



INSTITUTE FOR
INNOVATION AND
TECHNOLOGY

club
CLUSTER BENCHMARKING

Cluster Benchmarking Report



IKT  Grenland
ÅPEN | BLID | SKAPENDE

Imprint:

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Summary

Since 2001, the cluster IKT Grenland (located in Grenland, Telemark, Norway), comprising 85 members, has contributed to an annual growth in ICT employment of up to 40 % and a substantial increase in export. IKT Grenland's aim is to ensure continued growth and innovation both in the ICT industry and in other industries through strong regional collaboration with R&D institutions and demanding innovative customers. The core members of the cluster are software producers specialised in Web 2.0 technologies and Open Source Software

The cluster management of IKT Grenland participated in the benchmarking analysis along with other clusters from the ICT area in November 2009. In total 47 indicators were calculated and categorised into 7 different sub-dimensions. The following report reveals the findings of this benchmarking, comparing the IKT Grenland with other well performing ICT clusters (mainly from Germany and Denmark) as well as all Quality Clusters registered in our comparative cluster portfolio.

Figure 1 shows a summary of the benchmarking findings in comparison with a "Perfect Cluster" (further explanation can be found in connection with indicator 61). A "Perfect Cluster" is defined in such a way as its indicators all show ideal values. The "Perfect Cluster" can be understood as a high level benchmark in order to reveal the closeness of the IKT Grenland in comparison to that "Perfect Cluster". Values of 100 % in each sub-dimension mean that the IKT Grenland fully complies with the „Perfect Cluster“. Compared to that, the actual achieved scores from IKT Grenland, expressed as a percentage, are depicted as well as the average values of the other clusters from the comparative portfolio. Again we compared the IKT Grenland with all registered clusters from the same technological domain.

The IKT Grenland exceeds the average values of both comparative portfolios in five of seven sub-dimensions. The pattern of the sub-dimensions appears to be well-balanced. As far as the sub-dimension "Cluster typology and governance" is concerned the max. value of 100 % was reached. This means that all indicators belonging to this sub-dimension are on the level of a "perfect cluster". This is really impressive, e. g. the overall cluster governance is well structured as well as the clarity of tasks and objectives. But also in other sub-dimensions, excellent values were reached. A dedicated strength of the cluster is the spectrum and strong output of services offered by the cluster management. Besides of internationalisation issues, a broad range of services is offered to the members, whereas these services are often very demand oriented and innovative. Also the amount (output) of activities is very high compared to other clusters, not only in the ICT sector. Compared to both comparative portfolios, IKT Grenland achieves maximum values, which means that the cluster organisation is the most active one that has been benchmarked so far (status December 2009). This can clearly be considered as a dedicated strength of IKT Grenland. This is even more impressive, given that the number of staff within the cluster organisation is low compared to the average.

Thus, it is no surprise that the cluster gained a good reputation on a national level and the achievements gained so far can be considered to be very good. As far as internationalisation issues are concerned, the cluster management is well aware that more actions may be beneficial, but this strongly depends on the demand of the members. So far, this topic was not considered to be that important.

The benchmarking report emphasises that the benchmarking team was really impressed by the IKT Grenland and its cluster organisation. According to the findings, the cluster organisation ranks top among the ICT clusters benchmarked so far. In addition, it ranks among the top 5 clusters benchmarked to date (compared with all other cluster organisations benchmarked as yet). Consequently, the Institute for Innovation and Technology and the Agency of Kompetenznetze Deutschland would like to register the IKT Grenland as Quality Cluster in its comparative cluster portfolio.

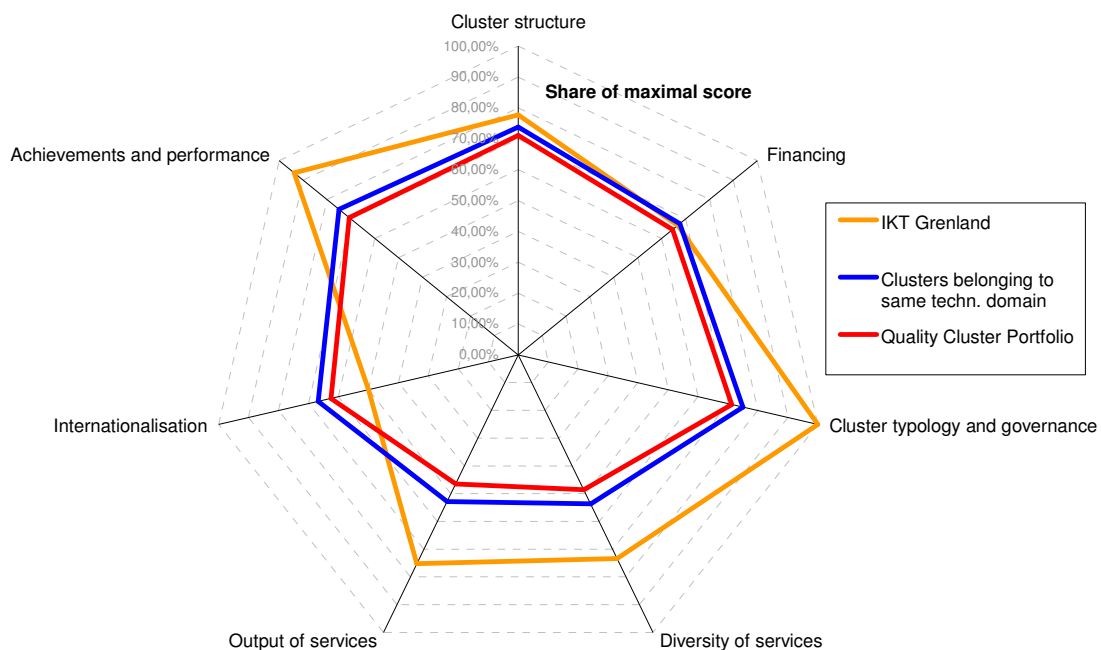


Figure 1: Pattern of the seven sub-dimensions of IKT Grenland compared to a „Perfect Cluster“ (100 % in each sub-dimensions) as well as to the comparative portfolios (ICT and all registered Quality Clusters), further explanations can be found in connection with indicator No. 61

The second graphic – the so-called cluster profile - enables an explicit overview in terms of the specific indicators. It shows whether a specific indicator from the IKT Grenland is located in the reference area (50 % of all respective values), which is the area between upper and lower quartile (explanations are given in Figure 3) or whether it is below the lower quartile or above the upper quartile. To reflect, it is important to know that data, which is potentially above or below the reference area does not necessarily mean good or bad. An interpretation of such findings should be made by the cluster management itself or in close discussion with the benchmarking team. 33 out of 47 indicators that are used in the cluster profile from IKT Grenland are within the reference area and 11 are above. Above the upper quartile are mainly indicators of the sub-dimensions “Spectrum of services” and “Output” since the cluster management is very active in this respect and offers a broad range of support services. Only three indicators (which are of low importance) lay below the lower quartile.

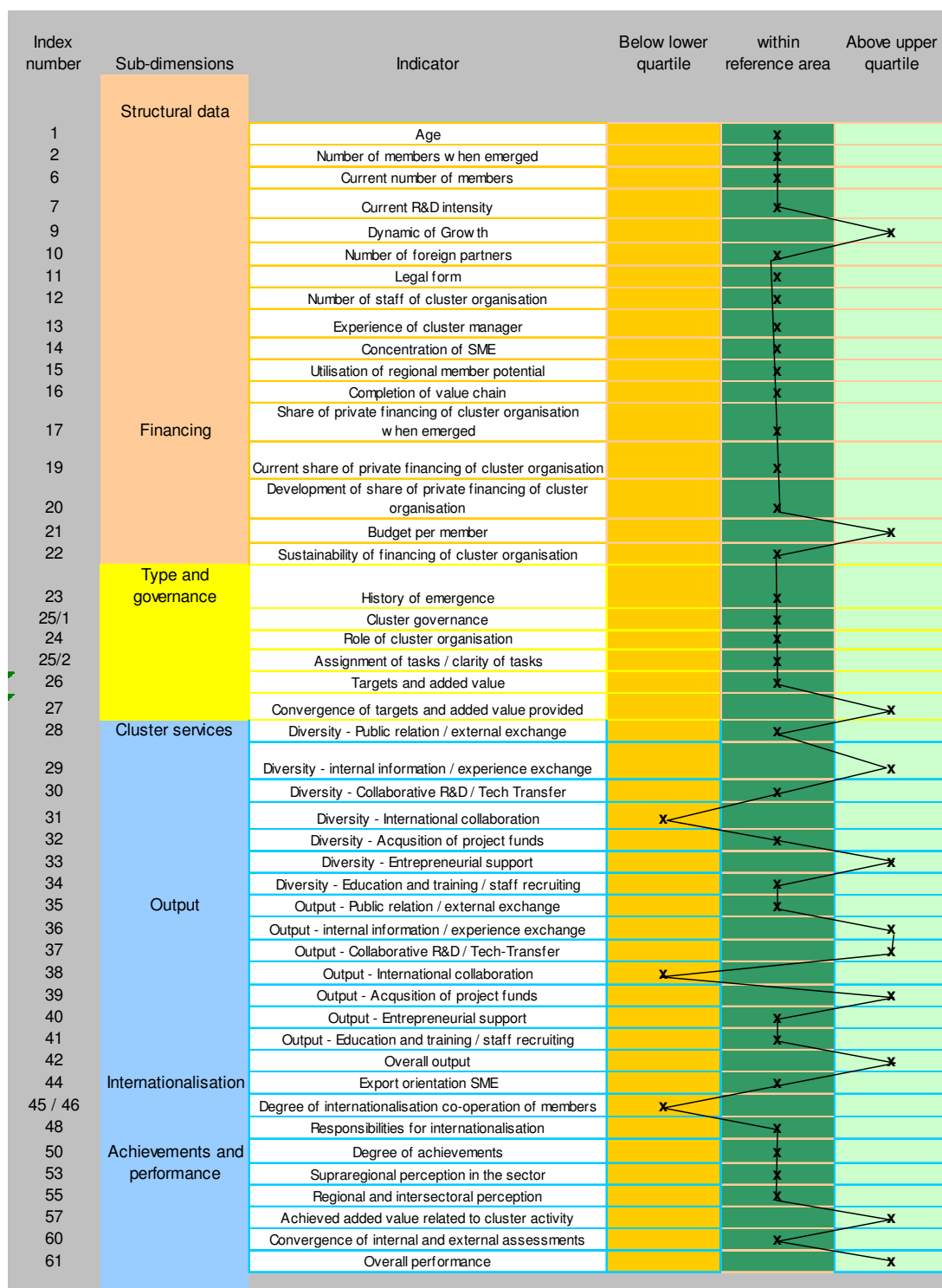


Figure 2: Profile of IKT Grenland based on 47 indicators that were applied

Introduction

Benchmarking of clusters describes the process of comparing the cluster structures, processes, developments and methods as well as service with those from other clusters. The comparison within the benchmarking process is not based on an universally valid definite rating scale, but on individual comparison criteria. Thereby, benchmarking provides a very good orientation on how the own cluster is placed and how it performs compared to similar clusters. The procedure is organised by an impartial benchmarking team – the Agency of the Kompetenznetze Deutschland Initiative as well as the Institute for Innovation and Technology.

Unlike other rankings benchmarking gives the opportunity to learn actively from one another. Benchmarking is therefore not only a goal-oriented way to a skills assessment but also an attempt to compare with others, learn from each other (“What is necessary and what is possible?”) to optimise one’s performing. Thus benchmarking is also an instrument for a steady improvement of one’s own work .

For clusters it is important to reflect the defined goals and tasks every so often and to analyse the specific structures and procedures of the cluster that have evolved since its foundation. That is especially important in terms of the continuously changes of the economic and technological conditions. Besides the cluster managements stakeholders often take a reasonable interest in an impartial assessment of the cluster, like

- executive boards,
- policy makers and funding authorities,
- members.

For such analyses of cluster structures, services, added-values for the members and potentials of clusters, benchmarking, namely the comparative analysis with similar clusters, is especially advisable. An extensive evaluation as it’s being frequently used as assessment instrument as well as for impact analyses of clusters often doesn’t achieve the desired results, especially for the cluster management as an input for future corrective actions. Compared to that, benchmarking is to be recommended. One of the essential benefits of benchmarking is the limited effort needed for the cluster managements and the fact that the members and partners of the cluster do not need to be involved. Interested members can of course be included in the benchmarking process.

The significance of the benchmarking process depends highly on the comparative portfolio against which the benchmarking is made. There exist several methods that can be chosen from:

- Technological domain-specific benchmarking (the cluster compares itself to other clusters operating in the same innovation field),
- Trans-sectoral benchmarking (the cluster compares itself to the entire existing comparative portfolio, e. g. only young or small clusters, all clusters registered in the comparative portfolio) or

- Benchmarking with selected clusters (comparative portfolio is assorted individually).

Usually the technological domain-specific comparative portfolio is chosen, because

- It is applicable to all clusters in a specific technological domain,
- The operation conditions, structures, processes and patterns of services are similar,
- Market and competitive position within the same technological domain can be classified and compared,
- The data of the comparative portfolio is sufficiently detailed and comparable,
- There is a high significance due to the availability of similar structured information.

