



REGIONAL INNOVATION SYSTEMS AND GOOD PRACTICES

Opportunities for transfer of NanoBioNet experience

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The INOLINK survey

- Between June 2010 and March 2011 the survey was performed in ten European regions
- Data collection was based on document search, existing surveys/databases, INOLINK (internal) partners surveys, stakeholder interviews
- Target group: regional (institutional) stakeholders (about 130)



Expected output and goals

- Identify the actors within the regional innovation system
- Identify good practices existing in the participating regions
- Identify the innovation needs
- Provide information about the SME policy, the research & innovation policy, financial support mechanisms and support programmes for innovative business groupings (target firms, internationalisation policy...).

Economy

Different historical development and economical backgrounds

- Agriculture
- Tourism
- Service Sector
- Coal and steel
- Marine industry
- and others



General regional characteristics

	RIS (2009)	Size/km2	Population	Nr. of students (%)	Population in cities (%)	Innovation Strategy since
West Midlands, UK	med-high	13.000	5.400.000	6,20	35,00	1999
Saarland, DE	med-high	2.569	1.022.585	1,83	16,90	2001
Abruzzo Region, IT	average	10.794	1.340.000	4,50	12,30	1997
Tuscany, IT	med-low	22.994	3.734.365	n.a.	18,90	1994
Algarve, PT	med-low	4.669	434.023	2,23	0,00	2006
Andalusia, ES	med-low	87.399	8.302.923	2,76	31,78	2005
Extremadura, ES	low	41.634	1.102.410	2,09	13,40	1998
North-East Region, BG	low	14.487	988.935	3,30	42,80	2008
North-East Region, RO	low	36.850	3.712.396	2,15	21,94	2005
Podravska Regija, SL	n.a.	2.170	323.343	7,58	34,75	2007

Lack of innovation awareness obstructing regional development

Innovation support is not solely a technological question in terms of funds or infrastructure but depends on the capabilities, openness and skills of the players involved.

The INOLINK study shows that the innovation potential of the individual region cannot be identified and developed until the regional players have reached a common understanding of the essence of innovation.

Innovative sectors I

- Not only high-tech sectors like IT, bio- or nanotechnology are addressed in the survey but as well established sectors like tourism or construction are seen with an innovative potential by the stakeholders
- Only in a few cases more than 75% of the requested stakeholders agreed on their regional innovative sectors.

Regional innovative sectors II

	Abruzzo Region	Algarve	Andalusia	Extremadura	North-East Bulgaria	North-East Romania	Podravje	Saarland	Tuscany	West Midlands
Aeronautics			more than 50 % of stakeholders see innovative strength		more than 50 % of stakeholders see innovative strength					more than 5 % of stakeholders see innovative strength
Agriculture/Forestry/Fisheries		more than 25 % of stakeholders see innovative strength	more than 25 % of stakeholders see innovative strength	more than 25 % of stakeholders see innovative strength	more than 25 % of stakeholders see innovative strength	more than 25 % of stakeholders see innovative strength	more than 5 % of stakeholders see innovative strength			
Automotive	more than 50 % of stakeholders see innovative strength		more than 5 % of stakeholders see innovative strength					more than 75 % of stakeholders see innovative strength		more than 50 % of stakeholders see innovative strength
Chemicals										
Consultancy services							more than 5 % of stakeholders see innovative strength			
Energy	more than 25 % of stakeholders see innovative strength	more than 25 % of stakeholders see innovative strength	more than 50 % of stakeholders see innovative strength	more than 75 % of stakeholders see innovative strength	more than 25 % of stakeholders see innovative strength		more than 25 % of stakeholders see innovative strength	more than 5 % of stakeholders see innovative strength	more than 50 % of stakeholders see innovative strength	
Environmental technologies			more than 5 % of stakeholders see innovative strength		more than 5 % of stakeholders see innovative strength	more than 5 % of stakeholders see innovative strength	more than 25 % of stakeholders see innovative strength			more than 5 % of stakeholders see innovative strength
Fashion	more than 5 % of stakeholders see innovative strength									
Food and beverage / Agrifood	more than 50 % of stakeholders see innovative strength	more than 25 % of stakeholders see innovative strength		more than 25 % of stakeholders see innovative strength		more than 25 % of stakeholders see innovative strength	more than 25 % of stakeholders see innovative strength			
Green Energy			more than 5 % of stakeholders see innovative strength							
ICT/Software		more than 25 % of stakeholders see innovative strength	more than 50 % of stakeholders see innovative strength	more than 25 % of stakeholders see innovative strength	more than 25 % of stakeholders see innovative strength	more than 25 % of stakeholders see innovative strength	more than 25 % of stakeholders see innovative strength	more than 25 % of stakeholders see innovative strength	more than 25 % of stakeholders see innovative strength	more than 25 % of stakeholders see innovative strength
Industrial Production				more than 5 % of stakeholders see innovative strength	more than 5 % of stakeholders see innovative strength					
Marine		more than 25 % of stakeholders see innovative strength			more than 25 % of stakeholders see innovative strength					
Engineering/Construction/Steel	more than 5 % of stakeholders see innovative strength	more than 25 % of stakeholders see innovative strength		more than 25 % of stakeholders see innovative strength	more than 5 % of stakeholders see innovative strength	more than 25 % of stakeholders see innovative strength	more than 5 % of stakeholders see innovative strength	more than 25 % of stakeholders see innovative strength	more than 25 % of stakeholders see innovative strength	
Medical/Health				more than 25 % of stakeholders see innovative strength			more than 25 % of stakeholders see innovative strength	more than 25 % of stakeholders see innovative strength		more than 5 % of stakeholders see innovative strength
New Materials/Nanotechnology	more than 5 % of stakeholders see innovative strength			more than 5 % of stakeholders see innovative strength			more than 5 % of stakeholders see innovative strength	more than 25 % of stakeholders see innovative strength		more than 5 % of stakeholders see innovative strength
Pharmaceutical/Biotechnology	more than 25 % of stakeholders see innovative strength	more than 5 % of stakeholders see innovative strength	more than 50 % of stakeholders see innovative strength	more than 5 % of stakeholders see innovative strength			more than 5 % of stakeholders see innovative strength	more than 5 % of stakeholders see innovative strength	more than 25 % of stakeholders see innovative strength	more than 25 % of stakeholders see innovative strength
Telecommunication	more than 5 % of stakeholders see innovative strength									
Textile Industry						more than 5 % of stakeholders see innovative strength			more than 25 % of stakeholders see innovative strength	
Tourism	more than 50 % of stakeholders see innovative strength	more than 75 % of stakeholders see innovative strength	more than 25 % of stakeholders see innovative strength	more than 25 % of stakeholders see innovative strength	more than 75 % of stakeholders see innovative strength	more than 25 % of stakeholders see innovative strength	more than 25 % of stakeholders see innovative strength			
Transport/Logistik	more than 5 % of stakeholders see innovative strength				more than 25 % of stakeholders see innovative strength			more than 5 % of stakeholders see innovative strength		more than 5 % of stakeholders see innovative strength
Wholesale and retail trade		more than 25 % of stakeholders see innovative strength				more than 25 % of stakeholders see innovative strength				



