



SMEs and Smart Specialisation - RIS3 in Lower Austria

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Economic Affairs, Tourism and Technology

Brussels, November 8th 2012

Agenda

- ▶ Key challenges
- ▶ Strategy RIS -> RIS³
- ▶ Lower Austrian Strategy, examples for involvement of SME 's
 - Analysis:
 - Large scale questionnaire surveys, Governance and Support Network, Dialogue
 - Implementation
 - Cluster, Technopol, Innovation Assistant, Start up
 - Monitoring
- ▶ KNOW HUB - Interreg IV/C Project

Niederösterreich - facts and figures

area:	19.178 km ²
population:	1,66 Mio.
Person employed 2011 2010/2011	573.305 + 1,6%
unemployment rate 2011:	4,1%
economic growth 2010:	+2%
2011:	+3,3%
P 2012/13:	+1,1%/+1%
start-ups 2011:	7.434
total exports:	€ 16 Mrd.
Gross Domestic Product Contribution NÖ	15,8%
Export rate: approx	44,9 %
R&D expenditures	635,4 Mio
R&D share on GDP	1,44 %



Key challenges

- ▶ Lacking critical mass in public R&D:
Vienna as Austria's R&D hub in the middle of NÖ,
but own province
- ▶ Lacking critical urban agglomeration:
low population density - 83 people per km²,
capital St. Pölten only 50.000 inhabitants,
> 410 km rural border region
- ▶ Highly diversified economy,
no strong sectorial specialization
- ▶ Dominated by very small companies

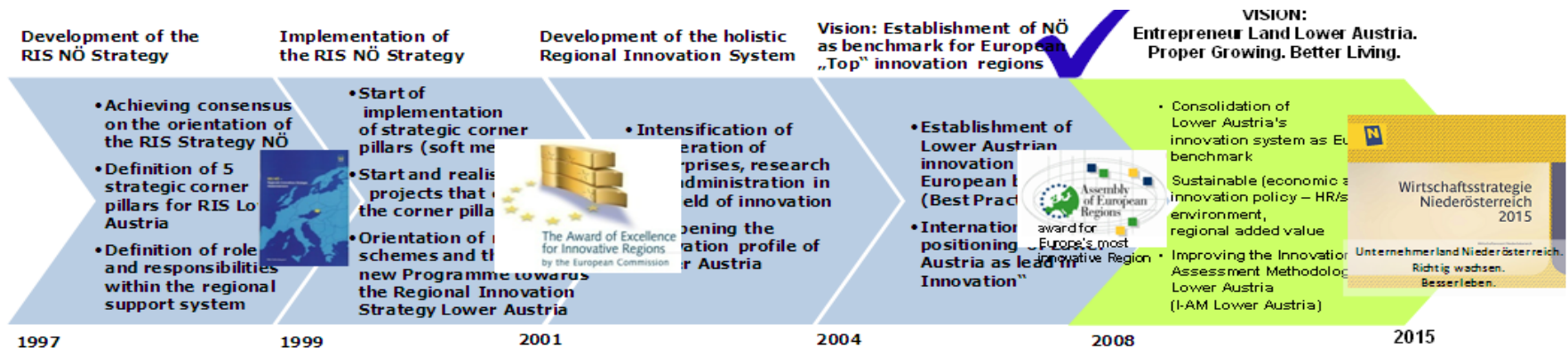


Lower Austria needs to

- ▶ Create its unique selling proposition, no duplication of other regions
- ▶ Collaborate with neighbor regions
- ▶ Create critical mass in R&D and Innovation in niche technologies
- ▶ Facilitate innovation also in rural areas, foster innovation capacity
- ▶ Encourage co-operations between instruments

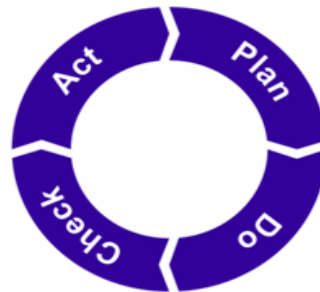
► **Strategy RIS -> RIS³**

Regional Innovation Strategy – RIS³



Based on

- ▶ SWOT
- ▶ Needs of clients / companies
- ▶ Trends and challenges
- ▶ Potential for excellence



Implemented

- ▶ Full commitment, Steering Committee

Steered by

- ▶ BSC, Balanced Score Card

Monitored and evaluated

- ▶ CIP, continuous improvement process

Integrated

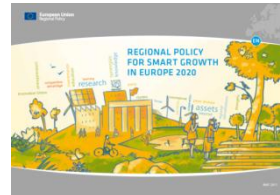
- ▶ National/European

RIS3, Smart specialisation strategy

- ▶ A multi-annual strategy
 - RIS NÖ valid from 1999 until 2008
 - Economic Strategy Lower Austria 2015 (includes updated Innovation Strategy)

- ▶ Defines a policy mix and budgetary framework focusing on a limited number of priorities targeted
 - Policy mix with 6 corner pillars in Economic Strategy NÖ 2015
 - Combining infrastructure, soft measures and financing

- ▶ Long-term political with budgetary commitment to implement
 - Large political and financial independency of the federal Province of Lower Austria
 - Always allocated budget for strategy implementation in Lower Austria
 - Clear and transparent responsibilities
 - Willingness for implementation!



RIS3, Smart specialisation strategy

- ▶ Focus on investing in research, innovation and entrepreneurship; technological and non technological innovation strengthening **companies innovation capacity**
 - Technopol Program Lower Austria
 - Innovation Assistant / R&D funding scheme

- ▶ Focus on region's strength and competitive advantage, **potential for excellence** based on evidence and strategic intelligence about a region's assets and the **capability**
 - Technopol Program Lower Austria: Screening of potentials
 - Cluster Program: Focus on regional strength
 - Large scale questionnaire survey on companies` strengths and needs in innovation
 - BSC, well developed monitoring of impact of innovation services and financial schemes
 - SWOT application



RIS3, Smart specialisation strategy

- ▶ Harnessing **regional diversity** by avoiding uniformity and duplication in regional investment goals
 - Support individual companies to innovate, no sole cluster policy approach

- ▶ involving **key stakeholders** from government, business, academia and other knowledge-creating institutions
 - Since 1997 RIS NÖ (regional Innovation System Lower Austria) Steering Committee with development of first Regional Innovation Strategy
 - Technopol Program following the Triple Helix Approach



