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INNOVATION + TECHNIK

Evaluation and Benchmarking
Experiences from the German „Kompetenznetze“ - Example

COMPERA Workshop

Oslo - 19.5. 2009

Jan Wessels / iit Berlin

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Agenda

INNOVATION + TECHNIK

- The rise of networks as an instrument of innovation policy
- Why benchmarking?
- What are success factors?
- How measuring succes?
- Some practical examples
- Conclusion

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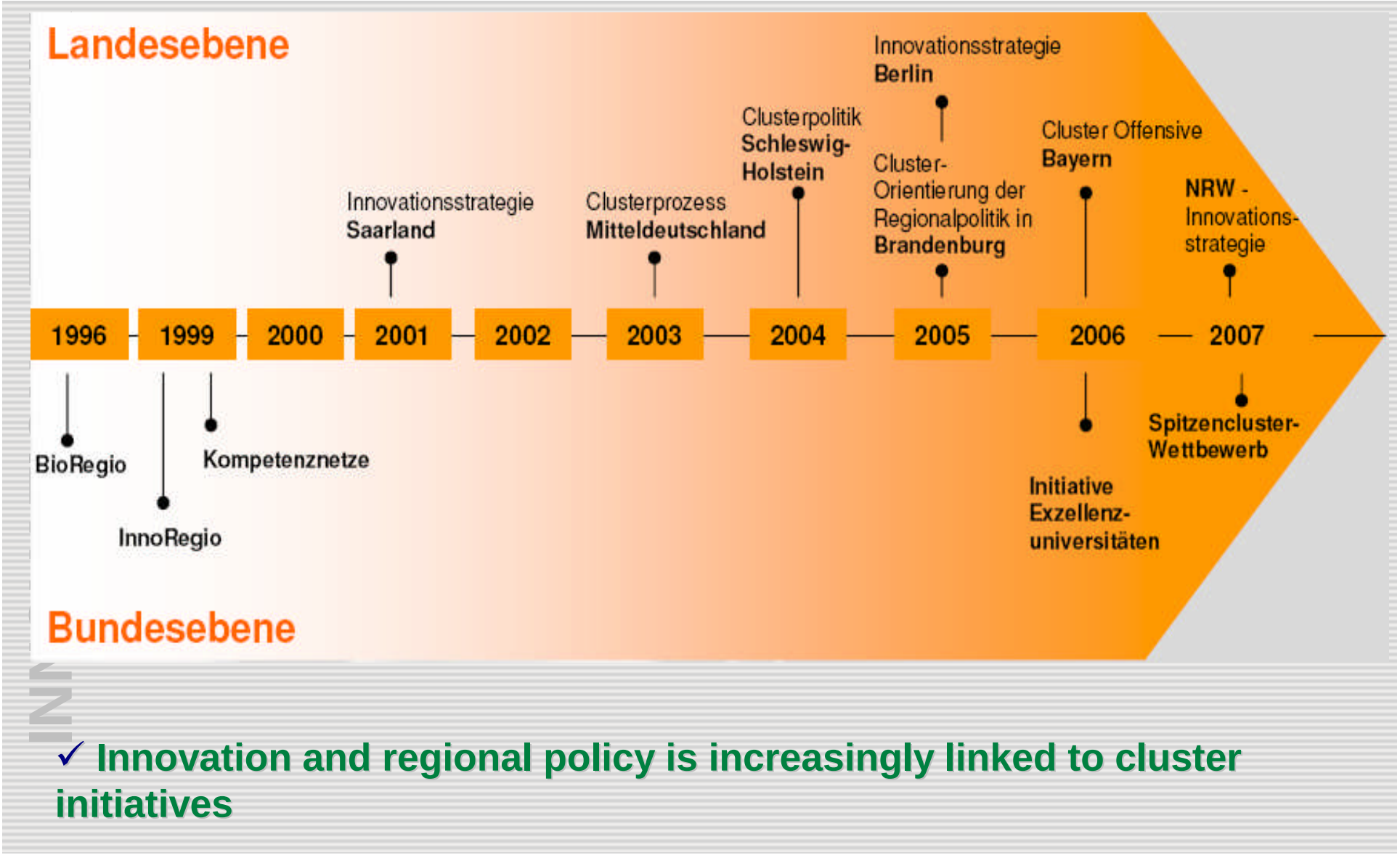
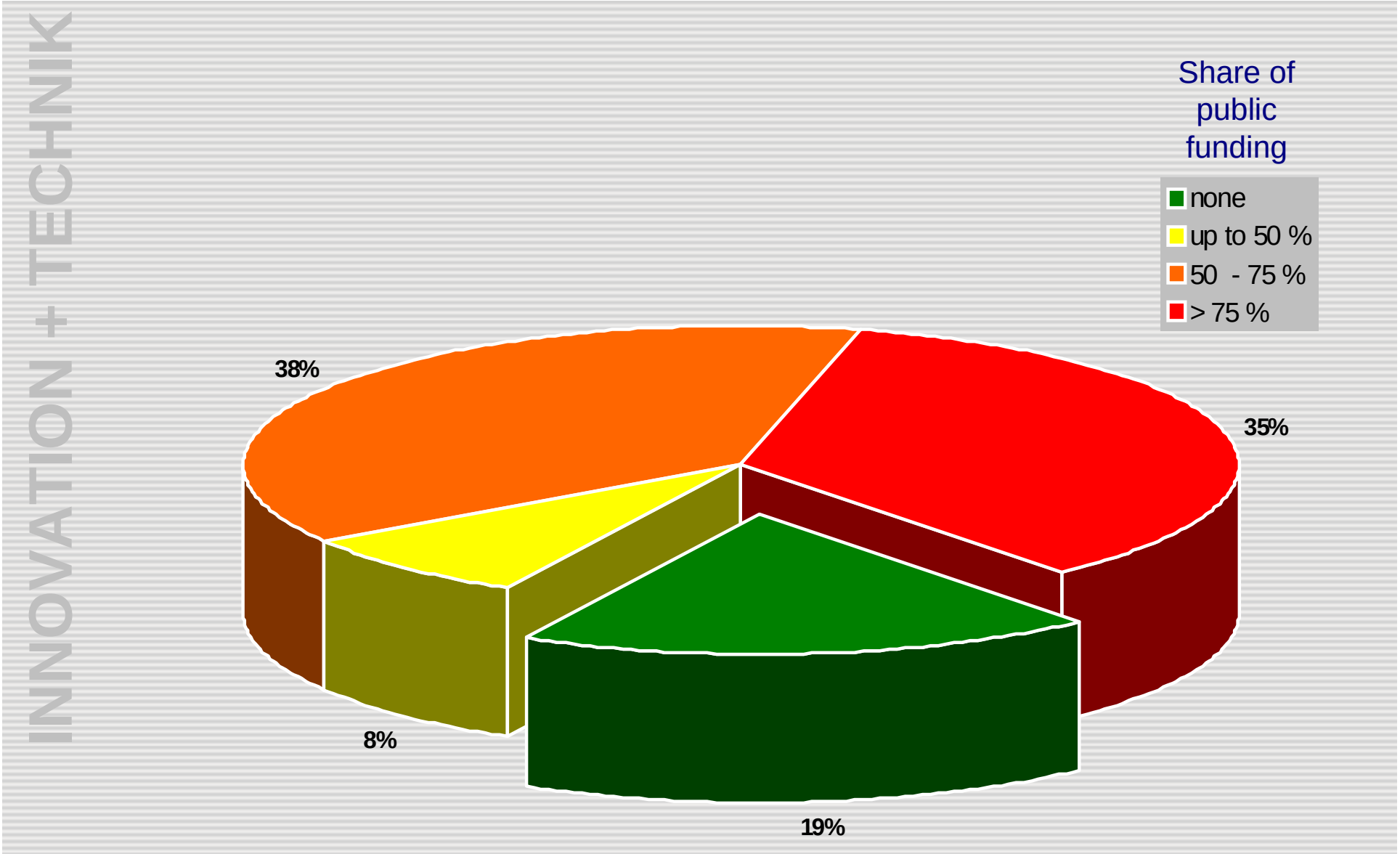
History of German networking initiatives (not all initiatives listed)



