial research, 25% experimental development Feasibility studies: Large enterprises: 65% preparation for industrial research, 40% preparation for experimental devel-opment SMEs: 75% preparation for industrial research; 50% preparation for experimental development Support to innovation: only to SMEs, 100% if the service provider proves a national or European certification; 75% otherwise Rent of high skilled personnel: only to SMEs, 50%
Most important evaluation criteria for project proposals	Composition of the cluster: - the management organisation should be a legal registered associations composed of at least 10 enterprises in "productive" sectors proven by the NACE codes of the members - no member should have more than 15% of votes in the management body - at least 75% of the votes in the management body should lie in the hands of productive SMEs - at least one R&D institution should be part of the management body

2.18.1.4 INSTRUMENTS

The "Cluster" program is being implemented under the The Sectoral Operational Program "Increase of Economic Competitiveness", one of the seven instruments (OPs), under the Convergence objective, for achieving the priorities of the National Strategic Reference Framework (NSRF) derived from the National Development Plan 2007 – 2013 (NDP), which aims to strengthen the strategic focus of the Economic and Social Cohesion policies across Romania, and to make the correct and appropriate linkages to the European policies and the Lisbon Strategy for growth and job creation. The total financial allocation for the period 2007-2013 for the SOP Competitiveness is of EUR 2.55 milliard.
The program finances two kinds of clusters:

Emerging clusters

Emerging clusters are those cooperative initiatives of enterprises and R&D&I providers, finding themselves in initial phase of the cooperation.

Innovative clusters

Innovative clusters are those collaborative initiatives of enterprises and R&D&I providers which prove advanced cooperation activities and aim at intensifying the interaction between its members (exchange of expertise and know how, technology transfer, dissemination activities among the members etc.).

2.18.1.5 RESULTS AND IMPACT OF THE PROGRAM

The aim of the project is the development of specific business structures (clusters) around productive activities aiming at increasing the added value of competitive products on national and international markets.

The program contributes to the achievement of the following indicators of the general SOP Competitiveness, as follows:

INDICATORS	
INDICATORS	Productive and environmental friendly investments and preparation for market competition, especially SMEs • Access to finance for SMEs • Sustainable entrepreneurship development
OUTPUT	• Assisted SMEs for direct investment operations, target 2015:2000 • SMEs that participated in international fairs, target 2015: 1200 • Newly created or empowered business infrastructures, target 2015: 10-15 • Enterprises benefiting of consulting services, target 2015 - 2000
RESULTS	• Jobs created/maintained in enterprise, target 2015 – 23000 • Share of supported SMEs in total number of SMEs, target 2015: 12-15 • Increase of turnover in assisted enterprises for productive investments (2 years after completion), target 2015:
IMPACT	• Consolidation and sustainable growth of the Romanian productive sector • Establishment of a favorable environment for enterprises' development

2.18.1.6 MONITORING AND EVALUATION SYSTEM

There are no defined target values at the level of the program, it should contribute to the general objectives of the SOP Competitiveness. However applicants should take into considerations and describe and quantify following indicators:

INDICATORS	
INDICATORS	Economic effects: investments, exports, labor productivity, new jobs, added value • Cluster development: new SMEs in cluster, international branding, new companies • R&D effects: increase in R&D expenditures, new brevets,
OUTPUT	• Between 20 and 100 clusters financed
RESULTS	No specific targets
IMPACT	• Consolidation and sustainable growth of the Romanian productive sector • Establishment of a favorable environment for enterprises' development

2.18.1.7 CONTEXT OF THE PROGRAM

Asked to assess the importance of the program on a scale from 0 (not important at all) to 4 (very important) in relation to the overall economic/industrial development strategy and in relation to other R&D/innovation programs the program authority assigned a 3 to the first dimension and a 2 to the second dimension (see table below). Being an element of the overall national development strategy the program is a medium important element of the Romanian economic and R&D support policy.

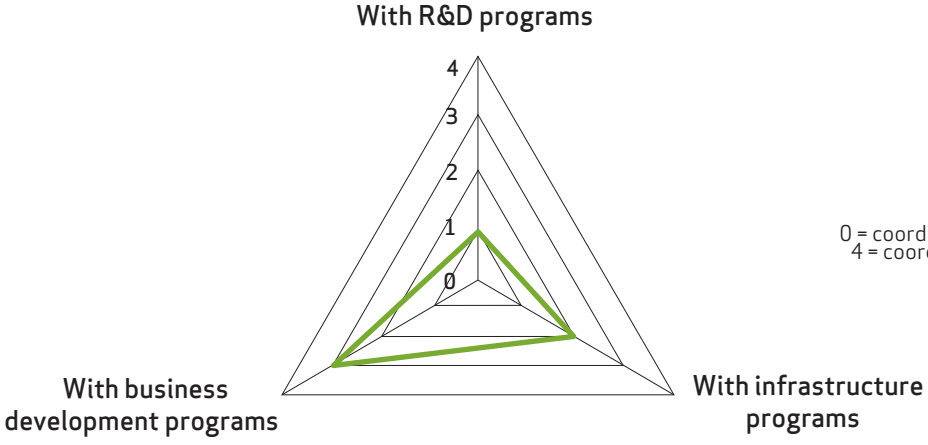
Table 28: Relevance of "Support to the integration of SMEs in value chains and clusters" in the overall policy setting

How important is the cluster program in relation to…	0	1	2	3	4
…the overall national economic/industrial development strategy?	•	•	•	X	•
…other R&D/innovation programs?	•	•	X	•	•

0 = not important at all ==> 4 = very important

In line with this finding is the strong coordination of this Romanian cluster program with other business development programs. The coordination with R&D programs and other infrastructure programs is strong to medium (see figure below).

Figure 40: Coordination of "Support to the integration of SMEs in value chains and clusters" with other Romanian funding programs



2.18.2 DEVELOPMENT OF BUSINESS SUPPORT STRUCTURES OF NATIONAL AND INTERNATIONAL RELEVANCE – COMPETITIVENESS POLES

NAME OF PROGRAM	DEVELOPMENT OF BUSINESS SUPPORT STRUCTURES OF NATIONAL AND INTERNATIONAL RELEVANCE – COMPETITIVENESS POLES
COUNTRY	Romania
CONTACT DETAILS	Ministry of Economy, Commerce and Business Environment, MECMA Autoritatea de Management pentru Programul Operaţional Sectorial Creşterea CompetitivitĐĐii Economice Christina Leucuta Str. Dr. Ernest Juvara nr. 3-7, sector 6 Bucureşti, cod 060104 Tel.: 031 413 27 62
INTERNET	http://amposcce.minind.ro/

2.18.2.1 OBJECTIVES AND RATIONALE OF THE PROGRAM

The support granted to the competitiveness poles aims at fostering the setting up and development of innovative enterprises / activities in enterprises resulting in an increased number of suppliers and clients on the national and international markets via an integrated financing package of projects jointly developed by enterprises/R&D organizations/NGOs/ public bodies.

In the sense of the program, a pole of competitiveness is represented by an association (with legal status or not) of enterprises, R&D and educational institutions, cooperating in joint innovative projects in view of accessing one or several markets. The competitiveness pole is specifically defined by three elements: a) compositions: mandatory existence of 2 types of actors: enterprises and R&D institutions and optionally of a third one, i.e. the so called "catalyst institutions": consultants, technology transfer centers, RDAs, banks etc. b) the association between the members – in a legal form or not; c) development strategy – assumed by all members of the pole.

2.18.2.2 TARGET GROUP OF THE PROGRAM

The target group of the program is SMEs, large companies, NGOs, universities, R&D institutions, and educational institutions.

2.18.2.3 TERM OF THE PROGRAM, FINANCIAL ASPECTS AND APPLICATION PROCEDURE

TERM OF THE PROGRAM	2012-2015
Budget	EUR 60 Million
Type of funding	Grant funding
Does the program have a specific technology focus?	No, however in the sense of the call only clusters comprising at least 10 SMEs with the main NACE code corresponding to "productive" activities will be financed.
Are there calls for proposals?	No
Is there a dialogue with applicants about the improvement of their application prior to the final submission of the application?	No
Maximum funding period for a project	2 years
Is there a maximum amount of funding an applicant can apply for?	Up to EUR 20 Million
Financing structure of projects	The programme finances an integrated package comprising minimum: 1 investment (hard) project – 50% funding, excepting Bucharest (40%) 1 R&D&I project : funding 50% industrial research, 25% experimental research 2 soft projects (training, management etc): funding 50% for projects under state aid, 100% for projects under de minimis
Most important evaluation criteria for project proposals	Innovative aspects Accessing new markets (export) Employment Relevance for the national economy (sectoral criterion)

2.18.2.4 INSTRUMENTS

The "Competitiveness Poles" program is being implemented under the sectoral operational program "Increase of Economic Competitiveness", one of the seven instruments (OPs), under the Convergence objective, for achieving the priorities of the National Strategic Reference Framework (NSRF) derived from the National Development Plan 2007 – 2013 (NDP), which aims to strengthen the strategic focus of the Economic and Social Cohesion policies across Romania, and to make the correct and appropriate linkages to the European policies and the Lisbon Strategy for growth and job creation. The total financial allocation for the period 2007-2013 for the SOP Competitiveness is EUR 255 Milliard.