Aim

In the present case, the IKT Grenland asked to be benchmarked in order to be able to be compared with other clusters in the ICT sector. In addition to that comparative portfolio, another one, containing all clusters benchmarked and registered as “Quality Cluster” in our comparative cluster portfolio database, was chosen as well. Up to now, this portfolio contains about 60 clusters benchmarked so far. It mainly consists of the member clusters of the German Initiative Kompetenznetze Deutschland (currently 80 %) as well as of the foreign clusters from Austria, Denmark, Norway and Switzerland. All of these foreign clusters are likewise in compliance with the requirements of the Initiative Kompetenznetze Deutschland. Both comparative portfolios were chosen because the IKT Grenland had expressed an interest in being compared with the best clusters that have been benchmarked so far. At the end of this benchmarking process stands a substantial set of about 47 cluster-specific indicators, that refer to the sub-dimensions

- Cluster structure,
- Financing of cluster organisation,
- Typology and governance of the cluster,
- Spectrum of services implemented,
- Output of services,
- Internationalisation,
- Achievements and performance

and compare them with other clusters. The indicators are listed in appendix I.

The indicators (compared to the others) can be interpreted either internally (by the cluster management) or externally (e. g. by the benchmarking team). Both groups will be able to deduct recommendation for improving actions (if needed).

The results of the benchmarking show the strengths and weaknesses of IKT Grenland as well as its development potential in the future. It also conveys how the cluster is structured and how it acts compared to others. This benchmarking can be conducted frequently (often times on a regular basis) in order to reveal how the cluster developed over time.

Methodology

The underlying methodology of the benchmarking process was developed by the Agency of Competence Networks Germany in close collaboration with the Institute for Innovation and Technology (iit) and selected clusters, advised by a scientific advisory board. The comparative portfolios include data made anonymously by the clusters from the same technological domain as well as by those clusters labelled as Competence Networks Germany. The 44 indicators that were applied for the IKT Grenland are depicted comparatively in the report and are complemented with some short comments. Some of the indicators were not used because they didn't fit together with IKT Grenland.

IKT Grenland was benchmarked by Gerd Meier zu Köcker from the Agency of Kompetenznetze Deutschland in November 2009. The relevant aspects were discussed in a half day face-to-face benchmarking meeting. Estimations that were based on a self-assessment were afterwards reflected by the Agency of Kompetenznetze Deutschland (supported by external experts). The results are shown in a questionnaire, which was verified by IKT Grenland to avoid misunderstandings.

The results are displayed in three different kinds of expressions to support the process of visualisation. As far as numeric values could be used, box plot method was applied, which has become the standard technique for presenting the *5-number summary*. It consists of the minimum and maximum range values, the upper and lower quartiles, and the median. This collection of values is a quick way to summarise the distribution of the dataset. The typical construction of the box plot, which can be seen in Figures 3 and 4, partitions a data distribution into quartiles, that is, four subsets with equal size. The box is used to indicate the positions of the upper and lower quartiles; the interior of this box indicates the inner quartile range, which is the area between the upper and lower quartiles and consists of 50% of the distribution (called reference area in the following). 25 % of all values lie above the upper quartiles, 25 % of all value lie below the lower quartile. Lines are extended to the extrema of the distribution, either minimum and maximum values in the dataset¹. The specific indicator value of the benchmarked cluster is marked within the box-plot figures.

¹ Potter, K. (2006): Methods of Presenting Statistical Information – The Box Plot Method

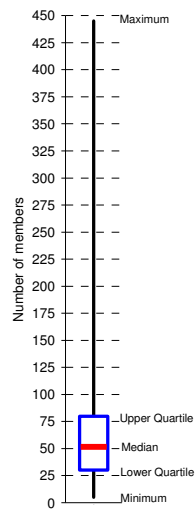


Figure 3: Number of committed members of a cluster portfolio according to the box plot method

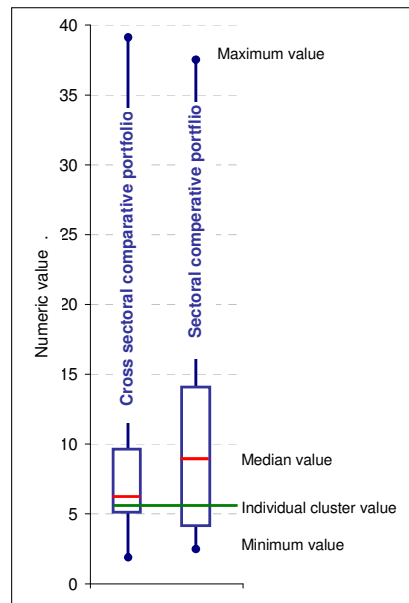


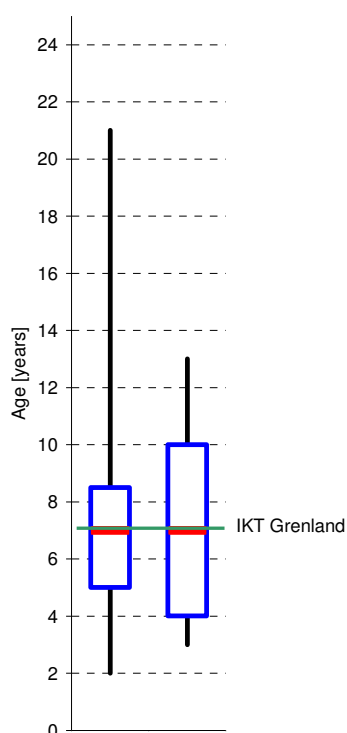
Figure 4: Number of committed members of a cluster according to the box plot method (on the left comparative portfolio: members of the Initiative Competence Networks Germany, on the right clusters from the same technological domain)

Findings

In the following the findings based on the calculated indicators are described, structured according to the seven different sub-dimensions. Alongside the graphs, a short comment is given to explain and further describe the findings.

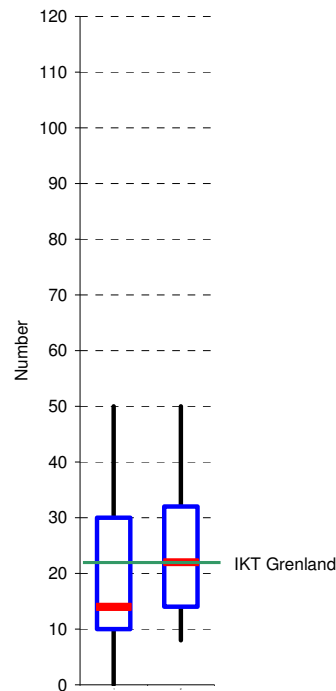
Structure of the clusters

Indicator No. 1: Cluster's age



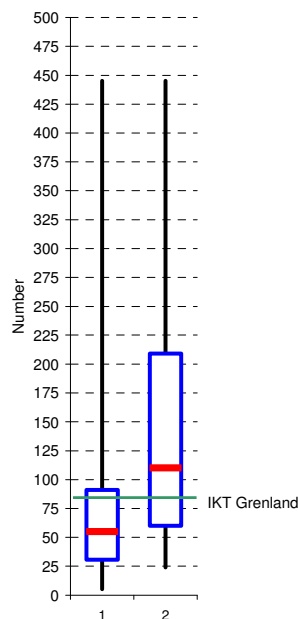
In this chart, the cluster ages are compared. Both, the clusters of the same technological domain (ICT, right) and all registered clusters (labelled here as Quality Clusters) show a median value of about 7 years. This is exactly the median value of IKT Grenland.

Indicator No. 2: Number of members when emerged



At the time of emergence, IKT Grenland had an average number of members. The corresponding value is within the reference areas (in which 50 % of all values are) of both comparative portfolios. Clusters from the ICT sector tend to have a slightly higher number of members when emerged than clusters from other technological sectors. This indicator only takes members into account who entered into a commitment in writing or by paying membership fees.

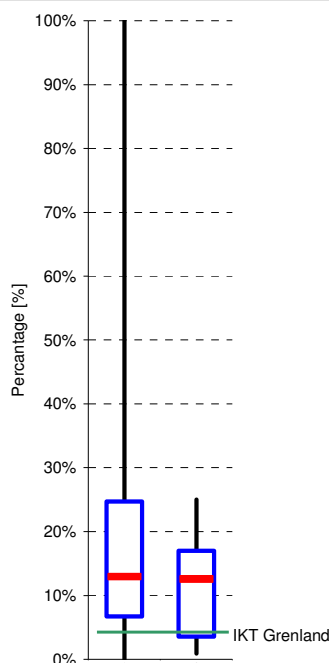
Indicator No. 6: Number of Members in 2009



At present, IKT Grenland shows an average value in terms of number of members (related to clusters from the same technological sector), who have committed

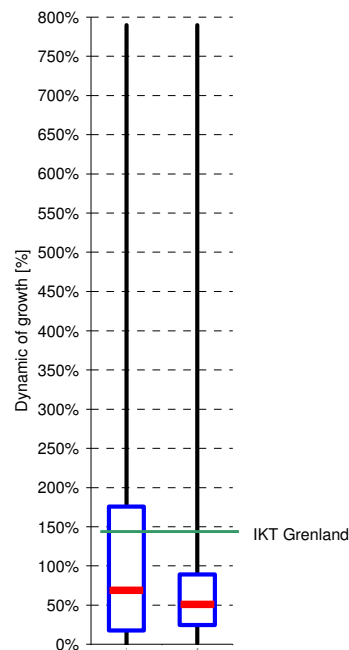
themselves to the collaboration within the cluster. ICT clusters tend to attract more members than clusters from other technological sectors. However, attention should be paid to indicator No. 15 (utilisation of regional member potential).

Indicator No. 7: Share of R&D Institutions in the Cluster



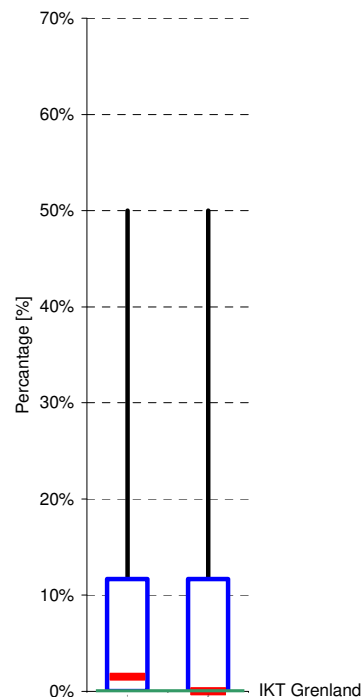
The percentage of the R&D institutions within the IKT Grenland is relatively low and slightly above the lower quartile of one of the reference portfolios (ICT clusters). Also in absolute terms, only three research partners are among the members, which appears to be low. A higher number of R&D institutions may increase the innovation capability of the whole cluster furthermore. In general, ICT clusters tend to reveal a lower share of R&D institutions among the members than clusters within other technological domains.

Indicator No. 9: Dynamic of growth (2005 – 2009)



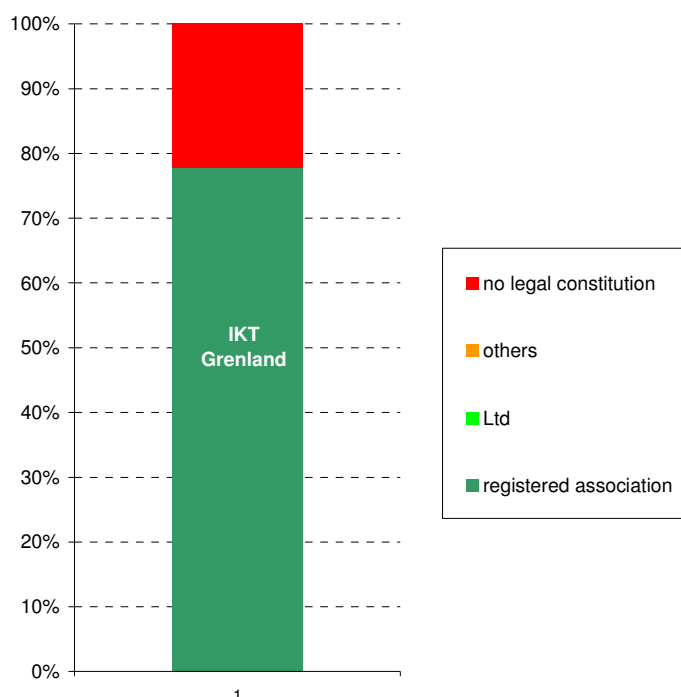
IKT Grenland reveals a comparatively strong growth dynamic (in terms of number of members) over the last years. The corresponding value is clearly above the average value of ICT clusters being in the reference area of the comparative portfolio Quality Clusters.

Indicator No. 10 Share of foreign partners



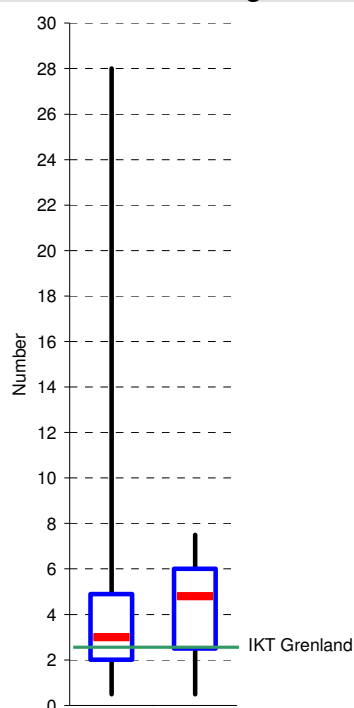
The cluster has no committed foreign members. Many other ICT clusters do not have foreign partners as well, whereas the corresponding values still is in the reference area.