✓ **Innovation and regional policy is increasingly linked to cluster initiatives**

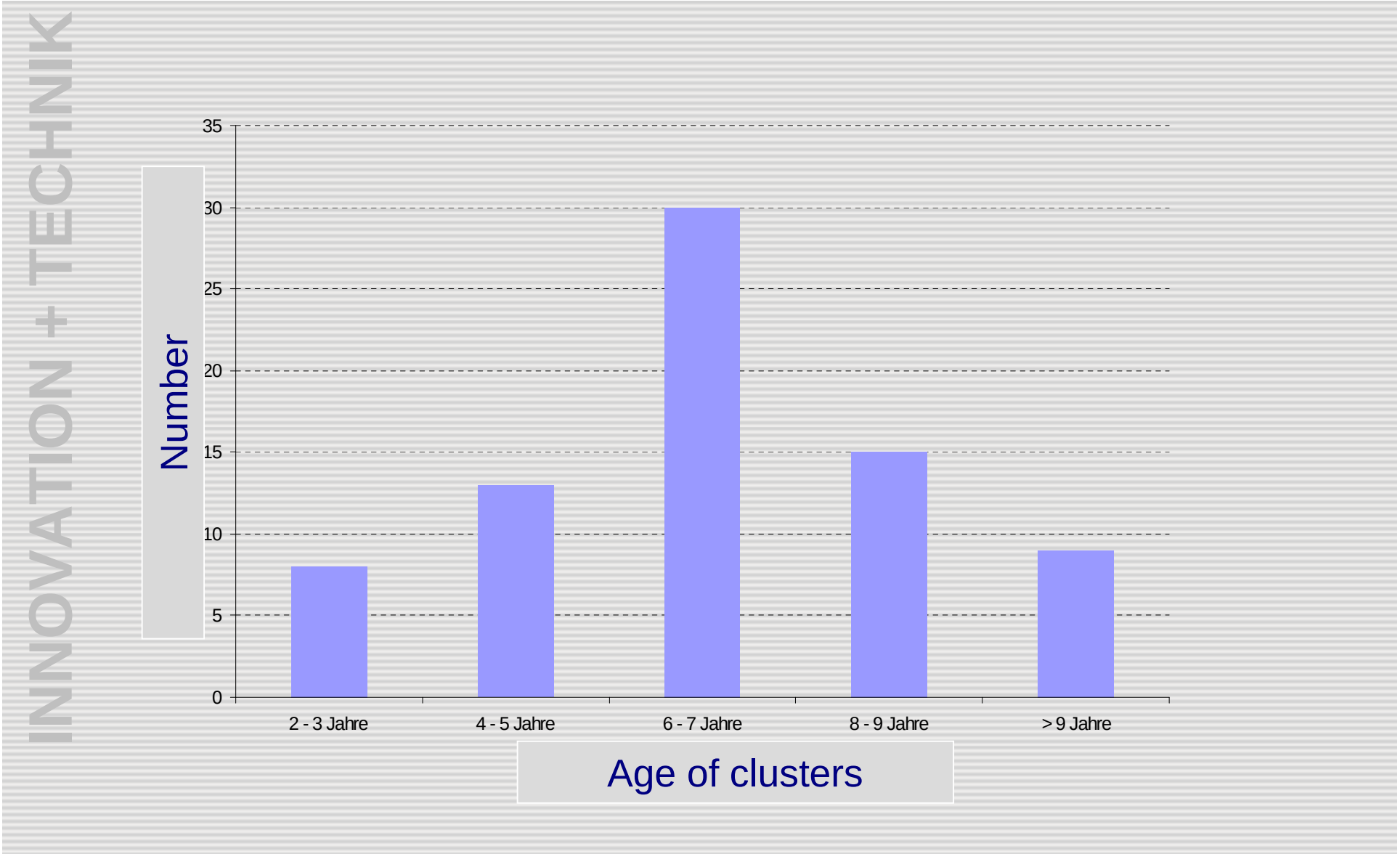
Rationale (I)

Most clusters and networks are still financed by public authorities….



Rationale (II)

…. and they are quite young



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Evaluation of Clusters

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Evaluation of clusters and networks is currently the dominating approach to assess the development, impact or success of a certain cluster / cluster policy

but

- typically connected with high efforts needed by all parties involved
- must be combined with complex impact analysis (incl. reference regions without cluster approaches, etc.)
- so far, only a few real appropriate indicators are available, which can really be measured in practice and are traceable by the cluster operation itself
- gives better results when a cluster has reached a certain age (e.g. at least 5 years)
- results are difficult to use for cluster governance

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How to Measure Cluster Management Performance ?