The "Competitiveness Poles" program finances an integrated package comprising:

Investment projects (hard)
- Invest ments in land, buildings
- IT infrastructure
- Technical transport vehicles
- Office equipment
- Patents/ trademarks/industrial drawings
- Software

R&D&I projects
- Industrial research
- Experimental development
- Feasibility studies
- IPR expenditures
- Staff renting
- Consultancy for innovation
- "Innovation to market" expenditures

Soft measures
- General management consultancy
- Participation to fairs
- Training activities
- Branding

2.18.2.5 RESULTS AND IMPACT OF THE PROGRAM

The program targets at encouraging the development of business structures (poles of competitiveness) in order to foster the development of high value added products, competitive both on the national and international markets against the general aim of increasing the competitiveness of Romanian enterprises. The program contributes to the achievement of the following indicators of the general SOP Competitiveness, as follows:

- Relevance of the project against the general objectives of SOP Competitiveness;
- Impact on innovation
- Impact on the pole's visibility
- Impact on employment
- Relevance of the sector for the national economy
- Economic impact (in terms of turnover and export)
- Number of SMEs involved

2.18.2.6 MONITORING AND EVALUATION SYSTEM

INDICATORS	
OUTPUT	• Productive and environmental friendly investments and preparation for market competition, especially SMEs • Access to finance for SMEs • Sustainable entrepreneurship development • Assisted SMEs for direct investment operations, target 2015: 2000 • SMEs that participated in international fairs, target 2015: 1200 • Newly created or empowered business infrastructures, target 2015: 10-15 • Enterprises benefiting of consulting services, target 2015: 2000
RESULTS	• Jobs created/maintained in enterprises, target 2015: 23000 • Share of supported SMEs in total number of SMEs, target 2015: 12-15 • Increase of turnover in assisted enterprises for productive investments (2 years after completion), target 2015: 10

IMPACT	• Consolidation and sustainable growth of the Romanian productive sector • Establishment of a favorable environment for enterprises' development • Between 3 and 12 poles financed • Consolidation and sustainable growth of the Romanian productive sector • Establishment of a favorable environment for enterprises' development

2.18.2.7 CONTEXT OF THE PROGRAM

Asked to assess the importance of the program on a scale from 0 (not important at all) to 4 (very important) in relation to the overall economic/industrial development strategy and in relation to other R&D/innovation programs the program authority assigned a 3 to the first dimension and a 2 to the second dimension (see table below). Being an element of the overall national development strategy the program is a moderately important element of the Romanian economic and R&D support policy.

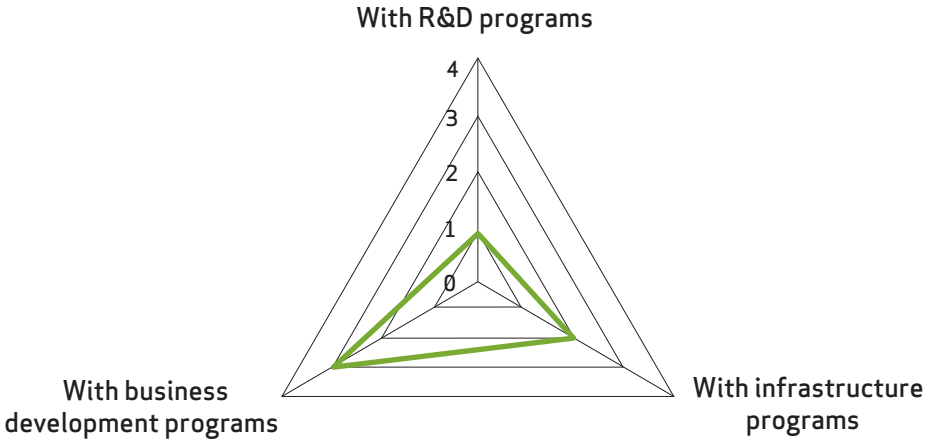
Table 29: Relevance of "Competitiveness Poles" in the overall policy setting

How important is the cluster program in relation to…	0	1	2	3	4
…the overall national economic/industrial development strategy?	•	•	•	X	•
…other R&D/innovation programs?	•	•	X	•	•

0 = not important at all ==> 4 = very important

It is mostly the business development programs that are best coordinated with this cluster program. The other indicators, however, also show a good coordinated with the cluster program.

Figure 41: Coordination of "Competitiveness Poles" with other Romanian funding programs



0 = coordination is weak ==> 4 = coordination is strong

2.19 SERBIA

2.19.1 SERBIAN CLUSTER DEVELOPMENT SUPPORT PROGRAM

NAME OF PROGRAM	SERBIAN CLUSTER DEVELOPMENT SUPPORT PROGRAM
COUNTRY	Serbia
CONTACT DETAILS	Ministry of Economy and Regional Development Zorica Maric Department for Regional Development and Promotion of Entrepreneurship Bulevar kralja Aleksandra 15 11 000 Belgrade Tel. +381 11 285 5201 E-Mail: zorica.maric@merr.gov.rs
INTERNET	http://klasteri.merr.gov.rs/en

2.19.1.1 OBJECTIVES AND RATIONALE OF THE PROGRAM

Cluster development support is regarded as one of the instruments for overcoming the international competitiveness problems of Serbia's enterprise sector as reflected by low productivity, over-reliance on traditional industry and an inadequate export structure based on non-differentiated low value added products and services. Cluster approach is also meant to be used for contributing to overcome the important shortages of Serbian economy such as: a low level of linkages and co-operation between companies, underdeveloped research collaboration between university and industry, insufficiently developed entrepreneurial spirit for rapid adaptation of cluster concepts, difficulties in accessing the foreign markets, lack of trust. The objective of the Program is to achieve improved international competitiveness and higher levels of exports through encouraging innovation-based cluster partnership among enterprises and between enterprises and education and research institutions, business support organizations and also trade associations.

2.19.1.2 TARGET GROUP OF THE PROGRAM

The target groups are groups of companies (minimum 9, at least 60% of SMEs) and R&D and service providers (minimum 3, at least 1 R&D Institution).

2.19.1.3 TERM OF THE PROGRAM, FINANCIAL ASPECTS AND APPLICATION PROCEDURE

TERM OF THE PROGRAM	2007-2013
Budget	EUR 1.6 Million
Type of funding	Grant funding
Does the program have a specific technology focus?	No
Are there calls for proposals?	No
Is there a dialogue with applicants about the improvement of their application prior to the final submission of the application?	Yes
Maximum funding period for a project	Eight months
Is there a maximum amount of funding an applicant can apply for?	EUR 25.000
Financing structure of projects	Up to 25% of eligible expenses
Most important evaluation criteria for project proposals	Most important evaluation criteria for project proposals • Cluster's resource fundament • Relations and dynamics within the cluster • International orientation and quality level • Project's quality and development potential

2.19.1.4 INSTRUMENTS

The Serbian Cluster Development Support Program is designed by the Ministry of Economy and Regional Development which has the sole responsibility for its implementation together with the subordinating Agency. There is no multi-annual programming in Serbia. Within this limitation, the Ministry of Economy is committed to seek annual national budget funds for cluster development based on the programs which has to be adopted every year. These allows for changes on yearly basis, but also, induces instability, hinder trust building and doesn't allow adequate mid and long term planning.

The total funds allocated for the program for 5 years are EUR 1.6 Million. In addition to funds from the national budget, in 2007, the Program is supported by the Norwegian Government, 365.000 Euros in total.

The cluster support in Serbia is scattered among several thematic policy documents without sufficient co-ordination and with no cross-cutting clear strategy. The level of participation of other Ministries is reduced. The program is focused mostly on competitiveness and SME development, growth and strengthening of existing clusters. Companies are the main target groups (minimum 9 companies, 60% SMEs), others are business support institutions, and especially R&D institutions are encouraged to participate.

The clusters are defined as a group of interrelated enterprises, operating in the same and different industry sectors, interrelated know-how, other institutions and organizations providing a relevant knowledge, technology, resources and other significant means to increase competitiveness of enterprises, participants and clusters generally. The clusters meet joint needs of enterprises in the areas of procurement, purchasers, specialized services, workforce, and other

resources. The main activity is to contribute to the development of industrial clusters in Serbia through a number of Cluster Initiatives (CIs), which are projects or project portfolios designed by cluster members and operated by CI hosts on their behalf. Other activities are designed to strengthen potential CIs and develop arenas for CI development processes across clusters. The program recognizes two phases of cluster development: starting initiatives for linking into a system of clusters (phase I) and for initial operation of CIs (phase II). The Ministry provides co-financing for envisaged activities and eligible costs related to those activities. The instruments used by the Program are:

- actors engagement of and building networks (internal within the CI and external between the CI and other actor or regions), organize them around key issues of the industry;

- support to the development of collective services (market intelligence, co-ordinate purchasing, export networks, brokering services, participation in trade fairs under a common label, vocational and university training, technical standards);
- support to the development of joint projects, „light" R&D.