Indicator No. 11: Legal Form



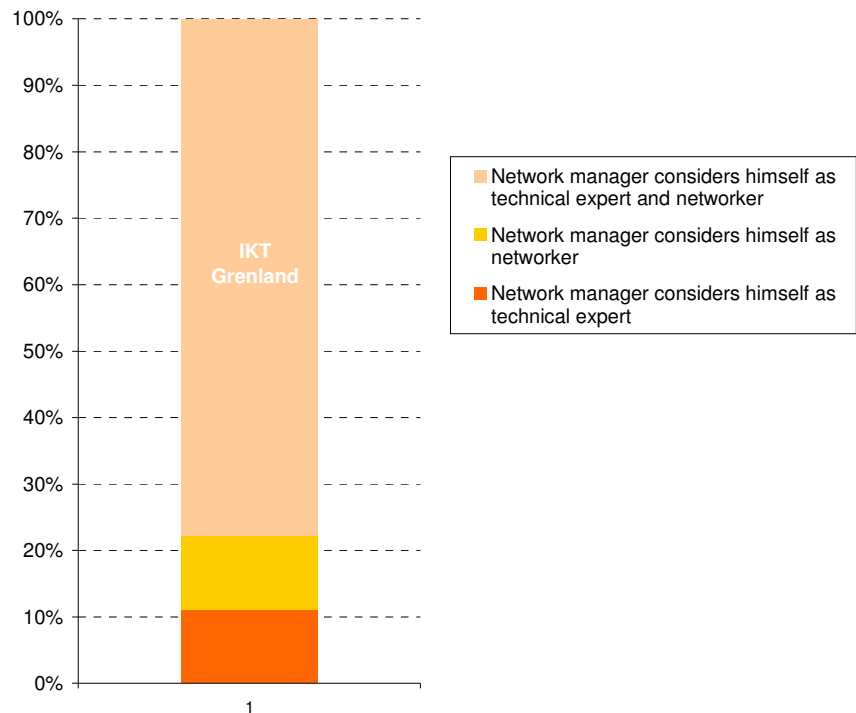
IKT Grenland has chosen a legal constitution (registered association), which shows that its members are strongly committed. Within the comparative portfolio (same technological domain) this type of legal constitution was chosen by almost 80 % of the clusters, it is therefore prevailing. Clusters without any certain legal form are rather an exception.

Indicator No. 12: Number of staff in cluster organisation



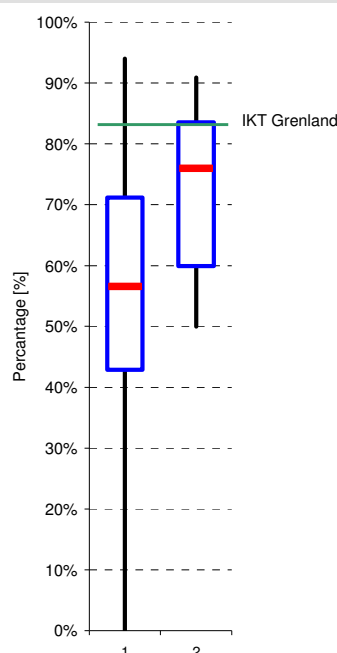
Compared to clusters of both comparative portfolios, the number of staff within the cluster organisation is comparatively low, but still in the reference area of both comparative portfolios.

Indicator No. 13: Experience of cluster manager



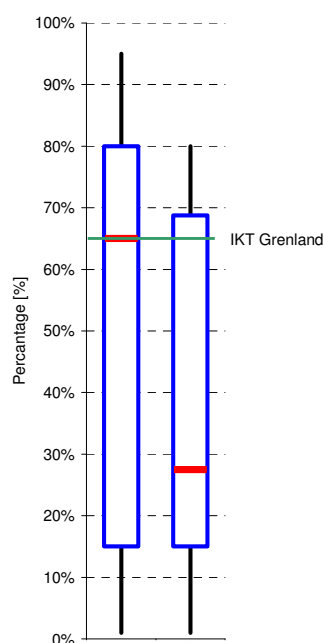
In this figure the experience of the cluster's managers coming from the same technological domain is described. The manager of the IKT Grenland considers himself mainly as an expert in communicating and networking. Most ICT cluster managers assess themselves as networker and technical expert.

Indicator No. 14: Concentration of SME



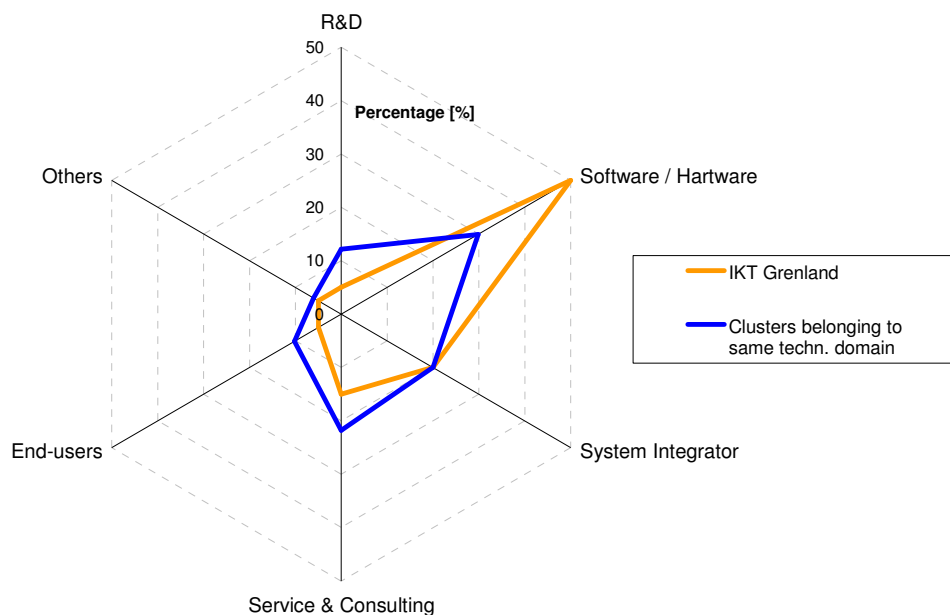
Concerning the share of SME within the IKT Grenland the corresponding value is quite high and lies at the top of the upper quartile. More than 85 % of the members are SMEs. This is, on one side very good, since SME are the main drivers of innovations. On the other side, global players and a higher share of R&D institution would be beneficial for all members. As far as future growth is concerned, the cluster management should focus on motivating other institutions than SME to join the cluster.

Indicator No. 15: Utilisation of regional membership potential



According to a self estimation of the cluster management, the cluster has gained about 65 % of the potential actors in the corresponding region (average size about 100 km). This value lies in the upper level of the reference areas of both comparative portfolios. The value appears to be excellent, since a sufficient critical mass is involved in the cluster, but there is still room for further growth.

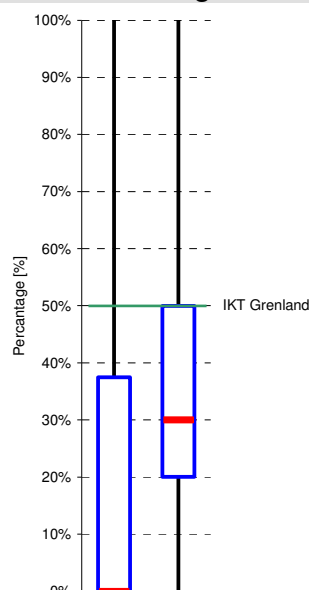
Indicator 16: Completion of the value chain



This figure shows the pattern how the members of ICT clusters are grouped according to defined elements of the ICT specific value chain. Some elements of the value chain are sufficiently covered, some others aren't (end-users or others). Most members are Software producers specialised in Web 2.0 technologies and Open Source Software. The pattern of the comparative portfolio appears to be balanced much better.

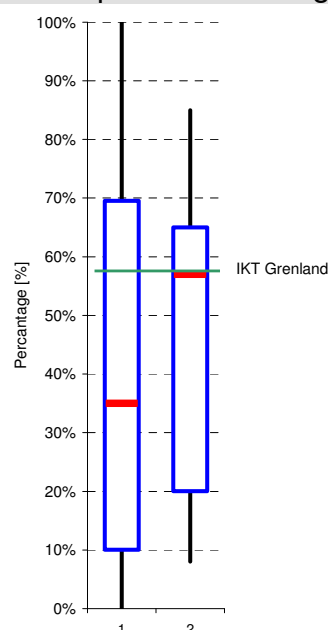
Financing

Indicator No.17: Share of private financing of cluster organisation when emerged



At the time of its emergence, IKT Grenland was partly privately and publicly financed. The share of private financing was very high compared to the comparative portfolios. The median is at 20 % private financing when emerged. ICT clusters tend to have a higher share of private financing when emerged than clusters from other technological areas. The median of the comparative portfolio “Quality Clusters” is significantly lower than that of the ICT clusters.

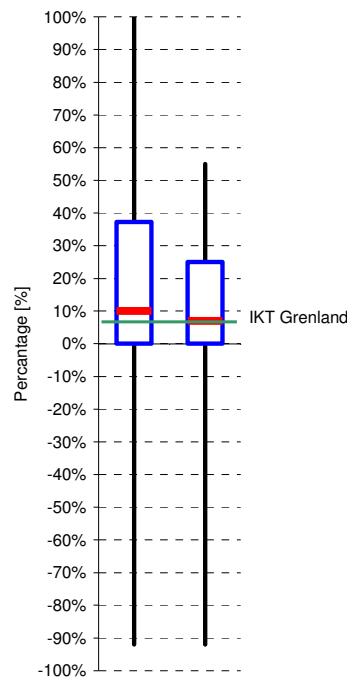
Indicator No. 19: Current share of private financing of cluster organisation



The financial structure of IKT Grenland has changed over time. The cluster gained additional dynamics when it became funded by the ARENA programme, since much

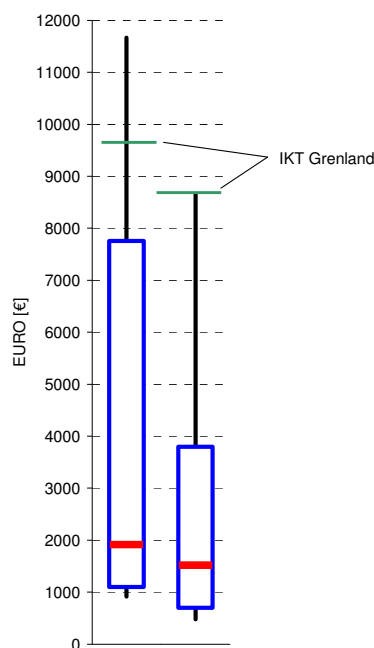
more funds for cluster work were available. Due to the higher overall budget, the share of membership fees were lowered, whereas the share of chargeable services and other private sources increased. In 2009, the share of private financing met exactly the median values of all ICT clusters.

Indicator No. 20: Development of the share of private funding over time



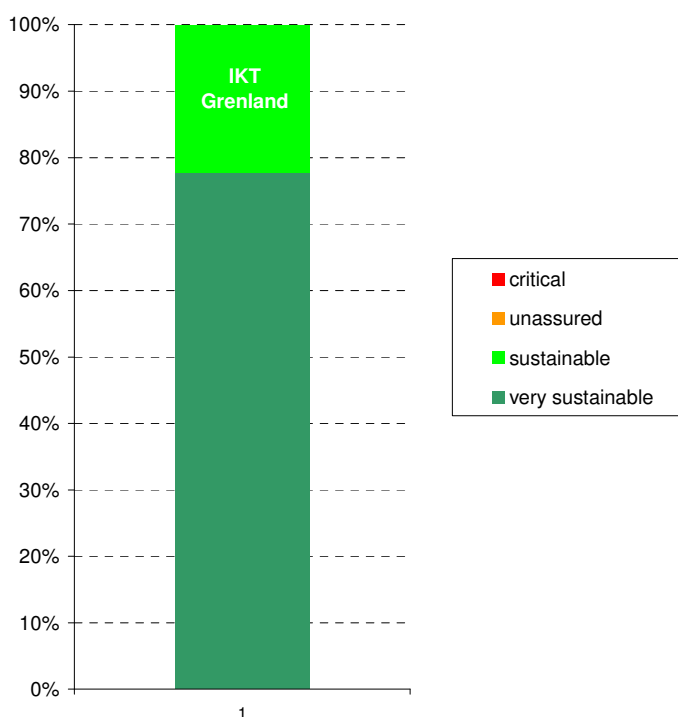
This indicator reveals the development of the share of private financing over time. Due to above mentioned reasons, the share of private financing only slightly increased since IKT Grenland emerged. Nevertheless, the overall composition of financing changed considerably.

Indicator No. 21: Budget per member



This figure shows the budget per cluster member. The left box-plot refers to the total amount (without the funds for R&D projects) while the right one refers to the staff costs. The graphic reveals how high the budget per member is, or rather how low each member's costs are. As far as IKT Grenland is concerned, the values are very high, clearly above the upper quartile of both comparative portfolios.