Strategy

examples for involvement of SME 's

analyses

implementation

monitoring

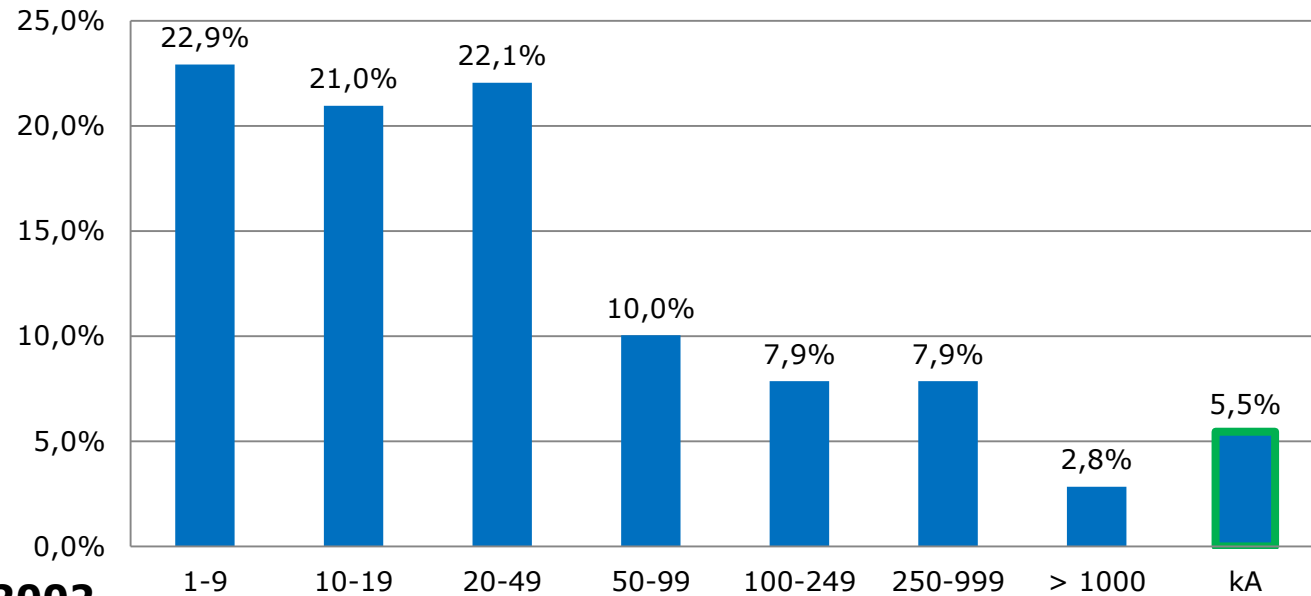


Large scale questionnaire surveys

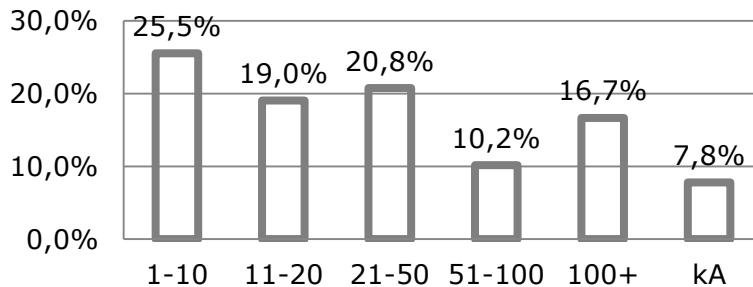
- ▶ Carried out approx. every 5 years (1997 – 2002 – 2008)
- ▶ Approx. 6.000 questionnaires sent out to regional firms
- ▶ Response rate between 8% and 12%
- ▶ Monitoring and analyses of NÖ firms'
- ▶ Strategic key activities
- ▶ Innovation activities and needs in innovation support
- ▶ Satisfaction with offered services
- ▶ Innovation partners

SME involvement

Companies size 2008



Companies size 2002



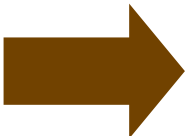
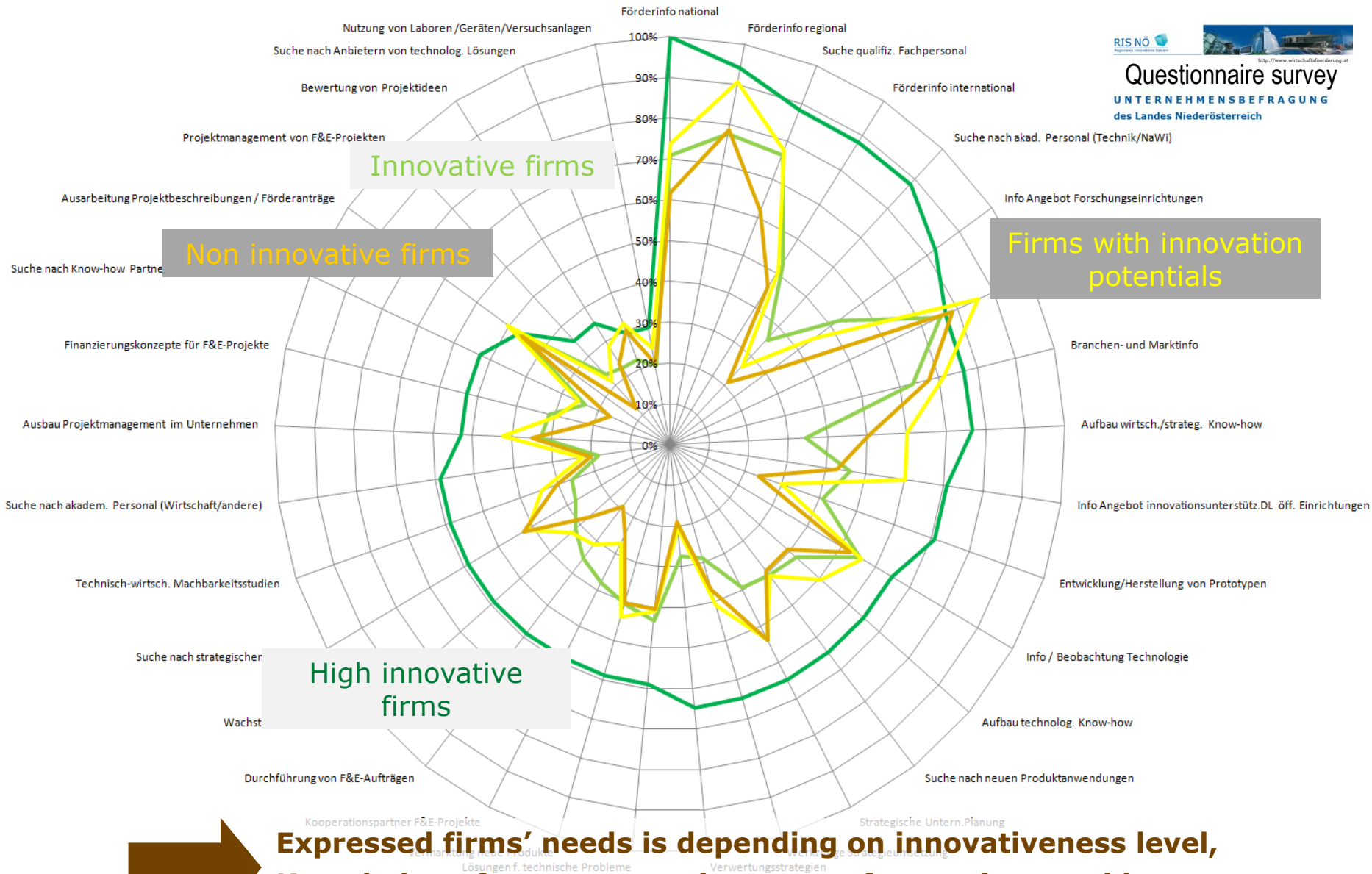
Firms questionnaire survey 2008: firms' needs