Critical factor evaluation

The variety of answers, the low maximum amount of total counts per measure and sometimes very individual answers like “appearance in press, public perception” showed that the evaluation, definition and perception of innovation seems to be open to many subjective, individual estimations.

Together with the fact that some data like the spin-off activities in innovative or developing sectors were not traceable in all regions it seems obvious that further effort has to be taken to deliver reliable data for the policy makers.

Direct innovation support measures

Parameters or methods	Total %
Promoting closer interaction between universities, public research institutes and companies	70.5
Direct support of corporate R&D (grants, loans)	47.5
Business advisory services (general consultancy and support in developing business)	43.4
Promotion of entrepreneurship/start up (including incubators)	43.4
Incentives for investment in corporate R&D	34.4
Internationalisation	26.2
Feasibility funds	23.8
Funds for networking	17.2
Information and consultation on grants and funds	17.2
Information and consultation on technology transfer	15.6
Exchange of information on contract research, licences, IPR issues	15.6
Mediation of relevant partners or research institutes	13.9
Cluster support measures	13.9

Saarland: Results and Experiences

**GERMANY'S
SAARLAND**



Area: **2.568 km²**
 Population: **1.022.500**
 Unemployment rate: **8.0%**
 Employees: **450.000**
 Agriculture: **1%**
 Industry: **33%**
 Service: **43%**
 Trade & Transport: **24%**
 Borders with France and Luxembourg
 Nationality changed 8 times during the last 200 years!

Challenges in the Saarland

The European Regional Innovation Scoreboard (RIS) classifies the Saarland's innovation performance in 2004 and 2006 as medium-high and concerning the enablers (tertiary education, life-long learning, public R&D, broadband) as average.

Other studies reveal a low R&D rate of employment and of turnover in research and development or identify the areas of public finances and demography as Saarland's real weaknesses.

On the other hand it is pointed out that the Saarland "shows how it is possible to approach a structural transformation through a shrewd innovation policy and the favourable tailwind of global economic activity" or foster the Saarland as Entrepreneur-friendly: "between 2000 and 2008 there were 40% more company start-ups than closures in this region. The ratio nationwide is 27%."

Structural Change and Innovation Strategy

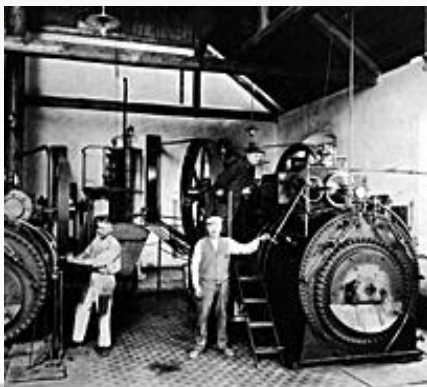


agriculture and industry

coal mining and steel industry

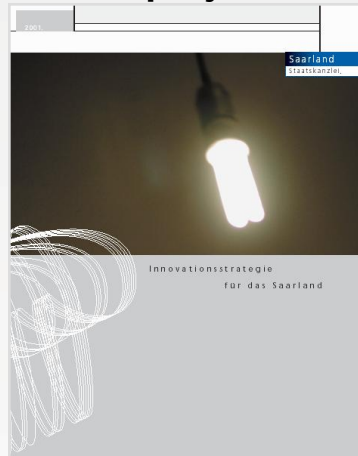
automotive and services

ICT and Nano-/ biotechnology



Innovation roadmap

Innovation Strategy 1.0
 > 85 projects



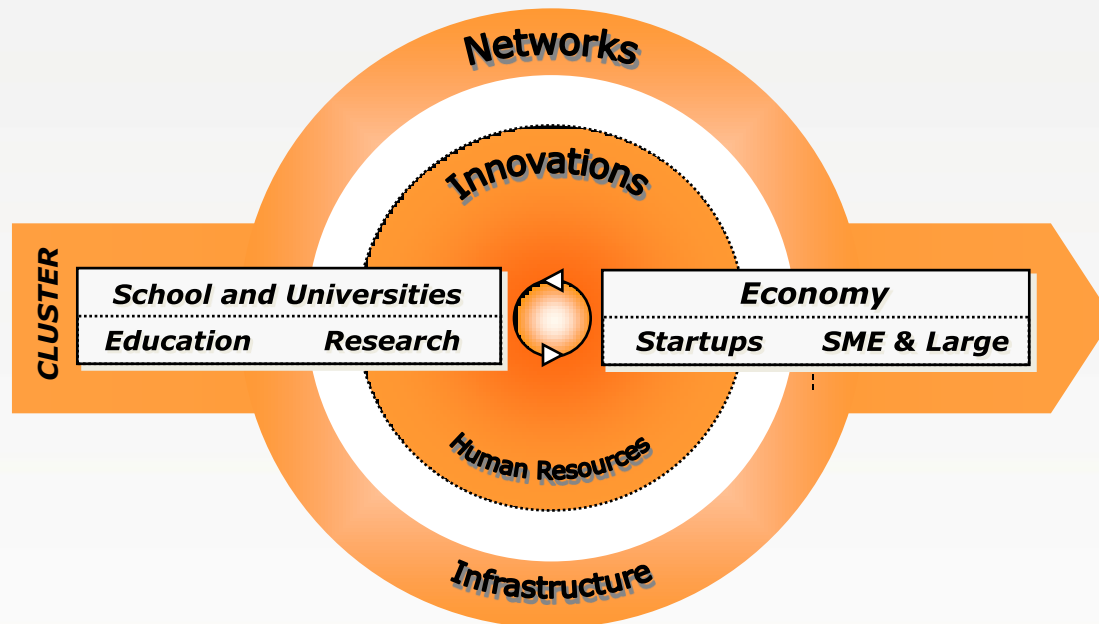
Interim Balance Sheet



Innovation Strategy up to 2015
 > 110 projects



Innovation Strategy since 2000



Formation of Innovation Clusters

- it.saarland
- nanobio.saarland
- automotive.saarland
- logistics.saarland
- healthcare.saarland