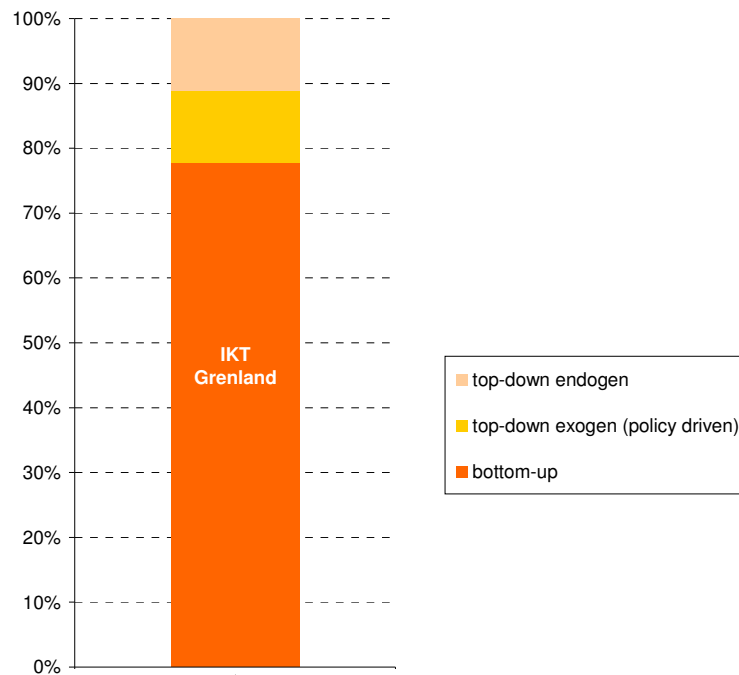
Indicator No. 22: Sustainability of financing



The financing of IKT Grenland is sustainably secured. Most ICT-clusters reported of a very sustainable or sustainable financing of the corresponding cluster organisations.

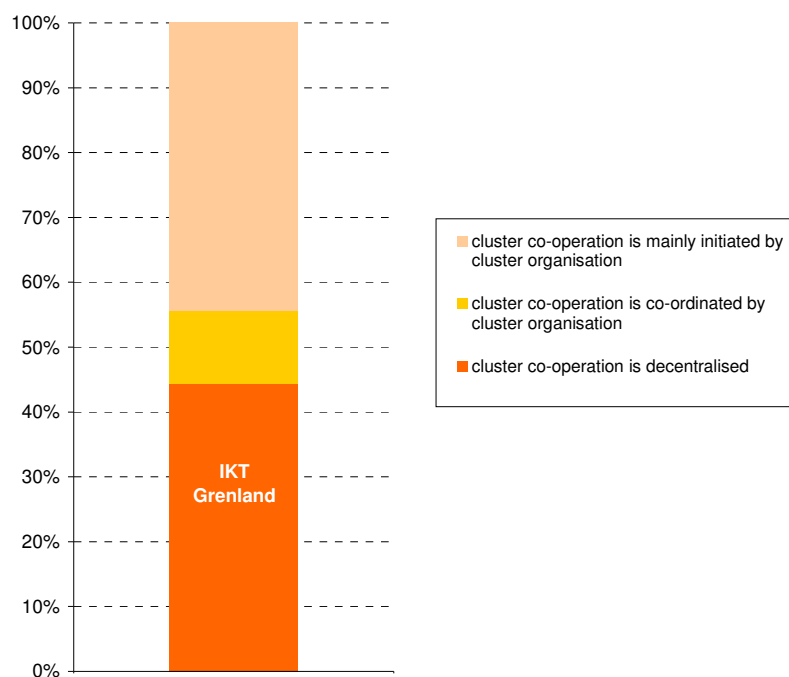
Typology and Governance

Indicator. 23: Type of cluster emergence



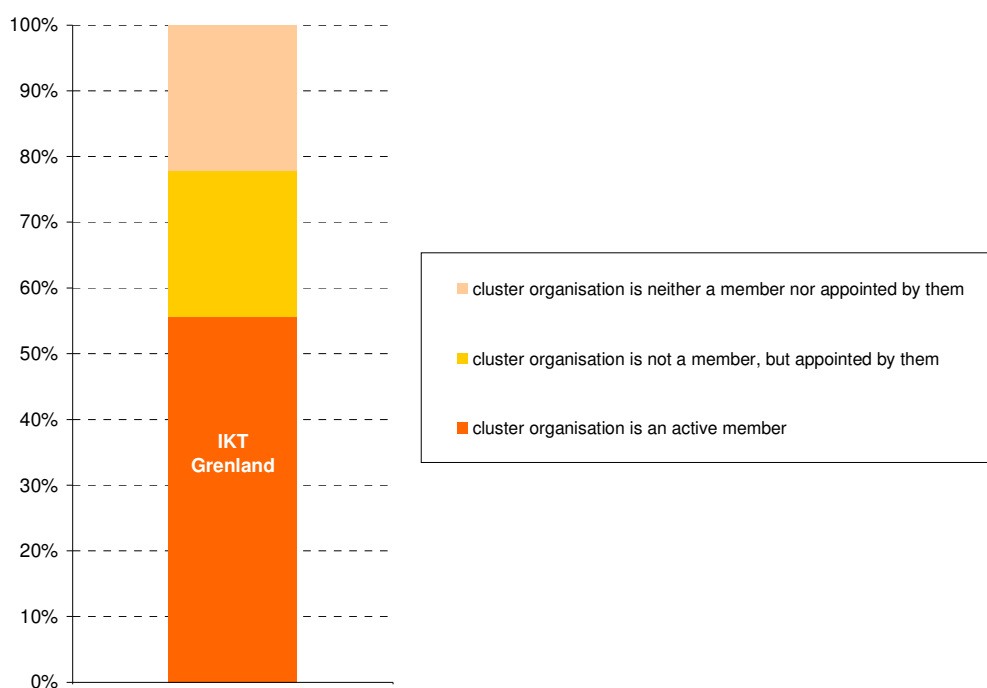
IKT Grenland was mainly initiated by a bottom-up approach. The majority of the clusters of the same technological domain has been emerged according to the same approach. Around 10 % can be considered as policy driven.

Indicator No. 25-1: Cluster governance



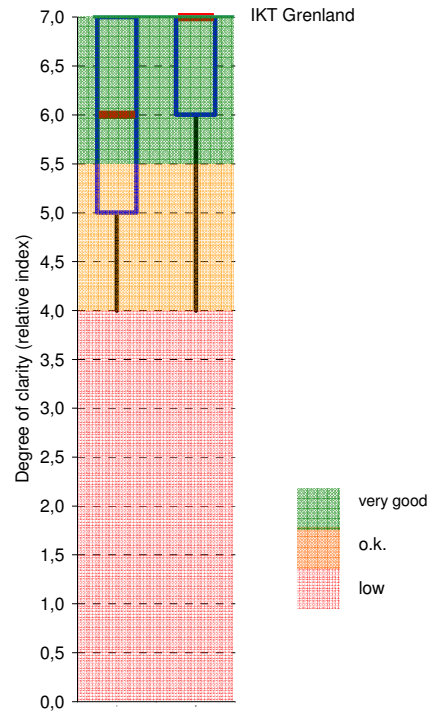
In more than 40 % of all cases, the cluster organisation acts in the centre of all activities and can be considered as the main driver of cluster related networking activities. Within IKT Grenland a decentralised co-operation philosophy is prevailing, which is more common for well matured clusters in Europe.

Indicator No. 24: Role of cluster organisation



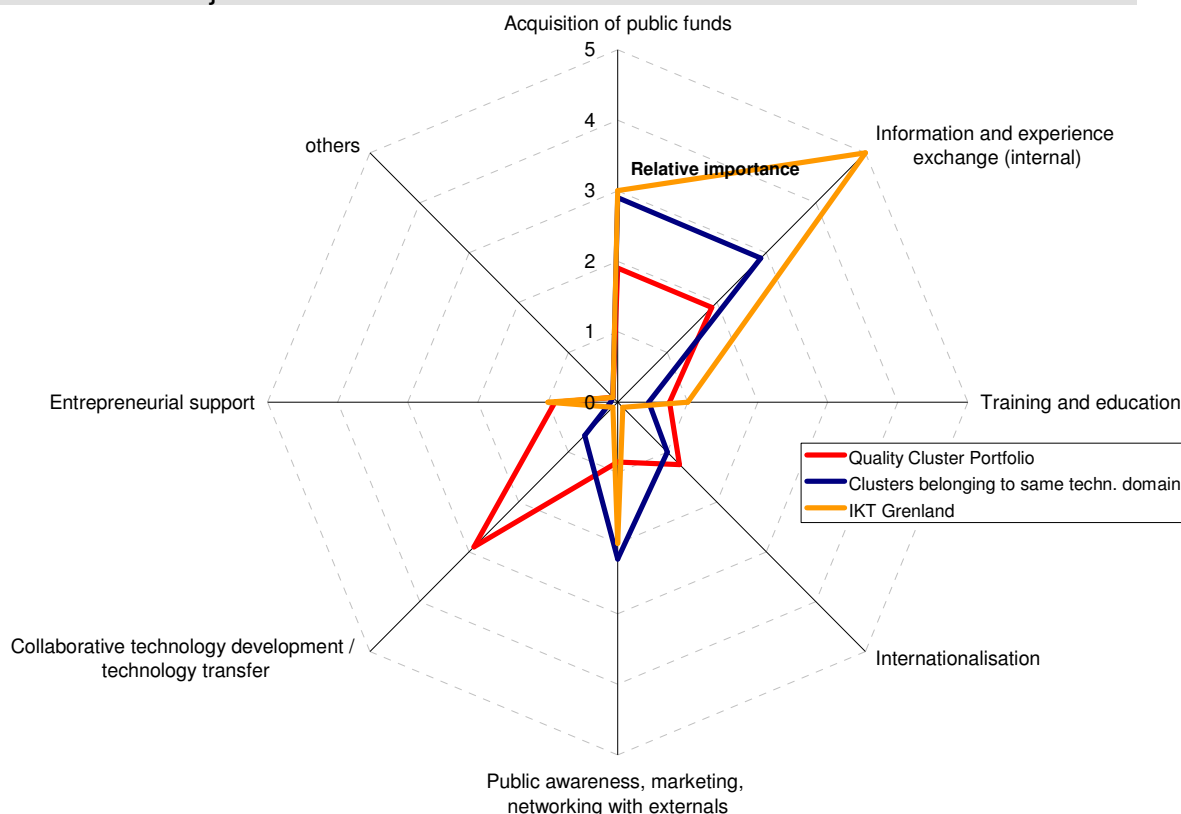
The cluster organisation of the IKT Grenland is an active member of the cluster, which is most common for ICT clusters in Europe. Thus, a close link to the members and high acceptance of the cluster work is guaranteed.

Indicator No. 25-2: Assignment and clarity of tasks



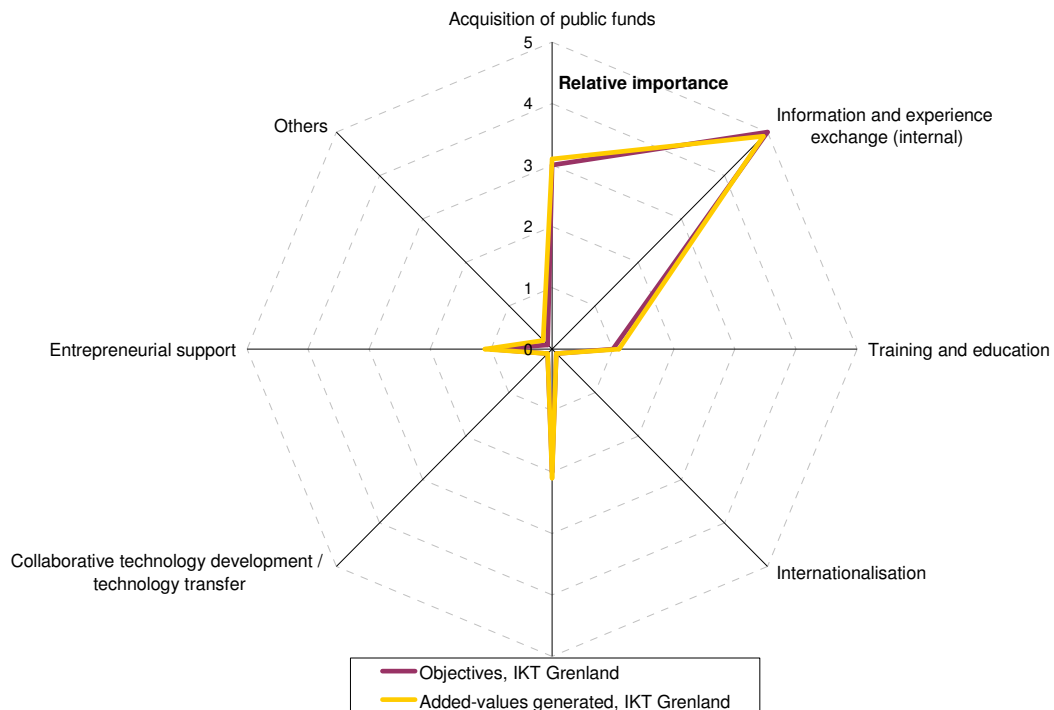
The assignment and clarity of tasks of the involved actors within the IKT Grenland are obviously existent and clearly defined to a certain degree. This generally leads to a clear allocation of roles and tasks. The values related to this indicator are excellent, which means that tasks and duties of all actors are clearly defined. Relevant governing tools and mechanisms are set into force.

Indicator No. 26: Objectives of the cluster



The focus of the work of clusters in the field of ICT is mainly in the domains of exchanging experience and information, acquisition of public (R&D) funds as well as public relations. The IKT Grenland also addresses most of these objectives, whereby strong emphasis is put on information and experience exchange, acquisition of public funds and increasing public awareness, marketing and networking with external partners. At this point it is important to note that selecting only a maximum of 4 objectives was permitted (According to priority 1 - 4). That doesn't mean that the IKT Grenland does not set any other focus in other domains.