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Benchmarking of cluster management is able to

- Compare clusters managements with others
  - reveals the current position compared to others / to the best
  - shows specific strengths and weaknesses
  - can stimulate a process of continues improvement
  - motivates to learn from the best
- provide important information about other clusters operating in same fields
- concentrate on practical aspects of cluster management and governance (no abstract or theoretical impact indicators are used)
- provide results which are of high practice for the cluster managers
- provide results satisfying the needs of policy makers (alternative to cluster evaluation)

Application of (quality) indicators to improve cluster performance

→ towards world-class clusters

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Some Success Factors for Sustainable Cluster Management

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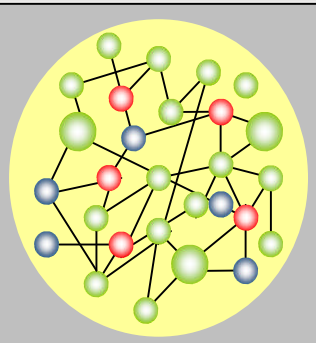
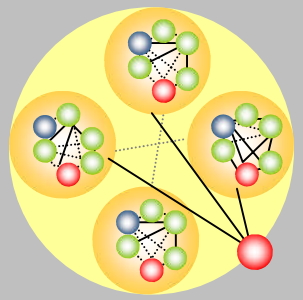
- Cluster emergence
- Sustainable financing
- Cluster management skills
- Spectrum and quality of services provided by the cluster management
- Demand-orientation of services provided by the cluster management
- Visible added-values provided by the cluster management
- Clear targets and milestone of cluster management

Success Factor I: History of Cluster Emergence - Short Characteristics -



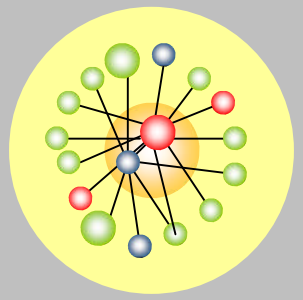
Buttom-up network

- decentralized governance
- cluster manager mostly appointed by and member of the cluster, acting as a kind of service provider
- political influence: low



Top down network, externally initiated

- centralised, externally governed
- network coordinator mostly nominated by the initiator
- political influence: high, mostly initiated by governments on regional or national level or business development agencies

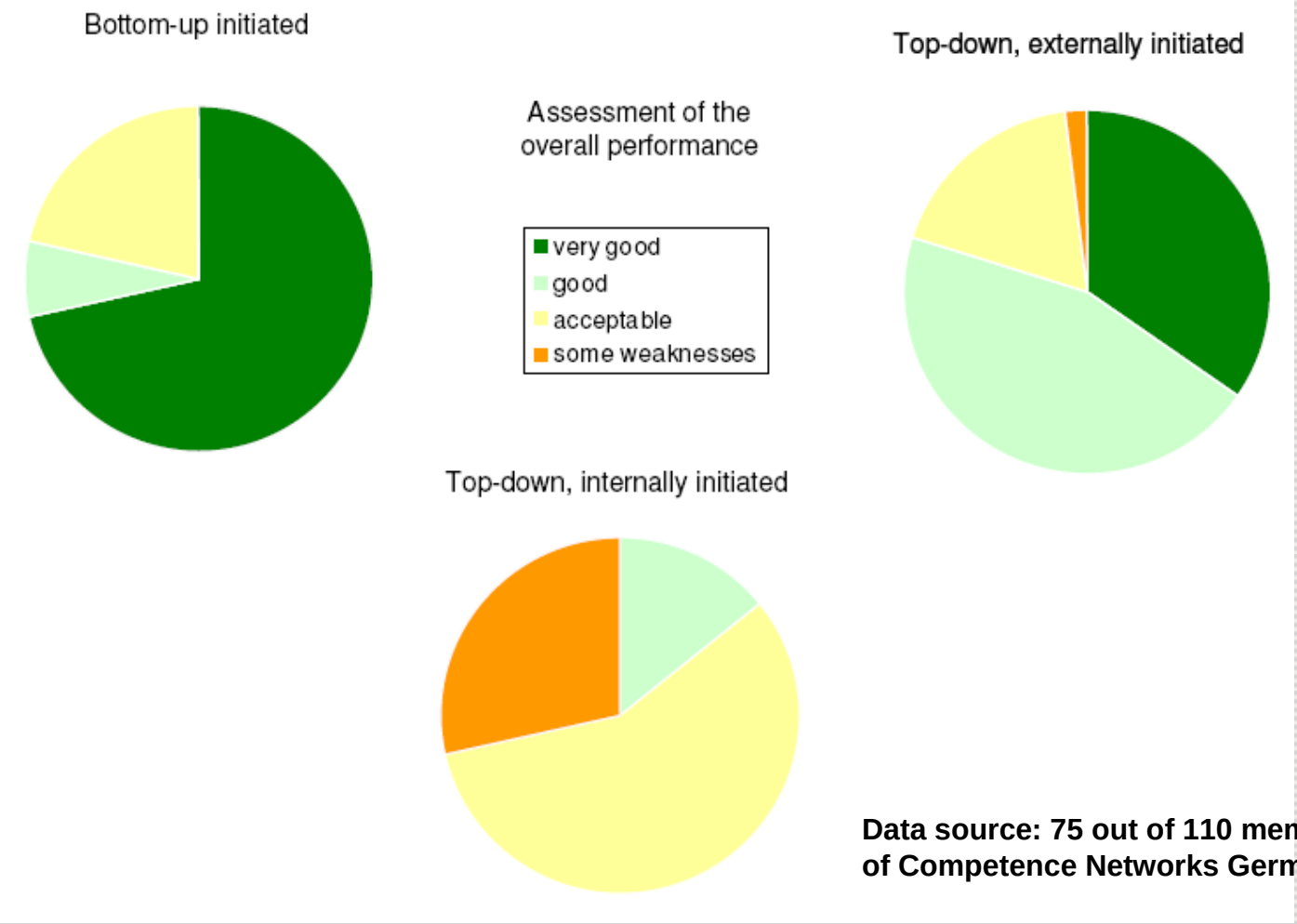


Top down network, internally initiated

- centralised, internally governance
- lead organisation acts mostly as network coordinator, also emerged and dominates the network
- political influence: varying

* According to
Provan, Kenis, (2007), J. of Public Administration Research and Theory

Success Factor I: Cluster Performance According to the Type of Cluster Emergence



Data source: 75 out of 110 member clusters of Competence Networks Germany

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Success Factor II: Financing of Cluster Management