RIS NÖ
Research Innovation System



Questionnaire survey
UNTERNEHMENSBEFRAGUNG
des Landes Niederösterreich

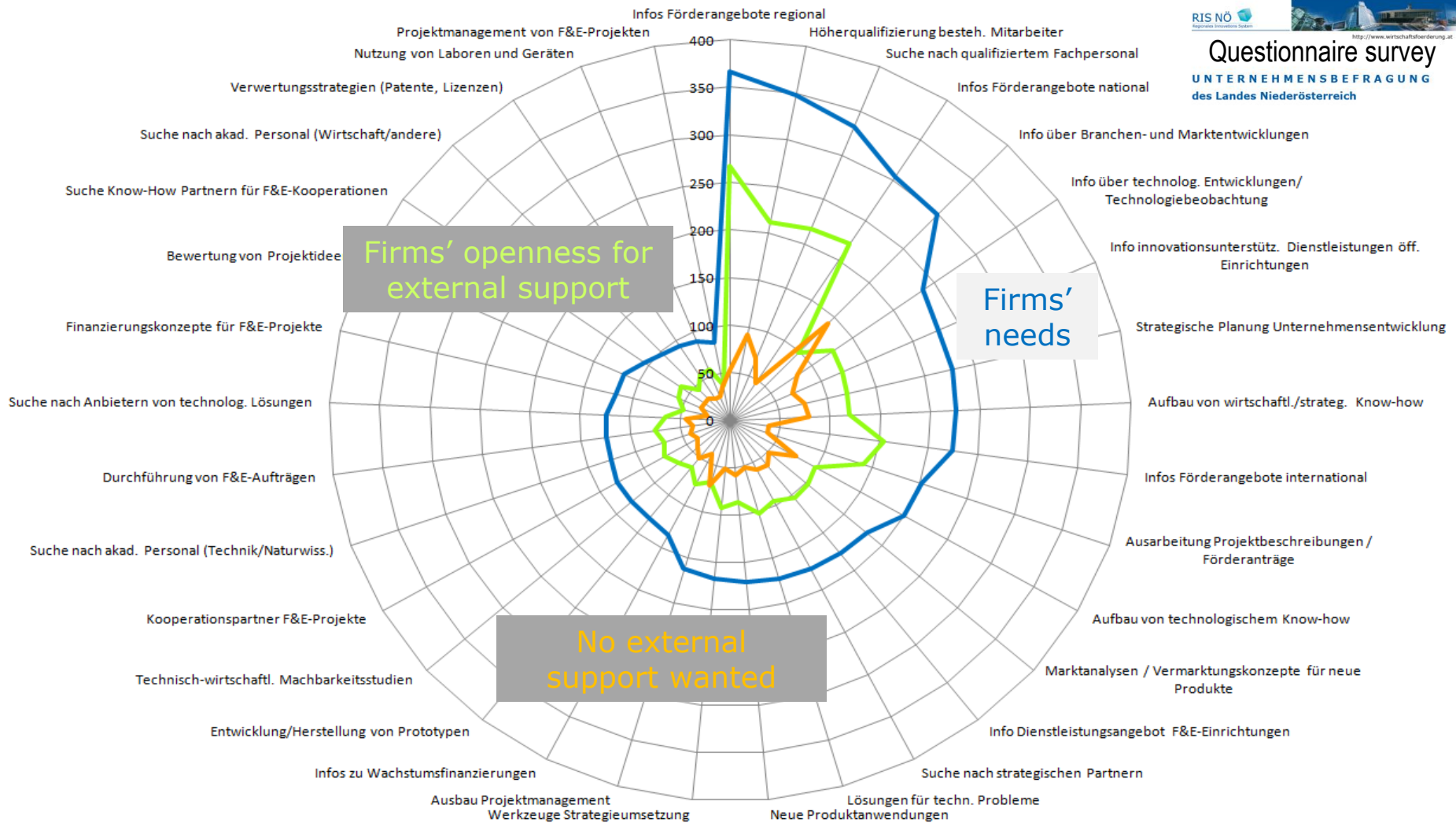


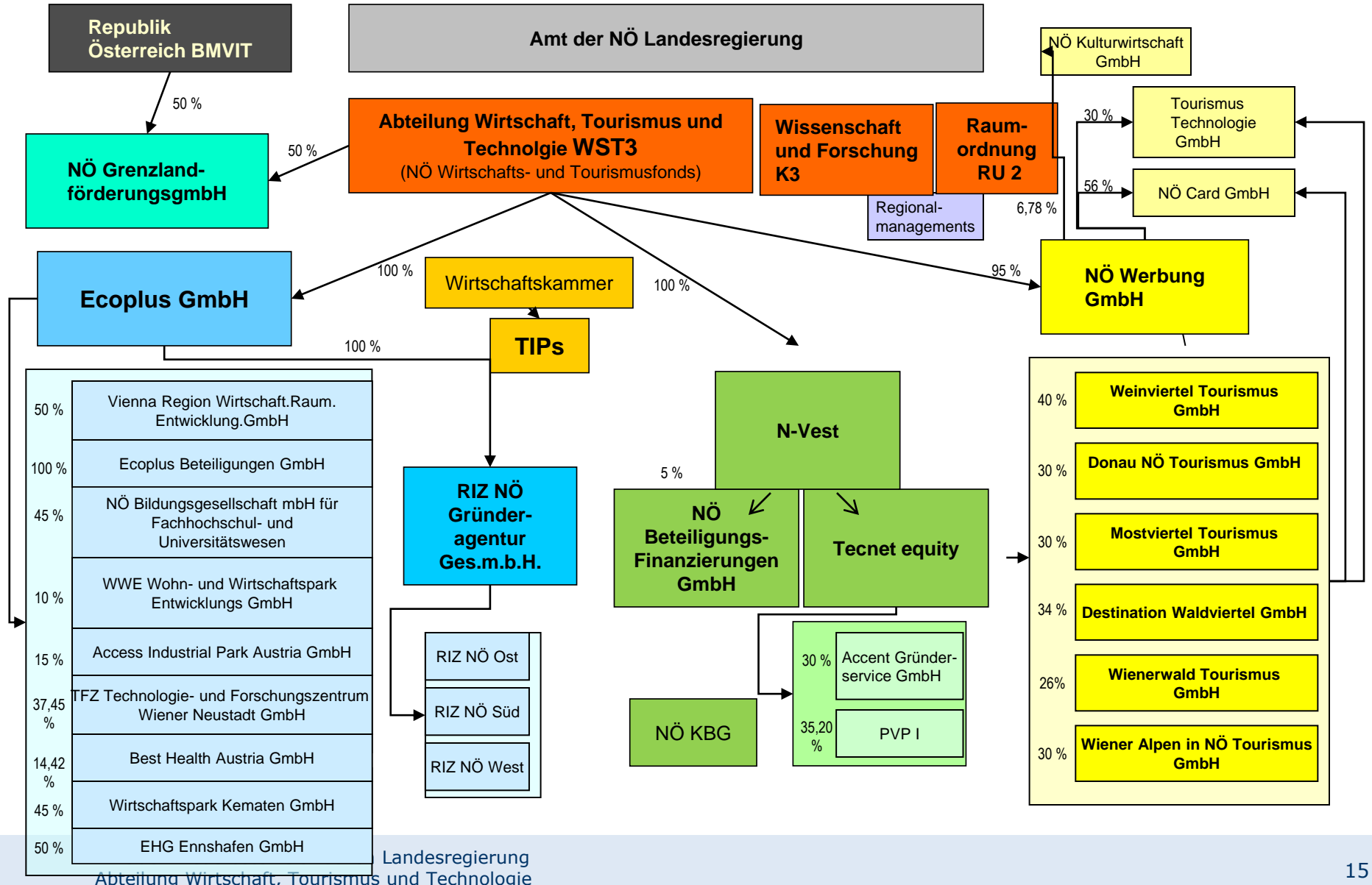
**Expressed firms' needs is depending on innovativeness level,
Knowledge of target group important for service providers**

Firms questionnaire survey 2008: openness for external support



RIS NÖ
 Regional Innovation System
 Questionnaire survey
 UNTERNEHMENSBEFRAGUNG
 des Landes Niederösterreich
<http://www.wirtschaftsforderung.at>





Vision: The right kind of growth for a better life.

