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CLUSTER MANAGEMENT EXCELLENCE IN THE DANUBE REGION

Pan-European Snapshot of the Current Status of Cluster
Development

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IMPRINT

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ESCA, the European Secretariat for Cluster Analysis is based in Berlin and hosted by VDI/VDE Innovation + Technik GmbH, ESCA supports in particular cluster managers and policy makers with advice on cluster development. ESCA experts have developed a methodology for cluster benchmarking that is acknowledged by both cluster managers and policy makers throughout and beyond Europe. Since 2008 more than 1000 cluster management organisations have been benchmarked according to this methodology. Being additionally involved in the European Clusters Excellence Initiative (ECEI) from 2009 to 2012, ESCA experts contributed to the development of tools that support cluster managers on their way to excellence.

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1 RATIONALE OF THE STUDY – A SNAPSHOT OF THE CURRENT LANDSCAPE OF CLUSTER INITIATIVES IN EUROPE

Most countries in Europe have developed cluster policies and programmes to support competitiveness and job creation. Clusters are a proven tool to address social and economic challenges through business development and innovation support programmes. In recent years, there has been a trend from cluster policy towards a more systematic approach of cluster-based regional development policy.

Excellent cluster management is crucial for maximizing the benefits that can be achieved through cluster initiatives in their efforts to support industry, research, and education in the regions. In parallel, these strategic cluster activities support public authorities in their regional development efforts focusing on improvements in competitiveness.

Over the last 10 years, Cluster Management Excellence has moved up the policy agenda: Initially, most cluster programmes within the European Union paid dedicated attention to funding cluster (management) organisations due to their important role as drivers of innovation within the clusters (or within the regional networks). Funding of such cluster management organisations mainly meant financing the corresponding staff and related infrastructure. In general, key programme objectives were to strengthen the capacities of cluster management organisations. This approach has worked fairly well for many years now. However, when Cluster Management Excellence gained increasing relevance in all political discussions, new approaches were needed to better support cluster management organisations striving for excellence.¹

¹ Kergel, Meier zu Köcker, Nerger (2014), *New Approaches to Improve the Performance of Cluster Management Organisations in Europe*, Danish Ministry of Science, Technology and Innovation, Copenhagen/Berlin,

Over the last decade, Europe has become a global leader in the use of cluster-based economic development tools. Numerous cluster initiatives have been created with support of a wide range of government programmes.

The ECEI initiative, supported by the European Commission, DG GROWTH, introduced a framework of indicators and an assessment methodology. ECEI was the enabler to turn a theoretical model into a mutually accepted approach for Cluster Management Excellence. The Initiative has also developed a training concept and training measures to support cluster management organisations in their quest for excellence. The European Secretariat for Cluster Analysis (ESCA) took the outcomes of ECEI further and operationalised the cluster management excellence idea and related labelling activities.

Over the years, significant progress has been made in this regard. More than 1000 different cluster initiatives have been benchmarked and more than 100 awarded a GOLD Label. Independent studies and evaluations confirmed the positive impact of the benchmarking and labelling approach on the development of cluster initiatives in Europe.²

Nevertheless, after following the approach of Cluster Management Excellence over such a long period, it is time to initiate an open discussion about what worked well and what did not. This study shall thus also contribute to the

<http://www.iit-berlin.de/de/publikationen/new-approaches-to-improve-the-performance-of-cluster-management-organisations-in-europe/>

² European Commission (2014) Evaluation of Cluster initiatives managed by DG Enterprise and Industry, DOI: 10.2769/89710

currently ongoing efforts made within the ECEI II project that aims to update and further streamline the Cluster Management Excellence and Labelling approach.

Furthermore, the study is to shed light on the current cluster landscape within the Danube region, where remarkable progress in cluster development has been made over the recent years although the framework conditions for cluster development were more challenging due to an absence of stable cluster support schemes over many years.³ The study clearly illustrates the similarities and differences of cluster development in the Danube Region compared to the entire Europe.

For the purpose of this exercise, ESCA clearly distinguishes between cluster, cluster initiatives and cluster organisations as follows:

- **Clusters:** Clusters are generally described as groups of companies, mainly SMEs and other actors (government, research and academic community, institutions for collaboration, financial institutions) co-locating within a geographic area, cooperating around a specialised niche, and establishing close linkages and working alliances to improve their competitiveness.
- **Cluster initiatives:** A cluster initiative is an organised effort aimed at fostering the development of the cluster either by strengthening the potential of cluster actors or shaping relationships between them. They often have a character like a regional network. Cluster initiatives may be managed by cluster organisations.
- **Cluster organisations:** Cluster organisations are entities that support the strengthening of collaboration, networking, and learning in innovation clusters and act as innovation support providers by providing or channelling specialised and customised business support services to stimulate innovation activities, especially in SMEs. They are usually the actors that facilitate strategic partnering across clusters. Cluster organisations are also called cluster managements.

³ Meier zu Köcker, Müller (2015): *Clusterprogrammes in Europe*, European Cluster Observatory Report, Brussels, 2015, http://ec.europa.eu/growth/smes/cluster/observatory/index_en.htm

2 CLUSTER MANAGEMENT EXCELLENCE

In contrast to evaluations and economic impact assessments, benchmarking of Cluster Management Excellence is an efficient way to identify the potential of a cluster and to develop strategic recommendations for its further development within a short time frame. Benchmarking is a comparative analysis of structures, processes, products and services. It compares an entity to peers in the same field of activity and/or to best practices from entities in other areas. The objective of benchmarking is to learn from better performing peers or other entities in order to improve own structures, processes, products and services.

Benchmarking of cluster organisations provides orientation in terms of the developmental status of the cluster organisation. However, it is the first step towards improving quality of cluster management. ESCA cluster bench-

marking is based on a personal interview of about two hours duration with the manager of a cluster organisation.

Data is collected through individual benchmarking interviews with cluster managers and an impartial ESCA benchmarking expert. By focusing on 36 indicators, the interview captures data on different dimensions of the cluster and the cluster organisation, including the structure of the cluster, the cluster management and the governance structures of the cluster, financing of the cluster organisation, services provided by the cluster organisation, communication within the cluster and achievements and recognition of the cluster and the cluster organisation.

2.1.1 INDICATORS FOR CLUSTER MANAGEMENT EXCELLENCE

The indicators to measure Cluster Management Excellence according to the ECEI approach are focused on the cluster organisation that is responsible for managing the cluster and its activities, and – to a certain extent - on the community of the cluster actors (see ANNEX). Economic or other effects of the cluster on entire industrial sectors or the development of regional strengths cannot be reliably measured through benchmarking and are therefore not part of this analysis.

The indicators and the three-level evaluation system used in this analysis are based on the

one developed in the framework of the European Cluster Excellence Initiative.

- ▶ GREEN: Excellent. Only minor improvements are - if at all - possible.
- ▶ YELLOW: Reasonable. Potential for improvement.
- ▶ RED: Certain minimal criteria for good practice in cluster management are not met. It is recommended to consider this issue for improvement.

Table 1: Benchmarking indicators

STRUCTURE OF THE CLUSTER
Age of the cluster organisation
Legal form of the cluster organisation
Nature of the cluster: driving forces
Nature of the cluster: degree of specialisation
Composition of the cluster participants (Committed participants)
Geographical concentration of the cluster participants (Committed participants)
Utilisation of regional growth potential
International participants of the cluster
Nature of cooperation between cluster participants
CLUSTER MANAGEMENT AND GOVERNANCE / STRATEGY OF THE CLUSTER ORGANISATION
Clear definition of the roles of the cluster manager / Implementation of a governing body / Degree of involvement of the participants of the cluster in the decision making process.
Number of cluster participants per employee (full-time equivalents) of the cluster organisation
Human resource competences and development in the cluster organisation
Strategic planning and implementation processes
Thematic and geographical priorities of the cluster strategy
FINANCING OF THE CLUSTER MANAGEMENT
Repartition of the different financial sources (public funding, chargeable services, membership fees and other private sources) in the total budget of the cluster organisation in relation to the age of the cluster
Financial sustainability of the cluster organisation
SERVICES PROVIDED BY THE CLUSTER ORGANISATION (SPECTRUM AND INTENSITY)
Acquisition of third party funding
Collaborative technology development, technology transfer or R&D without third party funding
Information, matchmaking and exchange of experience among participants
Development of human resources
Development of entrepreneurship
Matchmaking and networking with external partners / promotion of cluster location
Internationalisation of cluster participants
ACHIEVEMENTS AND RECOGNITION OF THE CLUSTER ORGANISATION
Number of external cooperation requests received by the cluster organisation
Institutional origin of external cooperation requests
Geographical origin of external cooperation requests
Characteristics of cooperation with other international clusters
Visibility in the press
Impact of the work of the cluster organisation on R&D activities of the cluster participants
Impact of the work of the cluster organisation on business activities of the cluster participants
Impact of the business-oriented services of the cluster organisation on SME participants
Degree of internationalisation of cluster participants

2.1.2 COMPARATIVE PORTFOLIOS

This report represents the largest international analysis of its kind since 2012, involving benchmarking data of more than 320 cluster organisations from over 30 European countries. The analysis of cluster organisations reveals various determinants for the development and characteristics of a cluster. Two different comparative portfolios have been selected: cluster initiatives from the **Danube Region** (see Figure 1) and from the **EU28** (plus Norway).