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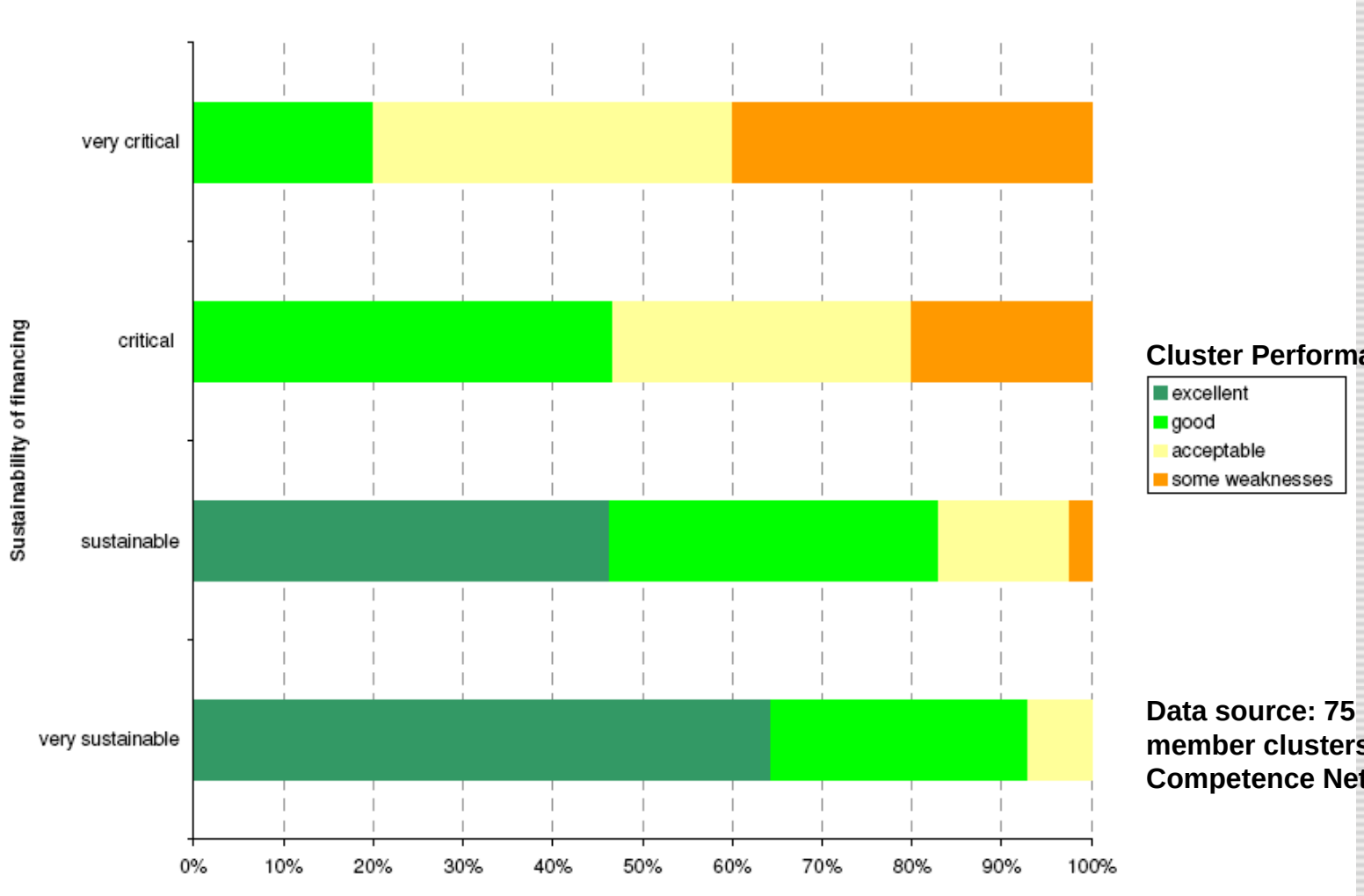

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Success Factor II: Financing of Cluster Management

Data source: 75 out of 110 member clusters of Competence Networks Germany

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Success Factor III: Cluster Manager Skills

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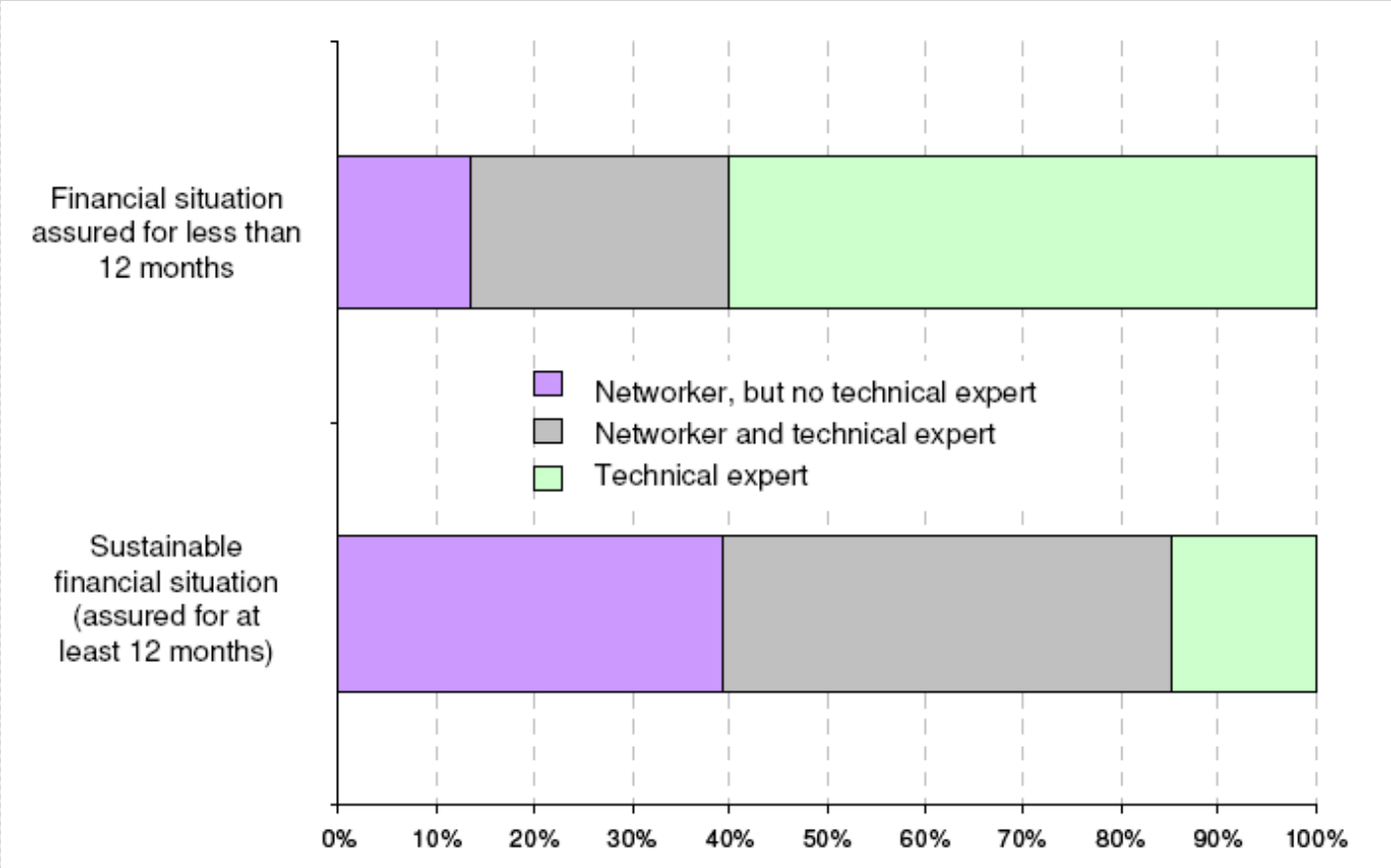

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Indicators Used for Benchmarking Cluster Management