A good innovation policy integrates economic, science and education policy

The NanoBioNet Cluster

- ...is a network of universities, research institutes, clinics, companies and further experts from the fields of technology transfer, business and financing with about 120 members .
- Funded in 2002 with support of the Saarland government, the German Federal Ministry of Education and Research and European funds.
- 2010 Fusion of NanoBioNet and the competence centre cc-NanoChem.
- 2011 Founding of the German Nanotechnology Association: Deutscher Verband Nanotechnologie

deutscher
verband
nanotechnologie

NanoBioNet

Non-profit association

Main office: 4-6 employees

Chemist, 2 Biologists, PR- Professional, 2 part- time assistances

Board of Directors: 5

Scientific advisory board: 12

Turnover 2009: 750.000 €

Funding:

Project funding by Saarland State, the EC and Germany

Member fees (250 € per year for companies)

Income (Training, NanoSchoolBox, PR-work)

Services

- Financial support for feasibility studies and development
- Professional technology scouting
- Help with submitting applications and handling application procedures
- Developing advanced training modules in the field of nanotechnology
- Market leader experimental school kit: NanoSchoolBox
- PR and Marketing
- Organization conferences and workshops
 - International conference on nanomedicine: NanoMed, Berlin
 - Conference on nano and ethics: SIZE MATTERS



Feasibility Funds

- 50% co-funded, max. 25.000€
 - Nominated for the NGP Cluster Excellence Award
 - 26 (meanwhile 30) studies funded with 650.000 €
-
- 12.5% have already resulted in a marketable products
 - 18.75% resulted in patents
 - 37.5% of the studies generated follow-up projects

Good Practice: Cluster

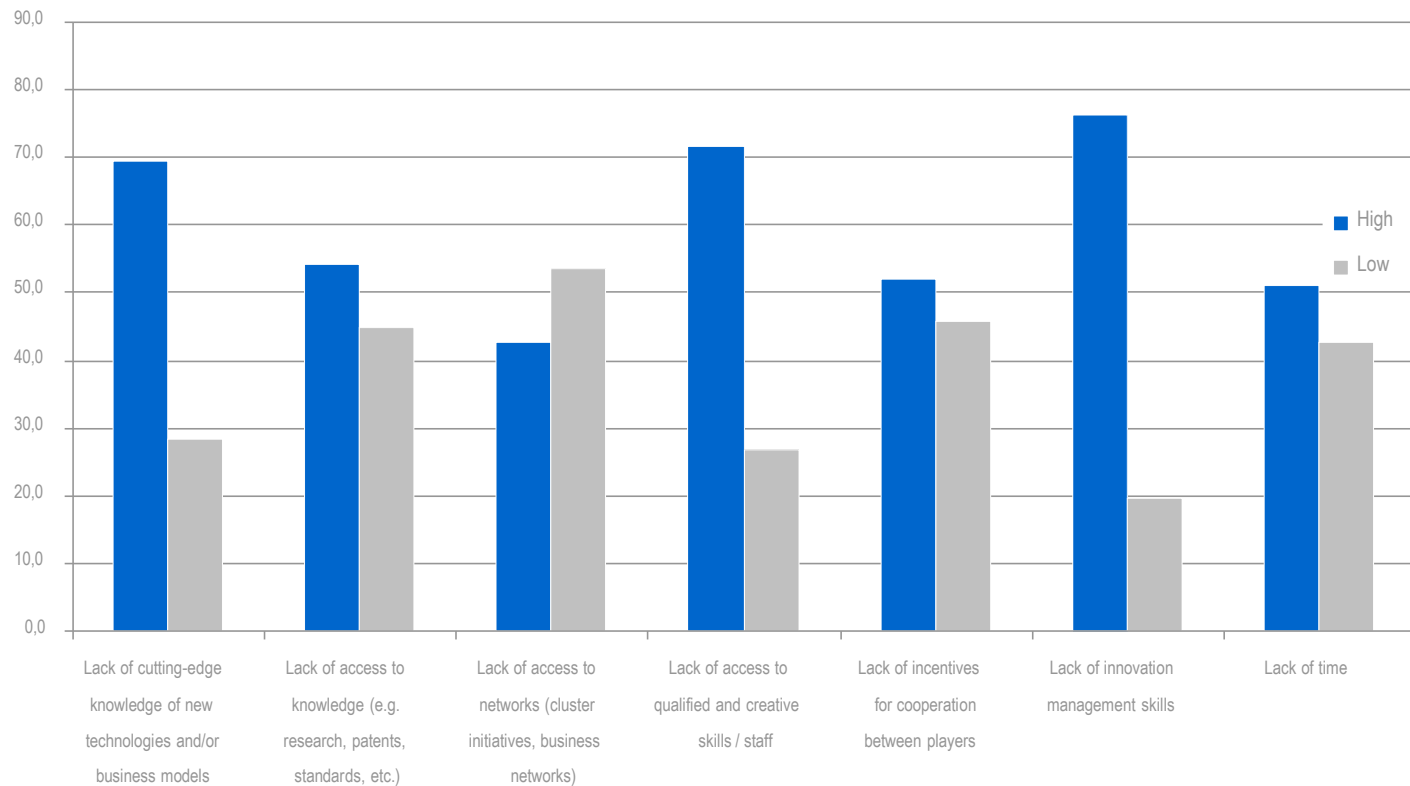
The question “How could innovation support services be provided more effectively” was answered by the majority “by introducing fast track procedures for administration and evaluation of projects” and by offering more integrated innovation support services (e.g. one-stop-shop approach).