Desk Research

- Experts Input
- SWOT Analysis
- Needs of Clients/Companies
- Trends and Challenges
- Large scale questionnaire surveys

Enterprise Dialog

Economic Strategy 2015

- Innovation and Technology
- Qualification
- Co-operation
- Internationalisation
- Start ups
- Sustainability

Instruments

- Infrastructure
- Advice and services
- Finance
- Location marketing

- ▶ Clear strategy
- ▶ Clear focus & measurable indicators
- ▶ Clear responsibilities within network
- ▶ Clear instruments

**Vision:
The right kind of growth for a better life.**

Enterprise Dialog



Strategy

examples for involvement of SME 's

analyses

implementation

monitoring

Instruments

Infrastructure

Advice and services

Finance

Location marketing

ERDF: Structural Funds 2007-2013

- ▶ **P1: increase regional competitiveness through Innovation and knowledge based economy**

1. Economy related and technology infrastructure	2. Industry, trade, services, innovation, technology, companies strategic development
Infrastructure, Technology Center	(academic) spin-offs , Technology-Transfer, Technology-Exploitation
Clusters & Networks	SME: Internationalization , cooperation, Innovation assistant , pilot actions
Technopol program	Innovation, R&D
Technology Projects	Investment in new technologies
	Soft measures
	Consultancy Services

84% of budget is earmarked (Lisbon relevant); ERDF: 145,6 Mio €

Implementation

Example: The Cluster Program

Advance through Collaboration

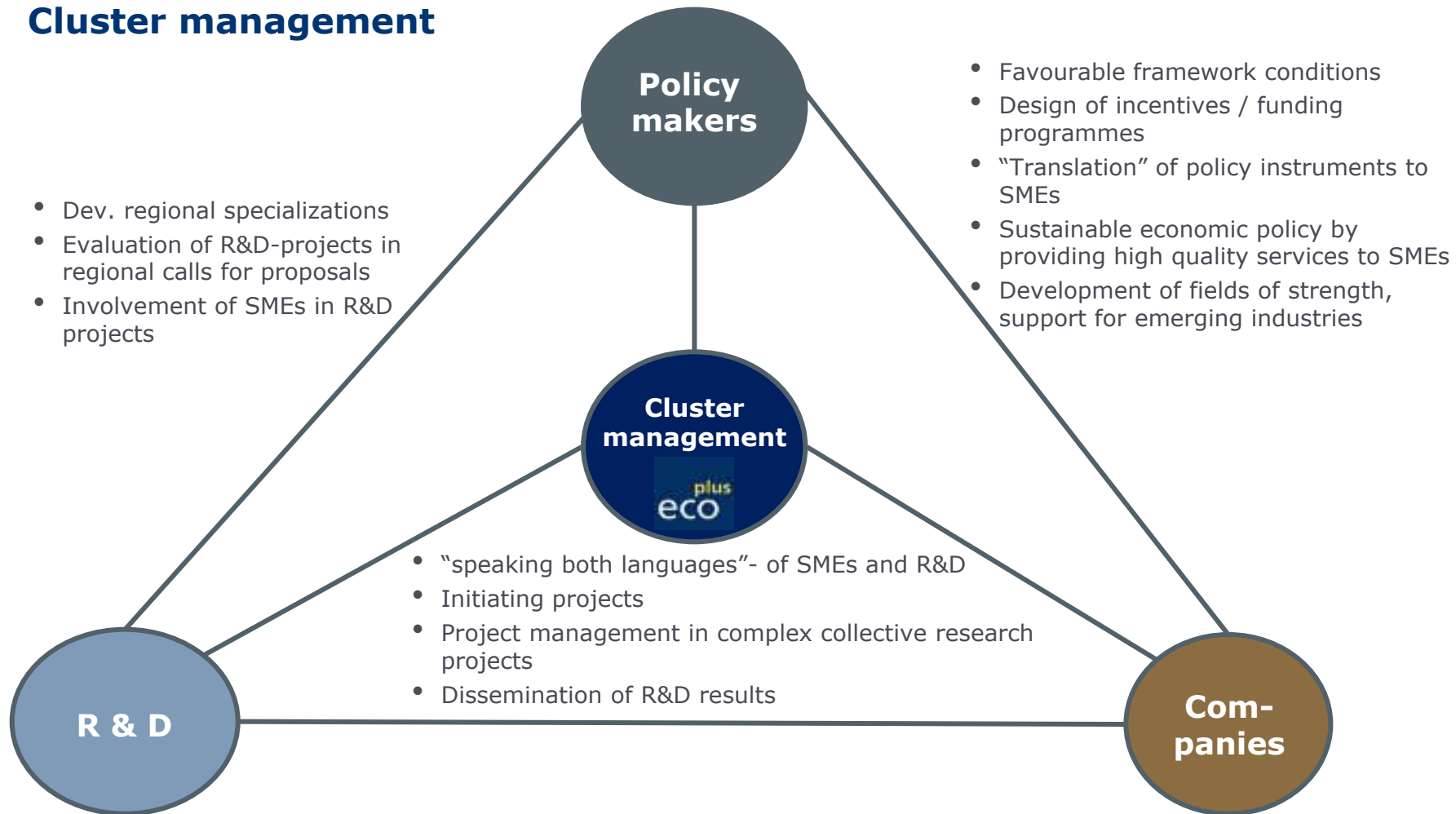
Lower Austrian Clusters & Network



- ▶ **Green Building Cluster (2003)**
 - www.bauenergieumwelt.at
 - Focus: energy efficient construction and refurbishment, healthy interior environments
- ▶ **Plastics Cluster (Lower Austria in 2005)**
 - www.kunststoff-cluster.at
 - Focus: bio-plastics
- ▶ **Mechatronics Cluster (2010)**
 - www.mechatronik-cluster.at
 - Focus: energy efficiency in production processes
- ▶ **Food Cluster (2006)**
 - <http://www.lebensmittelcluster-noe.at/>
 - Focus: food safety, regional und bio-products
- ▶ **Logistics Cluster (2008)**
 - www.logistikcluster.at
 - Focus: modal split, bundling (empty runs)
- ▶ **E-mobility initiative (2010)**
 - www.e-mobil-noe.at
 - platform for e-mobility activities and projects of communities and companies