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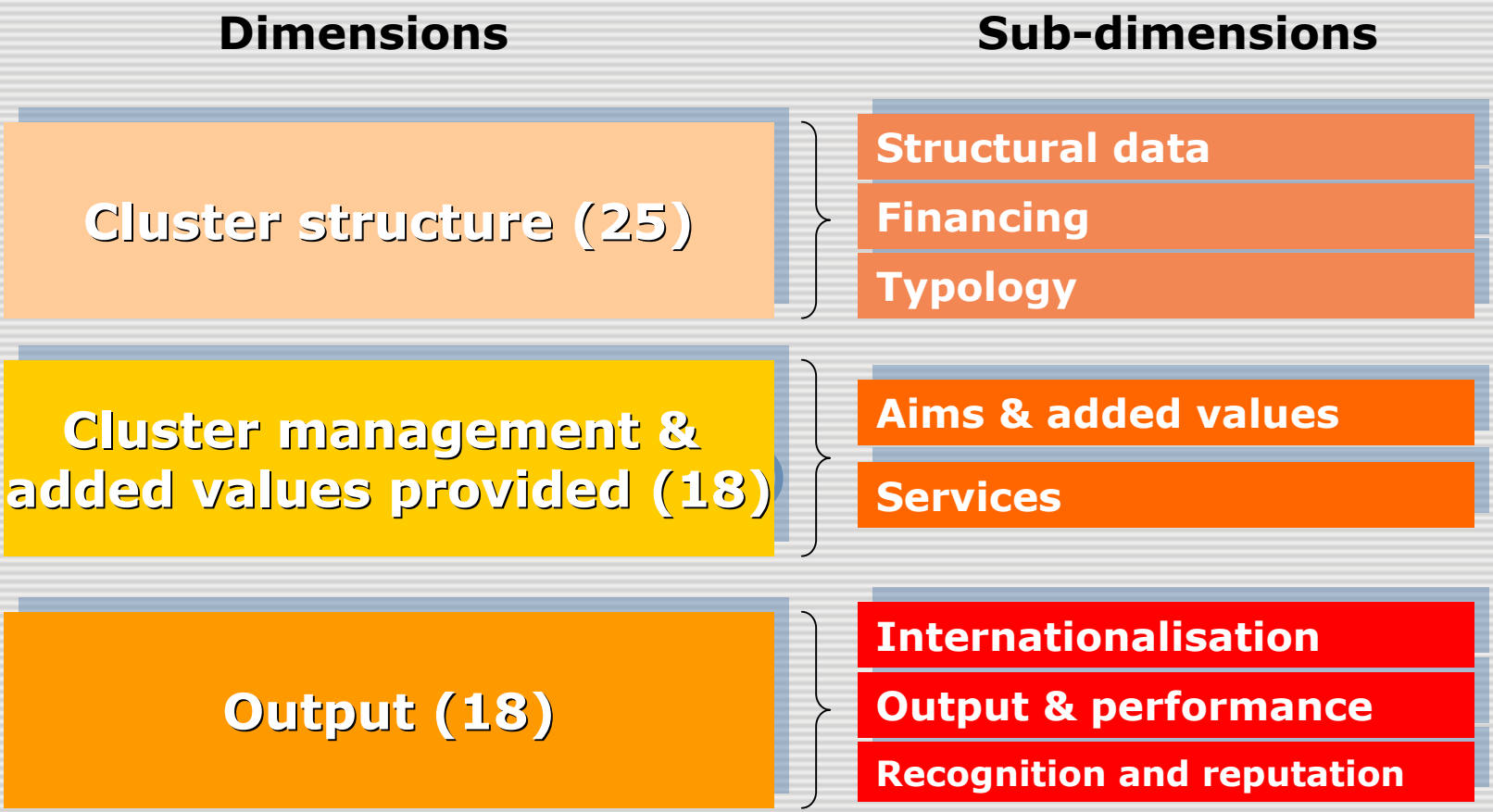

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Survey over Selected Indicators (I)

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Dimension	Sub-dimension	Name of Index (working title)	Direct index	Index calculated by others	Descriptive	Judgemental
Description of cluster	Structural data					
		Age	X		X	
		Number of members when emerged	X		X	
		R&D intensity when emerged		X	X	X
		Number of members in 2007	X		X	
		R&D intensity in 2007		X	X	X
		Dynamik of Growth		X	X	(X)
		Status of internationalization	X		X	
		Legal constitution	X	X	X	X
		Number of agency staff	X		X	
		Experence of cluster manager	X		X	(X)
		SME-concentration	X		X	
		Completion of value chain		X	X	(X)
	Financing					
		Financial sources when emerged	X		X	(X)
		Financial sources in 2007	X		X	(X)
		Share of private financing		X	X	X
		Budget available per member		X	X	(X)
		Sustainability of financing	X		(X)	X
	Typology					
		History of emergence	X		X	
		Category of cluster governance	X		X	
		Typology of cluster	X		X	

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Survey over Selected Indicators (II)

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Dimension	Sub-dimension	Name of Index (working title)	Direct index	Index calculated by others	Descriptive	Judgemental
Cluster governance and added values	**Aims & added values**					
		Aims & added values	X		X	
		Convergance of aims and added values provided		X	(X)	X
	Services					
		Completeness of services related to public relation	X		X	(X)
		Completeness of services related collaborative R&D	X		X	(X)
		Completeness of services related to entrepreneures	X		X	(X)
		Ausprägung Gründung	X		X	(X)
		Intensity of services related to staff recruiting	X		X	(X)
		Efficiency of services		X	(X)	X
Output	**Internationalization**					
		Status of internationalization	X		X	
		Impact of international co-operation	X		X	
	Completition of tasks & output					
		Assessment of how the targets are fulfilled	X		(X)	X
		Reputation in the region	X		X	(X)
		Reputation in the scientific community		X	(X)	X
		Quality of innovation highlights	X			X
		Overall all performance	X		(X)	X