Indicator No. 27: Congruence of objectives and added values of IKT Grenland

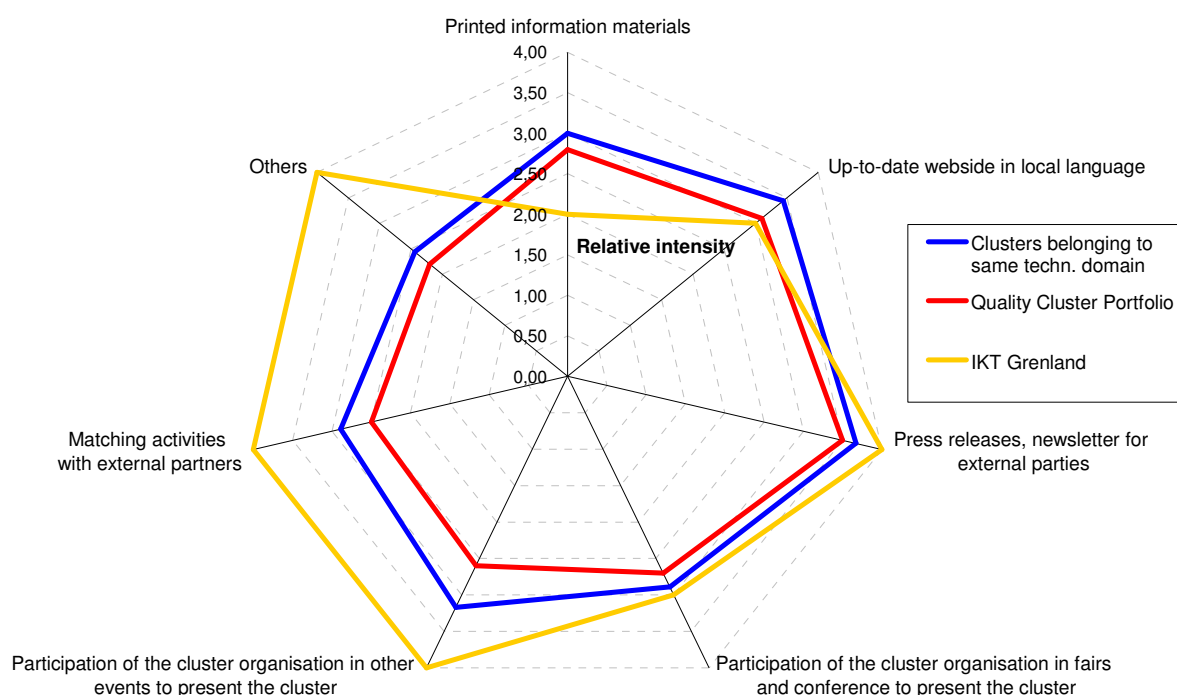


According to its self assessment, the IKT Grenland generates the highest added values for its members in exactly the same areas that are considered to be of high priority (see previous indicator, high values stand for especially significant added values, a maximum of 4 domains of activities was allowed in this context). The good congruence between objectives and added value is given.

Cluster Services

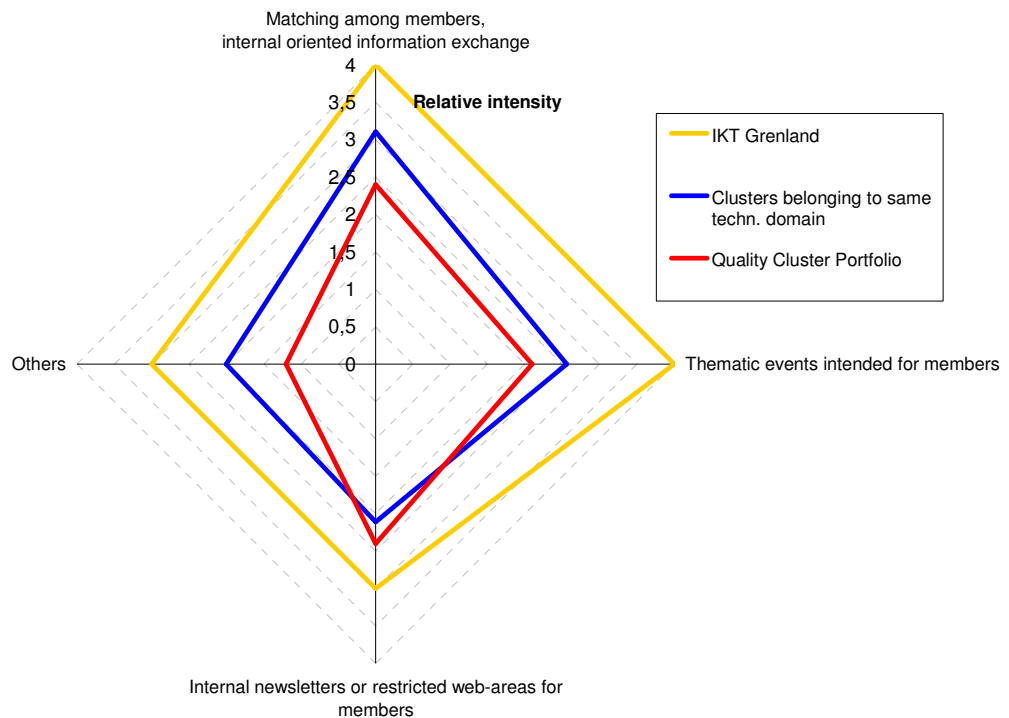
The activities of this sub-dimension are grouped into seven different domains of services which were predefined in the interview guideline. The amount of activities was calculated into a value called “Relative Intensity” (0 = no activities 1 = low activities, 2 = moderate activities, 3 = significant activities, 4 = many activities). Thus, high values mean that there is a large number of actions reported or a high intensity of activities implemented by the cluster organisation. As far as this sub-dimension is concerned, a well balanced pattern / variety of services per indicator is of more importance than the relative intensity of single services.

Indicator No. 28: Diversity of services – Public Relations and external information exchange



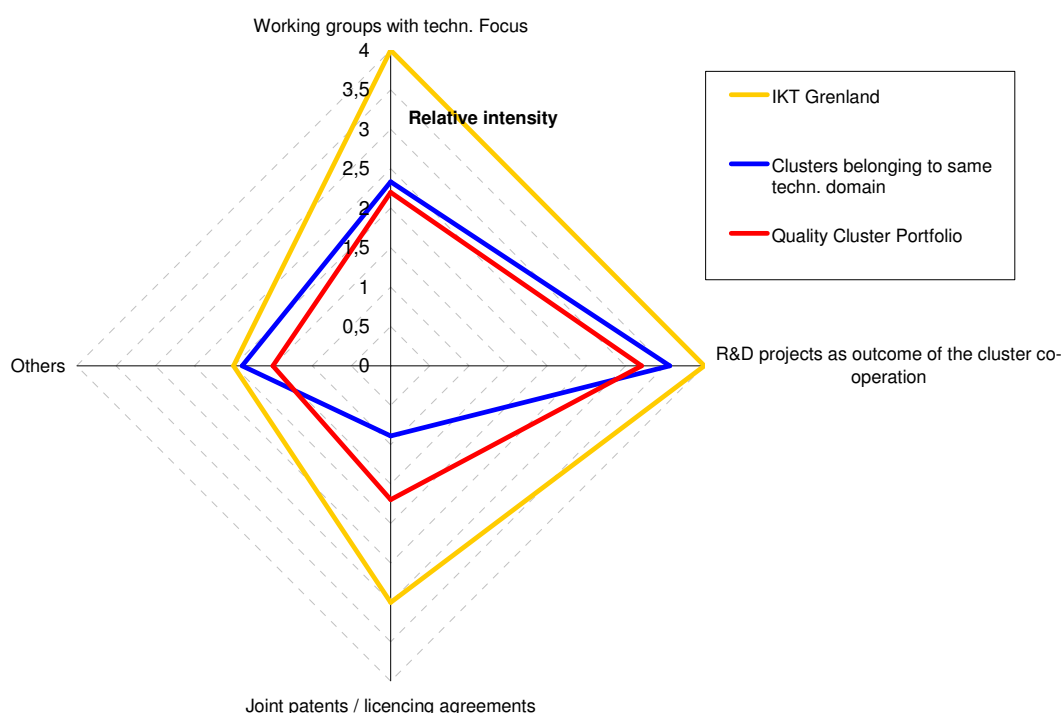
Indicator 28 reveals the pattern of services that IKT Grenland offers within the domain of public relation and information exchange with external actors. The outline of the range of services within the scope of public relations and external information exchange is evenly spread with certain maxima. As far as the relative intensity of the services is concerned, IKT Grenland looks mostly better than the pattern of the clusters of both comparative portfolios. Maximal scores are reached in four out of seven categories. This, indeed, is quite impressive. Especially the category “Others” means that the cluster organisation has implemented some innovative activities to increase visibility or information exchange with external actors.

Indicator No. 29: Diversity of services – Internal information and experience exchange



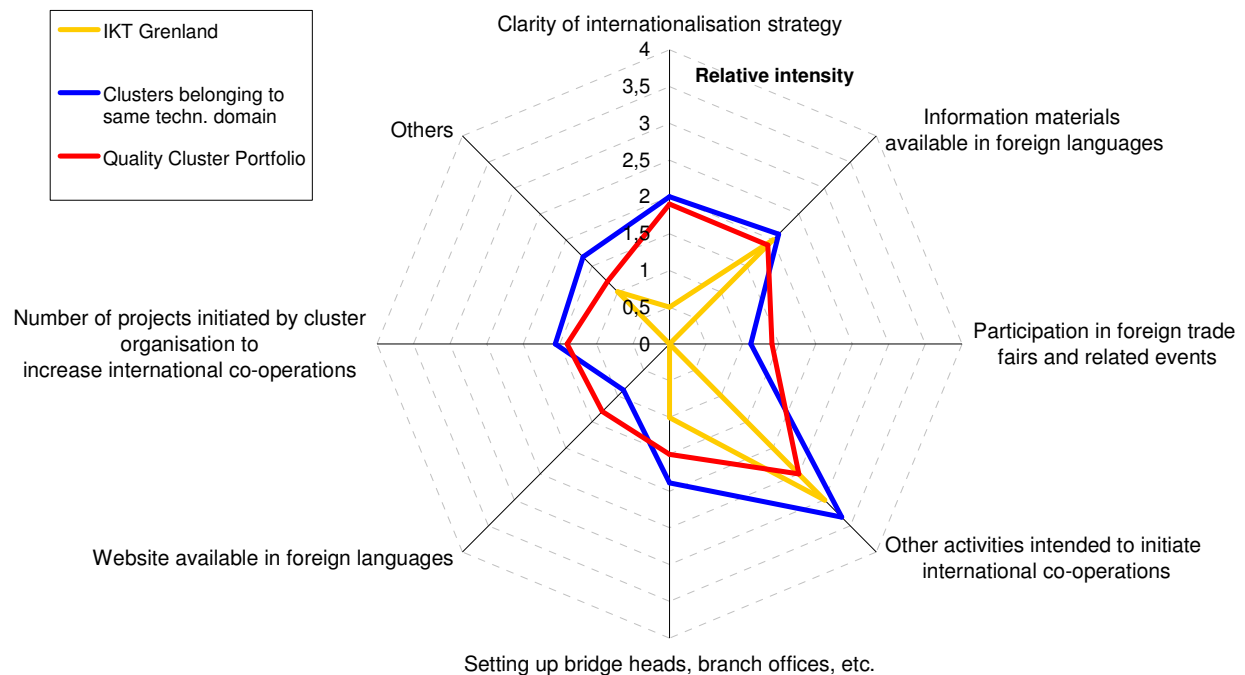
Indicator 29 compares the range of services provided by cluster organisations in terms of the exchange of information and experience (intended for members only). The IKT Grenland offers a broad variety of standardised services for their members, especially in terms of matching among members and implementing thematic events intended for the members. Especially the category “Others” means that the cluster organisation has implemented some innovative services.

