

Do companies profit from cluster activities? The Cluster Impact Analysis – a practice-oriented evaluation approach for impact measurement

Dr. Sonja Kind iit – Institute for Innovation and Technology 15th November 2013





What makes the Cluster Impact Analysis special?

Reasons for the use of a new instrument

- No enquiry of "sensitive" data (e. g. annual turnovers)
- Specific features of the clusters are taken into account (age, intensity of commitment within the cluster initiatives)
- Independence from statistical data/predefined industry sectors/regions
- Results are easily comprehensible
 - widely accepted
 - · field-tested
 - individual selection of indicators possible
 - suitable for all types of clusters
 - regional localisation of the clusters not relevant

high practicability:



Survey of the Companies in 5 Impact Categories (30 Questions):

- 1. Qualification and innovation
- 2. Co-operation
- 3. Entrepreneurial performance
- 4. Image and reputation
- 5. Sustainability

	Indicators of the Cluster Impact Analysis at a glance
Brief Company Information	Company size
	Year of accession to the cluster
	Company name
	Contact person email [optional]
	Commitment and involvement of the company in the cluster initiative
Impact Category	
1) Qualification and Innovation	Access to qualified personnel within the network
	Access to qualification offers and trainings for the network's staff
	Adjustment of training offers to changing requirements with regard to education, promotion of young talents or
	curricula, etc. within the network
	Access to technological know-how and technical infrastructure
	Access to market- and sector-related trends
	Access to funding and capital (public and private)
	Influence on standard-setting and standardisation processes
2) Co-operation	Intensification of existing and establishment of new contacts to R&D and business partners along the value chair
	Intensification of existing and establishment of new contacts to partners from politics and associations, etc.
	Access to consultants with expertise in other fields (e.g. in areas such as tax, law, human resources, marketing)
	Improvement of motivation and openness with respect to co-operation
3) Entrepreneurial Performance	
	Headcount increase (full-time job equivalent)
	Number of innovative products, processes and services
	Quality of products and processes
	Increase in productivity
	Reduction of the time-to-market
	Increase in R&D expenses (innovation intensity: R&D expenses/turnover)
	New business opportunities
	Entering new markets (geographically, new products/services)
4) Image and Reputation	Improvement of image and reputation of the industry/sector
	Improvement of image and reputation of the organisation itself and its products
	Improvement of image and profile-raising of the business location
5) Sustainability	Willingness to make a financial contribution for the cluster management to secure its continuance and thus
•	sustainability
	Preferred funding model for financing the cluster management organisation
	Willingness to get actively involved in the cluster initiative in terms of personnel
	Potential negative impacts on the cluster initiative due to "free-riders"
Summary	Assessment of overall benefits achieved by cluster involvement
1	Further positive impacts, not mentioned in the questionnaire
	Unexpected negative impacts of cluster involvement



CVC – Commercial Vehicle Cluster

CVC

- Industry sector: automotive
- Age: 5 years
- Active participants: ca. 70, thereof 40 enterprises (mainly SME)

Survey

- Survey period: April to May 2012
- Only enterprises had been addressed.
- Response rate: 78%



Effects and Priorities in the Cluster

- Have the most important company goals been attained in the cluster?
 (Priority > 50%)?
 - **Yes,** for nearly all goals that had been pursued by more than 50%, positive effects have been realised.



Evaluation of the Priority – Has this been a pursued goal?

80% of the companies responded that their participation in the cluster was a pursued goal

Sample Indicator	Evaluation	Priority	
Access to technological know-how and technical infrastructure	A	80%	-
Influence on standard-setting and standardisation processes	Ø	20%	



Evaluation of the effects and priorities of CVC at a glance

1/2

Cluster Impact Analysis

Indicator		Evaluation	Priority	
Brief Company Information				
Company size				
Year of accession to the cluster		Ø 2008		
Name name				
Commitment and involvement of the company in the cluster initiative		\rightarrow		
1) Qualification and Innovation				
Access to qualified personnel within the network			33%	
Access to qualification offers and trainings for the network's staff			43%	
Adjustment of training offers to changing requirements with regard to	education, promotion of young talents or curricula, etc.			
within the network			small effect,	
Access to technological know-how and technical infrastructure		less impo	•	
Access to market- and sector-related trends		icss impo	rtarit goe	
Access to funding and capital (public and private)	' '6' 66 '	4	46%	
Influence on standard-setting and standardisation processes	significant effect – important goal!	\Q	36%	
2) Co-operation				
Intensification of existing and establishment of new contacts to R&D and business partners along the value chain			100%	
Intensification of existing and establishment of new contacts to partners from politics and associations, etc.			52%	
Access to consultants with expertise in other fields (e. g. in areas such as tax, law, human resources, marketing)			23%	
Improvement of motivation and openness with respect to co-operation			97%	