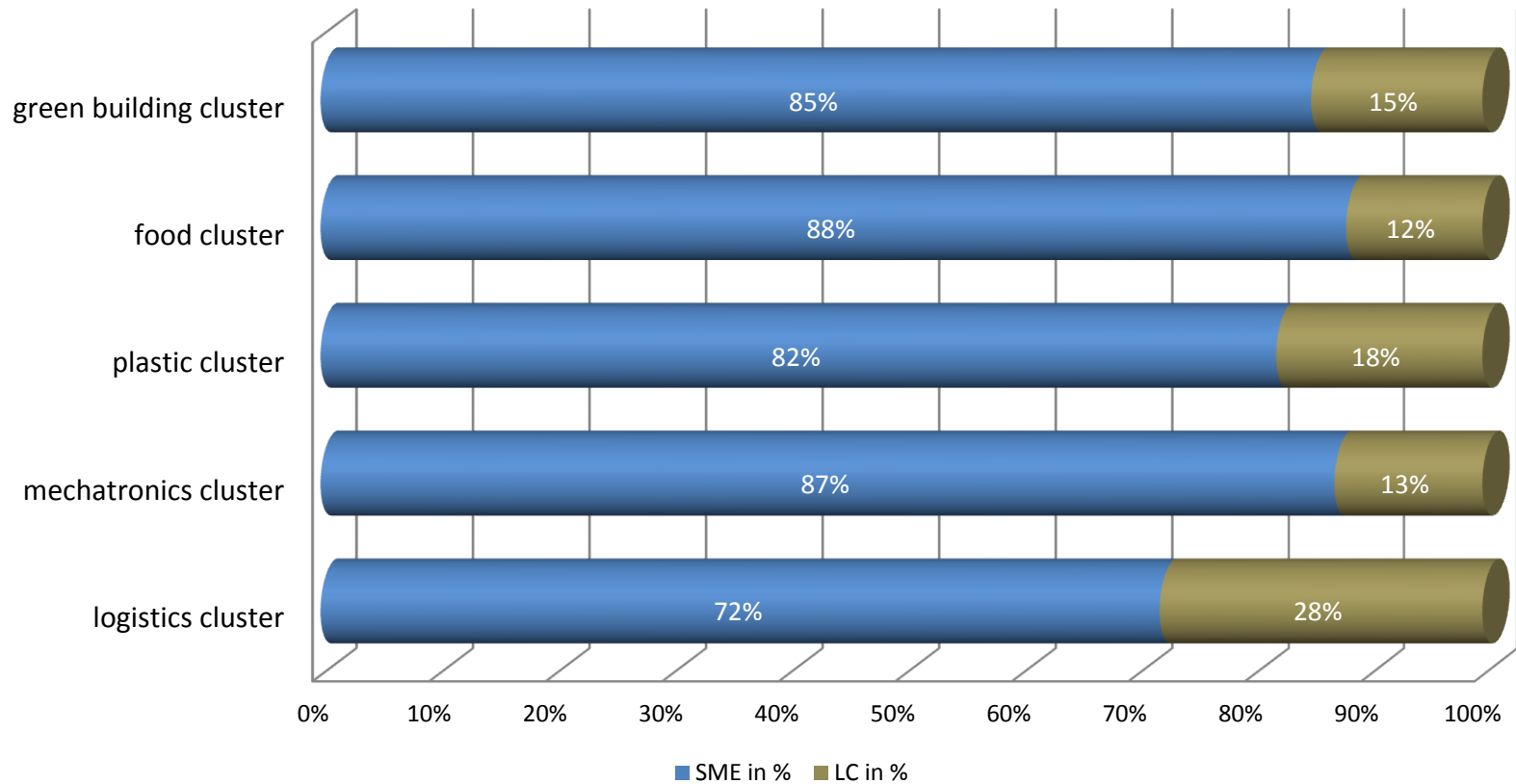
Bridge between policy makers, companies and R&D

Cluster management



Lower Austrian Clusterprogram

Clusterprogram SME & LC in %





Advanced PartSim

Advanced Simulation Methods for **part and process development** of complex **injection moulded plastic parts** tailored for SMEs

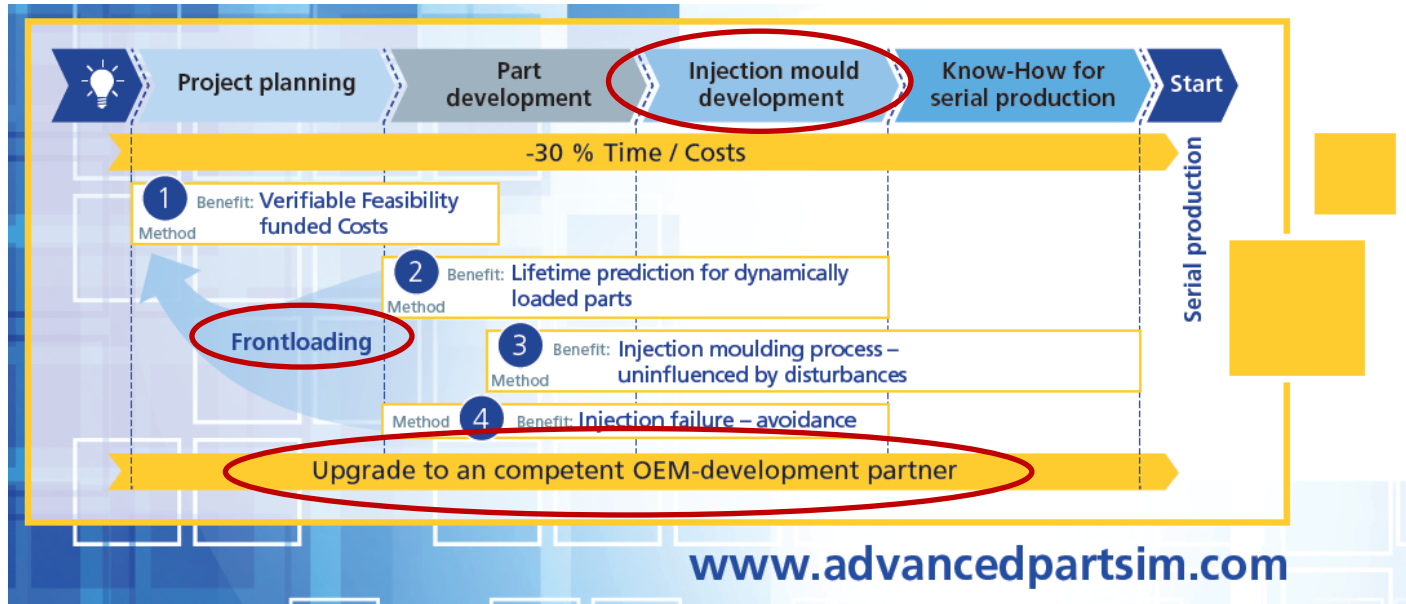
The project objectives:

- **Improvement of part-development-process (Frontloading)**
- **Establishment of strategical development partnerships**
- **Reduction of costs and development time up to 30%**
- **„Learning by doing“ Case-Studies at the companies**

The target group:

- **Production industries (OEM, Tier1) and their suppliers**
- **OEM-SME development partners**
- **Industry sectors: Automotive, electronic, medical/hygienic engineering, Life Science**





Big Enterprise (OEM)

- One practical Product-Development
- Willingness for early involvement of suppliers
- Go for regional suppliers

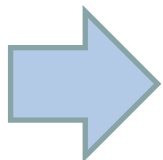
50%



Small and medium -sized Enterprise (SME)

- Qualification with supervision by university
- „Learning by Doing“
- Making of necessary investments
- Willingness for advance performance

50%



- **Establishment of strategical regional development partnerships**
- **30% faster and cheaper Product-Developments**
- **Competitive regional suppliers against Far East**
- **Positive kontakt of SME to Universities**