Indicator No. 30: Diversity of services – Collaborative technology development / technology transfer



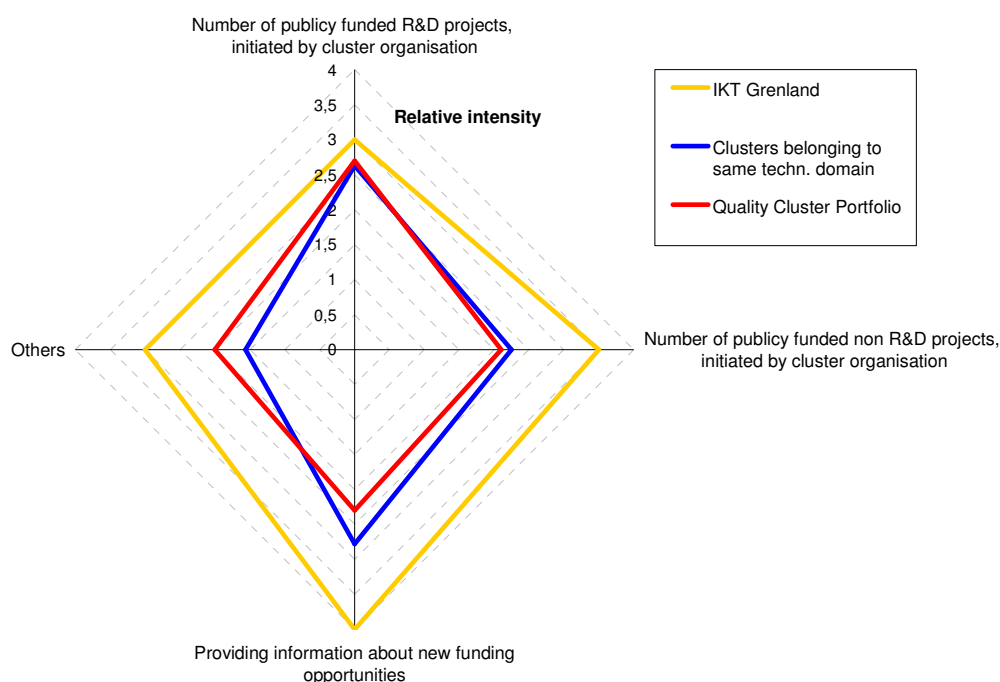
Indicator 30 compares the diversity and intensity of measures provided by IKT Grenland to stimulate collaborative technology development and technology transfer among the members. This includes joint working groups, R&D projects initiated by the cluster organisation (also without public funding) and patents / licenses that can be considered as outcome of the collaboration. IKT Grenland is very active and offers a broad range of services. Sufficient number of patents or licences as well as a comparative high number of R&D projects initiated by the cluster organisation can be considered as positive outcome of these efforts.

Indicator No. 31: Diversity of services – International co-operation and collaboration



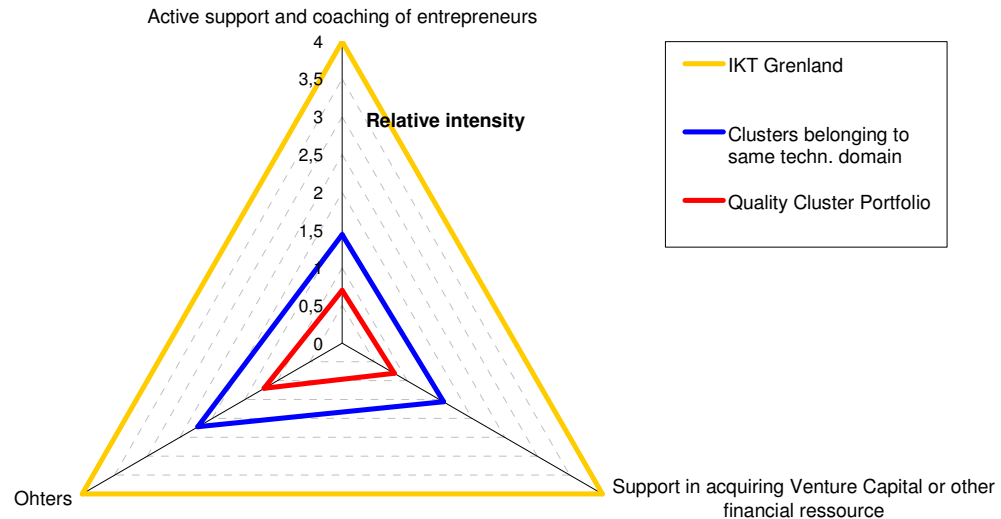
Indicator 31 reveals the diversity of services performed by the cluster organisation regarding the internationalisation of members or the initiation of international co-operation. IKT Grenland offers only some specific services, but not a broad spectrum of services. This is not a surprise, since internationalisation is not among the main priorities of the cluster work.

Indicator No. 32: Diversity of services – Acquisition of project funds, access to public funding



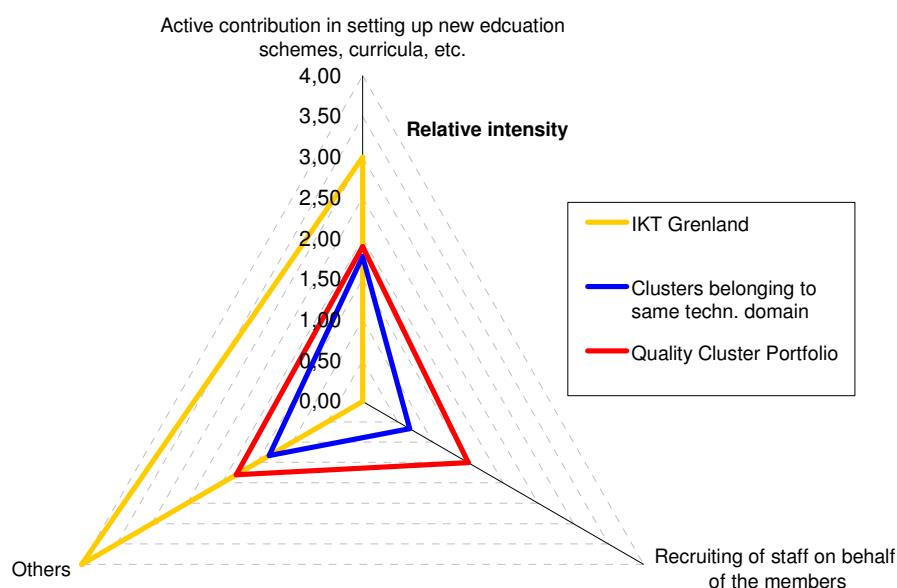
Indicator 32 shows a broad range of measures exerted by the cluster organisation to successfully acquire public funds. IKT Grenland has already initiated a significant series of publicly funded projects (R&D projects and others), in which many cluster members are involved. Altogether the range of actions is well balanced and outranges that of both comparative portfolios.

Indicator No. 33: Diversity of services – Support of entrepreneurs and start-ups



Indicator 33 compares the range of actions offered by the cluster organisation regarding the support of start-up companies. In this field, IKT Grenland is extremely active and offers a well balanced pattern of services with high intensity. It sets a certain kind of “new standard” since not many clusters are so active in this field. Especially the category “Others” means that the cluster organisation has implemented some innovative activities to support entrepreneurs.

Indicator 34: Diversity of services – Education and training / staff recruiting



Indicators 34 depicts the range of actions completed by cluster organisations with reference to education and further training as well as to staff recruiting. IKT Grenland is active in those areas, where it is allowed to operate. Personal recruiting services are provided by three member companies on a commercial basis and, thus, not in the scope of IKT Grenland..

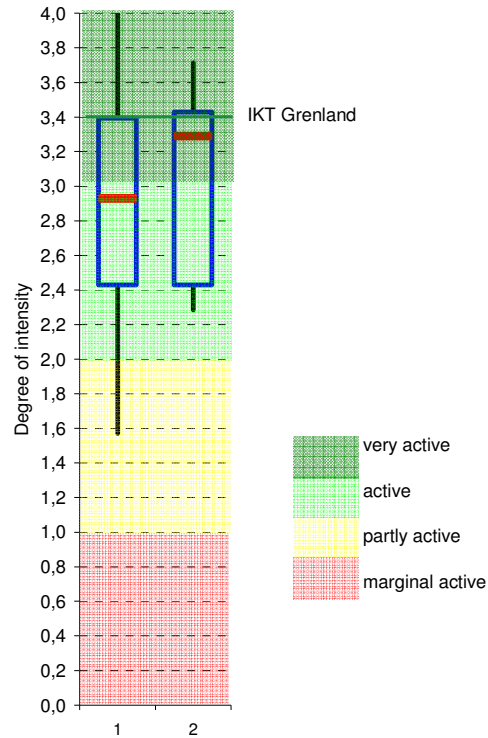
Output

In the following the intensity of the offered services in the different field are calculated by a specific algorithm and then compared whereas in the former chapter the diversity of the services was more relevant. The results are based on the assessments that were made in chapter Z 4 of the interview guideline. The quantitative values we gained from the calculation, were then grouped in different categories and finally standardised with a scale from 0 to 4 (0 - 1 = no activities, 1 = low – low number of activities provided 2 = fair - moderate number of activities performed, 3 = good – many activities performed, 4 = excellent – plenty of activities provided). Again the Box-Plot-approach was applied, as described in the introduction, to visualise the results.

Due to the high expressiveness of the following diagrams there are no further comments on the findings, which are self explanatory. As before the left box-plot shows the comparative portfolio consisting of all clusters registered in the

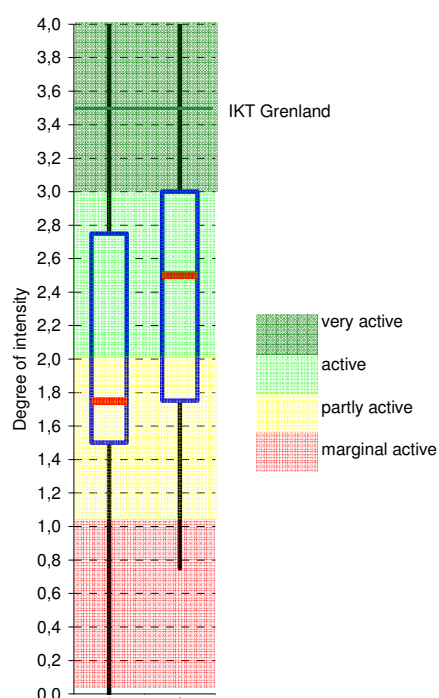
comparative cluster database (Quality clusters), the right box displays the relevant comparative portfolio of clusters belonging to ICT.

Indicator No. 35: Output - Public relations and external information exchange



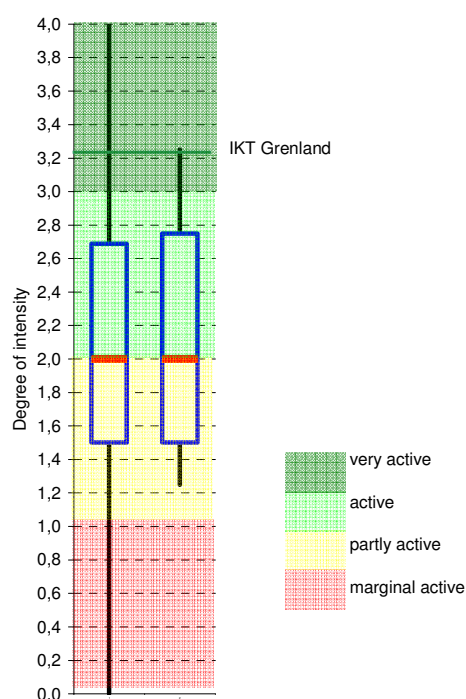
Indicator 35 depicts the intensity of all activities and measures related to public relations and internal information exchange, thus it combines all measures, unlike indicator 28.

Indicator No. 36: Output – Internal information and experience exchange



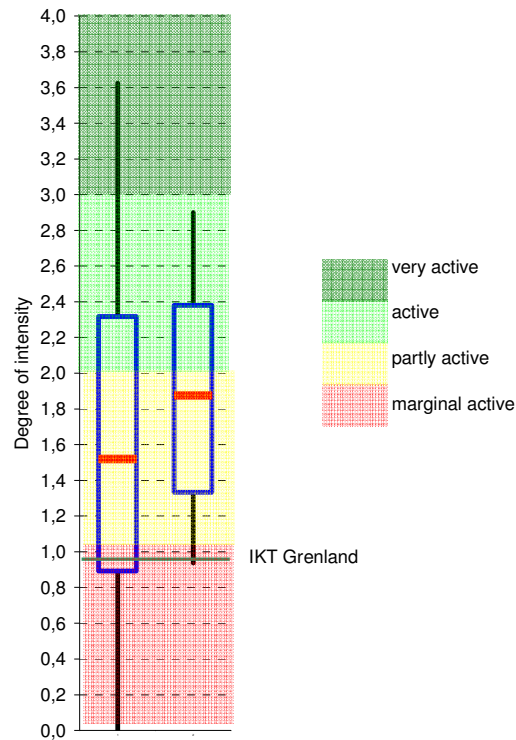
Indicator 36 displays the intensity of all activities and measures in the exchange of information and experience. (primarily for members) as a whole. In contrast to indicator 29 it embraces all measures.

Indicator No 37: Output – Collaborative technology development / technology transfer



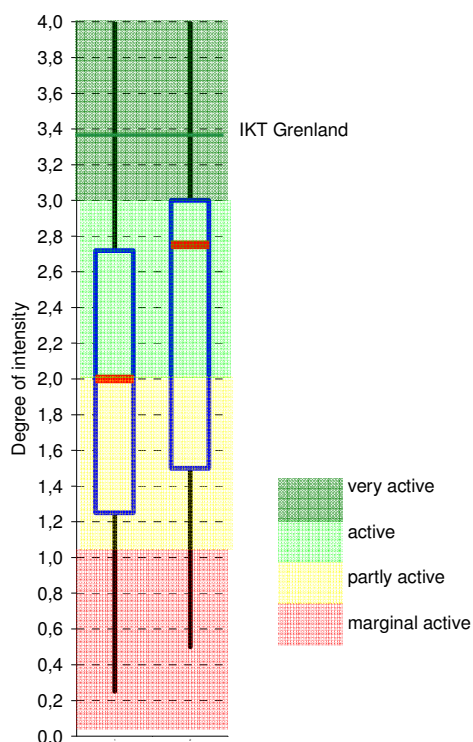
Indicator 37 outlines the intensity of all activities and measures in the field of collaborative technology development. In contrast to indicator 30 it summarises all measures.