With the offer of the externally managed feasibility studies the Saarland is already on the right path^.

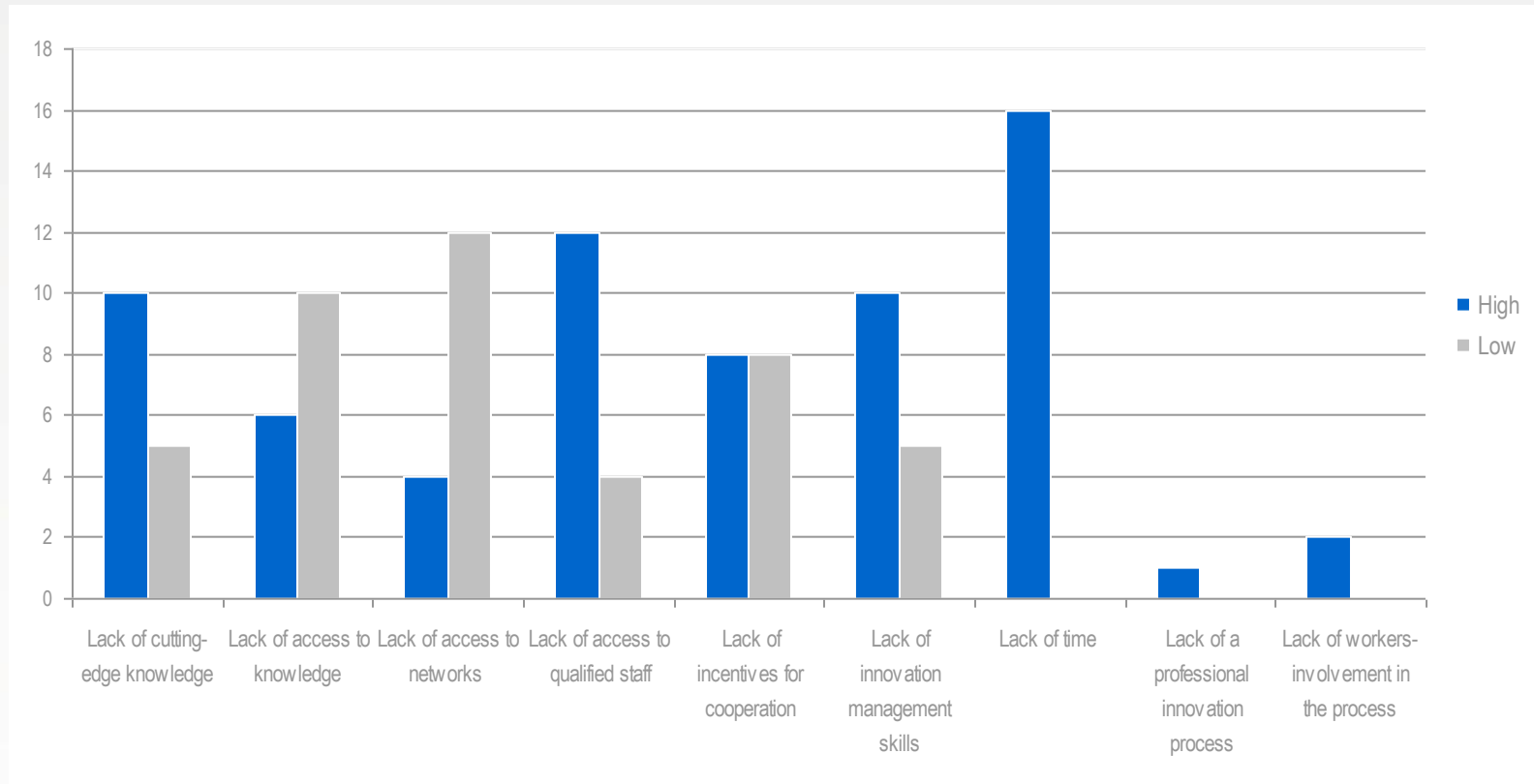
The very good interaction and cross-linking between the regional stakeholders enables the exchange of experiences and the communication flow.

Therefore it is not surprising the “lack of access to networks” is no issue for the interrogated stakeholders.