The Danube Region in this study covers ten countries: Austria, Czech Republic, Slovakia, Hungary, Slovenia, Croatia, Romania, Bulgaria, Serbia, Montenegro, and the two German regions Baden-Württemberg and Bavaria. The region is home to a total of 82 benchmarked cluster initiatives having been benchmarked between March 2016 and March 2018.

The second comparison group is composed of 234 benchmarked clusters from the EU's 28 Members States and Norway. They have been benchmarked during the same period like the cluster initiatives from the Danube region. Most

cluster initiatives belonged to Austria, Denmark, France, Germany (without Baden-Württemberg and Bavaria), Italy, Norway and Spain.



Figure 1: Benchmarking clusters in the Danube Region

Table 2 lists the total number of benchmarked cluster initiatives whose data was used in the context of the analysis for this report.

All of the over 320 cluster initiatives belong to different sectors or technological domains, representing the whole industrial spectrum of Danube / EU28.

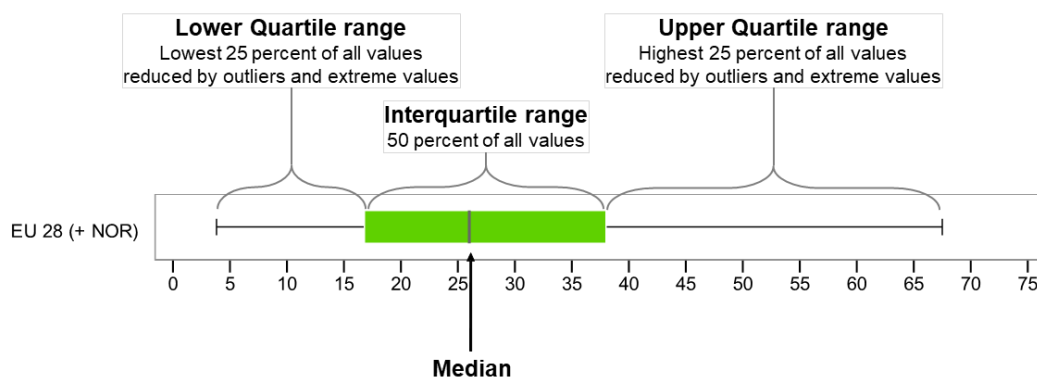
Table 2: Comparison portfolio

Region	Number of clusters per region
EU 28 (plus Norway)	234
Danube Region	82

2.1.3 EXPLANATION OF FIGURES USED IN THIS REPORT

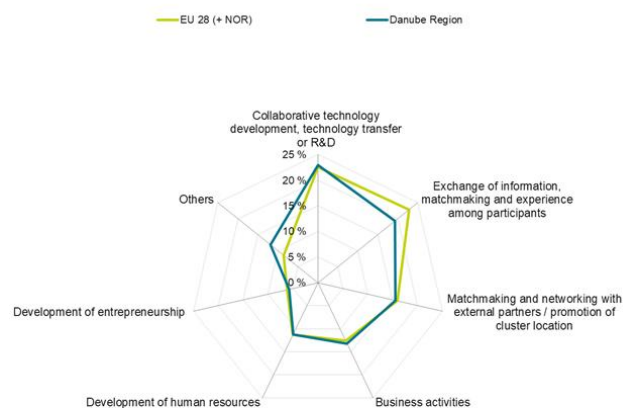
Boxplot

Boxplots display distributions of statistical data. The box represents 50 % of the statistical population (the interquartile range), 25 % higher and 25 % lower than the median value which is marked inside the box. The whiskers represent the lower quartile and the upper quartile of the data. For more homogeneity and representativeness of the results, the length of the whiskers is determined by the lowest and the highest value of the data being presented AND shall not be larger than 1.5x the size of the interquartile range. By this, the whiskers include up to 25 % of the entire data, reduced by significant statistical outliers. Thus, very special individual values are not considered.



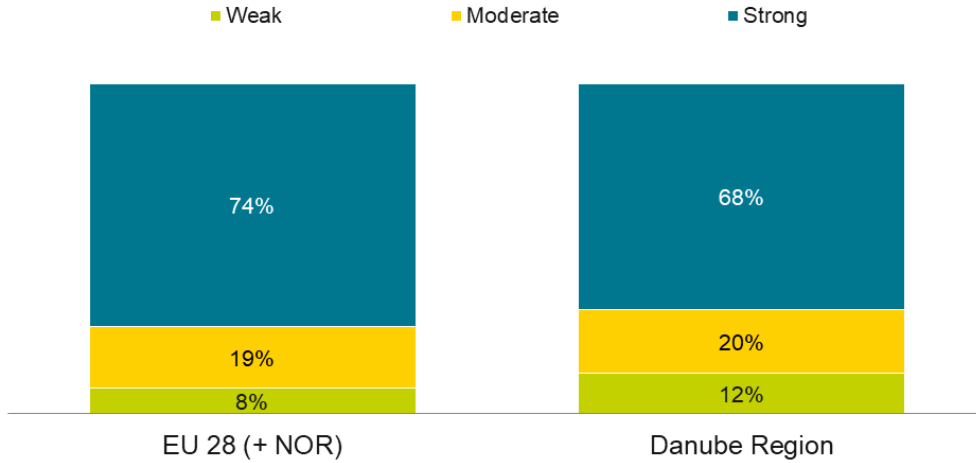
Radar Charts

The 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.



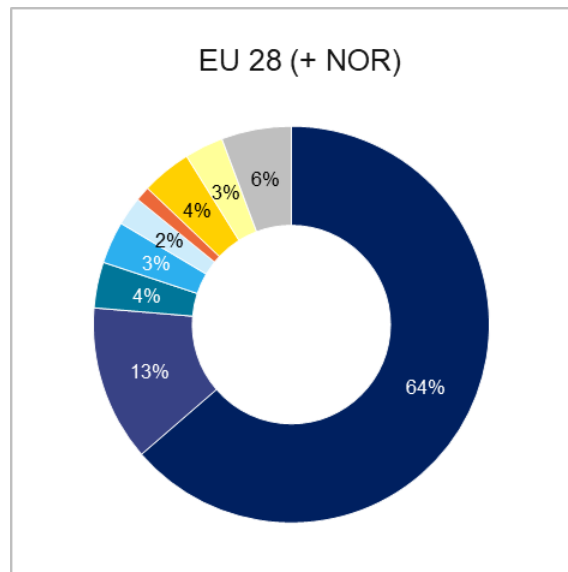
Stacked Bar Chart

A stacked bar chart is a comfortable method for comparing elements of a category with each other and comparing elements across groups. The cumulative proportion of each stacked element totals 100 %. That is useful to compare the share of a category for each group separately.



Ring Chart

A ring chart displays a circle divided into different sectors. Each sector shows the percentage distribution of a category related to the sum of all categories. The bigger the slice of the ring chart, the more of this data category was gathered.



3 FINDINGS

In the following, the main findings are presented and grouped according to the key indicators of the ECEI approach.

3.1 THE CLUSTER AND ITS CLUSTERS ACTORS

3.1.1 TOTAL NUMBER OF CLUSTER PARTICIPANTS

The benchmarking analysis concentrated on participants in the sense of committed participants. A cluster participant is committed if it actively contributes to the activities of the cluster through e.g. paying membership fees or providing financial support for the cluster management on a regular basis (this may also include in-kind contributions or staff working time) or regularly participating in cluster projects or working groups. Commitment is not reflected by a registration for a newsletter or by a single participation in an event organised by the cluster organisation. A non-committed cluster participant is a passive participant who shows interest in the cluster's activities going beyond the mere registration for a newsletter or similar (e. g. through regular participation in events), but does not contribute actively to any of the cluster's activities.