Examples

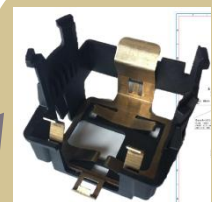
Project-Partner:



Development of a new Finger-sensor
 = Replacement of handmade version by 2-komponent injection moulding



Replacement of aluminium-Inserts by injection moulded part
 = Saving of one Production - Step



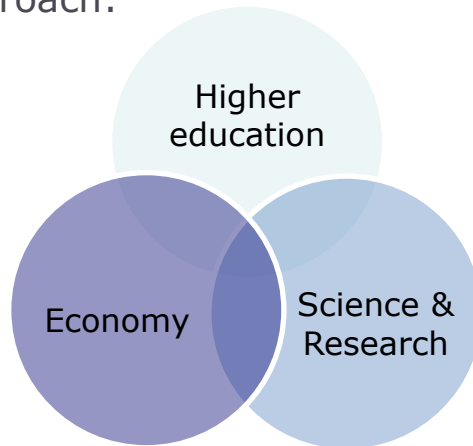
Development of a new Lamp-Holder
 = Saving of several Production - Steps

Implementation

Example: The Technopol Program



- ▶ Start: 2004 to
 - Strengthen the regional strength and develop regional potentials
 - Create critical mass in a selective way
 - Involvement of all relevant actors and stakeholders due to Triple Helix Approach:



- Monitored by Balanced Scorecard Approach

Specialisations and Technopoles in Lower Austria

Lower Austria's proximity to the knowledge-intensive Vienna region and the neighbouring Czech and Slovak Republics presents it with a specific set of challenges and opportunities. It managed to make the best of this position by focusing on cooperation both with Vienna, and within the cross-border CENTROPE region, but also with other neighbouring regions, such as Upper Austria, to allow the development of synergies, the opening of new markets for local companies and complementarity between value chains.

The region's innovation strategy is based on both qualitative and quantitative data and takes into account local and external conditions. Lower Austria has gone through extensive prioritisation processes thanks to several strategic exercises since the mid-1990s. In 1998, a project for the continuous improvement of its regional innovation system was started. The regional government carried out a SWOT analysis, sent questionnaires to its companies, organised workshops and carried out interviews with stakeholders. It also completed a survey of the activities of other similar regions.

Based on analysis of the region, several actions aimed at addressing the innovation needs of companies were undertaken, among them the creation of three "Technopoles", in the areas where the region has a competitive advantage: Biotech and Regenerative Medicine; Environmental Biotechnology and Agrobiotechnology; and Microsystems Engineering, Tribology and Medical Systems Technology. In this way, Lower Austria invested in improving those specialisations with a potential for excellence and in creating complementarities in those areas where knowledge and resources have to be shared with other regions, therefore steering clear of excessive specialisation and any risk of trying to excel at everything.

A recent independent study on the economic contribution of these specialisations and the related support measures (Technopoles) confirmed their beneficial impact on structural change and value creation in the region.

Technopols in Lower Austria



Technopol-locations and emphasis

▶ Krems

- „medical biotechnology“ with focus „regenerative medicine“ e.g. extra corporal blood-purification, tissue engineering, cell therapy and future building (low energy house)
- Infrastructure: 8.000m² with 107 Researcher

▶ Tulln

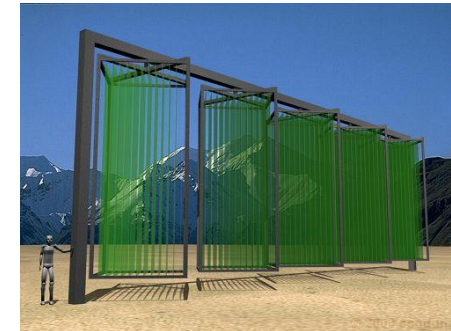
- Agro- and environmental biotechnology with focus on plant- and animal-production, (bio)-analytics, natural materials technology, environmental biotech
- Infrastructure: (TZ): 3.700m² with 520 Researcher

▶ Wiener Neustadt

- „Modern industrial technologies“ like surface technologies, centre of competence for electrochemistry and tribology, micro-system technology, integrated sensor systems, medical applications, injection moulding technology
- Infrastructure: (TZ): 13.000m² with 396 Researcher

Combining Technopol & Cluster services and other soft support instruments to realize a vision

- ECODUNA, a Start up company is developing a new bio-solar system and innovative photo-bioreactors to reduce energy input and increase quality and quantity of for microalgae cultivation
- Technopol management and Cluster management facilitate collaboration with R&D institutions at the Technopol Wiener Neustadt and with Plastics-Cluster companies
- Objective: to build the best photo-bioreactors for algae production worldwide in Lower Austria.



Algae Photo Bio Reactor



Martin Mohr & Franz Emminger



Implementation

Example: Innovation Assistant

- ▶ Target group: SMEs
- ▶ Objectives
 - Fostering the innovation capability and culture within SMEs
 - Stimulation of SMEs, especially with no or little experiences with graduated employees
 - Fostering the research capacity especially in Large companies
 - Increase the number of academic staff and researchers



Upgrading the Innovation Capacity of Existing Firms



History

2002 – 2004	Pilot Action within the Regional Program of Innovative Actions (RPIA) Lower Austria
2004	Standard funding scheme, managed by the department of economy and technology of the Lower Austrian Government
July 2005	Mainstream to the Obj. 2 program of Lower Austria
Since 2007	Part of the Regional Operational Program (ROP) Lower Austria
2008	NÖ Innovation Assistant awarded as RegioStar
2008 – 2012	most popular Good Practice within the ERIK ACTION INTERREG IVC Capitalisation project transferred to Opolskie, Lodz, ... Interest from Algeria
So far	15 calls carried out



Upgrading the Innovation Capacity of Existing Firms

Innovation Assistant – type of support

- ▶ Grant of the **labor costs** of the innovation assistant
 - 50% for the first 8 months of employment
 - 35% for further max. 7 months
 - with a maximum total amount of € 21.769,00
- ▶ Mandatory **training** of the innovation assistant
 - by a specially designed post graduated training program established at the Danube University Krems (100% funded)
 - 18 days – structured in modules
Project management, Innovation management, Presentation skills, Interview techniques, Leadership skills, Creativity techniques, Team building
- ▶ Funding of project and innovation assistant **coaching** (50 % of costs, max. € 3.200,00) by an external consultant
- ▶ Accompanied **monitoring/evaluation** of the project by an external consultant (100 % funded)