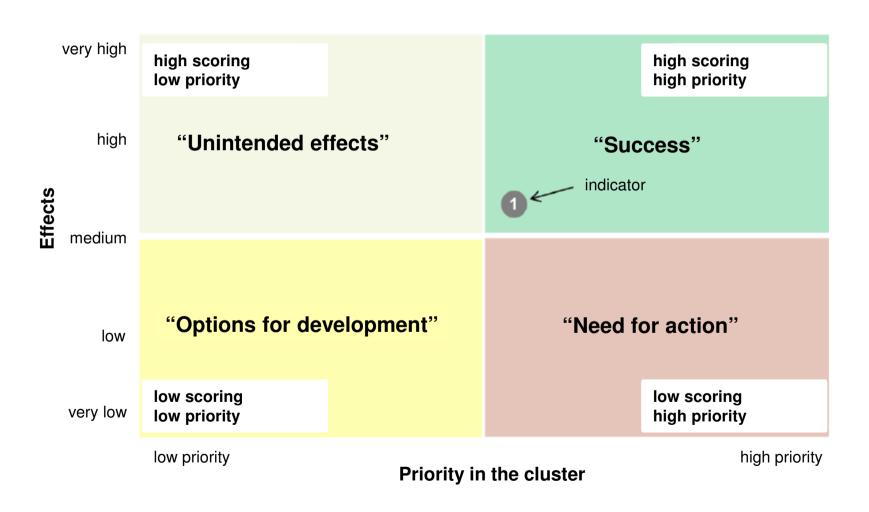
Evaluation of the effects and priorities of CVC at a glance

2/2

Indicator	Evaluation	Priority
3) Entrepreneurial performance		
Increase in turnover and profits	Ø	75%
Headcount increase (full-time job equivalent)	\rightarrow	47%
Number of innovative products, processes and services	Ø	79%
Quality of products and processes	<i>></i>	63%
Increase in productivity	\supset	55%
Reduction of the time-to-market	\Diamond	48%
Increase in R&D expenses (innovation intensity: R&D expenses/turnover)	\rightarrow	48%
New business opportunities	\rightarrow	89%
Entering new markets (geographically, new products/services)	\Diamond	71%
4) Image and reputation		
Improvement of image and reputation of the industry/sector	Ø	58%
Improvement of image and reputation of the organisation itself and its products	Î	92%
Improvement of image and profile-raising of the business location		63%
5) Sustainability		
Willingness to make a financial contribution for the cluster management to secure its continuance and thus sustainability		
- with unchanged range of services		
- with continuously improved service portfolio		
Preferred funding model for financing the cluster management organisation		
Willingness to get actively involved in the cluster initiative in terms of personnel		
- with unchanged range of services	Ø	
- with continuously improved service portfolio	Ø	
Potential negative impacts on the cluster initiative due to "free-riders"	22%	