The number of cluster participants is important in order to gain critical mass. Critical mass is needed to assure a minimum of interaction

between the cluster participants and to create an input that contributes to regional development. Practice has shown that a minimum of 30 – 40 cluster participants are beneficiary.

As far as cluster initiatives from EU28 are concerned, 50 % of them gather between 40 and 130 members with a median value of 70. Compared to a previous benchmarking study conducted in 2012, the number of cluster participants has risen.

Cluster initiatives from the Danube Region are, compared to their European peers, relatively small in size with an average number (as per Median) of committed participants of 35. The rationale for this is manifold and ranges from a lack of appropriate funding conditions to a partly lower industrial density in some Danube Regions.

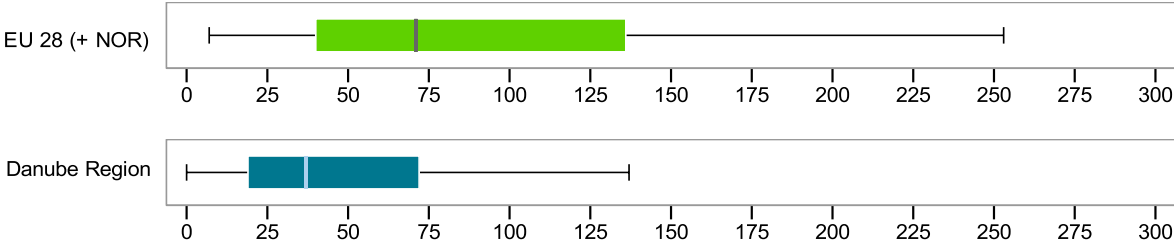


Figure 2: Total number of committed cluster participants

3.1.2 COMPOSITION OF THE CLUSTER PARTICIPANTS

The composition of cluster participants is very important for a successful cooperation within the cluster initiatives. Bundling of different competences is necessary for the facilitation of innovation and competitiveness of all cluster actors. If certain key actors and key competences are missing, this might have a negative impact on the innovation capability of the cluster. In all represented cluster initiatives the share of industrial participants is predominant and particularly the SME.

While Danube cluster initiatives may differ in size from their European peers, the composition of their cluster participants is more or less congruent.

It is worth to point out that the share of SME gathered in the cluster initiatives has significantly increased since 2012, when the respective average value was about 50%.

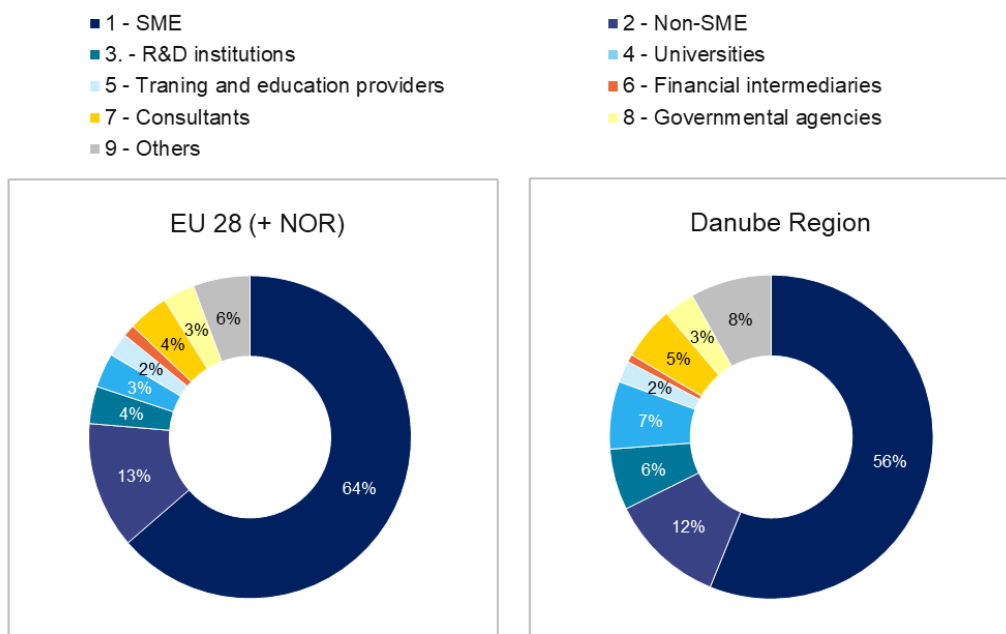


Figure 3: Composition of committed cluster participants

3.1.3 GOVERNANCE OF THE CLUSTER

The existence of different stakeholders of cluster governance as well as their role in the decision making process for cluster strategy and cluster governance were assessed. In this respect, the three following elements of cluster governance were analysed:

- ▶ Clear definition of the tasks and responsibilities of the cluster manager, like team management, day-to-day business and strategic activities of the cluster, etc., are in place.
- ▶ A governing body such as a steering committee or advisory board exists and is responsible for making decisions and supporting the cluster management in implementing the action plan, survey and review of the progress of the cluster work as well as the work of the cluster management. Its responsibilities are understood by all participants and meetings take place on a regular basis.
- ▶ Participants of the cluster are involved in the decision making and strategic orienta-

tion of the cluster organisation, for example through general meetings or other forms of consultation.

For a successful networking of all cluster actors has to understand and respect their tasks and responsibilities. In collaboration with relevant cluster participants, the cluster management must define dedicated governance structures and turn them into practice. The three elements described above were reflected in a composite indicator. Three levels were defined in order to identify whether there is a strong, moderate or weak system of cluster governance in place.

The majority of all cluster initiatives succeeded in building comparatively strong governance structures. There are no macro-regional patterns at all, even when having a closer look at both comparative portfolios.

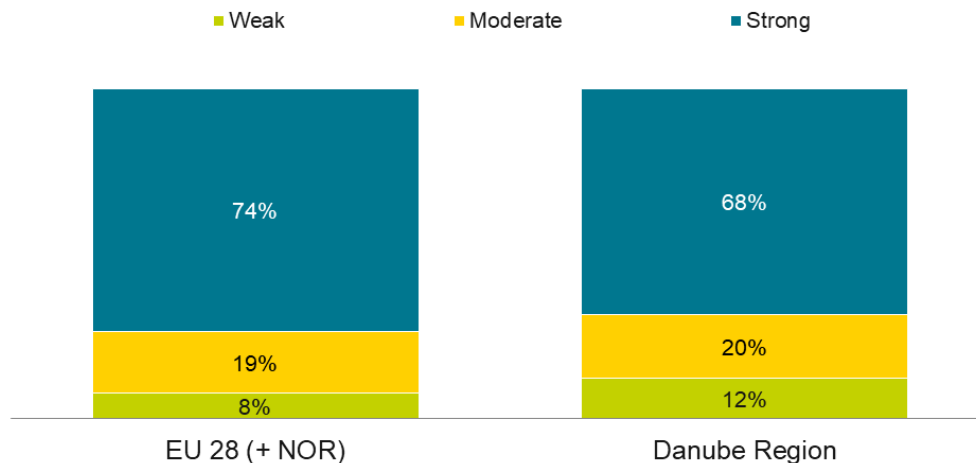


Figure 4: Governance of the clusters per region

3.2 THE CLUSTER MANAGEMENT ORGANISATION

3.2.1 AGE OF THE CLUSTERS

The maturity of a cluster organisation is often related to its age. As it takes time to successfully develop and implement activities within cluster initiatives, it is supposed that a cluster organisation needs at least four years to yield satisfying results. The year in which the cluster management activities were initiated (not necessarily as a legally independent organisation) is positioned in the following graphs and compared to the different comparative portfolios. The age of the cluster as such may be older than the age of its management body.

There is not much difference in terms of age related to cluster initiatives from both portfolios. The median value is, in both cases, at 2008. In addition, it is interesting to see that the establishment of “new” cluster initiatives significantly slowed down after 2011 / 2012, since in both cases 75% of all cluster initiatives have been established before that time.