Indicator No. 38: Output – International co-operation and collaboration



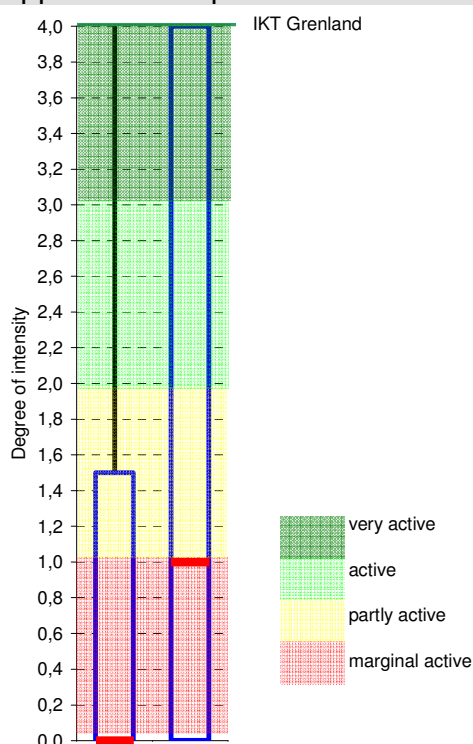
Indicator 38 shows the intensity of all activities and measures of the cooperation or rather of its members, hence all measures are included, unlike indicator 31

Indicator No. 39: Output – Acquisition of project funds, access to public funding



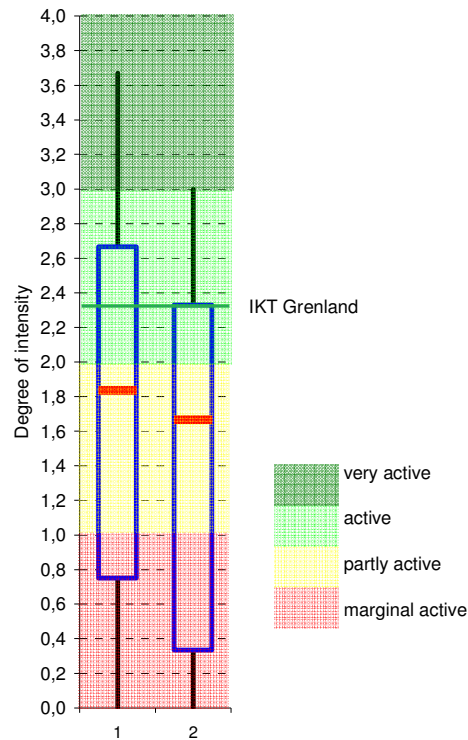
Indicator 39 reveals the intensity of all activities and measures performed by cluster organisations to acquire public funds of R&D or other project as well as to facilitate access to public funding for their members.

Indicator No. 40: Output – Support of entrepreneurs and start-ups



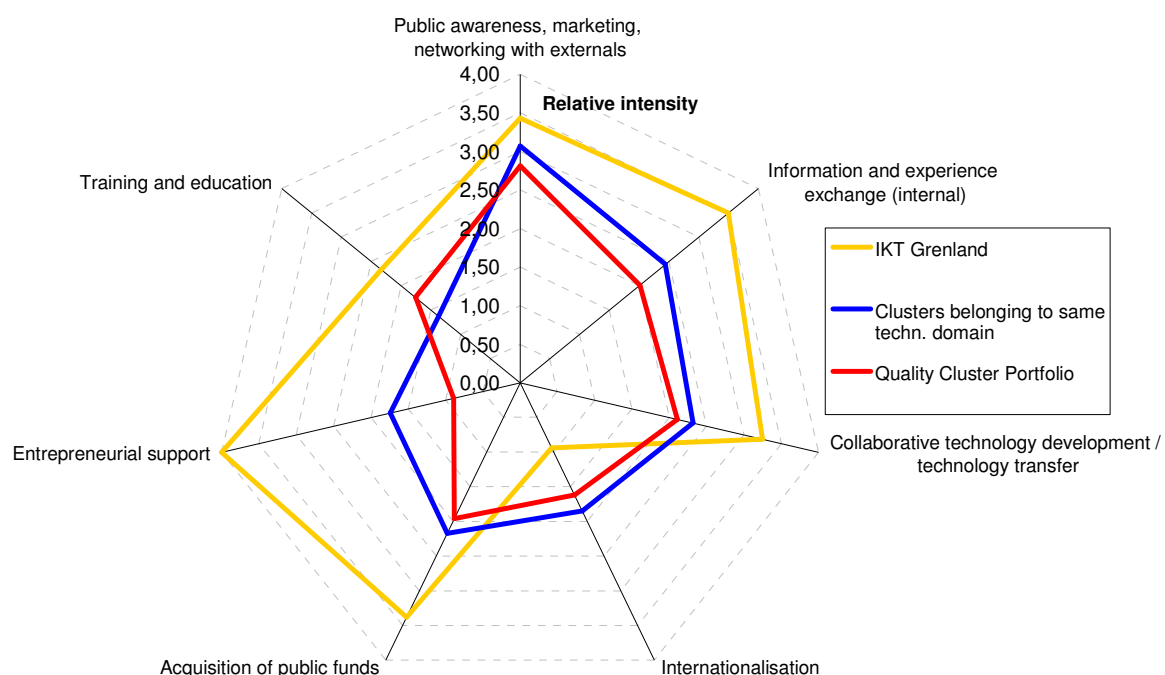
Indicator 40 reveals the intensity of all activities and measures undertaken by the cluster organisations concerning entrepreneurial support. Altogether the clusters belonging to both comparative portfolios are rather inactive in this field.

Indicator 41: Output – Education and training / staff recruiting



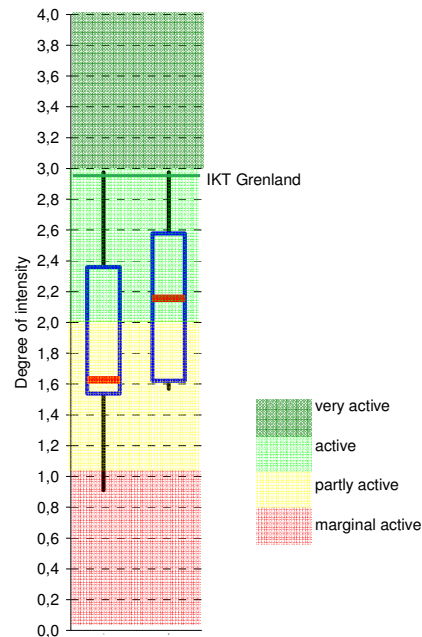
Indicator 41 reveals the intensity of all the activities and measures undertaken by the cluster organisation in the context of training and education as well as staff recruiting

Indicator No. 42: Output overall



Indicator 42 compares the complete pattern of services offered in all seven different service fields (summary of indicators 28 – 34). Altogether IKT Grenland's range of services is excellent and well balanced. There is a clear focus on entrepreneurial support (maximum value reached), but the other areas are also well covered. Only in the area of internationalisation, the cluster organisation is comparable inactive. Since currently there is not such a strong demand coming from the members, it is very reasonable not to focus on internationalisation issues now.

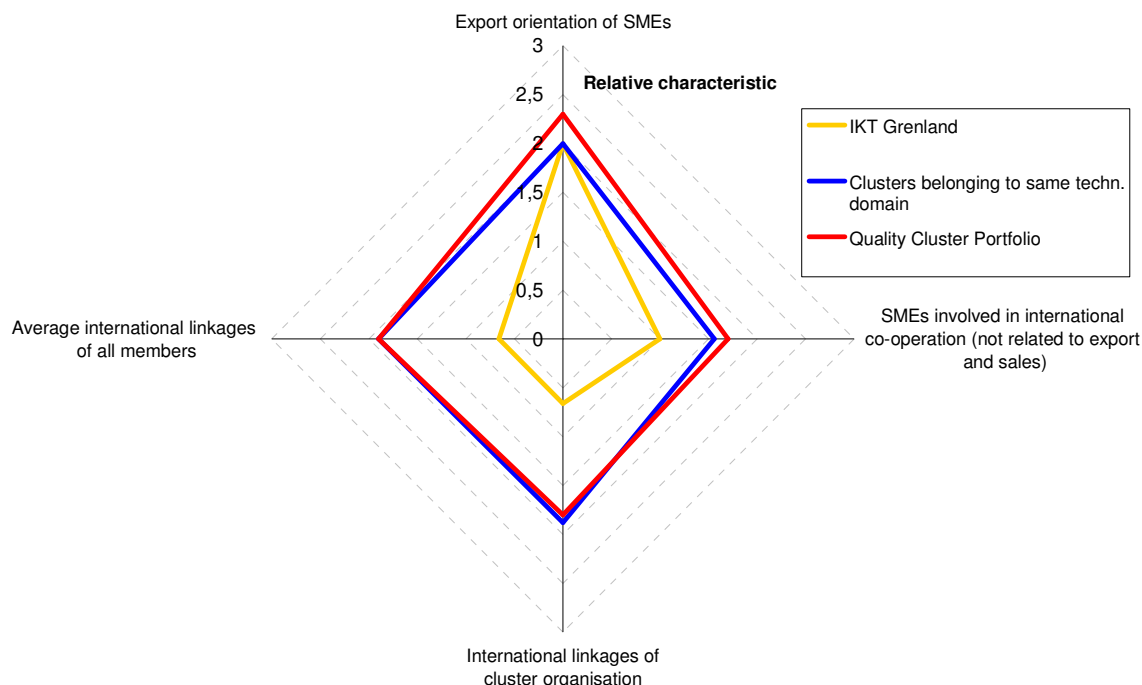
Indicator No. 42-1: Intensity of output



Indicator 42 summarises the intensity of all measures and services provided by the cluster organisation in all of the 7 service fields. Compared to both comparative portfolios IKT Grenland achieves maximum values, which means that the cluster organisation is one of the most active one which has been benchmarked so far (status December 2009). The broad range of services as well as the intensity are really impressive. This can clearly be considered as a dedicated strength of IKT Grenland.

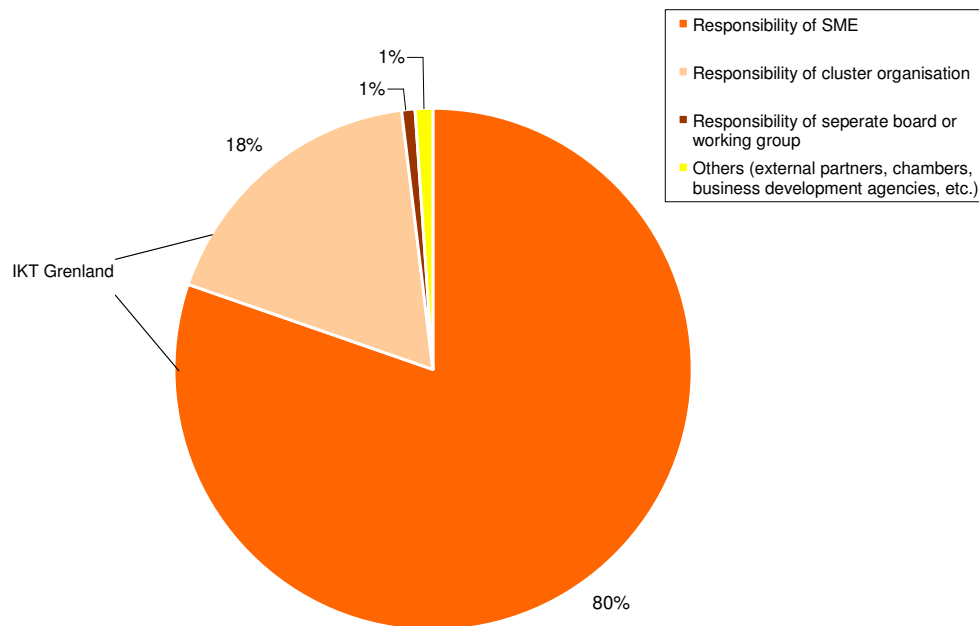
Internationalisation

Indicator No. 44 - 47: Status of Internationalisation



Members of IKT Grenland accomplish a moderate degree of internationalisation that is comparable to both comparative portfolios. SMEs of IKT Grenland are export oriented, but less involved in other kinds of international co-operation. The cluster organisation of IKT Grenland assesses itself as not much internationally linked. In summary, all members of the cluster do not really feel linked to international partners, much below the values of the comparative portfolios.