Implementation

Example: Start up´s

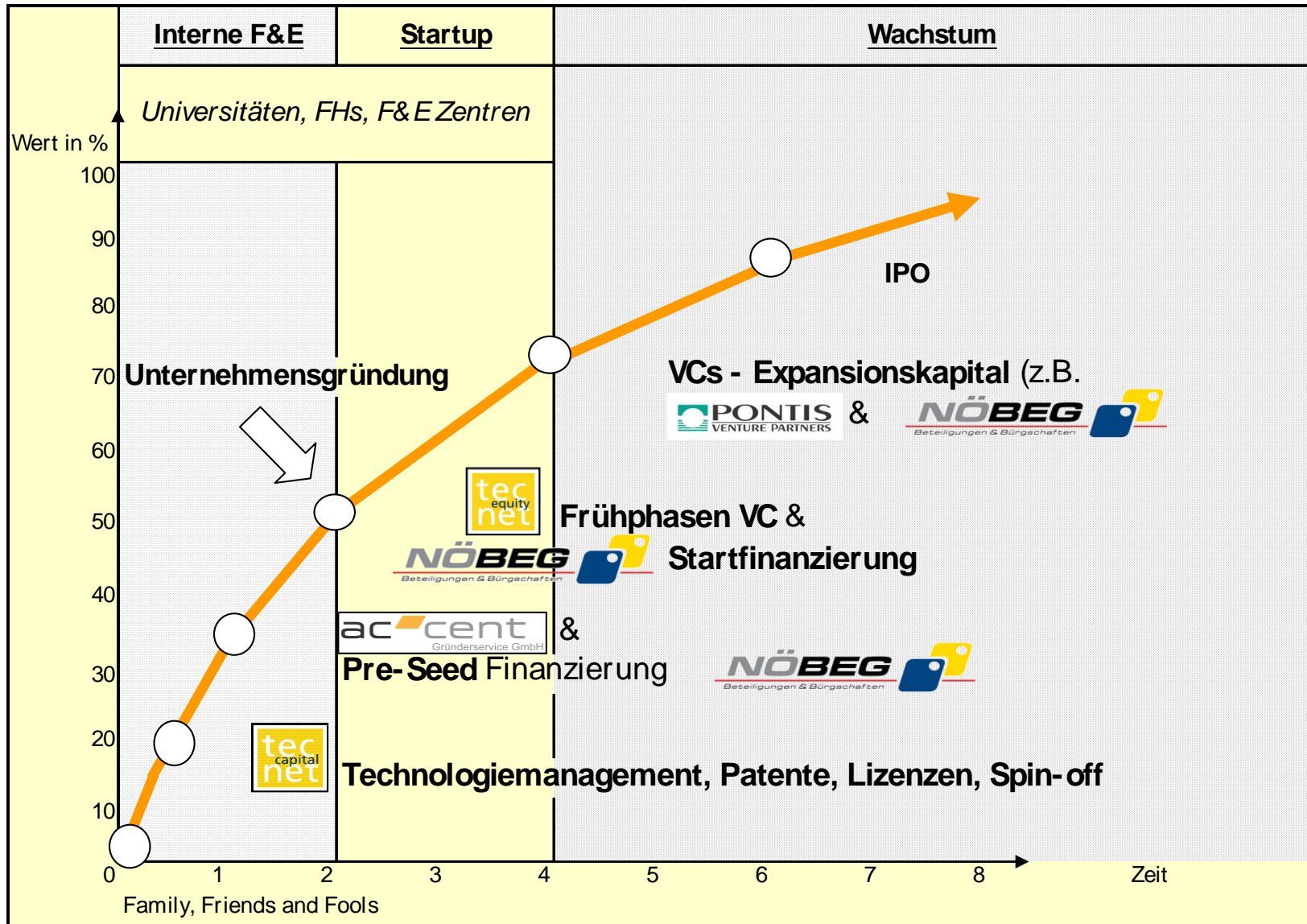


► tasks

- For all start up´s
 - Local contact point for start ups
 - Management of incubators with basic services
 - Coaching, training, networking for start ups
- For academic start up´s
 - Stimulation
 - Coaching
 - Training

► tools

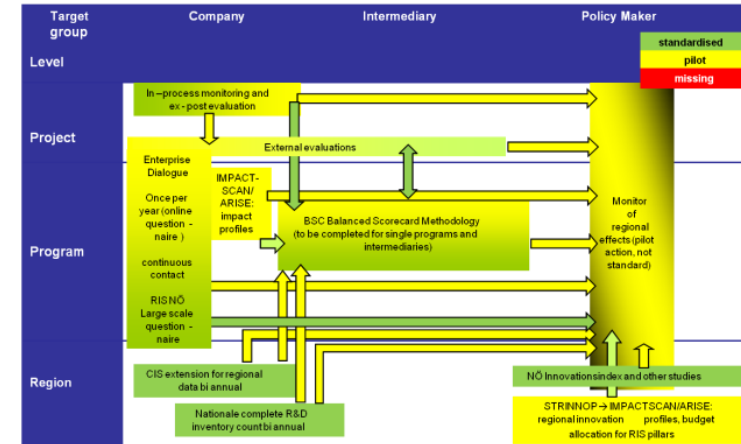
- Incubators with local/regional financing
- Coaches



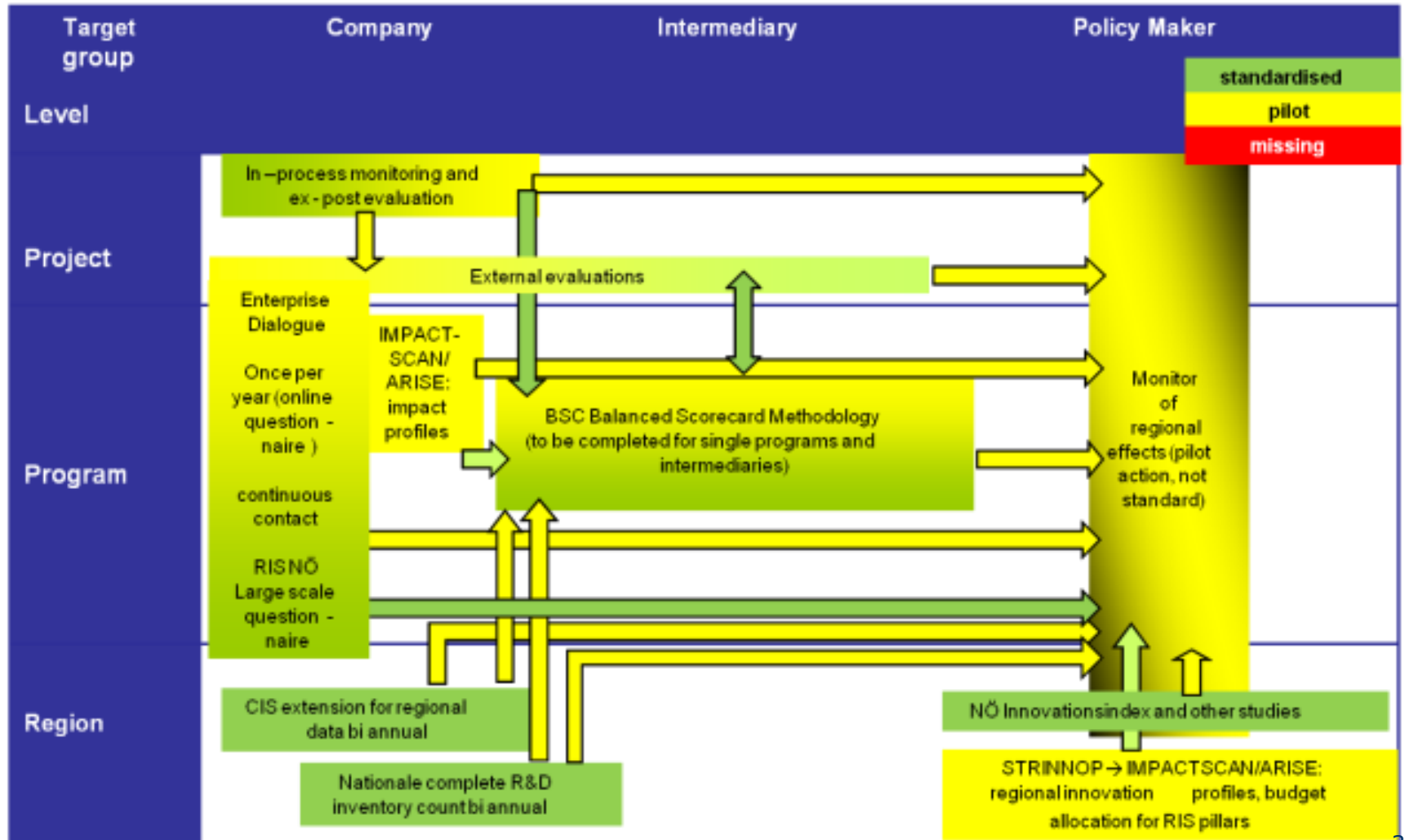
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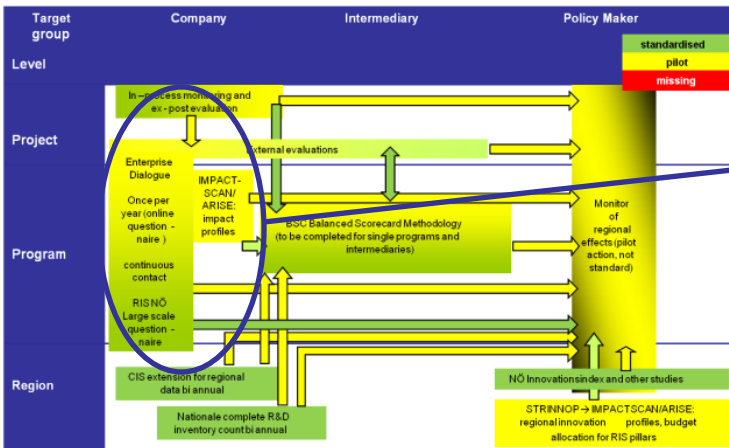
Monitoring & Evaluation