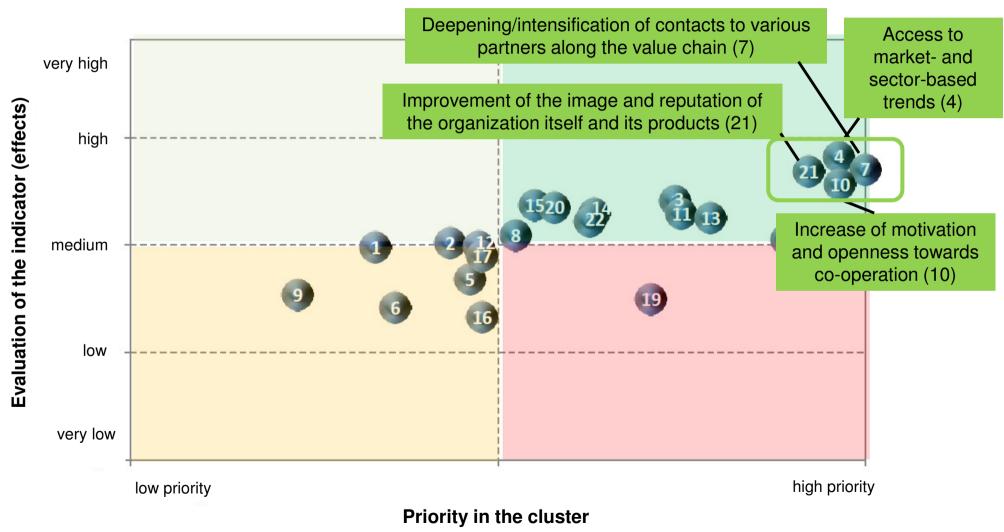


Cluster Impact Matrix: Need-Satisfaction-Matrix





Achieved effects were most apparent in the fields of highest priority





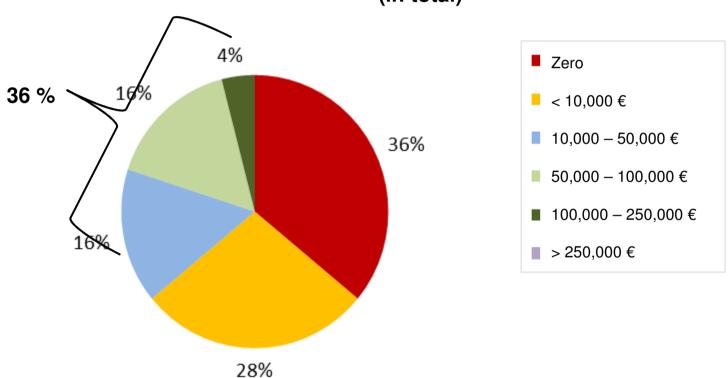
Needs for action...





Enterprises also Profit Financially When Participating in a Cluster

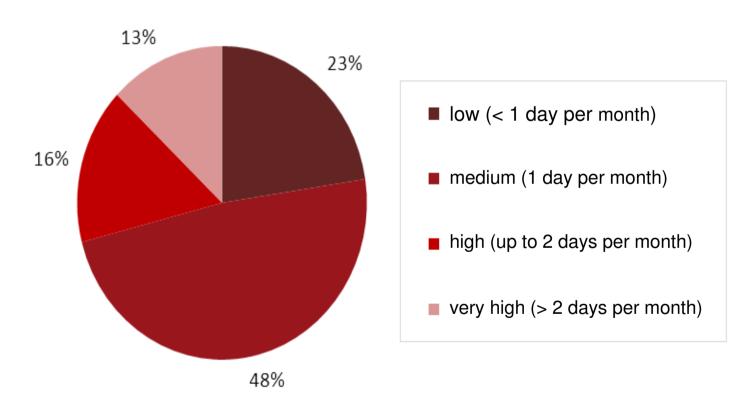
Monetary benefit resulting from cluster activities in the past 2 years (in total)





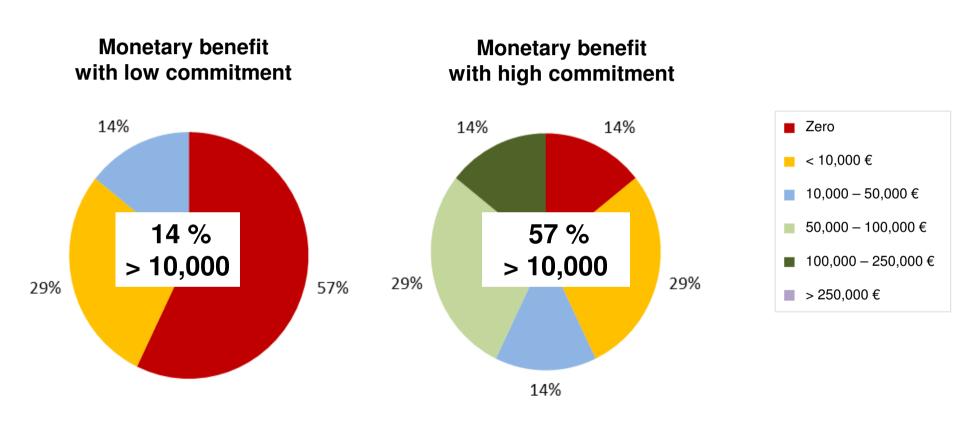
Cluster Activities are Profitable...

Companies' commitment for the cluster initiative in terms of personnel





...Involvement in Cluster Activities pays off for all Participants.



- High commitment = > 2 days per month spent for cluster work; intensive interaction with CM
- Low commitment = < 1 day per month spent for cluster work; occasional participation



Conclusion

The Cluster Impact Analysis...