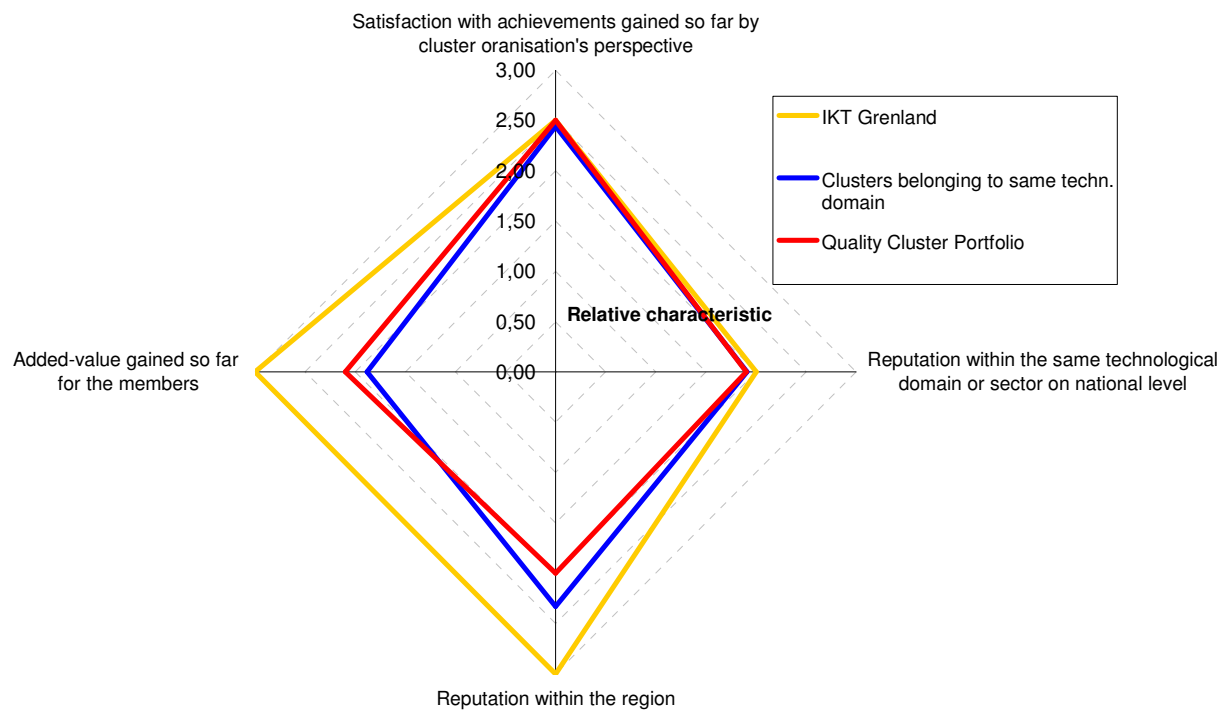
Indicator 48: Responsibility for international co-operations



Indicator 48 deals with the responsibility for international co-operation within a cluster. Regarding international co-operations, typically the members themselves (80 %) feel responsible for international issues. The findings of IKT Grenland reveal that the members themselves as well as the cluster organisation feel responsible for internationalisation issues.

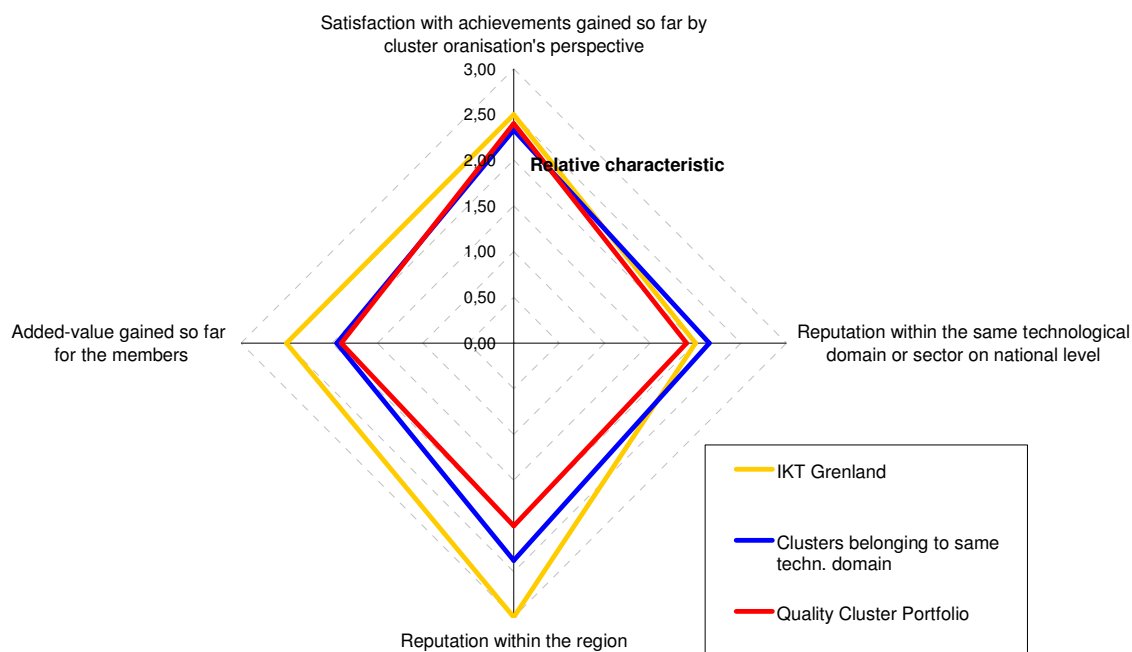
Achievements and Performance

Indicators No. 50/52/54/56: Assessment of achievements (Self-assessment)



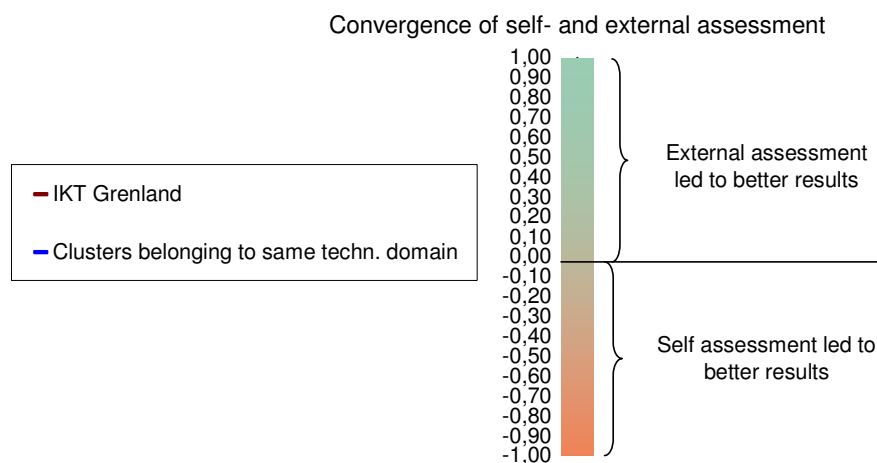
The indicators 50/52/54 and 56 that are summarised in the figure above are based on a self-assessment done by the cluster managements. It becomes plainly visible that the cluster management of IKT Grenland is very satisfied with the achievements gained so far as well as satisfied with the reputation gained within the region. Altogether the management sees plenty of added-values for their members gained so far. The values of the self assessment are mostly within the range of results from the comparative portfolios or above..

Indicators No. 51/53/55/57: Assessment of achievements (Assessed by the benchmarking team)



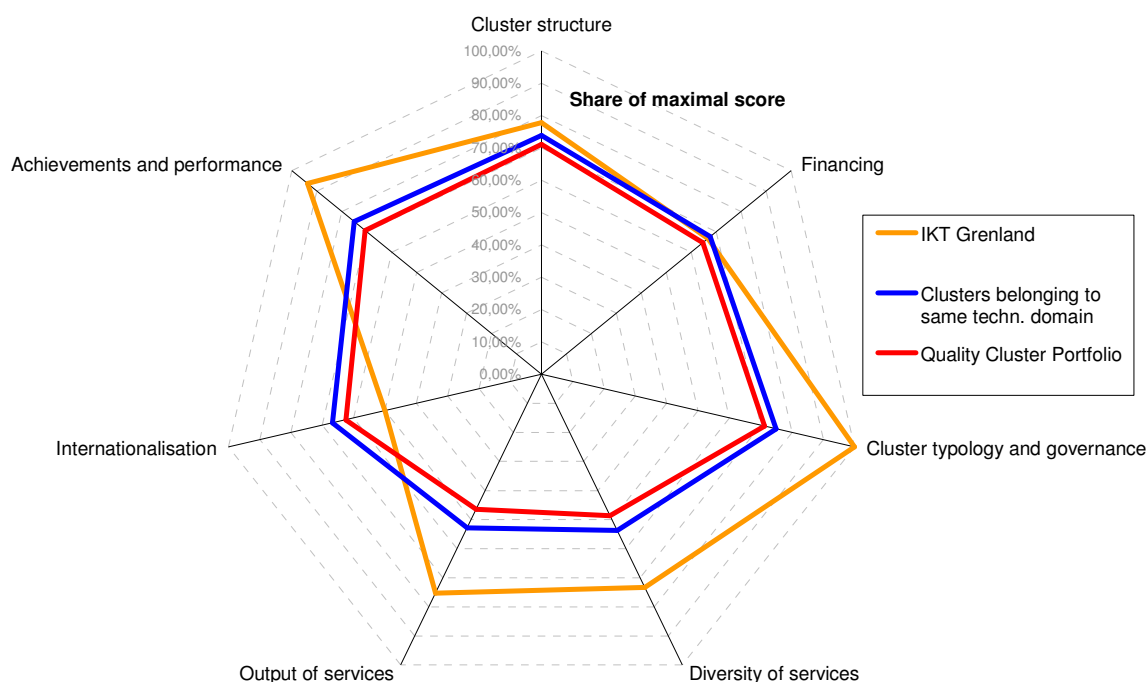
The indicators 51/53/55 and 57 that are summarised in this figure are based on an assessment of the Benchmarking-team, supported by external judgements. Altogether the self-assessment and the external perception are very similar.

Indicator No. 60: Convergence of internal and external assessments



As already mentioned above, the self-assessment and the external evaluation concerning the achievements and reputation are closely matched most of the times. All in all the self-assessment made by the cluster management of IKT Grenland and the verification conducted by the Benchmarking-Team are very similar.

Indicator No. 61: Overall assessment



Indicator 61 is calculated by comparing 39 out of 46 indicators with a “Perfect Cluster”. A “Perfect Cluster” is defined in such a way as its indicators all show ideal values. The “Perfect Cluster” can be understood as a high level benchmark in order to reveal the closeness of the IKT Grenland in comparison to that “Perfect Cluster”. Values of 100 % in each sub-dimension mean that the IKT Grenland fully complies with the „Perfect Cluster“. Compared to that, the actual achieved scores from IKT Grenland, expressed as a percentage, are depicted as well as the average values of the other clusters from the comparative portfolio. Again we compared the IKT Grenland with all registered clusters from the same technological domain.

The IKT Grenland exceeds the average values of both comparative portfolios in five of seven sub-dimensions. The pattern of the sub-dimensions appears to be well-balanced. As far as the sub-dimension “Cluster typology and governance” is concerned the max. value of 100 % was reached. This means that all indicators belonging to this sub-dimension are on the level of a “perfect cluster”. This is really impressive, e. g. the overall cluster governance is well structured as well as the clarity of tasks and objectives. But also in other sub-dimensions, excellent values were reached. A dedicated strength of the cluster is the spectrum and strong output of services offered by the cluster management. Besides of internationalisation issues, a broad range of services is offered to the members, whereas these services are

often very demand oriented and innovative. Also the amount (output) of activities is very high compared to other clusters, not only in the ICT sector. Compared to both comparative portfolios, IKT Grenland achieves maximum values, which means that the cluster organisation is the most active one that has been benchmarked so far (status December 2009). This can clearly be considered as a dedicated strength of IKT Grenland. This is even more impressive, given that the number of staff within the cluster organisation is low compared to the average.

Thus, it is no surprise that the cluster gained a good reputation on a national level and the achievements gained so far can be considered to be very good. As far as internationalisation issues are concerned, the cluster management is well aware that more actions may be beneficial, but this strongly depends on the demand of the members. So far, this topic was not considered to be that important.

The benchmarking report emphasises that the benchmarking team was really impressed by the IKT Grenland and its cluster organisation. According to the findings, the cluster organisation ranks top among the ICT clusters benchmarked so far. In addition, it ranks among the top 5 clusters benchmarked to date (compared with all other cluster organisations benchmarked as yet). Consequently, the Institute for Innovation and Technology and the Agency of Kompetenznetze Deutschland would like to register the IKT Grenland as Quality Cluster in its comparative cluster portfolio.

Appendix I: Survey indicators

Index number	Sub-dimensions	Indicator
	Structural data	
1		Age
2		Number of members when emerged
6		Current number of members
7		Current R&D intensity
9		Dynamic of growth
10		Number of foreign partners
11		Legal form
12		Number of staff of cluster organisation
13		Experience of cluster manager
14		Concentration of SME
15		Utilization of regional member potential
16		Completion of value chain
17	Financing	Share of private financing of cluster organisation when emerged
19		Current share of private financing of cluster organisation
20		Development of share of private financing of cluster organisation
21		Budget per member
22		Sustainability of financing of cluster organisation
	Type and governance	
23		History of emergence
25/1		Cluster governance
24		Role of cluster organisation
25/2		Assignment of tasks / clarity of tasks
26		Targets and added value
27		Convergence of targets and added value provided
28	Cluster services	Diversity - Public relation / external exchange
29		Diversity - internal information / experience exchange
30		Diversity - Collaborative R&D / Tech Transfer
31		Diversity - International collaboration
32		Diversity - Acquisition of project funds
33		Diversity - Entrepreneurial support
34		Diversity - Education and training / staff recruiting
35	Output	Output - Public relation / external exchange
36		Output - internal information / experience exchange
37		Output - Collaborative R&D / Tech-Transfer
38		Output - International collaboration
39		Output - Acquisition of project funds
40		Output - Entrepreneurial support
41		Output - Education and training / staff recruiting
42		Overall output
44	Internationalisation	Status of internationalisation
45 / 46		Degree of internationalisation of types of members
47		Responsibilities for internationalisation
50	Achievements and performance	Degree of achievements
53		Supraregional perception in the sector
55		Regional and intersectoral perception
57		Achieved added value related to cluster activity
60		Convergence of internal and external assessments
61		Overall performance