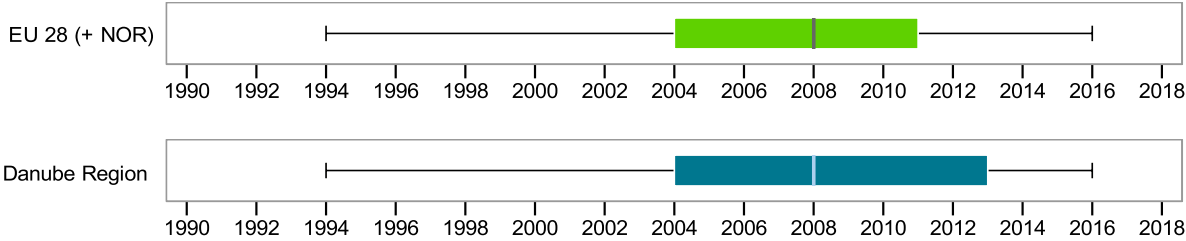


Figure 5: Year of Establishment of the clusters

3.2.2 NUMBER OF EMPLOYEES OF THE CLUSTER ORGANISATION

The number of active employees in the cluster management team was measured in full-time equivalents (FTE). The analysis of FTE provides a better understanding of the human resources that are effectively available for the cluster management in terms of working hours. Full-time equivalent employment (FTE) is the number of full-time equivalent jobs, defined as total hours worked divided by average annual hours worked in full-time jobs.

A more relevant factor for assessing whether the quantity of human resources of the cluster management is sufficient is the ratio of the number of cluster participants and the FTE in the cluster management staff. This indicator gives the numerical value of the number of cluster participants which one FTE of the cluster management has to serve. Higher capacities of the cluster organisation are expected to allow the development and provision of more tailor-made and demand-oriented services or a better direct support for the cluster participants.

Cluster managements in the EU28 tend to have a higher capacity than their Danube peers. This finding is connected to a much better public support scheme in the EU28. Cluster policy in these countries provides much higher funding over many years, whereas the support scheme for many Danube countries was interrupted over time (e.g. Hungary or Romania) or not really existing (e.g. BiH or Serbia).³ Higher public funding allows cluster organisations to finance more staff for day-to-day management

However, Danube cluster initiatives, being smaller in size in general (see 3.1.1), also show a lower number of cluster participants per FTE. This means that cluster management organisations in the Danube Region can take better care of their individual cluster participants with approx. one FTE per 20 cluster participants.

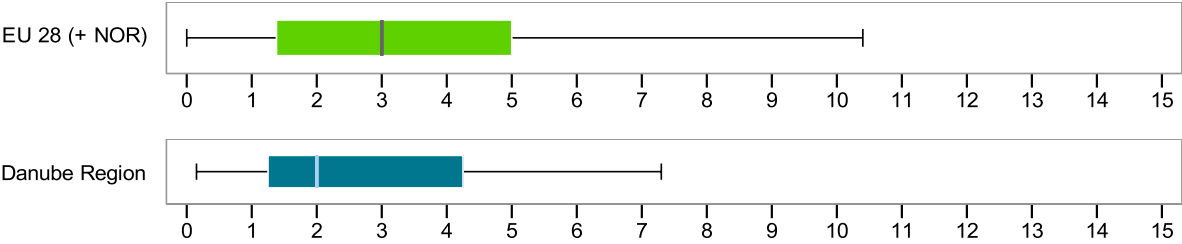


Figure 6: Number of employees in the cluster management team (FTE)

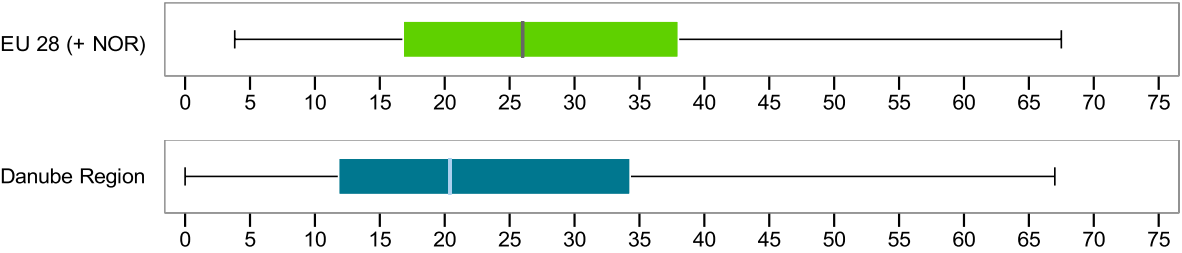


Figure 7: Number of participants per employee of the cluster management team (FTE)

3.2.3 FINANCIAL SOURCES OF CLUSTER MANAGEMENT

The total budget of the cluster organisation includes the budget dedicated to management tasks or to activities performed by the cluster management organisation for cluster participants (staff and non-personnel expenses). It excludes the specific budget for R&D projects or any other projects conducted by the cluster organisation as a task not related to the actual cluster management.

The origin of the total budget of the cluster is split between the following categories: public funding, income generated from chargeable services, membership fees, as well as other private sources like private foundations or donations. In-kind contributions (non-cash contributions) are considered as private source income and are accordingly not represented in the following graphs.

Many cluster organisations were established with significant public support. As public support is mostly limited in time, it is crucial for a cluster management to tap other sources of financing. The substitution of public funding by private means over time can indicate good cluster management practises as products and

services are sold to cluster participants or other parties.

In general, experience shows that a broad mix of various sources of income has proven to best for the sustainable existence and development of a cluster management organisation. Such a mix is the most resistant against failure of one of the financial sources.

The comparison of both portfolios reveals, again, the different conditions cluster initiatives operate in. EU 28 cluster initiatives, on average, receive 44% public funding, compared to 29% in the Danube Region. The share of membership fees and chargeable services is similar, whereas cluster managements in the Danube Region succeeded to attract more additional private funding sources than their EU28 peers (16%). These findings point out that cluster initiatives in the EU28 are significantly more dependent on public funding than in the Danube Region. However, when comparing these findings with 2012, the overall share of public funding significantly declined over the last 5 years.

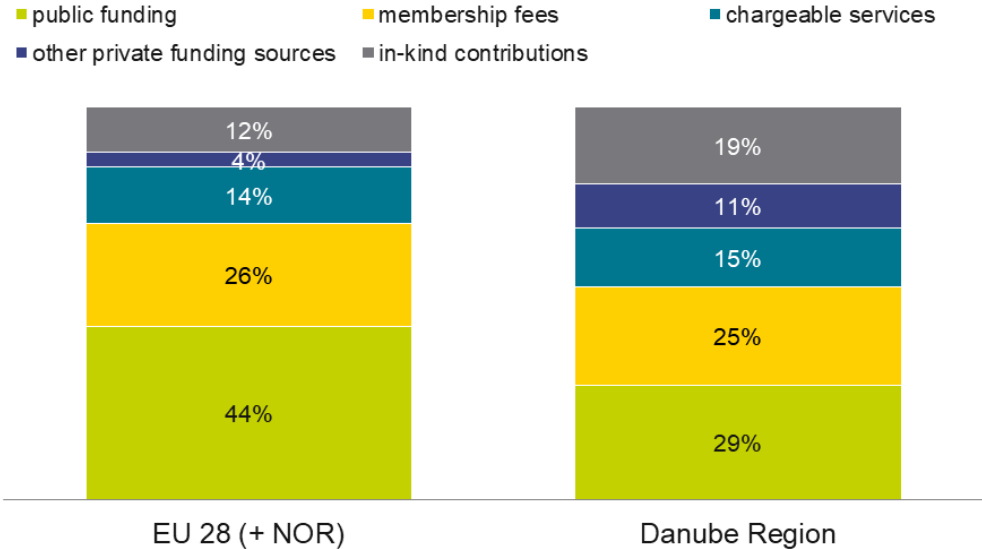


Figure 8: Share of private financing in the total budget of cluster organisations

3.3 CLUSTER STRATEGY AND SERVICES

3.3.1 DRIVING FORCES OF THE CLUSTER; INDUSTRIAL VS: R&D

The cluster participants influence the agenda setting of the cluster initiative as well as strategic priorities. The cluster managers were asked to indicate on a scale from 0 (no influence) to 4 (very strong influence) to which extent the cluster is driven by the industry, research and policy stakeholders for the agenda setting of the cluster.

There is also a certain kind of influence of policy due to the fact the cluster initiatives depend on public funding and programme owners tend to influence the day-to-day agenda accordingly. Furthermore, due to the fact that in many cases cluster initiatives are used as a tool for regional development, the public sector also sets the agenda as regards regional development.