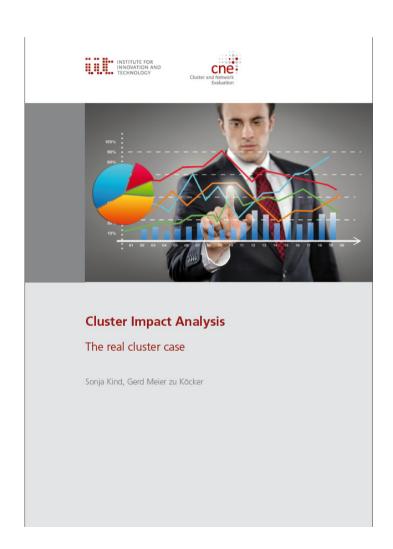
- ...helps to identify strengths and fields of action.
- ...builds the basis for strategic discussion (e.g. range of services).
- ...support legitimisation of activities towards various stakeholders.



Cluster Impact Analysis – Evaluation Report

Full report

Available online





Thank you for your kind attention!



Contact

iit Institute for Innovation and Technology

c/o VDI/VDE Innovation + Technik GmbH

Dr. Sonja Kind

Steinplatz 1 10623 Berlin Germany +49 30 310078-0 sonja.kind@vdivde-it.de kind@iit-berlin.de

www.vdivde-it.de www.iit-berlin.de





Example: Trend Calculation

Exemplary Trend Calculation					Per indicator, a maximum of 100 points	
example indicator XY	number of replies	in %	quantification (points)		e achieved	
has developed rather poorly or insufficiently.	5	18%		0,18*33		
is now given.	18	67%	66%	0,67*66		
is now very good or excellent.	4	15%	100%	0,15*100		
total	27	100%		65		

Evaluation in points between	Conditional formatting	Interpretation
70 and 100	1	very good or excellent effects
60 and 69.9	Ø.	good or very good effects
50 and 59.9	→	effects are given = positive
40 and 49.9	\bigcirc	few effects
0 and 39.9	1	very few or no effects at all

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Indicator Legend

1) Qualification and Innovation

- 1 = Access to qualified personnel within the network
- 2 = Access to qualification offers and trainings for the network's staff
- 3 = Access to technological know-how and technical infrastructure
- 4 = Access to market- and sector-related trends
- 5 = Access to funding and capital (public and private)
- 6 = Influence on standard-setting and standardisation processes

2) Co-operation

- 7 = Intensification of existing and establishment of new contacts to R&D and business partners along the value chain
- B = Intensification of existing and establishment of new contacts to partners from politics and associations, etc.
- 9 = Access to consultants with expertise in other fields (e.g. in areas such as tax, law, human resources, marketing)
- 10 = Improvement of motivation and openness with respect to co-operation

3) Entrepreneurial Performance

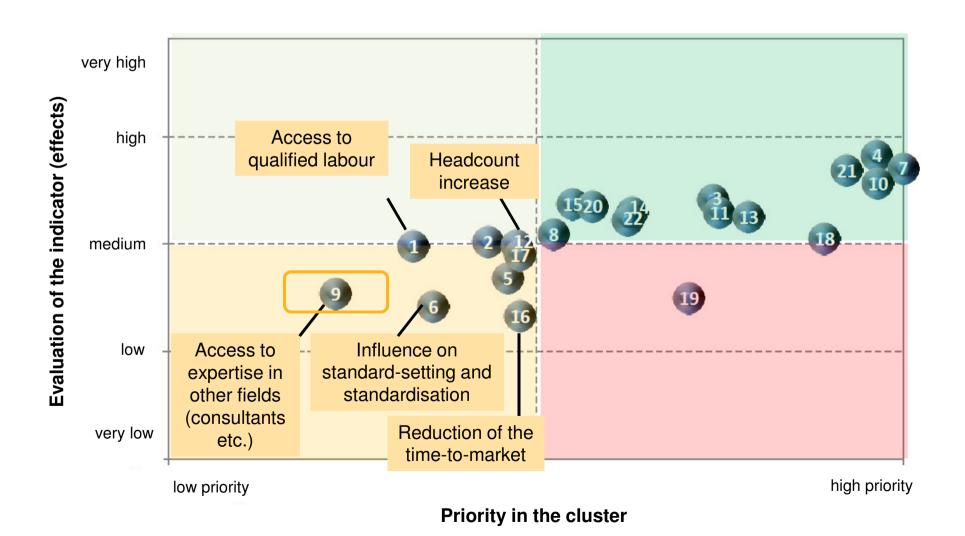
- 11 = Increase in turnover and profits
- 12 = Headcount increase (full-time job equivalent)
- 13 = Number of innovative products, processes and services
- 14 = Quality of products and processes
- 15 = Increase in productivity
- 16 = Reduction of the time-to-market
- 17 = Increase in R&D expenses (innovation intensity: R&D expenses/turnover)
- 18 = New business opportunities
- 19 = Entering new markets (geographically, new products/services)