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The Comparative Portfolio

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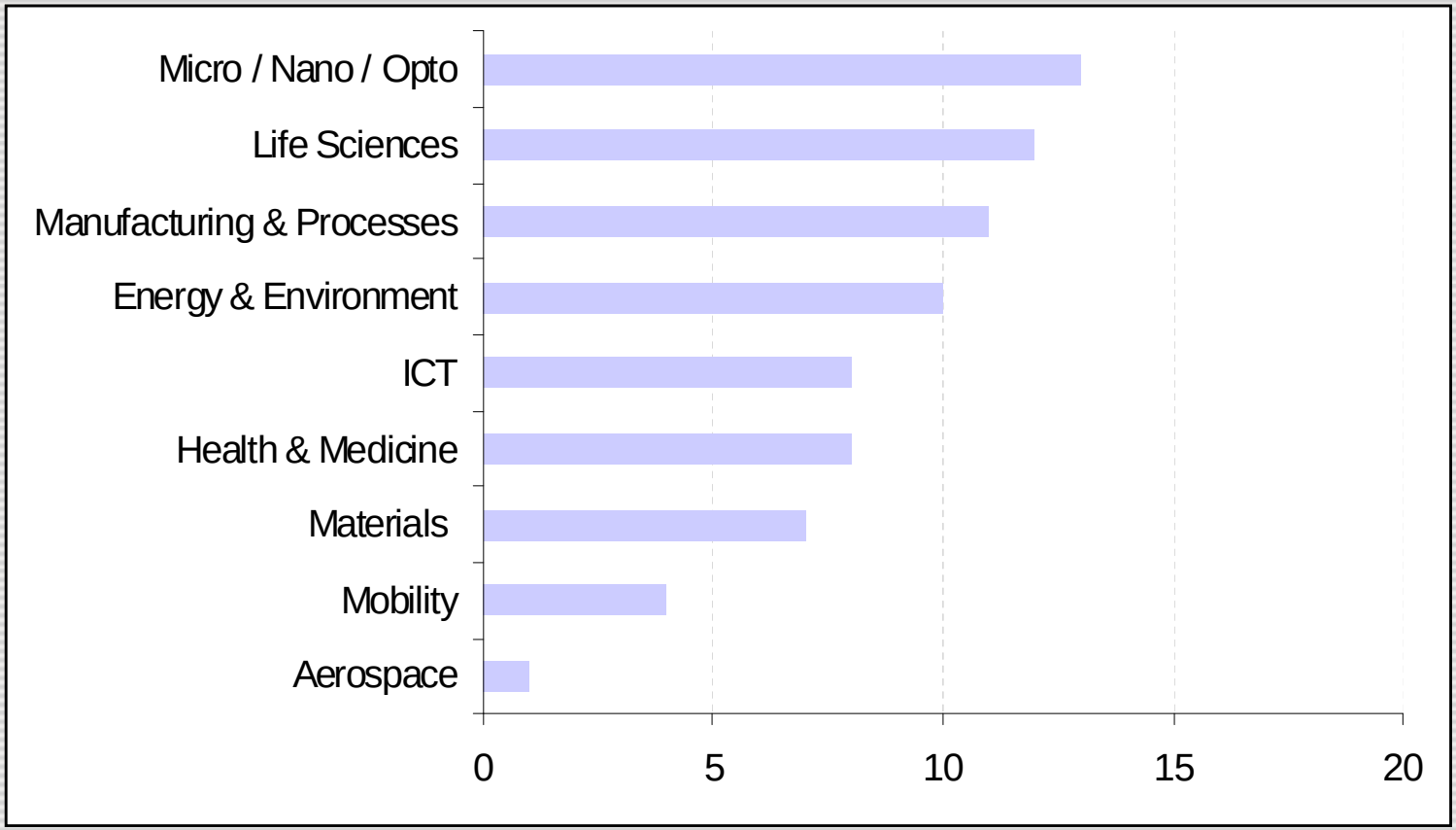

…. is the key success factor for the benchmarking process

more than 100 clusters gathered in the Initiative Competence Networks Germany, fulfil a minimum level of quality

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Framework Conditions of the Benchmarking Process (I)

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1. Data collection
   - ✓ Minimum efforts for clusters involved
   - ✓ Involvement of the cluster members is not needed
2. One-day visit on-site for interviews, discussions and questions with the cluster manager is mandatory (no on-line data collection)
3. Information gained must be transferable into quantitative indices
4. Up to two experts (Benchmarking expert, Technical expert) involved
5. High transparency of the whole procedure, the indicators used and the evaluation of the data collected
6. Ability to regard individual characteristics of the clusters benchmarked

   -> not to compared apples with pears

   -> mostly recommended: to benchmark clusters against those operating in the same technological fields

Framework Conditions of the Benchmarking Process (II)

5. **Reliable indicators are to be used (no speculations, like as bigger as better….)**
6. **Comprehensive summary of the findings (easy visualisation of findings)**
7. **All indices must be structured in such a way that they can be used judgementally or descriptively (according to individual preferences)**
8. **The comparative portfolio must be updated regularly**
9. **Not expensive……**

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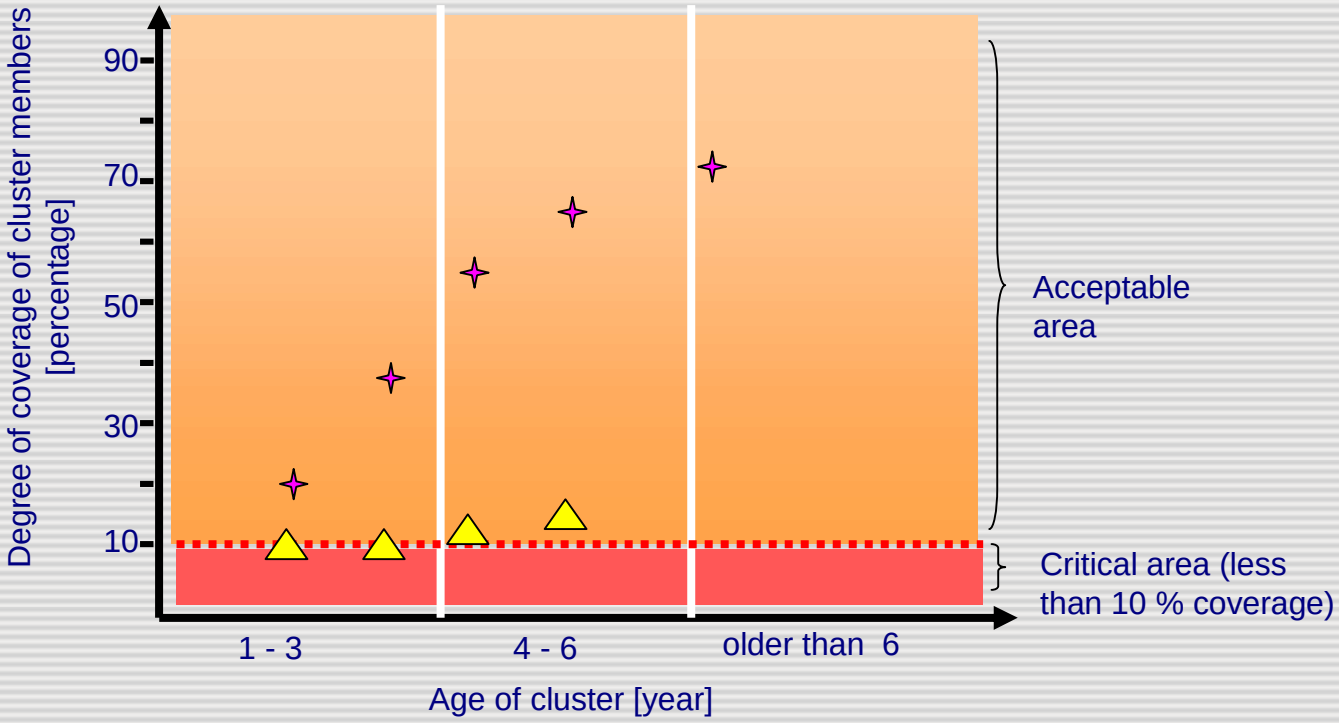
Practical Example (related to Clusters from the Manufacturing Area)