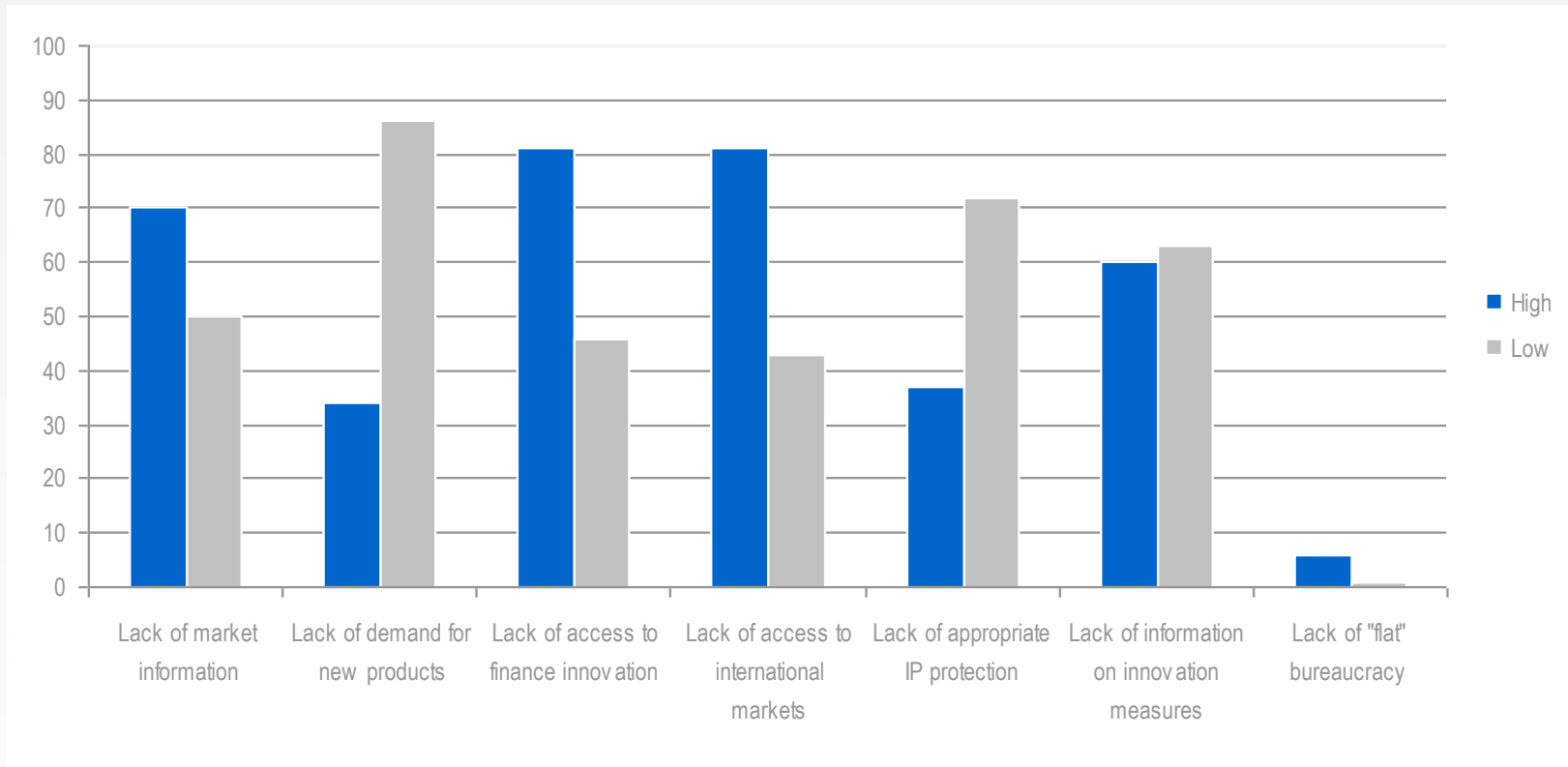
Relevance of barriers preventing companies from organizing innovation processes more effectively (All regions)



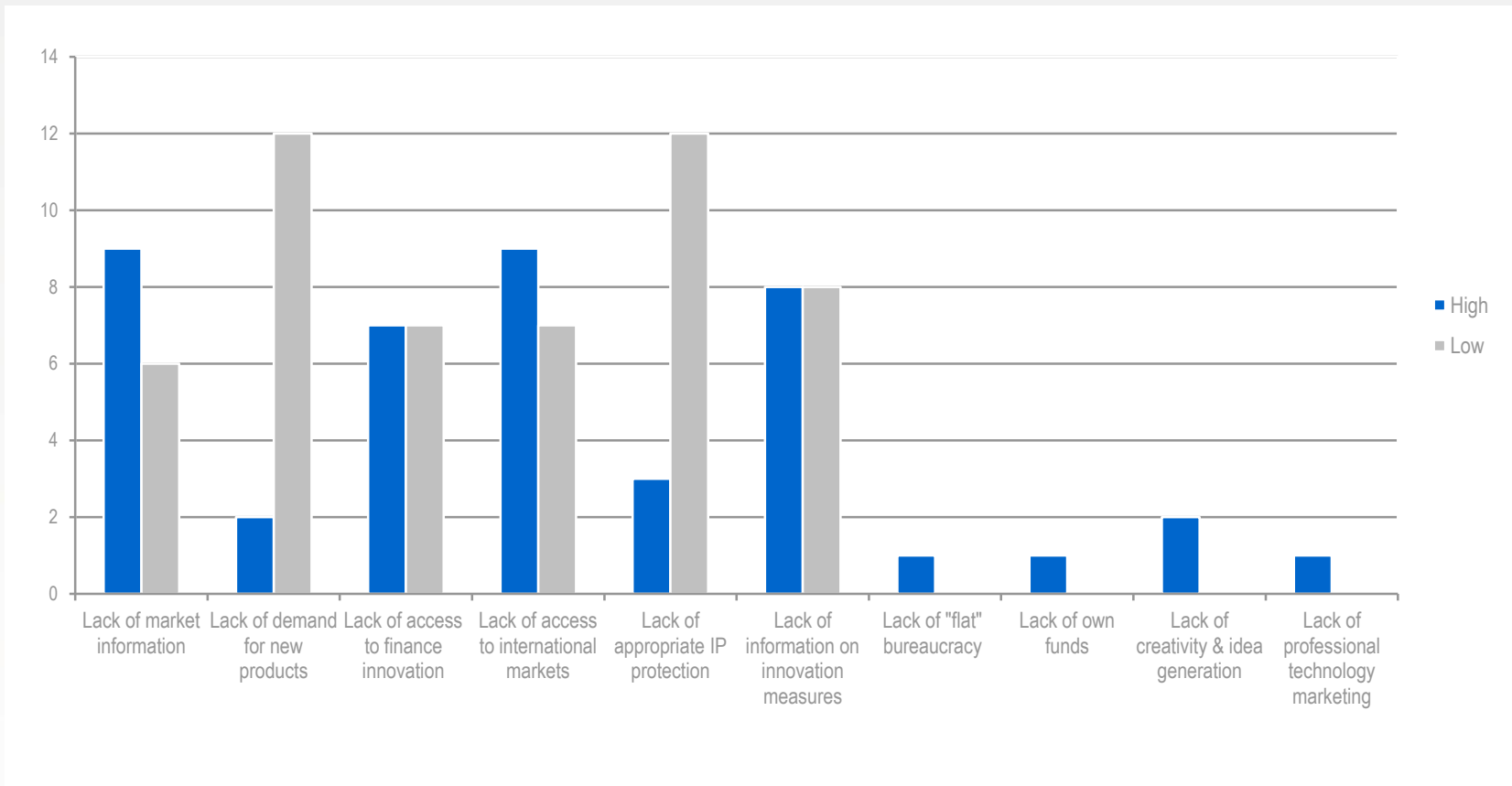
Relevance of barriers preventing companies from organizing innovation processes more effectively (Saarland)




Relevance of barriers preventing companies from introducing innovations onto the market (all regions)



Relevance of barriers preventing companies from introducing innovations onto the market (Saarland)