4) Image and Reputation

- 20 = Improvement of image and reputation of the industry/sector
- 21 = Improvement of image and reputation of the organisation itself and its products
- 22 = Improvement of image and profile-raising of the business location

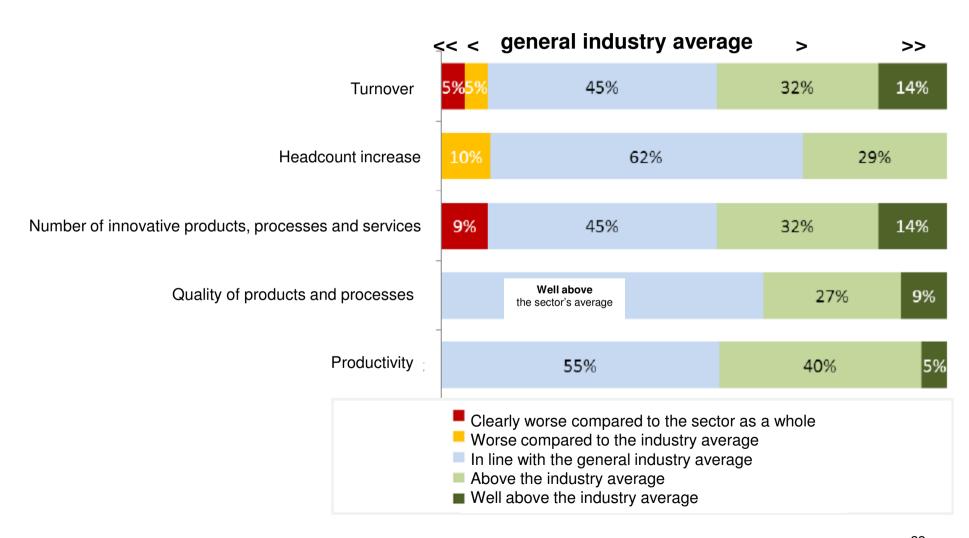


Achieved effects were less apparent in the fields of lower priority. Please pay attention to the transition zone.





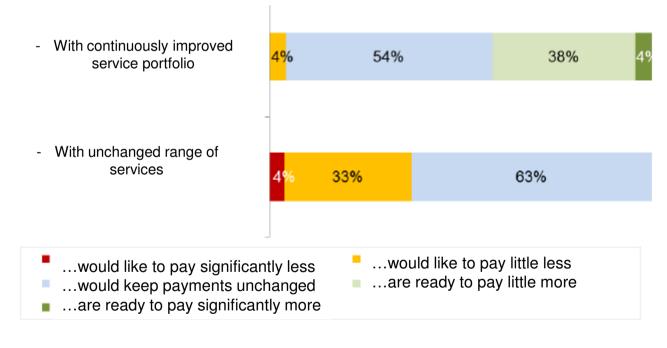
Self-Assessment of the Entrepreneurial Performance Capacity Resulting from an Active Participation in the Cluster Initiative





Companies' Willingness to pay Membership fees as Indicator for Obtained Benefits

Readiness to make a financial contribution in order to support the cluster management organisation

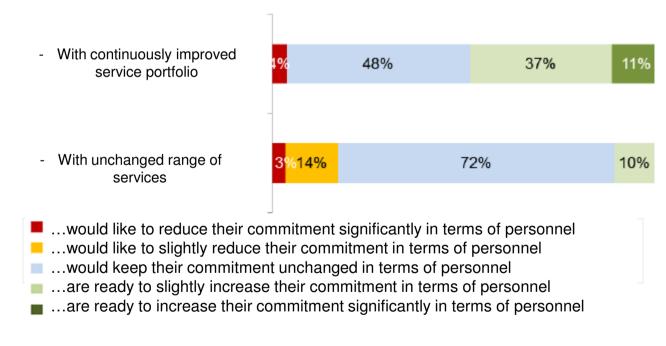


- With an improved service portfolio, nearly 40 % would raise their contributions.
- If the performance continued "as usual", 2/3 would be ready to retain their financial contributions.