Indicator: Degree of coverage of cluster members (committed members of cluster compared to max. possible number of members within the region)



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Practical Example (related to Clusters from the Manufacturing Area)

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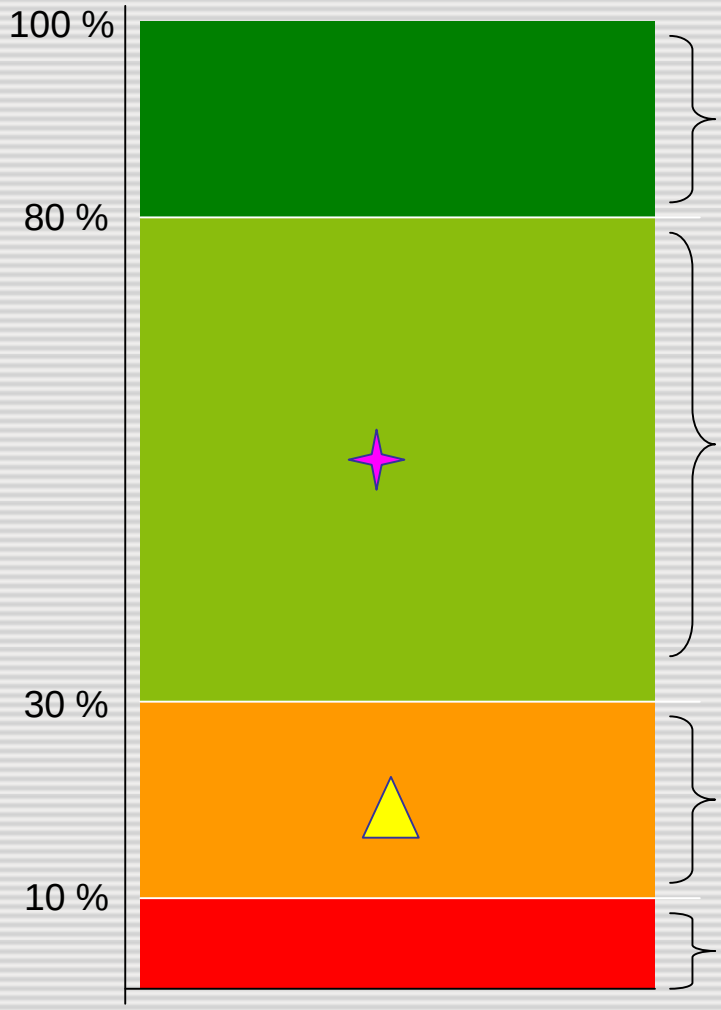


Financing is …

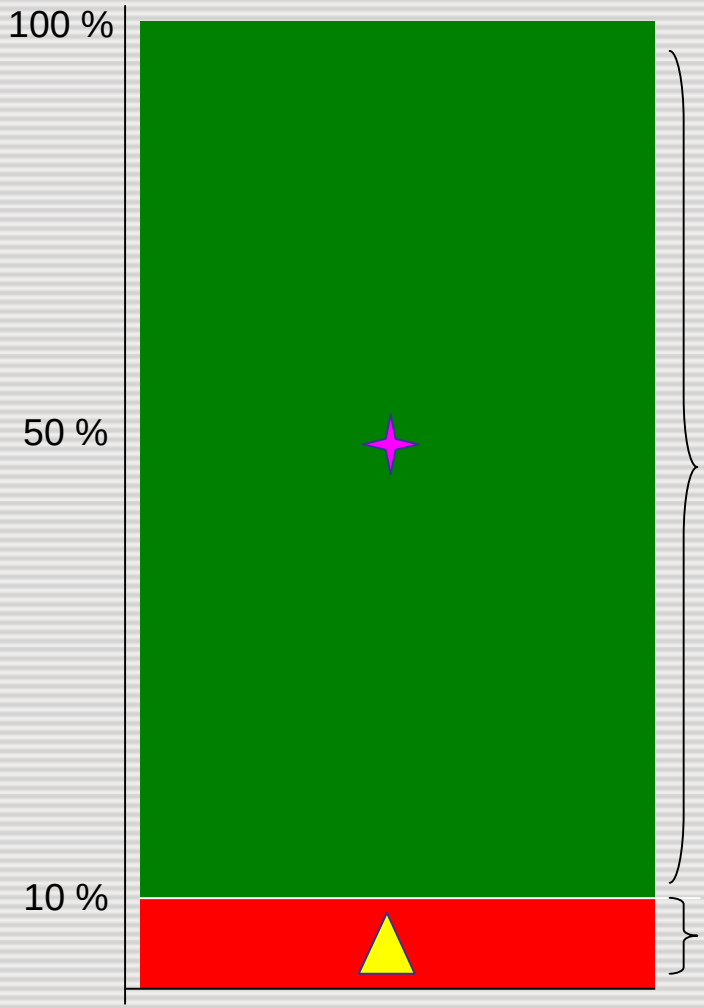
assured for at least two years

assured for one up to two years

assured only on short-term, up to one year

critical, negative impact already visible

Practical Example (related to Clusters from the Manufacturing Area)



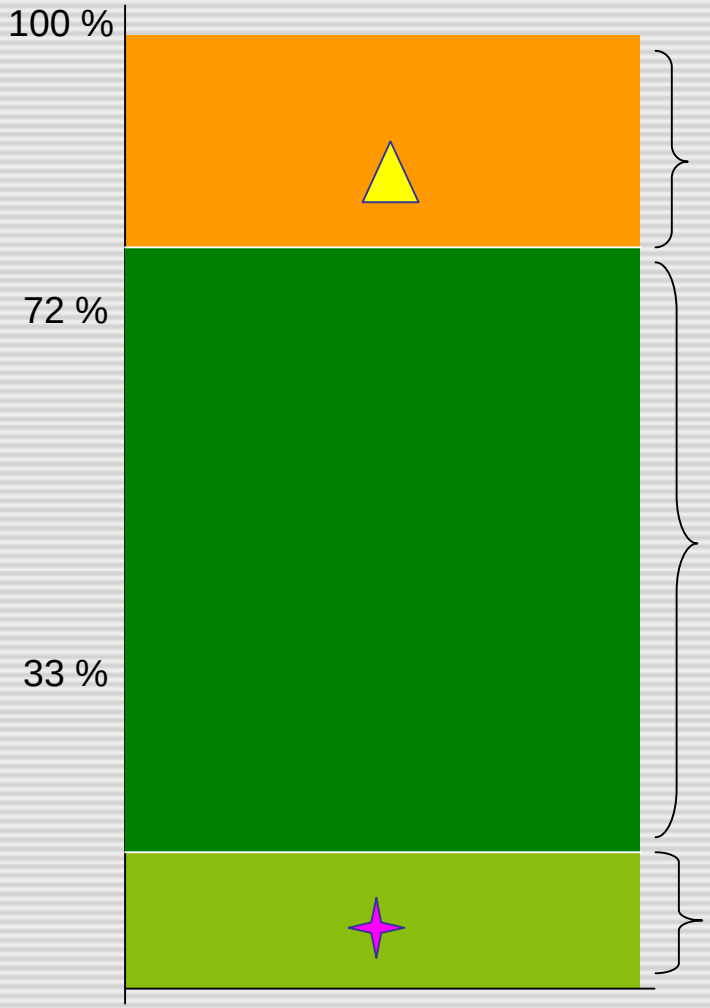
Availability of budget for the cluster management