Good Practice : KWT



Kontaktstelle für Wissens- und Technologietransfer
der Universität des Saarlandes

Knowledge and Technology Transfer

Saarland University



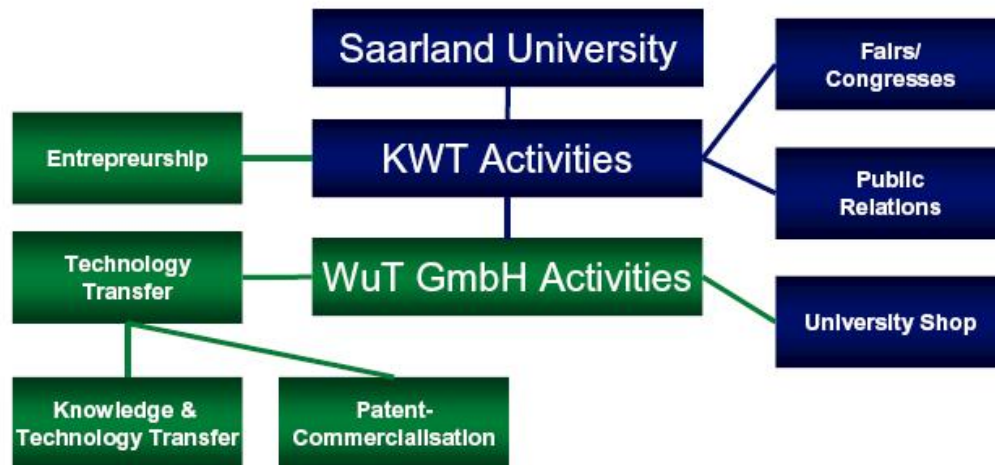
IPR Services



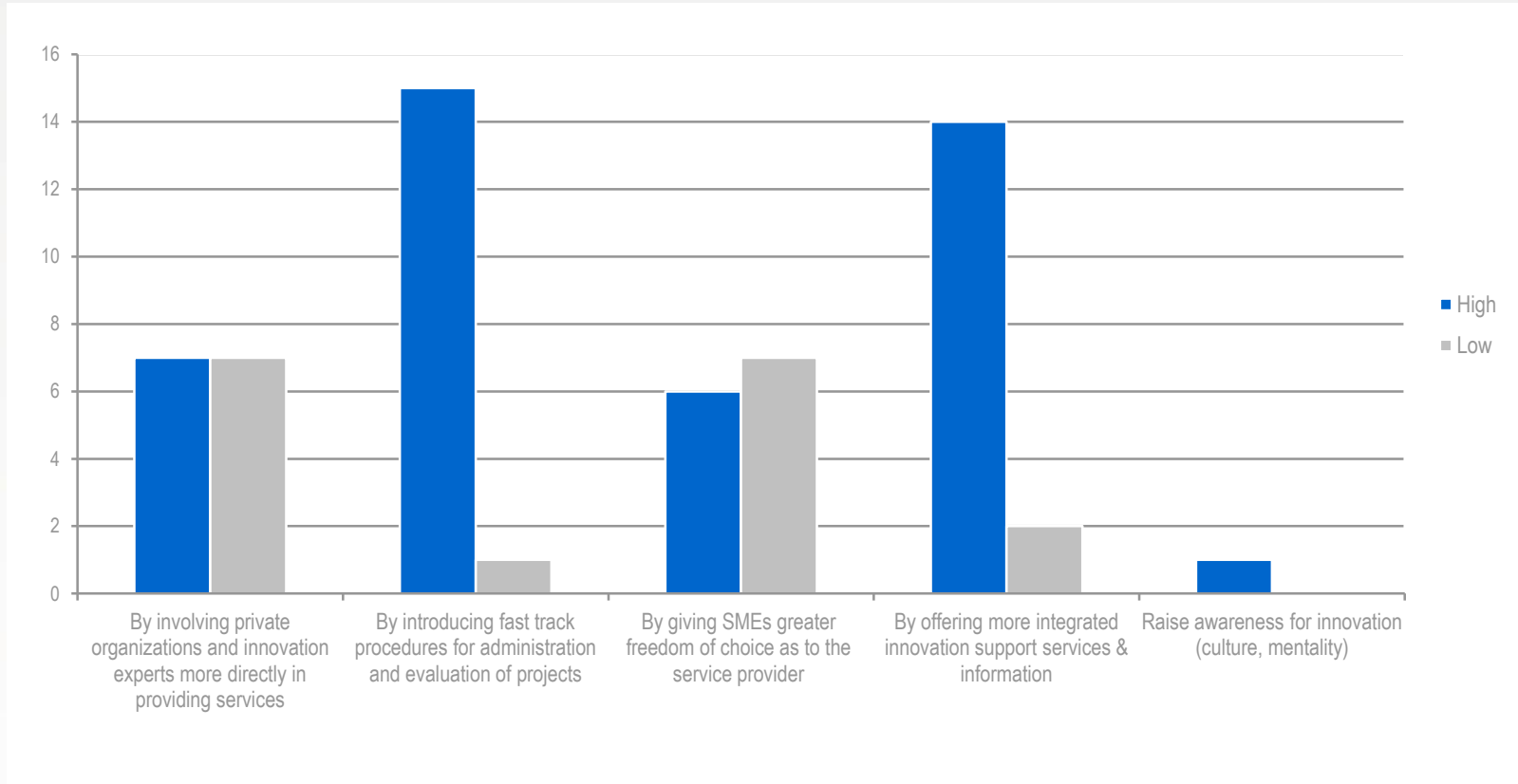
Kontaktstelle für Wissens- und Technologietransfer der Universität des Saarlandes