The program relies on self-identification, bottom-up approach. The ministry does not define the cluster development areas, does not determine the strategy, rules, and form of organization and cluster management process, does not appoint and choose cluster actors. However, the selection of the program participants is in competitive procedure, delimited by eligibility and selection criteria in line with the program objectives.

The selection criteria cover such aspects as cluster's resource fundament, the relevance of the action, its consistency with the objectives of the call for proposals, quality, expected impact, sustainability and cost-effectiveness.

The monitoring and evaluation system is in place, and the performance of CIs supported by the program is evaluated annually. Two sets of indicators are used. The first set concerns the development of the clusters themselves: basically their size and strength. These indicators can only be said to be indirect effects of the activities of the CIs, since many other factors contribute as well. The second set concerns the development of five sets of drivers that are, in general, important for cluster development: communication and network development; innovation, research and development; human resources, training and education; marketing, export and internationalization; financial base.

2.19.1.5 RESULTS AND IMPACT OF THE PROGRAM

The establishment and operation of 20 CI and their cluster organizations involving 602 companies, is the result of the program. These CIs collected important players in their fields. Cluster organizations in general were successful in making the ground for trust building among the participants. The strategies and action plans are developed with active participation of the members in line with the current needs of the CI, internal organization for implementation, formal and legal CI bodies are set up.

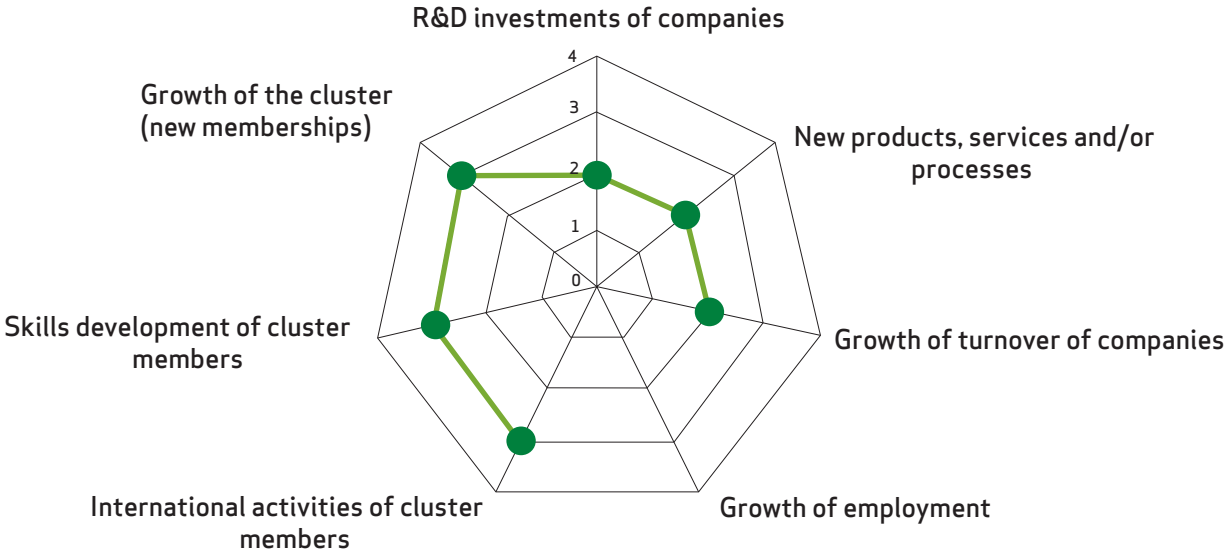
The big obstacle in the Serbian economy "lack of trust and short-term thinking without understanding of the need for common vision, strategic goals, and operational plans toward realization of strategic goals" is addressed by the program.

The provision of specialized education and trainings for cluster participants represent very important part of the activities supported, fulfilling existing gap of formal education and industry needs and also introducing the system of long-life learning. Cooperation with the similar initiatives in the area of SEE, as the result of the Program, set the ground for knowledge transfer, joint market presentation and strengthening SEE destination.

All cluster organizations are providing high added value services for their members in the field of information, business linkages, joint representation, market intelligence, support to project development, lobbing. Clusters have the orientation of development joint innovative projects and succeed to attract additional funds for the implementation. The infrastructure necessary to support cluster development have emerged. The regional development agencies have the specific knowledge and services and can play an important role in the cluster development (as a broker, facilitator, and service provider). Thanks to their strategic thinking and common needs identified, two CI where able to use funds available through IPA instruments, to build and equip testing laboratories for their needs, and thus directly raise the competitive position of their members. CIs currently ensure financial sustainability with membership fees, sponsorships, services and additional donor support, and don't rely on governmental budget, which has very limited resources.

With regard to the benefits the program can transfer, it apparently has the largest impact on the growth of cluster programs, international activities of the cluster members and the skill development within such a cluster.

Figure 42: Results of the program that were achieved in 2011



0 = results are poor ==> 4 = results are excellent
Missing values are due to the fact that there is no evidence available yet.
This does not mean that there are no effects at all.

2.19.1.6 MONITORING AND EVALUATION SYSTEM

The program will be evaluated twice during its term (approximately every 24 months). The following indicators are used to monitor the performance of the program:

INDICATORS	
OUTPUT	• number of cluster networks , number of companies, number of employees, • number of universities and R&D, number of task forces, advisory boards with • public and private representatives • number of joint projects • number of projects developed in cooperation of companies and R&D • institutions • number of joint market presentations • number of regional networks participation • number of project developed and submitted for donor funds • number of joint infrastructure projects funded

RESULTS	• number of cluster networks , number of companies, number of employees, • number of universities and R&D, number of task forces, advisory boards with • public and private representatives • number of joint projects • number of projects developed in cooperation of companies and R&D • institutions • number of joint market presentations • number of regional networks participation • number of project developed and submitted for donor funds • number of joint infrastructure projects funded
IMPACT	• introducing strategic thinking into business procedures of Serbian companies • development of new organizational forms, • increasing the productivity of individual enterprises involved in measure • private level of investment in research & development and innovation higher • than national average, • wide variety of intermediaries and brokers with strong reliability • contribution to the national innovation system by development of missing links, • e.g. testing laboratory, center of excellence • international linkages re-established, increase in exports of participating • companies by 10% • higher participation in international projects, cooperation and transfer of good • practice.

2.19.1.7 CONTEXT OF THE PROGRAM

Asked to assess the importance of the program on a scale from 0 (not important at all) to 4 (very important) in relation to the overall economic/industrial development strategy and in relation to other R&D/innovation programs the program authority assigned a 2 to the first dimension and a 1 to the second dimension (see table below). Thus, the program is a rather small element of the Serbian economic and R&D support policy.

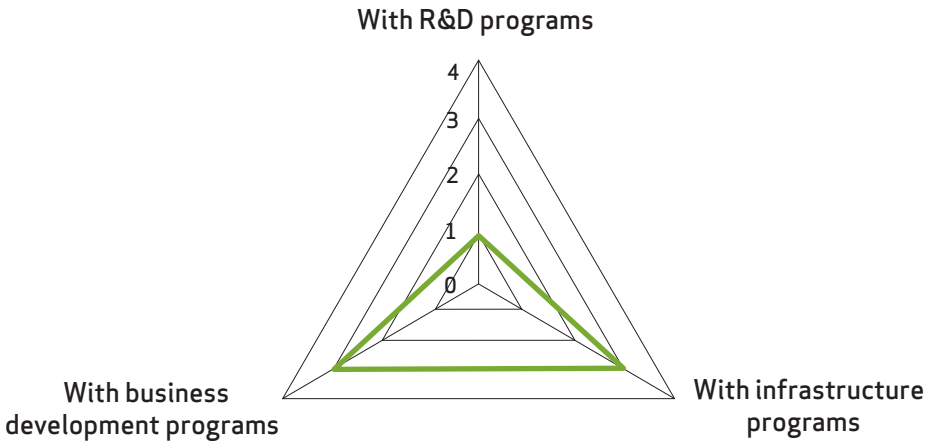
Table 30: Relevance of the Serbian cluster development program in the overall policy setting

How important is the cluster program in relation to…	0	1	2	3	4
…the overall national economic/industrial development strategy?	•	•	X	•	•
…other R&D/innovation programs?	•	X	•	•	•

0 = not important at all ==> 4 = very important

However, despite the fact that the Serbian cluster development program is rather a small element within the national policies it is still quite well coordinated with other funding programs (see figure below).

Figure 43: Coordination of the Serbian cluster development program with other funding programs



0 = coordination is weak ==> 4 = coordination is strong

2.20 SLOVAKIA

2.20.1 SUPPORT TO INNOVATIVE INDUSTRIAL CLUSTER ORGANIZATIONS

NAME OF PROGRAM	SUPPORT TO INNOVATIVE INDUSTRIAL CLUSTER ORGANIZATIONS
COUNTRY	Slovakia
CONTACT DETAILS	Department for Industry and Innovation of Ministry of Economy of Slovak Republic Martin Hlinka Mierová 19 827 15 Bratislava 212 Tel.: 00421-2-4333 7827 e-mail: hlinka@mhsr.sk
INTERNET	www.economy.gov.sk

2.20.1.1 OBJECTIVES AND RATIONALE OF THE PROGRAM

The main objective of the Innovation Policy of the Slovak Republic for 2011 to 2013 ("Innovation Policy") is to develop individual measures of the Innovation Strategy of the Slovak Republic for 2007 to 2013.