Companies' Readiness to show Commitment in Terms of Personnel as Indicator for Obtained Benefits.

Readiness to become actively involved in the cluster work in terms of personnel resources

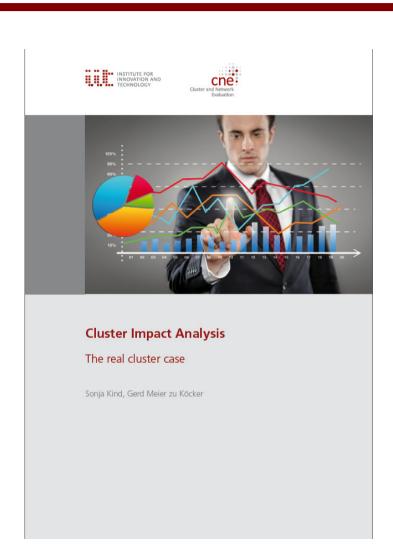


- With an improved service portfolio, nearly half of the enterprises would like to raise their personnel resources for cluster work purposes.
- If the performance continued "as usual", staff commitment would principally remain unchanged.



Cluster Impact Analysis – Evaluation Report

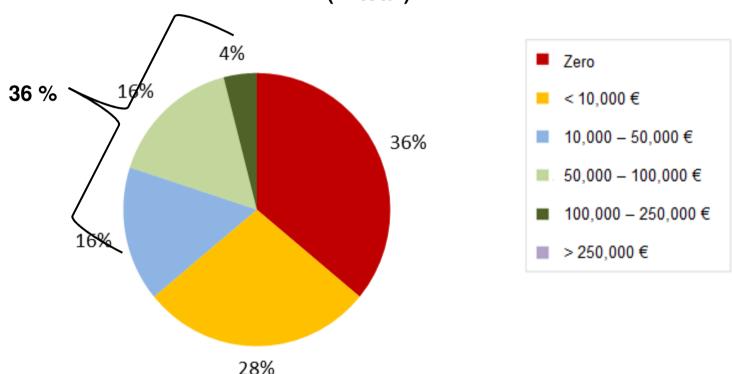
- Clearly presented evaluation report ca. 30 pages
- Visualisations
 Table of trends, matrix, pie/bar charts
- Analysis
 Evaluation of effects and priorities
 Overall monetary benefit for the cluster as a whole
 Commitment and sustainability
- Recommendations for action





Enterprises also Profit Financially When Participating in a Cluster

Monetary benefit resulting from an active participation in cluster initiatives (in total)



The average cluster participant (private/public) has spent EUR 9,200 p. a. for cluster work. On the other hand, enterprises profit financially with an average benefit of approx. EUR 12,600 p. a. This corresponds to a **rate of approx. 1.4**. Companies that show **particular commitment realise a benefit almost twice as high** (EUR 26,000 Euro p. a.).



Companies' Commitment for Cluster Activites

Brief information about your company

The commitment of your company for network activities can be described as...

...low (< 1 day per month*)</p>

Your company makes use of single specific services offered by the cluster management.

There are rarely interactions with the cluster management organisation or other participants of the cluster initiative.

...medium (1 day per month*)

Your company participates in working groups and/or makes use of offers provided by the cluster management. The personnel occasionally interact with the cluster management or other participants of the cluster initiative.

...high (up to 2 days per month*)

Your organisation is actively involved in the cluster initiative and interacts with the cluster management and other participants of the cluster initiative. Your company participates part in relevant activities of the cluster initiative, in the strategic development and implementation processes.

...very high (> 2 days per month*)

Your company is one of the most active players in the cluster initiative, which means that the strategic orientation and contents are significantly shaped by your company. Your company has been playing a very active role in the cluster initiative (for years).

Your company closely interacts with the cluster management organisation and other participants of the cluster initiative.

 Estimated personnel expenses for network activities. 	PLEASE NOTE:	The contribution of human	resources to R&D pr	ojects does explicitly	NOT fall under
this category.					