Technology Transfer

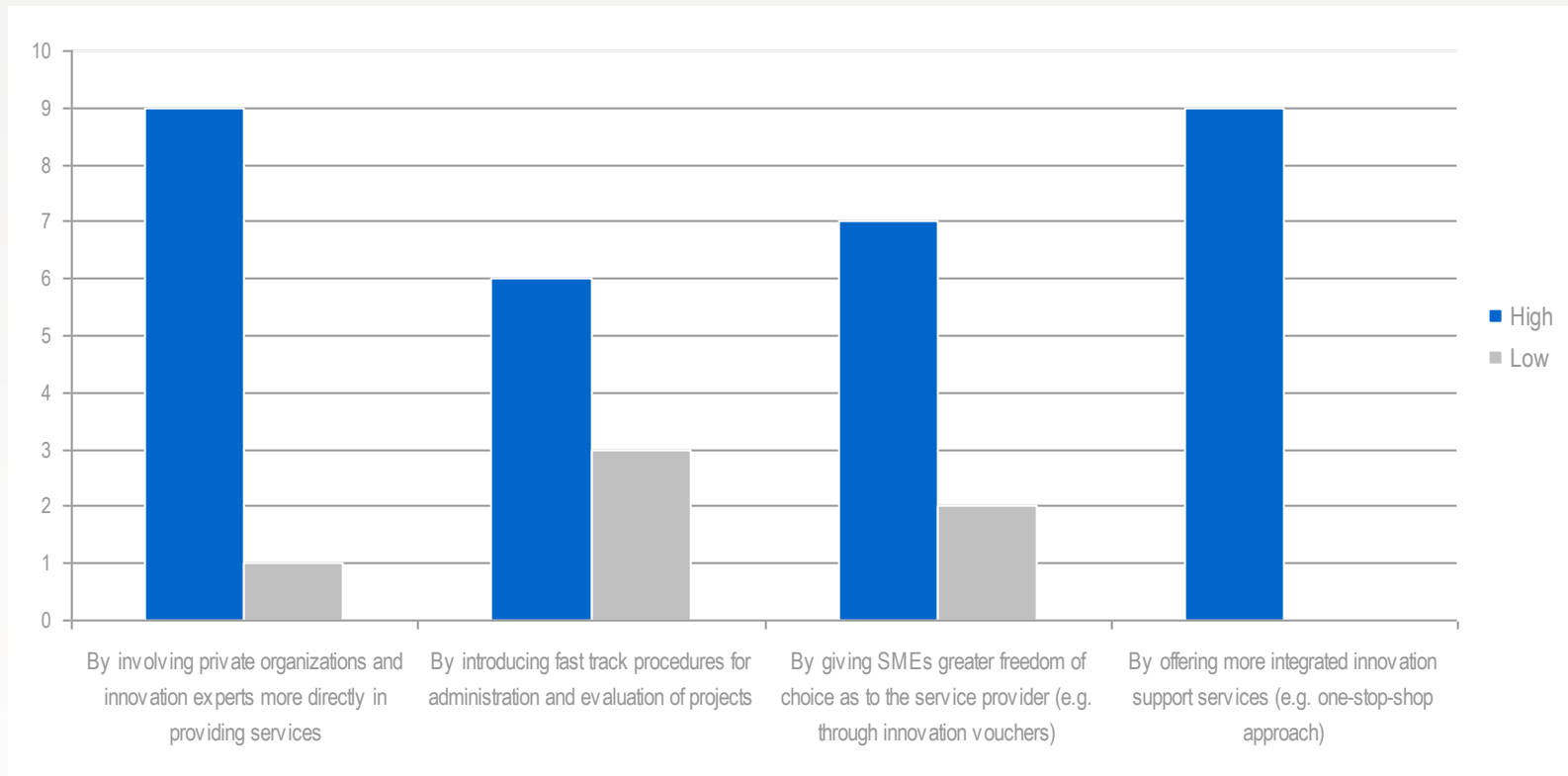
Structure



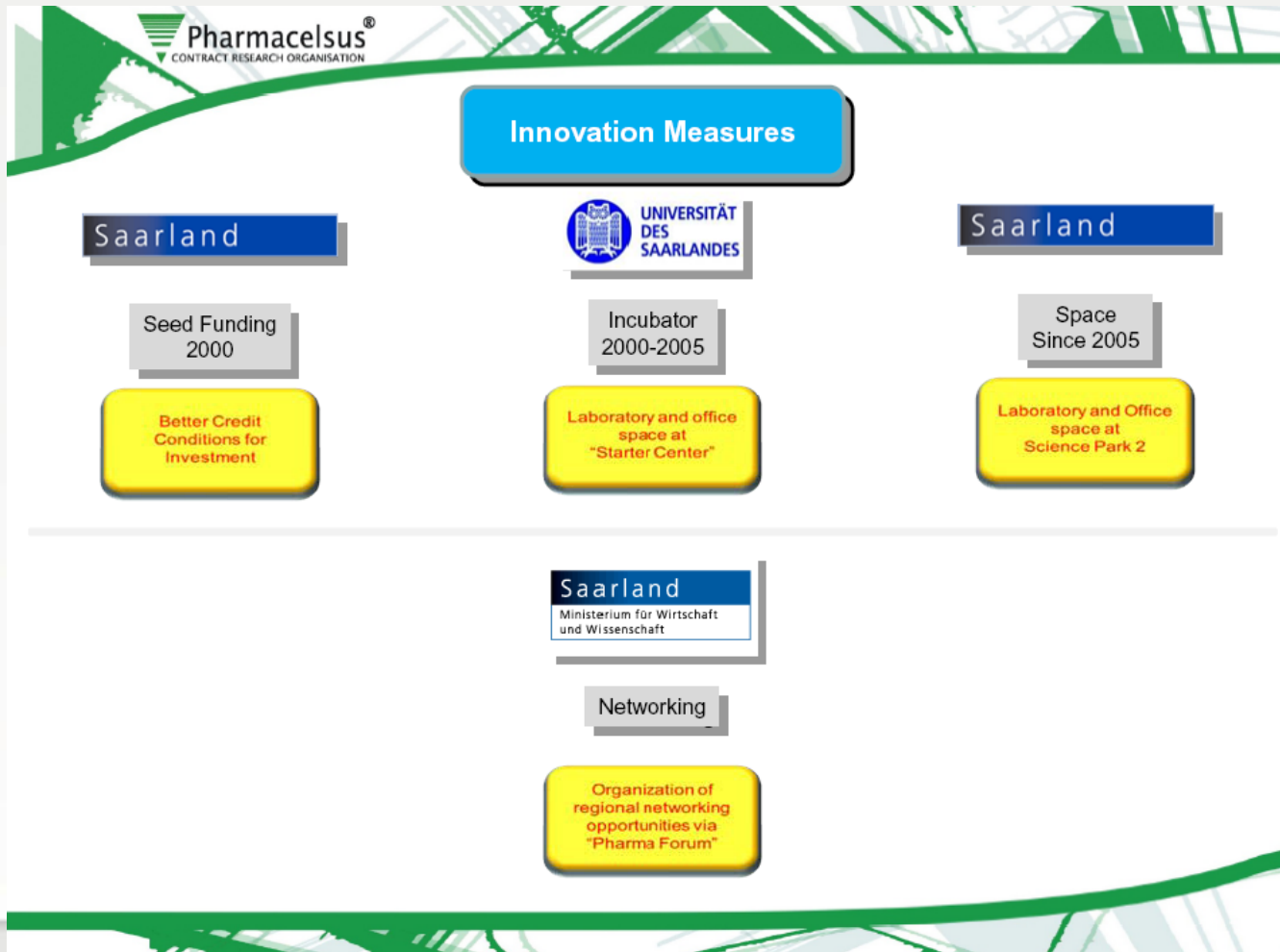
How to provide more effective innovation support services (Saarland)