The Innovation Policy for 2011 – 2013 in the authority of the Ministry of Economy of the Slovak Republic was drawn up in accordance with Act No. 403/2010 Coll. amending Act No. 575/2001 Coll. on the organization of government activities and on the organization of central state administration as amended, and on the amendment of certain acts. The Innovation Policy was prepared so as to fit the EU policy framework, and simultaneously to represent a specific program pursuing the national interests of the Slovak Republic.
In terms of content, the Innovation Policy for 2011 – 2013 follows up on the "Manifesto of the Government of the Slovak Republic for the period of 2010 – 2014" of August 2010, where the Slovak government has set the following goals in relation to innovation:

Taking into consideration the document entitled "EUROPE 2020 the Slovak government considers it the most important economic policy objective to establish conditions for improving the quality of life and the living standards of its citizens by restoring the growth of the national economy and competitiveness through Slovakia's improved innovation performance.

The Innovation Policy reflects the OECD recommendations listed in the Overview of the Economic Survey of the Slovak Republic of November 2010, in particular from the long-term structural view-point and focuses on the issue of green growth, which is the main OECD strategy in the member countries and covers, inter alia, innovation (eco-innovation), the business environment and education. Eco-innovation is key in the long term. In the course of structural reforms, it is necessary to improve the innovation framework, including the rules for the provision of support to R&D and innovation. Supporting the business environment is necessary in order to provide access to capital and labor market mobility. Promoting the knowledge economy contributes to human capital building.

With that in mind, it is necessary to consider the fact that the industry faces a challenge ensuing from the approved Directive 2010/75/EU of the European Parliament and of the Council on industrial emissions, the implementation of which will require substantial investments in production sustainability. In this case, innovation represents an opportunity to ensure the greatest possible efficiency of return on investment, with a view to getting the maximum added value from the material and energy used. The measures proposed below constitute the basic prerequisite for innovation to help promote the sustainability of Slovak industrial production.

In context of the policy there is no clear cluster definition. The primary objective of the Innovation Policy is to set up support mechanisms for the creation and development of innovation structures, innovation businesses, partnership and cooperation among businesses, universities and re-

search institutes in the fields of research, development and innovation, and the establishment of conditions for improving Slovakia's competitiveness.

The main activities are

- Priority No. 1 High quality infrastructure and an efficient system for innovation development
- Priority No. 2. High-quality human resources
- Priority No. 3. Efficient tools for innovation

Supports under Priority No. 1 - High-quality infrastructure and an efficient system for innovation development - are the following:

- Measure No. 1: Support to innovative industrial cluster organizations
- Measure No. 2: Promotion of innovation and building of innovation awareness across the society
- Measure No 3: Competition "Innovative Action of the Year"
- Measure No. 4: Strategic Innovation Material for the Next Planning Period
- Measure No. 5: Support to projects applying for funding from Community Programs to support innovation

The program activities linked with Measure No. 1. - Support to innovative industrial cluster organizations - have not defined yet, it is in the start-up phases.

The purpose of the measure is to improve industrial competitiveness through support to selected activities of industrial cluster organizations, with a view to promoting joint industrial activities in selected areas.

The measure will support selected cluster activities which contribute to increasing the competitive ness of the innovative cluster organizations' member companies. It will focus on actual well-established cluster organizations that have been carrying out activities for the benefit of their members in the past.

While facilitating the development of clusters, the creation of a supporting development instrument will mainly contribute to increasing the innovation capacity of the companies that are members of the cluster organizations. The measure will thus indirectly stimulate the development of small and medium-sized enterprises, which are the ones most vulnerable in the long-term – also due to their lack of innovation capabilities.

The instrument will also indirectly stimulate the establishment of new cluster organizations, thus stimulating cooperation in diverse industries or regions.

This measure will favor cluster organizations which focus on high-tech, those which operate in less developed regions, and internationally recognized cluster organizations.
The program runs from 2007 – 2015.

2.20.1.2 TARGET GROUP OF THE PROGRAM

The target group is the industrial cluster organizations.

2.20.1.3 CONTEXT OF THE PROGRAM

Asked to assess the importance of the program on a scale from 0 (not important at all) to 4 (very important) in relation to the overall economic/industrial development strategy and in relation to other R&D/innovation programs the program authority assigned a 2 to the first of the two dimensions and a 1 to the second dimension (see table below). Thus, the program is a rather small element of the Slovakian economic and R&D support policy.

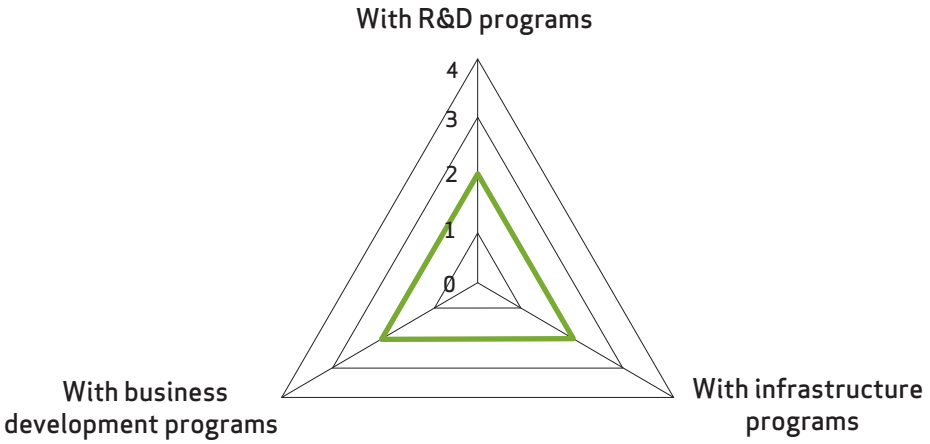
Table 31: Relevance of the Cluster Program in the overall policy setting

How important is the cluster program in relation to…	0	1	2	3	4
…the overall national economic/industrial development strategy?	•	•	•	X	•
…other R&D/innovation programs?	•	X	•	•	•

0 = not important at all ==> 4 = very important

However, the program is well coordinated with other funding programs in Slovakia as indicated in figure below.

Figure 44: Coordination of Cluster Program with other Slovakian funding programs



0 = coordination is weak ==> 4 = coordination is strong

2.21 SPAIN, REGION: CATALONIA

2.21.1 CLUSTER DEVELOPMENT CATALONIA

NAME OF PROGRAM	CLUSTER DEVELOPMENT
COUNTRY	Spain, Region: Catalonia
CONTACT DETAILS	Generalitat de Catalunya, Competitiveness for Catalunya Alberto Pezzi Passeig de Gràcia, 129 08008 Barcelona Tel.: +34 935 674 905 E-Mail: apezzi@gencat.cat
INTERNET	www.acc10.cat/en//index.jsp

2.21.1.1 OBJECTIVES AND RATIONALE OF THE PROGRAM

The overarching aim of the cluster program is to improve the competitiveness of Catalan companies. The specific objectives are:

- To improve the competitiveness of Catalan companies by facilitating strategic change and upgrading their business toward more added value activities.
- To strengthen innovation through cross-sectoral cooperation projects.
- To improve the professionalization of cluster managers and stimulate networking.

2.21.1.2 TARGET GROUP OF THE PROGRAM

As for the New Business Opportunities call, it is open to all firms located in Catalonia. Nevertheless, the target group is formed by approximately 2.000 firms (mainly SMEs) and businessmen working in one of the 30 cluster reinforcement initiatives currently ongoing in Catalonia.

Regarding the Cluster Development call, it is open to any cluster organization operating in Catalonia.

2.21.1.3 TERM OF THE PROGRAM, FINANCIAL ASPECTS AND APPLICATION PROCEDURE

TERM OF THE PROGRAM	2005
Budget	EUR 5.1 Million p.a.
Type of funding	Grant funding
Does the program have a specific technology focus?	No
Are there calls for proposals?	Two calls for proposals: 1) New Business Opportunities Call, 2) Cluster Development Call

Is there a dialogue with applicants about the improvement of their application prior to the final submission of the application?	Yes. There is a continuous dialogue with cluster organizations in which funding is part of the whole process.
Maximum funding period for a project	One year
Is there a maximum amount of funding an applicant can apply for?	For the New Business Opportunities call there is a limit of 60.000EUR for strategic change and 90.000EUR for structural change. Regarding the Cluster Development call there is no maximum amount.
Financing structure of projects	In general up to 75% of the total costs of the projects. Specific actions (like training or investment could have a lower degree of financing)
Most important evaluation criteria for project proposals	Alignment with the strategic challenges of the sec-tor. Technical and economic coherence. Socio-economic impact of the project.