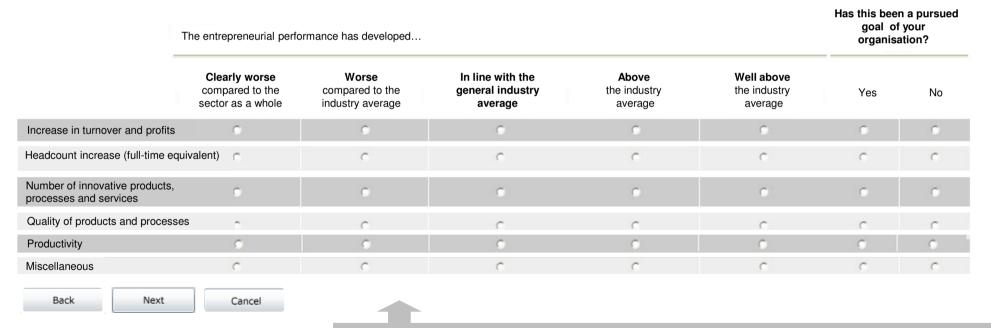




Entrepreneurial Performance

3) Entrepreneurial Performance

How would you evaluate the effects resulting from your participation in the network?



Qualitative evaluation compared to the sector's average as a whole



Monetary Benefits Arising from the Cluster Activities

Summary

Please try to give an estimate about the monetary benefits* your company was able to realise over the last two years thanks to its participation in the cluster initiative:

- C zero
- C < 10,000 €</p>
- 10,000 50,000 €
- © 50,000 100,000 €
- 100,000 − 250,000 €
- 250,000 1 million €
- > 1 million €

^{*} e. g. additional revenues, licensing revenues, cost savings, reduced development time, lower financial risk etc.



As compared to "Intensity of entrepreneurial commitment within the cluster"



Evaluation of the effects and priorities in the cluster at a glance

Example - Extract

Cluster Impact Analysis

Indicator	Evaluation	Priority
Brief Company Information		
Company size		
Year of accession to the cluster	Ø 2008	
Name name		
Commitment and involvement of the company in the cluster initiative	\rightarrow	
1) Qualification and Innovation		
Access to qualified personnel within the network	\rightarrow	33%
Access to qualification offers and trainings for the network's staff	\rightarrow	43%
Adjustment of training offers to changing requirements with regard to education, promotion of young talents or curricula, etc.		
within the network		
Access to technological know-how and technical infrastructure		74%
Access to market- and sector-related trends		69%
Access to funding and capital (public and private)	\bigcirc	46%
Influence on standard-setting and standardisation processes		36%
2) Co-operation		
Intensification of existing and establishment of new contacts to R&D and business partners along the value chain	Î	100%
Intensification of existing and establishment of new contacts to partners from politics and associations, etc.		52%
Access to consultants with expertise in other fields (e. g. in areas such as tax, law, human resources, marketing)		23%
Improvement of motivation and openness with respect to co-operation	Ø	97%



Target Group and Implementation of the Cluster Impact Analysis

- Target group: organisations acting as business entities within a cluster (members)
- Online questionnaire
- Support of the target-group with specific addressing via e-mail Email "cover" letter, FAQ for companies, active link to survey
- Control is exercised by the cluster management organisation emailing, circle of participants, start/end, reminders
- Anonymity is preserved
 No conclusions on the responding companies
- Confidentiality is given
 Cluster Management receives feedback and decides on measures and publication



Sample Question: "Look and Feel"

Back

Next

Cancel

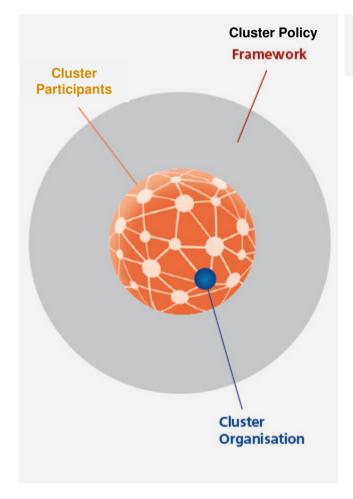
How would you evaluate the effects resulting from your participation in the network? Focus on effects triggered by the participation in the cluster! The access to technological know-how and infrastructure has developed rather poorly or insufficiently Positive effects on the organisation have hardly been achieved or not at all. ... is given, but has not yet led to any noteworthy positive effects. ... is now very good or excellent and contributes positively to various aims. Has this been a pursued goal of your organisation? Yes No Response categories describe tangible results!

• Enhanced comparability.