The findings confirm previous investigations that mainly the industry is setting the agenda.

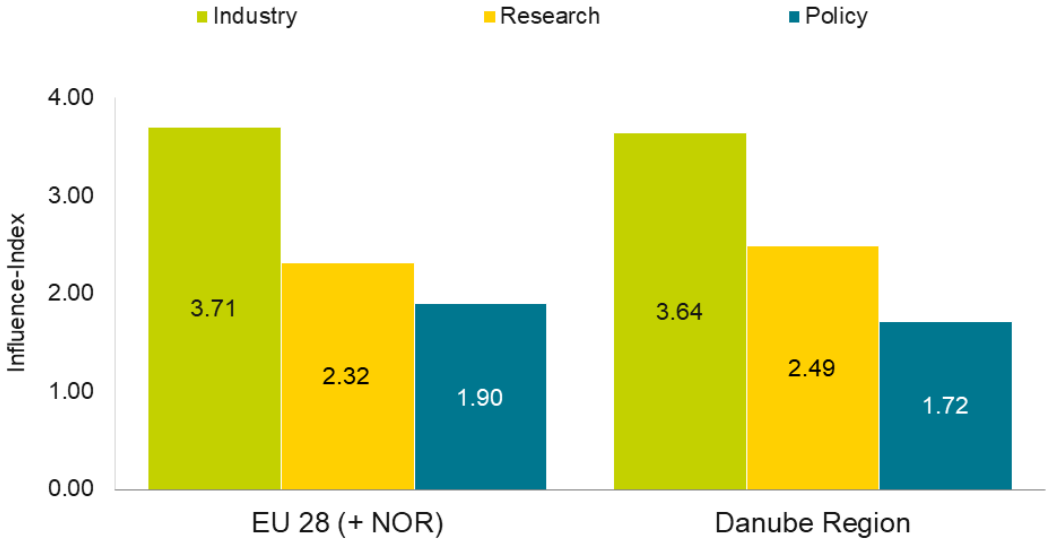


Figure 9: Influence of research, industry and policy stakeholders in establishing the strategic priorities and activities of clusters

3.3.2 THEMATIC PRIORITIES OF THE CLUSTER STRATEGY

In the figure below, the thematic priorities of cluster initiatives are compared. In general, the thematic priorities of a cluster strategy result in a portfolio of tailor-made services adapted to cluster participants' needs.

irrespective of their nationality, with “Collaborative cooperation in R&D and innovation” and “Exchange of information, matchmaking and experience among participants” being their predominant strategy priorities.

It can be seen that the thematic priorities of the European clusters follow a similar tendency,

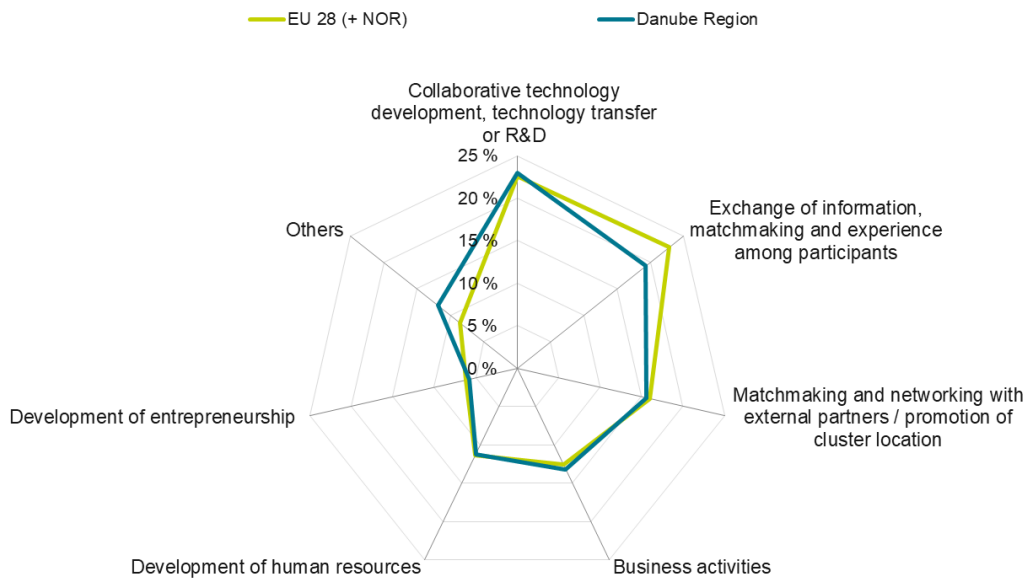


Figure 10: Thematic priorities of cluster strategy

3.3.3 SERVICE OF THE CLUSTER ORGANISATION

One of the main aims of cluster organisations is to provide need-oriented structures of cooperation and to make cooperation between members in the innovation business more efficient. The success of clusters therefore also depends on the extent to which the cluster management succeeds in supporting the cluster participants with need-oriented services.

In doing this, it is crucial for cluster participants to be able to concentrate on their specific core competences and that the expenditure of time and financial resources by individual approaches is thus reduced. It is important that services are geared to needs in such a way that they generate high added value for participants. Hence, it is crucial to consider first of all the needs and requirements of the cluster participants and, in particular, the specific features of the cluster in the sense of an “optimal tailoring.”

For each service category, the diversity and the intensity of the services have been analysed and are represented in a normalised manner on a scale from 0 (no actions) to 4 (very high activity level).

The figure below illustrates a similar pattern for cluster initiatives from both comparative portfolios. The fact that almost all values are slightly higher for cluster initiatives in the EU28 results due to the fact that their cluster management has a higher capacity (FTE) and, thus, can offer more services. Nevertheless, activities related to networking and matchmaking dominate in both cases. A slightly higher intensity of services related to the “Acquisition of third party funding” for cluster initiatives from the EU28 can be explained by a higher regional or national availability of public funding.

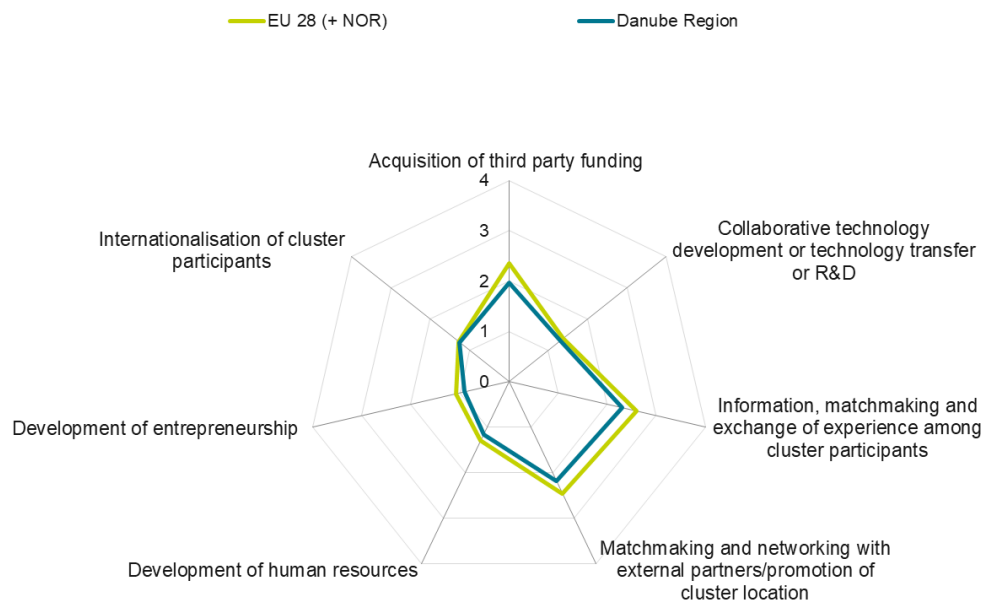


Figure 11: Intensity and diversity for each service category

3.3.4 READINESS FOR INTERNATIONALISATION

With the indicator “Readiness for Internationalisation” the entire data of the cluster benchmarking exercise is used to determine a level of readiness of the cluster organisation and the cluster as such regarding the status and the degree of being prepared for successfully initiating and implementing internationalisation. Three areas are considered in this context and build the bars of the chart below, normalised on a scale from (0 = not prepared at all) to (4 = all prerequisites fulfilled and internationalisation as a pillar of cluster management is already successfully implemented):