2.21.1.4 INSTRUMENTS

Instrument 1: Call for New Business Opportunities

- Business projects of strategic change consisting in the carrying out of a business plan. Carrying out of an initial analysis of the current situation of the company as well as analyzing the need to explore new business opportunities and the carrying out of a business plan including the required measures and resources to guarantee its feasibility (market study, definition of the new business models to be developed, strategic reflection, marketing plan, operative implementation, financial plan)

- Business projects of structural change, implementation of actions defined in the previous business plan.

Instrument 2: Call for cluster development projects

- 2a: Projects of reinforcement of the competitiveness of Catalan clusters.

- 2b: Projects fostering strategic change, innovation and internationalization of Catalan com-panies through the participation in cluster projects (consultancy in specific topics such as taxation in innovation, specific executive training for cluster managers, benchmarking, fore-sight studies, market analysis, setting up of shared structures, foresight and/or entry into new markets…)

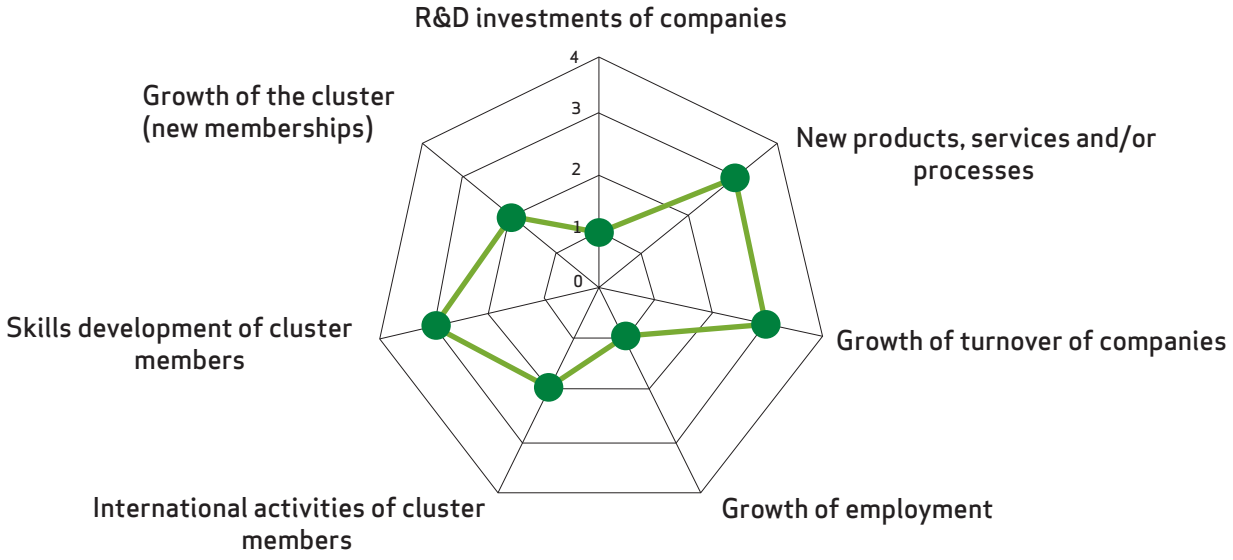
- 2c: Projects of transnational cooperation with activities such as: networking, organization of conferences and workshops, exchange of best practices and training activities.

- 2d: Specialized training devoted to the professionalization of cluster managers

2.21.1.5 RESULTS AND IMPACT OF THE PROGRAM

When asking the program officials about the impact of the program it has been rated quite high in all categories shown in the figure below.

Figure 45: Results of the program that were achieved in 2011



2.21.1.6 MONITORING AND EVALUATION SYSTEM

The program has not yet developed a consistent evaluation system (currently in phase of study / implementation).

INDICATORS		
	New Business Opportunities (NON)	Cluster development (CLU)
OUTPUT	• Number of projects submitted:124 • Number of projects approved: 110	• Number of projects approved: 85 • Number of projects submitted:104
RESULTS	• Number of projects funded: 63	• Number of projects funded: 79
IMPACT	• Cannot be measured yet	• Cannot be measured yet

2.21.1.7 CONTEXT OF THE PROGRAM

Asked to assess the importance of the program on a scale from 0 (not important at all) to 4 (very important) in relation to the overall economic/industrial development strategy and in relation to other R&D/innovation programs the program authority assigned a 3 to each of the two dimensions (see table below). Thus, the program is an important element of the Spanish / Catalonian economic and R&D support policy.

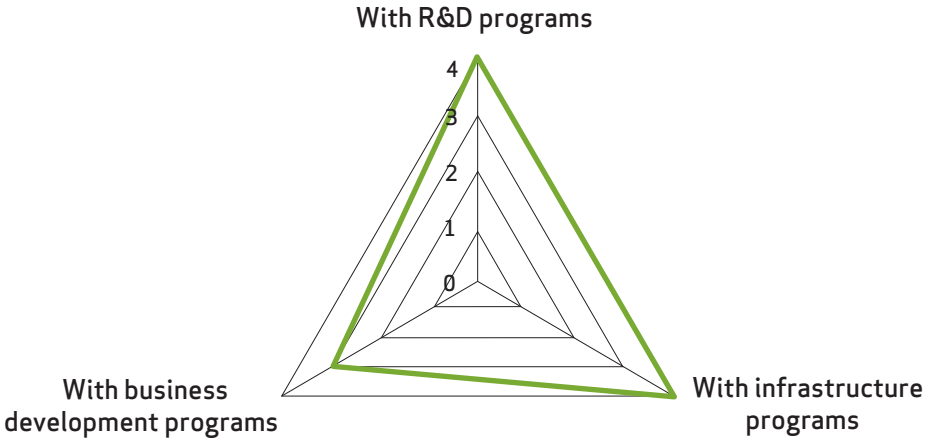
Table 32: Relevance of Cluster Development Catalonia in the overall policy setting

How important is the cluster program in relation to…	0	1	2	3	4
…the overall national economic/industrial development strategy?	•	•	•	X	•
…other R&D/innovation programs?	•	•	•	X	•

0 = not important at all ==> 4 = very important

Similar to the high importance in the context of overall policies its coordination with other programs is also very strong. Asked about the coordination of the cluster programs with other support pro-grams of the country program officials indicated that it is high (see figure below).

Figure 46: Coordination of Cluster Development Catalonia with other Spanish funding



0 = coordination is weak ==> 4 = coordination is strong

2.22 SWEDEN

2.22.1 VINNVÄXT

NAME OF PROGRAM	VINNVÄXT
COUNTRY	Sweden
CONTACT DETAILS	Vinnova Göran Andersson Program Manager Mäster Samuelsgatan 56 101 58 Stockholm Tel.: +46 8 473 30 83 E-Mail: goran.andersson@vinnova.se
INTERNET	www.vinnova.se/en/activities/vinnvaxt

2.22.1.1 OBJECTIVES AND RATIONALE OF THE PROGRAM

The overall objective of the VINNVÄXT program is to promote sustainable growth in regions by developing competitive research and innovation environments within specific growth fields. Cutting-edge competence of the environments shall be strengthened through needs-driven funding of R&D and strategic efforts for the development of effective regional innovation systems. Based on a competition a limited number of regions have been chosen for support. Each winner shall become internationally competitive in its field of expertise within 10 years.

To become internationally competitive the following operational objectives have to be achieved in each region:

- Research and education in focused growth areas in the region are developed according to high international standards.
- Interaction and mutual learning between different competences and organizations (companies, R&D institutes, colleges, universities, etc.) is effective.
- The infrastructure of the innovation system in the region is developed so that all its components are of a high standard both individually and when seen as a whole. This requires co-ordinated measures and investments from the private, public and research sectors and from the political sphere. Such measures may include support for new spin-off/hive-off companies from research institutes or companies, risk capital, technical and competence brokering, networks between companies, joint marketing activities, the recruitment of cutting-edge competence and the pro-vision of housing, land, premises, communications etc.

In the context of the program regions are not understood as "administrative regions" (e.g. a municipality or a county), but as "functional regions". It is the geography and not administrative boundaries that matters in terms of the development of social capital and confidence between relevant stakeholders in regions. In the practical implementation of the program this approach applied both to the support of municipality-based initiatives (e.g. the cluster Uppsala BIO) and large regional-based initiatives (e.g. the cluster Process IT Innovations). Funding may be used for a wide array of projects and activities depending on the existing capabilities and shortcomings in the regional system of innovation.[36]

Following the selection of three winning initiatives in 2003 and further five in 2004, in 2008 four - in contrast to the initiatives that had been selected until then - more embryonic innovation systems were selected under a special call for proposals entitled "Early-Stage Innovation Systems".

In June 2012 a new VINNVÄXT call was launched. In the first step there will be a planning grant and in the second step there will be a call which will add 2-4 more VINNVÄXT

Vinnova, 2010: VINNVÄXT at the Halfway Mark – Experiences and Lessons Learned, p. 7.

initiatives receiving funding for 10 years. In addition VINNOVA has launched a prolongation grant (3+3 years). The first three initiatives that leave the program can apply for the grant this year.

2.22.1.2 TARGET GROUP OF THE PROGRAM

Target group of the program are regional-based consortia including companies, R&D actors and public institutions (triple helix approach).