Evaluation has to distinguish between three different dimensions of cluster policy intervention

Three leves of cluster policy intervention

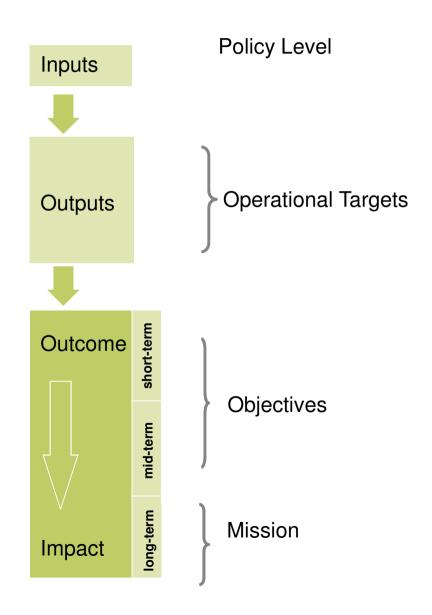


The evaluation system addresses three different "subjects of evaluation"

Source: VDI/VDE-IT 2010



Simple evaluation model to explain the relationship between policy intervention and results



Cluster and Network Evaluation Model

What is invested? Inputs • e.g. personnel, money, time, material, infrastructure **Cluster organisation** What is done and how is it done? · Conducting workshops, meetings (e.g. quantity, participation) **Outputs** Offering services / consulting (e.g. trainings, coaching, dialogues) Public Relation/cooperation with media (e.g. publications, website) **Cluster Participants** What are short and mid-term results? Access to technological know-how Outcome New R&D products Improvement of knowledge/skills Commitment Patents, increase in sales New/improved products/processes mid-term New/intensified cooperation Improved image, access to personnel · Cooperation with organisations from abroad New or safeguarded jobs What are long-term results/impacts? long-term Economy Society Results that lie beyond the target group **Impact** Environment of the policy intervention

Policy Level

Operational Targets

E.g

- Provision of logistic stationary areas
- Implementation of PR measures
- · Qualification of personnel by training
- ...

Objectives

E.g.

- Strengthening cooperation between science and industry
- Support of technology transfer
- · Building of infrastructure
- Settlement of industry and R&D organizations
- Internationalization
- ..

Mission

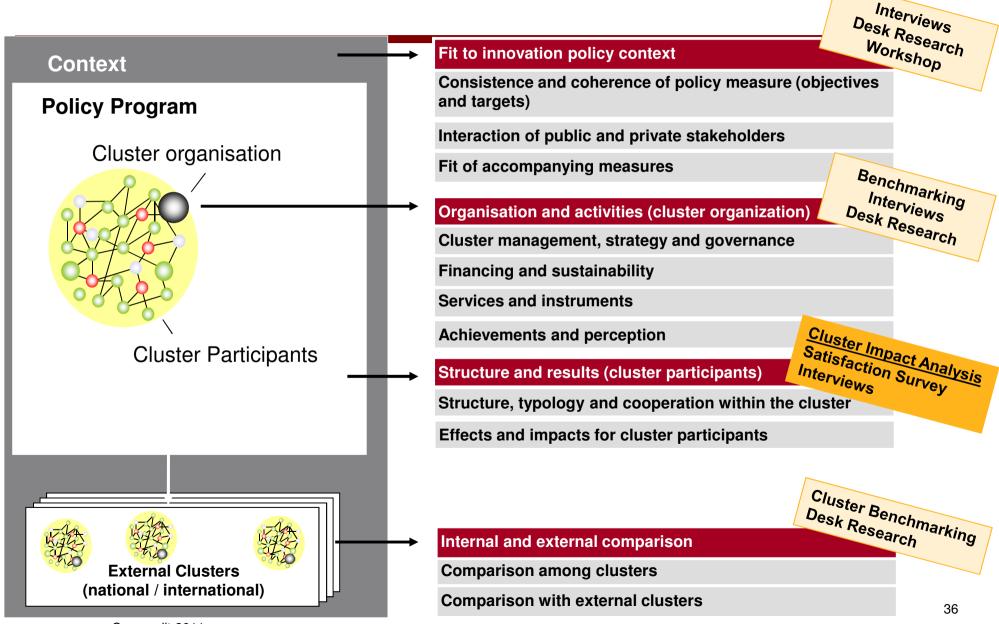
E.g. Strengthening economic growth and prosperity of the region XY

Source: iit 2010

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What kind of indicators to look at?



Source: iit 2011