- ▶ **Status of internationalisation of the cluster organisation and the various groups of cluster participants:** It is considered as very helpful, if at least major groups of the cluster participants are already acting in an international context and thus themselves have a clear view on their specific additional demands for activities within the cluster. The cluster organisation itself can benefit if experiences regarding internationalisation already exist and a certain status/brand of the cluster is visible on an international level.
- ▶ **Resources and competences of the cluster organisation:** Internationalisation requires longer-term significant efforts from the cluster management. Thus, financial resources should be sufficiently available to the cluster management on at least medium-term and personnel resources. Besides these quantitative aspects, skills and experiences regarding internationalisation, including language skills, are obviously required among the cluster management team in order to be well prepared for successfully acting in the international environment.
- ▶ **Strategy and already implemented services regarding internationalisation:** Depending on the different interests and experiences for the various cluster participants, the elaboration of a specific internationalisation strategy for the cluster is required which should not copy, but complement the individual internationalisation strategies of the cluster participants. The internationalisation strategy of the cluster should focus on aspects which cluster participants cannot address alone and where the cooperation within the cluster is a valuable asset (topics to be elaborated which generate added value to a group of cluster participants). As every strategy only can lead to effects when complemented with related activities and services, any existing experiences regarding international activities are valuable. As efforts for such activities normally are rather high, they should be carefully evaluated in order to learn from the experiences and to use the experiences to sharpen the focus of future internationalisation activities.

Building an average of the scores in all three axes leads to a total score regarding the readiness for internationalisation between (0) and (4).

Although the respective values of both comparative portfolios are more or less similar, cluster initiatives from the Danube Region show slightly higher values on average. Smaller domestic markets or a stronger involvement in international value chains require a higher international orientation. For example, when taking a closer look within the comparative portfolios, it becomes obvious that German cluster initiatives are less internationally oriented than their Scandinavian peers. Cluster initiatives e.g. from the Baltic region or from Slovenia show the highest values in this regards.

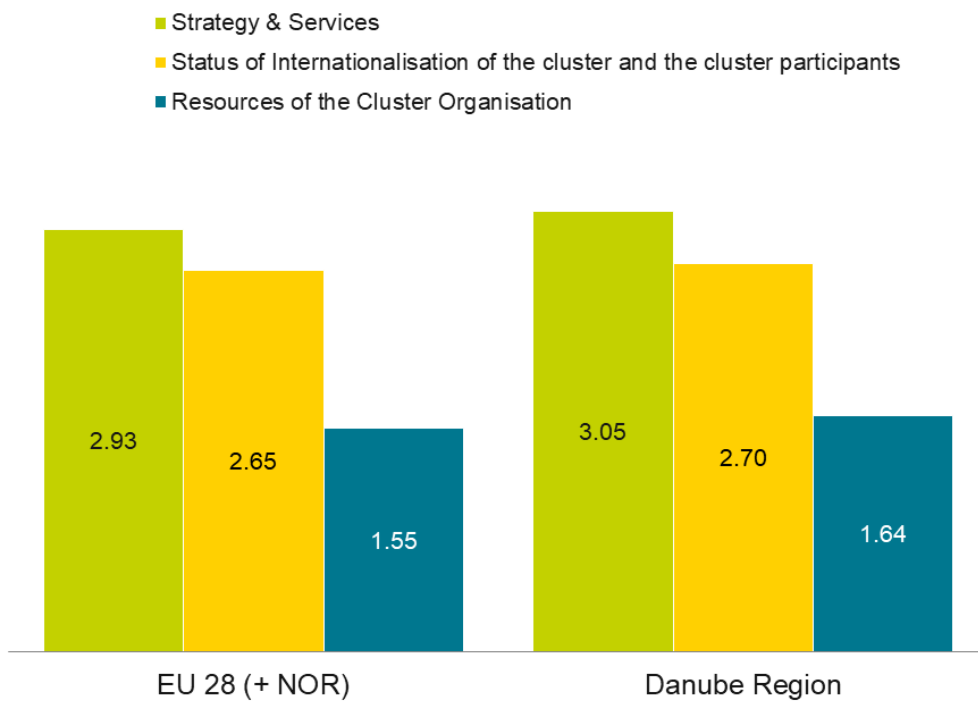


Figure 12: Readiness for Internationalisation of the clusters

3.3.5 CHARACTERISTICS OF INTERNATIONAL COOPERATION

The cooperation with foreign partners can follow different objectives. In any case, the reasons for cluster participants to become internationally active are usually threefold: to maintain their technological level, to get a better access to new markets or to fill skills gaps within the cluster.

As cluster participants, particularly SME, often lack sufficient internal resources to go interna-

tional, they benefit from the cluster which takes responsibility for the internationalisation efforts of its members and offers adapted measures and instruments for internationalisation.

However, the figure below illustrates that most of the cluster organisations successfully initiated real collaborations between their cluster participants and foreign partners (over 60%).

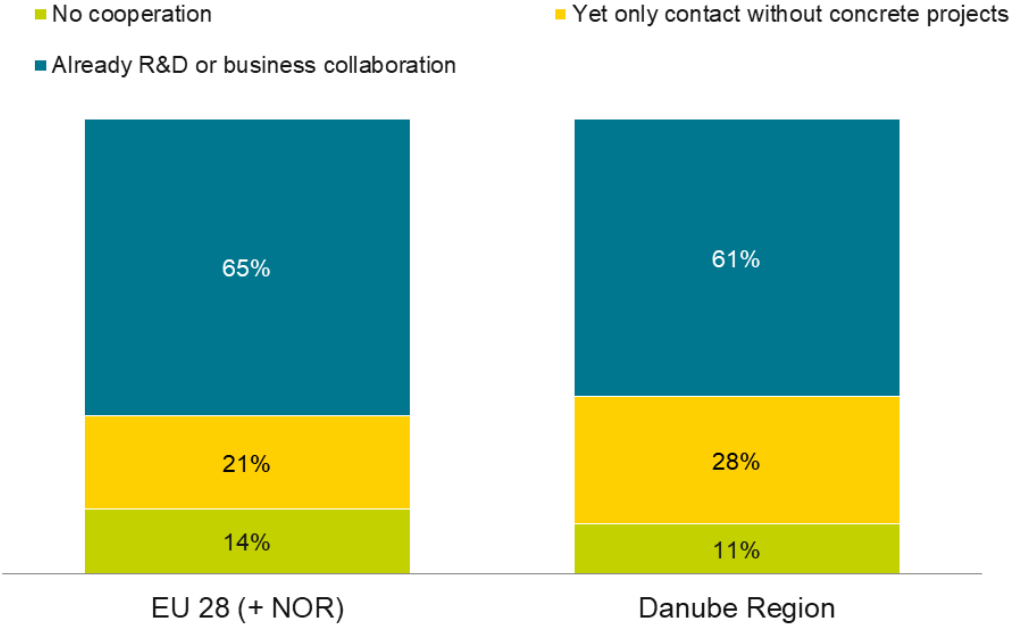


Figure 13: Type of cooperation with foreign clusters

3.4 CLUSTER VISIBILITY AND EFFECTS

3.4.1 PRESENCE IN MEDIA

Visibility and reputation are very relevant for cluster initiatives. Thus, many cluster initiatives are investing in public relation efforts in order to increase the awareness of interested parties about the cluster and its success. Regional branding is also often a driving force. Cluster initiatives well known and acknowledged for their potentials, it is much easier for them to attract new participants, convince policy makers of the importance of the cluster or to get involved in international cooperation projects. Public relation should be increased locally, on national and international level as well as within the industrial sector.

The visibility of cluster initiatives was analysed on a scale ranging

- ▶ from 0 (None);
- ▶ to 4 (High), which is more than 48 media appearances in the past twelve months (equals four media appearances per month).

The below findings illustrate that cluster initiatives from the Danube Region are less present in the media. The reasons why need to be further looked into.