2.22.1.3 TERM OF THE PROGRAM, FINANCIAL ASPECTS AND APPLICATION PROCEDURE

TERM OF THE PROGRAM	2002-2015
Budget	EUR 8.8 Million (SEK 79 Million)
Type of funding	Grant funding and technical assistance
Does the program have a specific technology focus?	No
Are there calls for proposals?	There were calls for proposals in 2002, 2003 and 2008. They did not have specific thematic foci.
Is there a dialogue with applicants about the improvement of their application prior to the final submission of the application?	Yes
Maximum funding period for a project	10 years. Funding is allocated for contract periods of 3.5 years and beneficiaries have to submit a status report every third year to prove their progress to be eligible in the following period.
Is there a maximum amount of funding an applicant can apply for?	EUR 1.1 Million p.a. (SEK 10 Million p.a.)
Financing structure of projects	Max. 50% funding from the program Min. 50% regional co-funding (cash funds or in-kind-contributions)
Most important evaluation criteria for project proposals	Impact on industry sector and companies Impact on society (non-economic effects) SME focus or SME participation in activities Credibility of the triple helix partnership of the applicants

2.22.1.4 INSTRUMENTS

The VINNVÄXT program offers both grant funding and technical assistance (process support) to the winning regions. Grant funding is provided for the following activities:

- For the development of the identified innovation system funding is provided for
  - o Process management
  - o Future-oriented processes and technological scenarios
  - o Analyses and the drawing up of strategies to lift the innovation system to an international level
  - o The commissioning of research and expert competence in the fields of learning, network organization and leadership
  - o The development of preconditions for learning and innovations.

- For needs-driven research within the identified growth field through joint projects of colleges/universities and companies.

In the initial phase of support funding is focused on the development of the identified innovation system while needs-driven research projects are being prepared. In the course of support regions are expected to cover most of the funding for the further development of the innovation system, while VINNVÄXT funding is devoted to needs-driven research and development funding.

In addition to grant funding technical assistance is provided to the regions to support their efforts. This includes

- Training courses offered by the DahménInstitute[37] to support cross-border, interdisciplinary learning about and for regional development processes, innovation systems in regions and knowledge-driven clusters.

- A Process Manager Network as a forum to exchange of experiences between process managers, consultants, researchers and other relevant stakeholder. Work of the network has focused on the development of networks, indicators for success and how to communicate ideas within a regional system of innovation. The network is also organized by the DahménInstitute.

- A resource handbook "Mobilizing for Regional Growth – Regional Development Processes, Clusters and Innovation Systems" was produced by the DahménInstitute to support both practitioners and policy makers in their work on cluster development.

2.22.1.5 RESULTS AND IMPACT OF THE PROGRAM

Today there are 12 cluster organizations including 512 companies (of which are 411 SME), 15 universities, four applied research institutions and more than 100 public entities.

An evaluation report published by Vinnova in 2010 ("VINNVÄXT at the Halfway Mark") that has analyzed 8 out of the 12 clusters identified the following results and impacts with regard to the overall objective of the program, the development of a regional system of innovation:[38]

- Three out of eight cluster organizations report an increase in number of memberships. At least in these cases stakeholders perceive added value from a participation in the cluster organization which involves the payment of membership fees.

- The R&D profile of a number of regions has strengthened through the establishment of research centers in the corresponding regional focus areas. However, evaluators conclude that it is difficult to say how much the initiatives' operations have contributed to this.

- There are examples of increased investment by the public players in activities to strengthen the cluster organizations operations in the respective focus areas.

- There is evidence of a change in the mindsets of stakeholders who subordinate their personal interest to the overall interest of the cluster.

According to the 2010 evaluation report most initiatives conduct activities to promote internationalization of the cluster. Activities include i.a. export and investment promotion, participation in fairs and conferences, delegation trips as well as, in some cases, the development of internationalization strategies. The extent of internationalization activities differs between the clusters; some made the initial choice to focus first on regional activities before going international, others are very active particularly those that are operating in an international industry such as Uppsala BIO, Biomedical Development in Western Sweden and Robotdalen.[39]

All initiatives have developed a portfolio of R&D projects to support the development of the regional system of innovation. The number of projects differs between the clusters; some fund quite a lot projects (which may result in the risk of subcritical funding of individual projects), while others concentrate on a small number of big projects with a large

37 The Dahmén Institute (DI) is a network organization working towards the increase of knowledge in the development of Swedish innovation policies as well as the promotion of Sweden's regional and national economic growth. For further information please see www.dahmeninstitutet.se.

38 Vinnova, 2010: VINNVÄXT at the Halfway Mark – Experiences and Lessons Learned, pp. 34-35

39 Ibid., pp. 23-25

amount of individual funding. Only a few cluster initiatives appear to have a clear strategy on how their R&D project portfolio should contribute to the positioning of the regional players in an international comparison.[40]

With regard to industrial development and commercialization of results the cluster initiatives conduct a number of activities. Although the cluster initiatives have varying interests in commercialization of R&D results, most of them are active in this area. Six out of the first eight winning regions reported the start-up of new companies based on their activities. The number of newly-established companies varies from one to eleven for the six clusters. Three out of the four latest competition winners reported the establishment of one new company. The performance of some regions may be influenced by an underdeveloped infrastructure for commercialization and promotion of start-up companies; but the concerned cluster organizations play an active role in developing such an infrastructure, which may help to increase the number of newly established companies.[41]

The first eight VINNVÄXT cluster initiatives that were set up in 2003 and 2004 developed in total 56 new goods, 10 new services and 60 new processes for producing goods and services in 2008/2009 (Swedish financial year). However, the majority of those goods, services and processes were developed by just two initiatives.[42] The four VINNVÄXT initiatives that were set up under the "Early-Stage Innovation Systems" call in 2008 developed a total of two new goods and two new processes in 2008/2009. Half of those new developments originate from one cluster initiative.[43]

2.22.1.6 MONITORING AND EVALUATION SYSTEM

The following main indicators are used to measure the performance of the program:

INDICATORS	
OUTPUT	Activities performed by the cluster initiatives: • Regional and national strategic processes • Regional meeting arenas • Communication and marketing • Competence supply • Funding of R&D projects • Internationalization • Integration of gender perspectives • Needs-driven research • Stimulating the formation of new enterprises • Development of existing industry and/or public sector • Activities for individual learning, monitoring and evaluation

40 Ibid., p. 29

41 Ibid., pp. 30-31

42 Ibid., p. 165

43 Ibid., p. 171

RESULTS	Impact on the level of prioritization and specific actions taken by the regional actors in order to stimulate the cluster focus area: • Number of actively involved companies • Number of projects and project content • Funding of development or maintenance of infrastructure for R&D processes (instruments, test beds etc.) • Number of new patents/products/processes/prototypes developed in activities co-financed by the cluster initiative • Number of scientific publications and other publications (taking also into account whether they are co-published between academia and industry • Number of newly established companies as a result of or stimulated by cluster activities • Number of involved researchers and examination of individual PhD students • Inward investment • Establishment of companies or expansion of already existing companies • Number, type and content of established networks that meet regularly
IMPACT	Impact on R&D: • Increased supply of R&D-based knowledge relevant for the cluster through reinforced and focused R&D capacity in the region and international and national connections that are made available and that are being used Impact on commercialization: • Renewed/upgraded companies with increased value added based on R&D derived products • Internationally competitive research and innovation environment (cluster)

No except for companies that are involved in the cluster no economic indicators are used as it is difficult to establish a resilient cause-and-effect chain between the activities of the cluster initiatives and their impact on the economy. Beneficiaries are monitored by regular written reports, regular meetings with the program owners, IT-based monitoring, regular independent evaluations and individual contacts with representatives of the initiatives. Independent evaluations of the program are carried out every 36 months.[44]

2.22.1.7 CONTEXT OF THE PROGRAM

Asked to assess the importance of the program on a scale from 0 (not important at all) to 4 (very important) in relation to the overall economic/industrial development strategy and in relation to other R&D/innovation programs program officials reported that the VINNVÄXT program is not important at all.(see table below). This was explained by arguing that the debate on cluster policy has started just recently in Sweden and there is no overall innovation policy framework assigning relevance to the program. The program is

44 Evaluation reports are available at www.vinnova.se/en/Activities/VINNVAXT/Publications/.

also very small in terms of budget. The VINNVÄXT budget of SEK 80 Million equals roughly 4 per cent of the entire budget of VINNOVA which in turn accounts for some 6-7 per cent of the entire national R&D budget of Sweden.