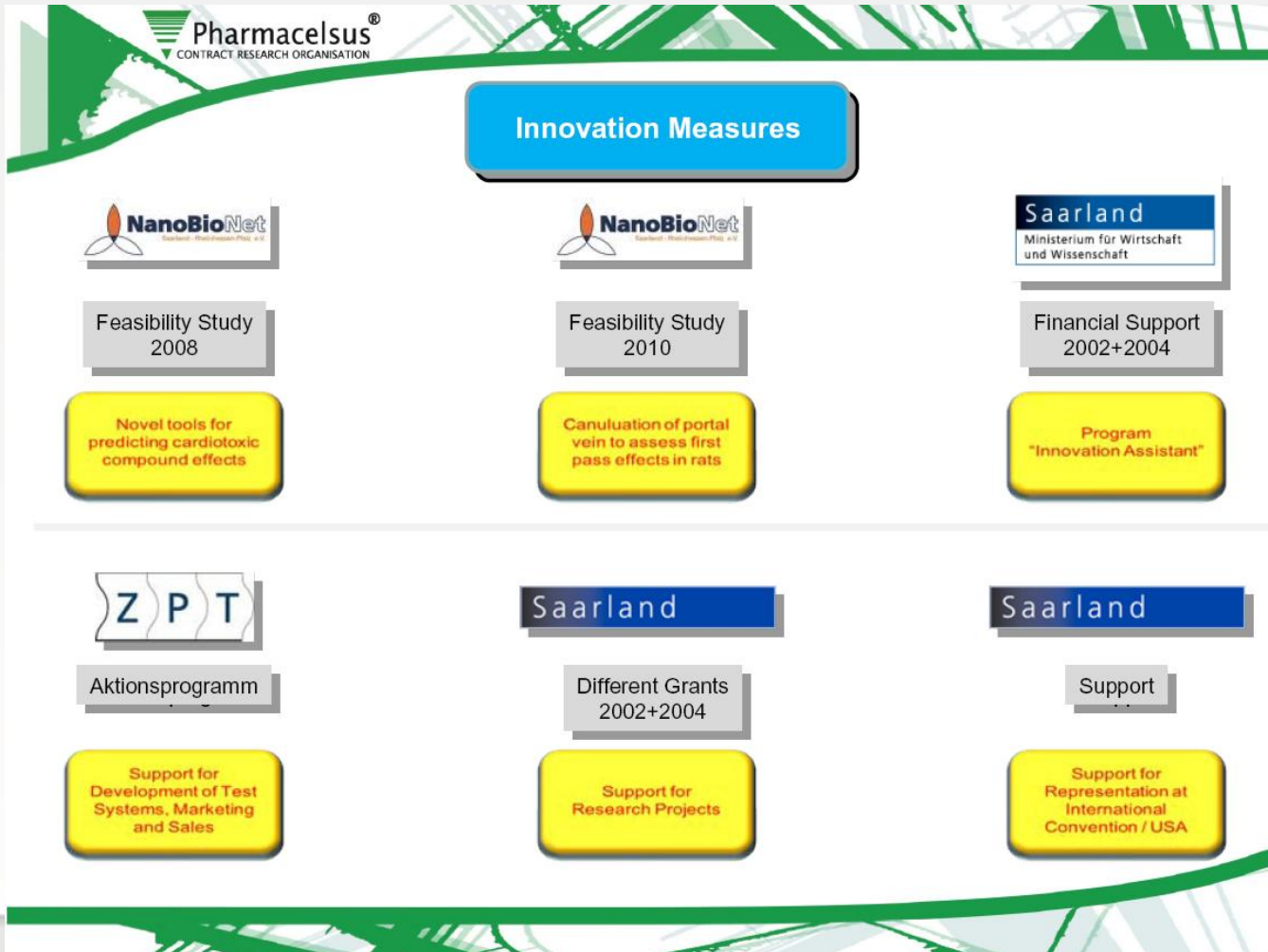
How to provide more effective innovation support services (North East Romania)



How do companies benefit ?



How do companies benefit ?



Challenges in the Saarland I

The understanding of "innovation" and the target-oriented application of evaluation or success measures varies strongly among the stakeholders.

Especially the input und output factors are difficult to trace.

As public funding sources are getting low it is essential for the donators to evaluate or estimate the return of investment (ROI).

Challenges in the Saarland II

In contrast to some regional and German-wide studies where the little „amount of entrepreneurs and self-employed/freelance workers“ is tackled the Saarland stakeholders do not focus on this point very much.

But it is clearly visible that the Spin-Off activities in the nano- and biotechnology sectors decreased rapidly within the last years.

Future role of innovation networks

In addition to a large number of inspiring examples of successful and effective innovation policies, the INOLINK study revealed several weaknesses in the infrastructure of the regions like the

- lack of innovation awareness
- lack of institutionalized communication between the players.

By implementing the planned expansion of institutionalised regional innovation networks, analysing the results of the survey and identifying diverse good practices, INOLINK wishes to play its part in achieving a sustainable regional development.

This is the end. Thanks to...

- ... you for listening,
- ... the INOLINK partners for contributing,
- ... the NanoBioNet team for its support.



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