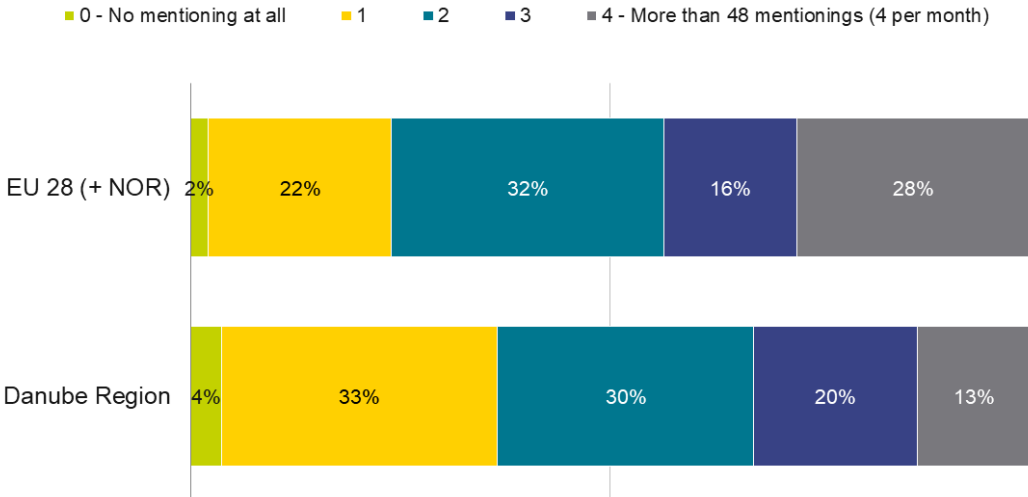


Figure 14: Frequency of mentioning the cluster in publications, press and media

3.4.2 EFFECT ON BUSINESS ACTIVITIES

The impact of the cluster organisation’s work on business activities of cluster participants is indicated by the following figure. The spectrum and the frequency of services provided by the cluster management team, with respect to business development, are expected to influence the business activities of cluster participants. The cluster managers self-assessed the effect of their work according to the following scale:

- ▶ (4) Significant and sustainable impacts on a significant number of cluster participants in the field of business development;
- ▶ (3) Significant and sustainable impacts on a reasonable number of cluster participants in the field of business development;
- ▶ (2) Measurable impacts on a certain number of cluster participants in the field of

business development, but not yet really significant and/or sustainable;

- ▶ (1) Limited impacts on a small number of cluster participants in the field of business development;
- ▶ (0) No impact yet.

The self-assessment covers different categories of cluster participants (SME, Non-SME, universities, R&D organisations, and training and education providers). It is interesting to see that a higher impact on business activities of all groups can be found for cluster initiatives in the Danube Region. However, dedicated high values for both comparative portfolios can be found related the category “SMEs”.

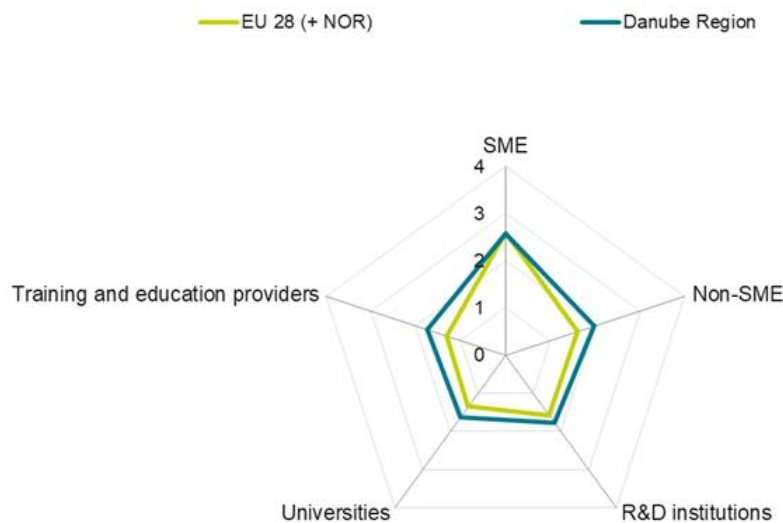


Figure 15: Effect of the work of the cluster organisation on business activities of cluster participants

4 EUROPEAN CLUSTER MANAGEMENT EXCELLENCE SCORECARD

The following figure highlights the condensed results of both comparison portfolios in order to be even more representative. It can be considered as the **European Cluster Management Excellence Scorecard**. The 31 indicators used in this analysis are based on a three level approach and based on same methodology developed in the framework of the European Cluster Excellence Initiative (ECEI), described in the ANNEX. The three levels are:

- ▶ GREEN: Excellent. The indicator value is in full compliance with the ECEI standard and meets the related threshold. .
- ▶ YELLOW: Reasonable. The indicator value is close the related threshold. There is some potential for improvement.
- ▶ RED: Certain minimal criteria for good practice in cluster management are not met, the indicator value is far below the threshold. It is recommended to consider this issue for improvement.

Figure 16 displays the European Cluster Management Excellence Scorecard. It illustrates were cluster initiatives in Europe tend to be well developed (high percentage of green) as well as where it is room for improvements (high percentage of red). A differentiation between cluster initiatives from EU 28 and from Danube Region was not meaningful since the Scorecard for both is very similar.

The European Cluster Management Excellence Scorecard confirms that significant progress in terms of professional cluster management has been reached. Many European Member States as well as the European Commission spent significant efforts in this regards. The cluster programme survey done in 2015 showed that Cluster Management Excellence is an important aspect embedded in many cluster support programme designs, e.g. Austria, Denmark, Germany, Norway, Catalonia, Baden-Württemberg, Lombardy, etc.

Financial stability, skill development for cluster managers and success stories related to outcome and impact of the cluster initiatives remain a challenge; the latter often not because of an absence of existing success stories but due to the lack of a monitoring system.

The financial uncertainty is mainly caused by a lack of long term perspective of cluster initiatives support. Many cluster initiatives, which were sufficiently funded when they emerged, still rely on a continuation of public funding. Interestingly, cluster initiatives in the Danube Region, mostly lacking substantial public support, report less financial uncertainty due to the fact that they learned how to cope with it over time. However, this results in often smaller cluster initiatives with the risk of lower impact on regional development.

EU 28 (+ NOR) and Danube Region



Figure 16: European Cluster Management Excellence Scorecard, based on ECEI indicators

5 SUMMARY

The pan-European cluster benchmarking exercise involved over 320 cluster initiatives from more than 30 countries. It showed that significant progress in the development of cluster initiatives all over Europe and improvements of the cluster initiatives landscape in Europe has been made over the recent past. When comparing the results with findings gained in 2012, it becomes obvious that the philosophy of Cluster Management Excellence became embedded in many cluster initiatives and related programmes.

The European Cluster Management Excellence Scorecard presented in Chapter 4 allows for a more detailed view of the European regions where cluster initiatives are already well developed and where there is room for improvement.

In addition, regional differences in terms of cluster management are more and more vanishing. The comparison of cluster initiatives from the EU28 with those of the Danube Region confirmed this perception.

However, offering professional and demand oriented services as well as sustainable financing remains a challenge. The latter is further

tested by the vagueness of many (regional) cluster policy makers on how to deal with those cluster initiatives in the future.

The philosophy of S3 / regional innovation strategies provides good reasons to even make more use of cluster initiatives as a tool for implementation. The authors believe that the interplay between S3 and cluster (initiatives) is an innovative approach that could spread innovation in the respective regions.⁴ It can thus be expected that the role of cluster initiatives might become even more important in the near future, making the concept of Cluster Management Excellence⁵ all the more relevant.

⁴ Meier zu Köcker, Dermastia (2017), *StressTesting Regional Approaches Conducive to Implement S3 through Cluster* – Synthesis Report for the Alpine Space Region, published by S3-4AlpProject, doi:10.23776/001

⁵ Lämmer-Gamp, T., Kergel, H. and Nerger, M. (2014): Cluster organisations in Europe – insights from Bronze and Gold Label assessments – Input paper for the workshop “Moving forward the EU policy agenda on cluster excellence”, Brussels, September 23rd, 2014 - see www.cluster-analysis.org

6 ANNEX: EUROPEAN CLUSTER EXCELLENCE BASE-LINE AND THE INDICATORS DEVELOPED IN THE EUROPEAN CLUSTER EXCELLENCE INITIATIVE

An important aim of the European Cluster Excellence Initiative (ECEI) is to propose a set of indicators, discussed and agreed by cluster experts from all over Europe, for assessing the excellence status of a cluster management organisation and to prepare the path for a “Cluster Management Excellence Label GOLD – Proven for Cluster Excellence” for excellent management performance. An overall set of 31 indicators has been elaborated and is used in a process of assessing the quality of cluster management by neutral assessment through specifically trained external “Cluster Analysis Experts”. The aim is to award a label to cluster organisations that have reached a certain excellence status, but also to provide cluster managers with recommendations how to further improve.