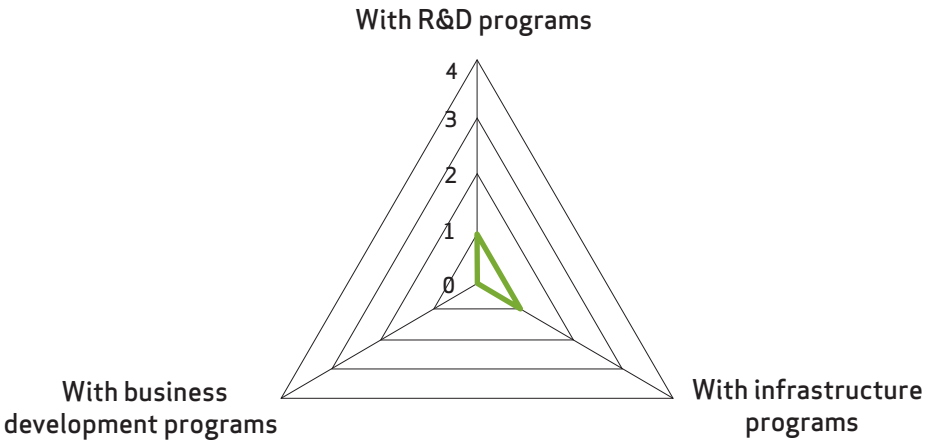
Table 33: Relevance of the VINNVÄXT program in the overall policy setting

How important is the cluster program in relation to…	0	1	2	3	4
…the overall national economic/industrial development strategy?	X	•	•	•	•
…other R&D/innovation programs?	X	•	•	•	•

0 = not i mportant at all ==> 4 = very important

The lack of an overall coordinating policy framework also explains the very weak coordination of the VINNVÄXT program with other Swedish funding programs that was indicated by program officials. Some coordination with other programs does however exist (e.g. with the Regional Cluster Program of Tillväxtverket).The lack of coordination is to some extent due to that VINNVÄXT is not a program targeted at top down identified business or technology segments. Even if The VINNVÄXT program as such is not co-ordinated with other national programs, the initiatives are expected to coordinate their projects and activities with the existing innovation support system. They are also expected to identify issues to address and initiate activities e.g. to address bottlenecks, find solutions to overcome missing functions and further promote the identified potentials for innovation and growth.

Figure 47: Coordination of the VINNVÄXT program with other Swedish funding programs



0 = coordination is weak ==> 4 = coordination is strong

2.23 TURKEY

2.23.1 SUPPORT FOR THE IMPROVEMENT OF INTERNATIONAL COMPETITIVENESS (UR-GE)

NAME OF PROGRAM	SUPPORT FOR THE IMPROVEMENT OF INTERNATIONAL COMPETITIVENESS (UR-GE)
COUNTRY	Turkey
CONTACT DETAILS	Directorate General of Exports, Ministry of Economy Mr. M. Emrah Sazak Head of Department SMEs and Clustering Supports İnönü Bulvarı No: 36 06510 Emek, Ankara Tel.: +90- 0-312-212 59 08 E-Mail: sazake@ekonomi.gov.tr
INTERNET	www.ekonomi.gov.tr www.smenetworking.gov.tr

2.23.1.1 OBJECTIVES AND RATIONALE OF THE PROGRAM

The objective of the Turkish cluster program is to mobilize export initiatives by mobilizing cooperation with business support organizations through enabling local dynamics based on project management and the clustering approach.

The collaborating institutions encourage companies to develop export strategies by making plans and programs in the spirit of common problem, shared opportunity and shared vision.

2.23.1.2 TARGET GROUP OF THE PROGRAM

- Industry unions, SMEs, large companies;
- R&D and higher education institutions, vocational education institutions;
- Other potential cluster partners (local authorities (e.g. city municipalities), governmental institutions, NGOs etc.)

2.23.1.3 TERM OF THE PROGRAM, FINANCIAL ASPECTS AND APPLICATION PROCEDURE

TERM OF THE PROGRAM	2010
Budget	EUR 5 Million
Type of funding	Grant funding
Does the program have a specific technology focus?	No
Are there calls for proposals?	No
Is there a dialogue with applicants about the improvement of their application prior to the final submission of the application?	Yes
Maximum funding period for a project	3 years
Is there a maximum amount of funding an applicant can apply for?	Max: EUR 1.6 Million
Financing structure of projects	Need Analysis including training and joint consultancy for companies Trade Mission Buyers' Mission Employment (2 persons for project staff for each collaboration organization for 3 years) Consultancy (optional, after completion of joint 3 years)
Most important evaluation criteria for project proposals	Minimum number of participants (10 companies) Producer and/or exporters Excluding service sectors Capacity of collaboration organization A satisfactory need analysis report including sec-toral/ cluster level/company level interventions

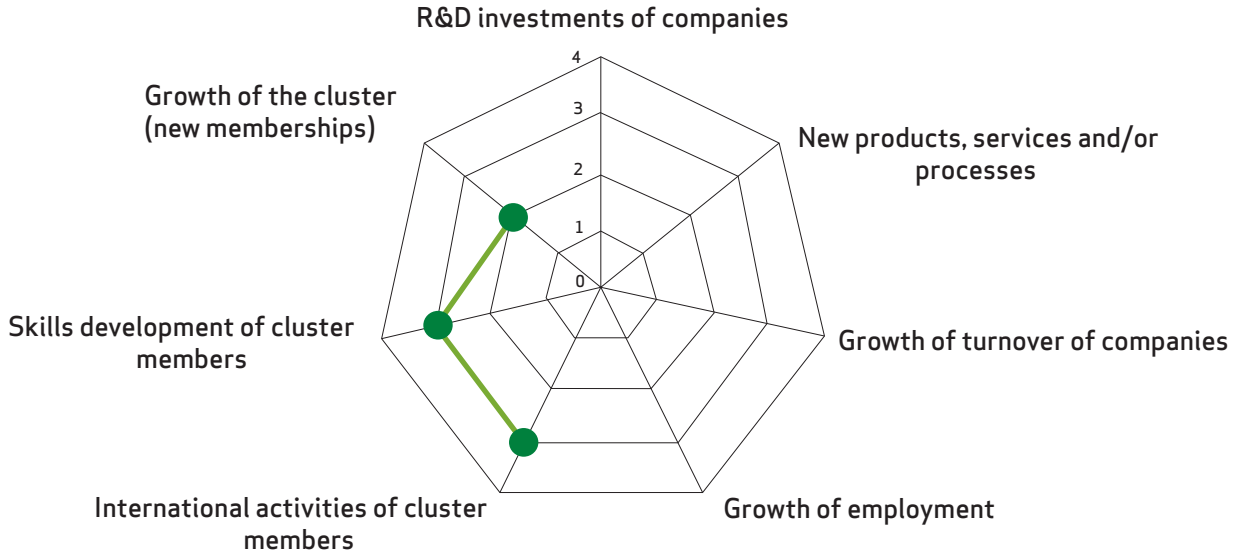
2.23.1.4 INSTRUMENTS

All expenses are made beforehand. Then the cooperating organizations apply for reimbursement. Thus, the instrument is grant funding.

2.23.1.5 RESULTS AND IMPACT OF THE PROGRAM

Since support mechanism of the URGE Program started to be implemented in 2011 and the duration of a project is 3 years, there is no project completed yet. The activities to be counted as results can be named as need analysis, training activities, consultancy activities, international marketing activities, buyer mission activities, employment situation. The expected impact will be the rise of the export of Turkey and the development of the competitiveness level of companies and business support organizations. So far, impact is visible in the categories growth of clusters, skill development of cluster members and international activities of the cluster members (indicated in the figure).

Figure 48: Results of the program that were achieved in 2011



0 = results are poor ==> 4 = results are excellent
Missing values are due to the fact that there is no evidence available yet
This does not mean that there are no effects at all

2.23.1.6 CONTEXT OF THE PROGRAM

Asked to assess the importance of the program on a scale from 0 (not important at all) to 4 (very important) in relation to the overall economic/industrial development strategy and in relation to other R&D/innovation programs the program authority assigned a 4 to the first of the two dimensions and a 2 to the second dimension (see table below). Being an element of the overall national development strategy the program is a rather small element of the Turkish R&D support policy, but it features high on the overall national economic/industrial development.

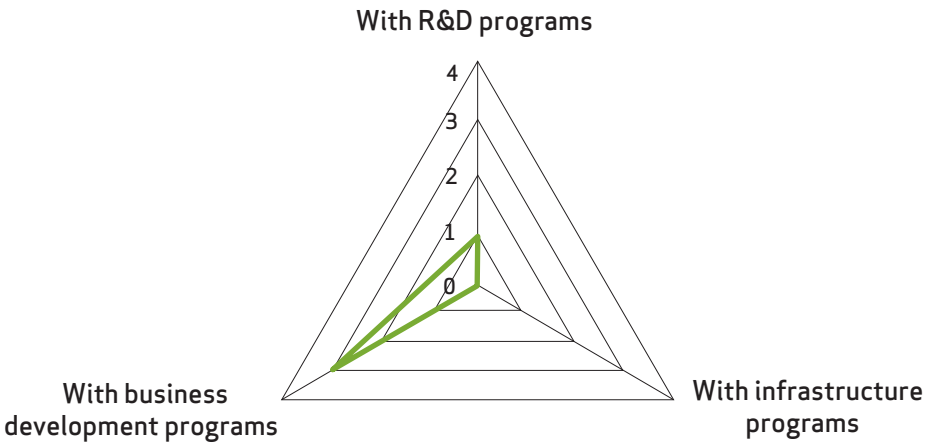
Table 34: Relevance of the Cluster Program in the overall policy setting

How important is the cluster program in relation to…	0	1	2	3	4
…the overall national economic/industrial development strategy?	•	•	•	•	X
…other R&D/innovation programs?	•	•	X	•	•

0 = not important at all ==> 4 = very important

This fact is confirmed in the figure below, which indicates that the coordination with other funding programs is rather weak, except for the coordination with business development programs.