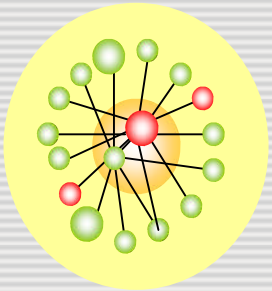
Cluster management has separate budget available

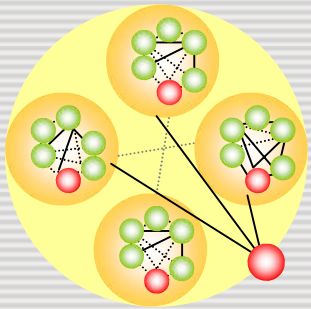
Cluster management doesn‘t have own budget available

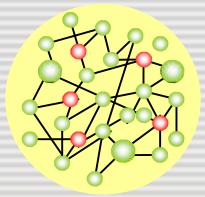
Practical Example (related to Clusters from the Manufacturing Area)

Clusters belonging to the manufacturing area have the following category









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Cluster Profile

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Dimension	Sub-dimension	Name of Index (working title)	Critical area	Below the standard area	Standard frequency area (80 %)	Above the standard area
Description of cluster		Age				
		Number of members when emerged				
		R&D intensity when emerged				
		Number of members in 2007				
		R&D intensity in 2007				
		Dynamic of growth				
		Status of internationalization				
		Legal constitution				
		Number of agancy staff				
		Experience of the cluster manager				
		SME-concentration				
		Completion of value chain				
		Financial sources when emerged				
		Financial sources in 2007				
		Share of private financing				
		Budget available per member				
		Sustainability of financing				
		History of emergence				
		Categoryof cluster governance				
		Typology of cluster				
Cluster governance and added values		Aims & added values				
		Convergance of aims and added values provided				
		Completeness of services related to public relation				
		Completeness of services related collaborative R&D				
		Completeness of services related to entrepreneures				
		Intensity of services related to staff recruiting				
		Efficiency of services				
Output		Status of internationalization				
		Impact of international co-operation				
		Assessment of how the targets are fulfilled				
		Reputation in the region				
		Reputation in the scientific community				
		Quality of innovation highlights				
		Overall all performance				

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Benchmarking of Cluster Management - Summary

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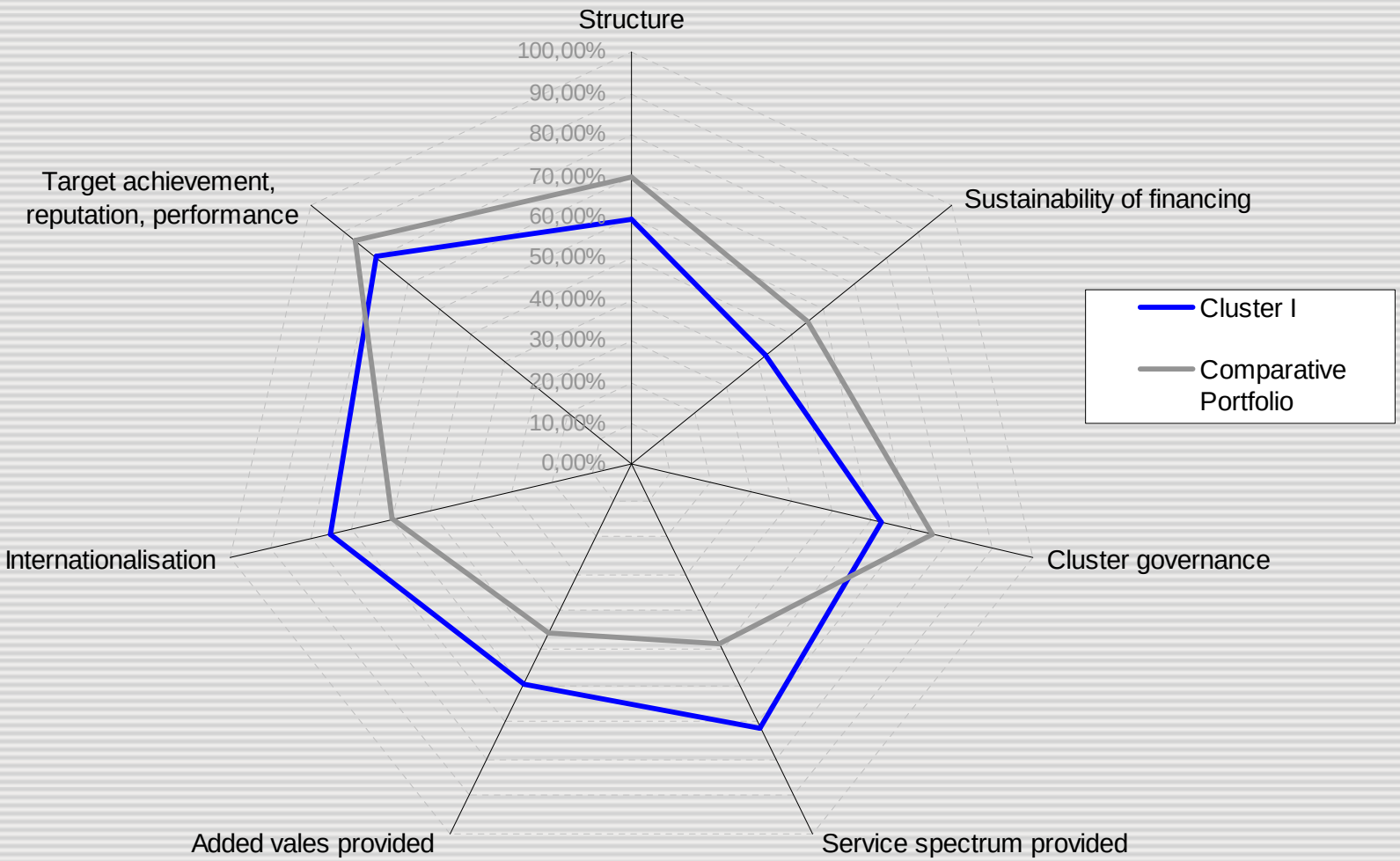

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Conclusions

- Benchmarking is a useful instrument for a comparative analysis
- Benchmarking is user oriented and useful for direct interventions
- Benchmarking is a kind of snapshot and should be repeated regularly
- Benchmarking can be accompanied by other instruments (like member survey) and included in a broader evaluation design