Within ECEI an international experts working group defined these indicators and regarding specific indicators as well a set of minimum requirements. Looking to the minimum criteria, this can be considered as an “entrance level” for cluster organisations to participate in the labelling process. These minimum requirements are described in this chapter, the further indicators are here mentioned shortly and in an incomplete manner only. It is obvious however, that only reaching minimum criteria is not sufficient for excellence, but can be considered as a very first step towards working for being assessed regarding the “Cluster Management Excellence Label GOLD – Proven for Cluster Excellence”.

Further information regarding the indicators and the entire assessment and labelling process can be found under:

<http://www.cluster-analysis.org/gold-label-new>

6.1 GOLD LABEL INDICATORS REGARDING STRUCTURE OF THE CLUSTER

The cluster management should consider that the cluster is clearly structured and that the participants are committed to the cluster organisation and also confirmed their participation through some kind of written form. The cluster should furthermore represent a critical mass of companies in relation to its sector or field of activity.

Committed cluster participation

The cluster shall be dominated by so-called “committed cluster participants”. A cluster participant is committed if it actively contributes to the activities of the cluster through e.g. membership fees, signing of a declaration of accession, a letter of intent or a partnership agree-

ment, etc. The cluster may as well have non-committed passive participants who show an interest in the cluster’s activities going beyond the mere registration for a newsletter or similar (e.g. through regular participation in events), but who do not contribute actively to any of the cluster’s activities. However, the number of non-committed participants shall be less than 90% of all participants (committed and non-committed).

Composition of cluster participants

More than half of the committed cluster participants shall be businesses (industry/service providers) within the cluster relevant sector or field of technology. The cluster shall also have

re-search organisations and/or universities among its committed partners.

Number of Committed Cluster Participants in Total

Only groupings of at least 15 clearly “committed participants” are considered as sufficient

for asking for a quality label for cluster management. The number of any additional “non-committed cluster participants in this context is not of any matter.

6.2 GOLD LABEL INDICATORS REGARDING TYPOLOGY, GOVERNANCE, COOPERATION OF AN WITHIN THE CLUSTER

Clusters characteristically change over time and have to adapt their strategy and activities accordingly. The cluster management has to have structures implemented for decision-making processes with clear roles of participants and other stakeholders in order to facilitate and balance continuity on one side and change on the other side.

Maturity of the cluster management

The cluster organisation management activities must have been started at least two years ago.

Qualification of the cluster management team

The personnel involved in the cluster organisation, responsible for managing the cluster shall be well qualified for the required management tasks to be performed. A certain minimum threshold of a mixture of education, work experience and skills in management, communication and leadership shall be reached.

Clarity of Roles – Involvement of Stakeholders in the Decision Making Processes

How can the different groups of stakeholders within the cluster influence the cluster-internal opinion-building and decision processes? The cluster organisation should not be the only party, operating this process more or less detached from the “committed cluster participants”.

Direct Personal Contacts between the Cluster Management Team and the Cluster Participants

Within one year, the cluster management team must have been in direct contact with at least 20 % of the cluster participants, meaning

- ▶ a contact during a visit at the participants premises or a visit of the participant in the premises of the cluster organisation,
- ▶ an extensive bilateral exchange of information and experience via telephone or email, or
- ▶ a joint work of the cluster management team and representatives of the participant in specific projects, working groups, and/or other joint activities.

Degree of Cooperation within the Cluster

Within one year at least 15 % of the cluster participants shall be involved in bilateral and/or multilateral cooperation activities with each other, not necessarily facilitated by specific actions of the cluster organisation management. Participation in regular working groups, projects, delegation visits (incoming and outgoing), joint trade fair activities, lecturing activities, etc. shall be considered here, with a minimum effort of two working days spent. Passive participation in seminars, workshops, courses shall not be considered in this context.

Integration of the Cluster Organisation in the Innovation System

The cluster organisation shall maintain good co-operation contacts with stakeholders and organisations of institutional innovation support

and service providers, etc. on a regular basis. These organisations are not necessarily committed participants of the cluster.

6.3 GOLD LABEL INDICATORS REGARDING THE FINANCING OF THE CLUSTER MANAGEMENT

The activities of cluster management organisations can be very diverse. Furthermore very different expectations of cluster participants require very specific actions. A cluster management organisation therefore requires sufficient resources for a successful operation. A secure financial situation with diversified sources for financial income allows a concen-

tration of the core work of managing the cluster and its activities. However considered a very important is-sue, the indicators related to financing are not minimal requirements due to the different cluster financing approaches and patterns in Europe and worldwide.

6.4 GOLD LABEL INDICATORS REGARDING STRATEGY, OBJECTIVES, SERVICES OF THE CLUSTER ORGANISATION

The elaboration and implementation of a strategic positioning of the cluster is considered as one main issue for cluster management. A clear and well prepared strategy and a strong link to the cluster participants builds the base for implementing and performing a spectrum of actions, serving the needs of the cluster participants in the most successful manner.

Strategy Building Process

The involvement of companies in the process of strategic analysis is mandatory. Furthermore, a minimum of two of the following strategic instruments shall be used, in the context of strategic analysis:

- ▶ Identification of the industry and market challenges, e.g. by conducting an industry analysis on the attractiveness of the strategic segments where the cluster participants compete or could compete, based on own studies and/or existing studies
- ▶ Analysis of the value chain and value systems for the existing industrial/technological sector and for the needed

value system for the transformation of the cluster strategy

- ▶ Benchmarking against Advanced Buyers Purchase Criteria (locally and globally) in the new strategy, identification of key success factors to compete and benchmark the new value chain activities against best practices worldwide
- ▶ Further strategic planning tools like SWOT or similar instruments

These steps of analysis shall be performed by the cluster management team and shared with the cluster participants through participatory processes, for example:

- ▶ Integration of results of member feedbacks (by surveys, specific feedback workshops, etc.)
- ▶ Utilisation of other strategic planning workshops or similar instruments

Documentation of the Cluster Strategy

The cluster's strategic challenges shall be outlined in a documented (written format, PowerPoint, multi-media, ...) format, describing the

previous analysis, the strategic options for the participants of the cluster and the way in which the cluster organisation plans to support them in the long, medium, and short term, stating aims and objectives.

Implementation Plan

The cluster organisation shall have available and develop further a written action and implementation plan with measurable targets and dedicated budgets. The implementation plan shall be in line with the cluster strategy and the documented strategic challenges.

Financial Controlling System

An easy-to-use tool for day-to-day financial controlling and reporting system for the cluster organisation's activities on at least quarterly basis shall be in place.

Review of the Cluster Strategy and Implementation Plan

A process to review and update the documented cluster strategy and the strategic challenges for the cluster and the according implementation plan for the cluster organisation shall be foreseen at least every two years, either due to requirements of any public funding or due to intrinsic strategic planning cycles. If no review of strategy was done during the past two years, a review must be planned for the near future (< 6 months).

Performance Monitoring of Cluster Management

There shall be a controlling system in place and be used to monitor the performance of the cluster organisation on a regular basis (at least annually).

Activities and Services of the Cluster Organisation

The cluster management team shall provide a certain spectrum of services for the cluster participants with significant intensity in its 3 most important fields of activities (e.g. improving innovation capability, exploring business opportunities, fostering entrepreneurship, education & training, inter-nationalisation, etc.).

Performance of the Cluster Management

The cluster organisation must have fulfilled at least 50% of the targets set in the cluster organisation's performance monitoring system or in the annual implementation plan in the last 12 months.

Cluster Organisation's Web Presence

The cluster organisation must initiate and regularly update its web presence (webpage, social networks), giving overviews and details of the cluster and of the work of the cluster organisation and maybe even of the industrial and/or technological sector in general, as well as important contact points in the local language. Furthermore, as internationalisation of clusters is regarded as an important issue, basic information and contact data shall also be accessible in English.

6.5 GOLD LABEL INDICATORS REGARDING ACHIEVEMENTS AND RECOGNITION OF THE CLUSTER AND THE CLUSTER ORGANISATION

The "Cluster Management Quality Label GOLD – Proven for Cluster Excellence" should apply to all types of cluster organisations in all possible technological and/or industrial/commercial areas. Therefore, the direct impact achieved is only comparable on the basis of success sto-

ries and media appearance. Furthermore tools for assessing customer satisfaction shall be in place to give an indication if the expectations of the cluster's stakeholders and participants are fulfilled.