Figure 49: Coordination of Cluster Program with other Turkish funding programs



0 = coordination is weak ==> 4 = coordination is strong

2.24 UNITED KINGDOM

2.24.1 KNOWLEDGE TRANSFER NETWORKS

NAME OF PROGRAM	KNOWLEDGE TRANSFER NETWORKS
COUNTRY	United Kingdom
CONTACT DETAILS	Technology Strategy Board Dr. Peter J. Dirken North Star House, North Star Avenue Swindon, Wiltshire SN2 1UE Tel.: +44-7824-599699 E-Mail: peter.dirken@tsb.gov.uk
INTERNET	https://connect.innovateuk.org

2.24.1.1 OBJECTIVES AND RATIONALE OF THE PROGRAM

The objective of the programme is to stimulate technology-enabled innovation through increased knowledge transfer, partnership formation, supply chain support and other relevant support. The services include:

- signposting to sources of funding
- advice to best routes to funding
- connecting the innovation landscape (i.e. link to other business support programs)
- inform TSB on strategy in key technology and market areas

2.24.1.2 TARGET GROUP OF THE PROGRAM

The target group are the UK businesses.

2.24.1.3 TERM OF THE PROGRAM, FINANCIAL ASPECTS AND APPLICATION PROCEDURE

TERM OF THE PROGRAM	2005-2014
Budget	EUR 21 Million p.a.
Type of funding	Grant funding
Does the program have a specific technology focus?	No
Are there calls for proposals?	Yes, KTNs are established as part of regular strategic reviews every 3 years.
Is there a dialogue with applicants about the improvement of their application prior to the final submission of the application?	Yes
Maximum funding period for a project	3 years with an option of an extension of 2 years

Is there a maximum amount of funding an applicant can apply for?	Overall expenditure needs to fit with programme envelope, individual budgets vary, max. currently EUR 2.1 Million p.a., but is not fixed
Financing structure of projects	100% grant funding for core programme, but extra income from public and private sources is encouraged (ranges from 0 to 100% currently).
Most important evaluation criteria for project proposals	Business impact as articulated in the 4 key performance metrics (see table below "monitoring and evaluation")

2.24.1.4 INSTRUMENTS

Most of the funding comes from the Technology Strategy Board, but the UK's Research funding bodies, the Research Councils (EPSRC, BBSRC, ESRC, MRC, NERC, AHRC and STFC) fund KTNs to increase their own reach into high-growth companies in the UK. Additionally, the KTNs obtain funding for international activities from the Foreign and Commonwealth Office (Science and Innovation Network) as well as UKTI, mainly to support inward and outward missions.

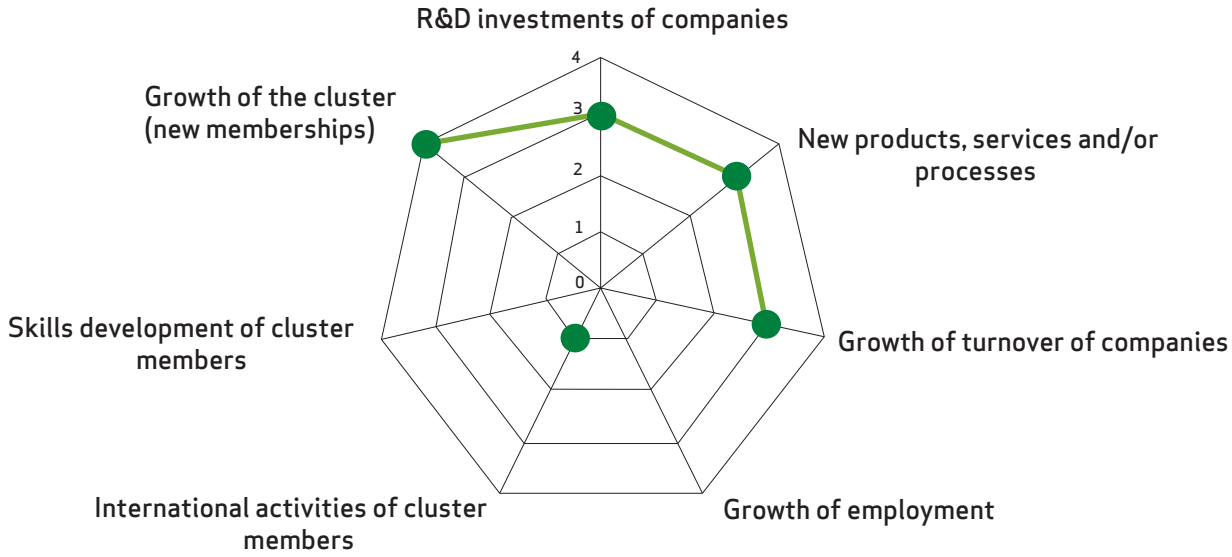
2.24.1.5 RESULTS AND IMPACT OF THE PROGRAM

Since April 2010, the networks have acquired a membership of around 60,000 individuals, 75% of which are companies, of which around 75% again are SMEs.

Since 2009 and up to the end of 2011, the current investment in KTNs has resulted in financial output (see below) of approximately EUR 560 Million against an investment of around EUR 75 Million.

This impact is also visible in the categories indicated in the figure below. The categories "growth of cluster", "new products, services and processes" and the "growth of turnover of the companies" have received the highest impact from the cluster program.

Figure 50: Results of the program that were achieved in 2011



0 = results are poor ==> 4 = results are excellent
Missing values are due to the fact that there is no evidence available yet
This does not mean that there are no effects at all

2.24.1.6 MONITORING AND EVALUATION SYSTEM

INDICATORS	The KTNs' performance is measured using 4 Key Performance Indicators: • Size of the network • Interaction between members • Number of projects and partnerships • Financial output, new products, project funding, start-ups facilitated, etc.
OUTPUT/ RESULTS	• financial output (see below) of approximately EUR 560 Million against an investment of around EUR 75 Million
IMPACT	• As well as the financial impact, the networks have acted as informers of policy to central government departments, providing neutral business input to ministers. • The networks have acted as 'glue' between a number of other business support providers. • The networks have built communities to support other important TSB programs such as Catapults, ensuring the highest possible quality of people and companies participating in this as well as other programs.

2.24.1.7 CONTEXT OF THE PROGRAM

Asked to assess the importance of the program on a scale from 0 (not important at all) to 4 (very important) in relation to the overall economic/industrial development strategy and in relation to other R&D/innovation programs the program authority assigned a 2 to the first of the two dimensions and a 1 to the second dimension of the two dimensions. Thus, the Knowledge Networks program has a medium relevance within the overall national economic/ industrial development strategy and a rather little relevance with regard to other R&D and innovation programs.

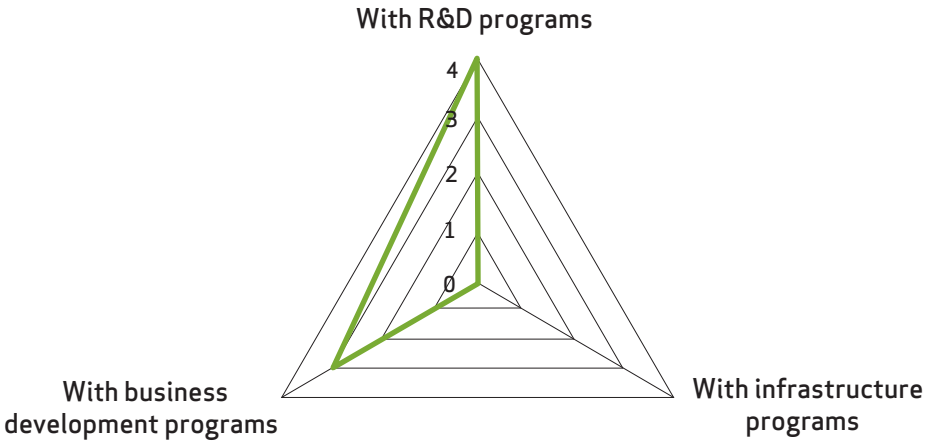
Table 35: Relevance of Knowledge Transfer Networks in the overall policy setting

How important is the cluster program in relation to…	0	1	2	3	4
…the overall national economic/industrial development strategy?	•	•	X	•	•
…other R&D/innovation programs?	•	X	•	•	•

0 = not important at all ==> 4 = very important

This is also mirrored by the coordination activities between the cluster program and other funding programs. Coordination is nearly non-existent with other infrastructure programs. However, there is a quite strong coordination existent between the Knowledge Transfer Networks and other R&D programs and business development programs as indicated below.

Figure 51: Coordination of the Knowledge Transfer Networks program with other funding programs in the UK



1 = coordination is weak ==> 4 = coordination is strong