Monitoring Impacts of Regional Innovation Policy

Companies attitude Impact of financial support schemes

- ▶ Is there an intended change regarding our clients
- ▶ What are the results / impact of our financial support schemes for projects



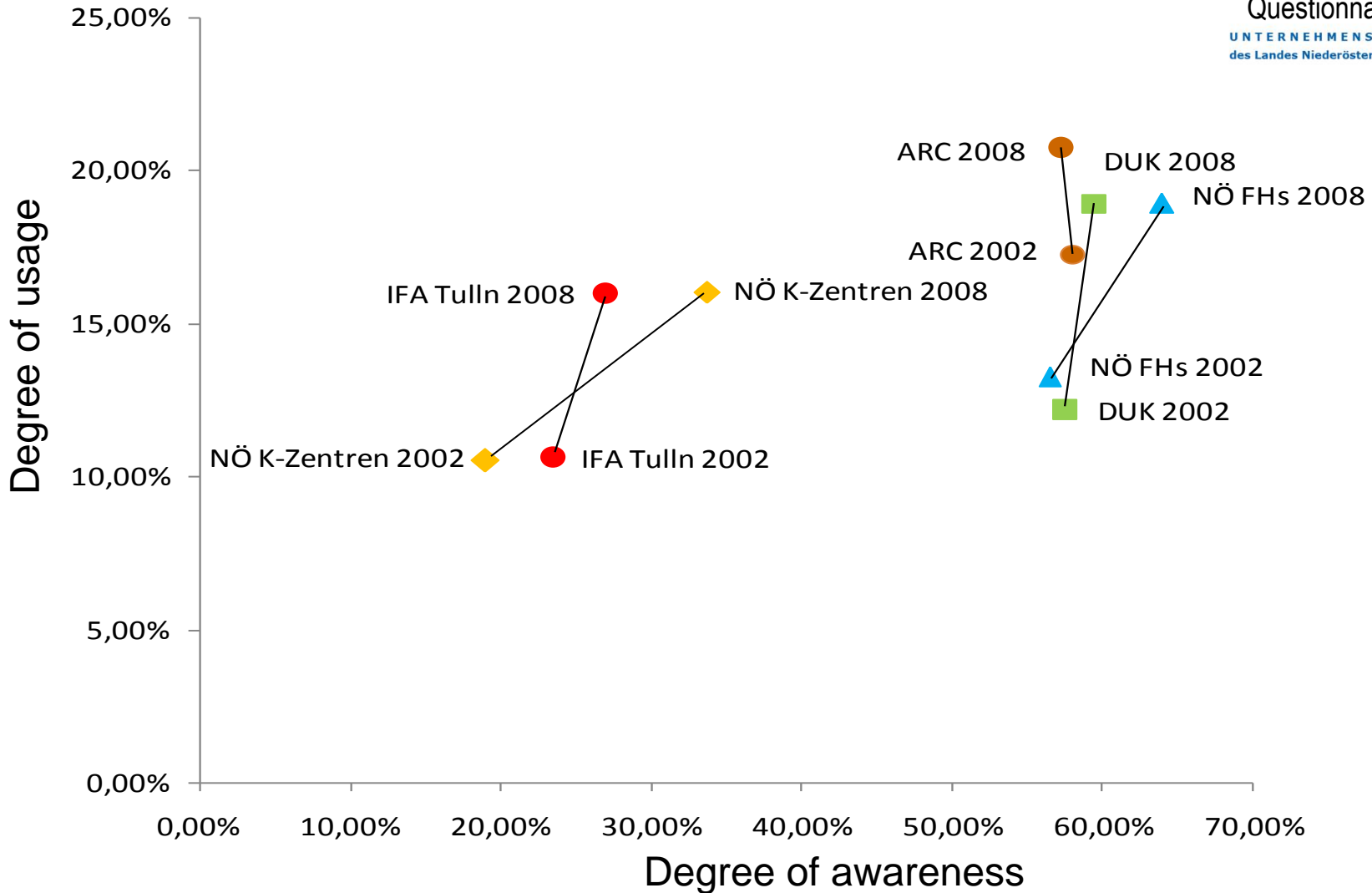
Firms questionnaire survey 2008: degree of awareness and usage of academic/ technology institutions



RIS NÖ
Regional Innovation System



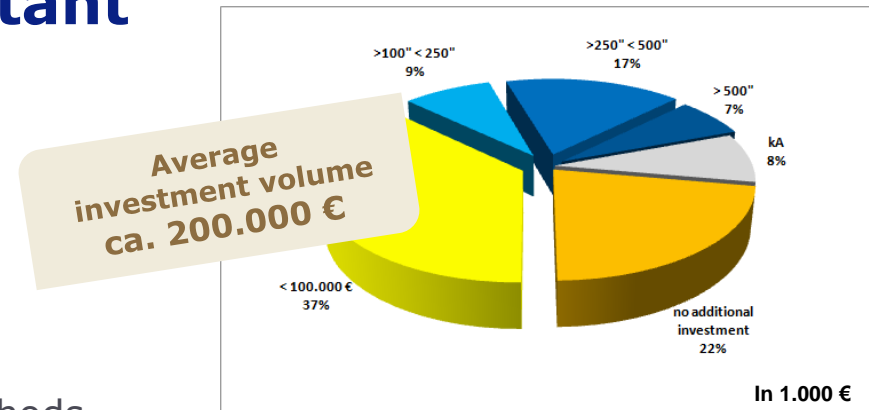
Questionnaire survey
UNTERNEHMENSBEFRAGUNG
des Landes Niederösterreich



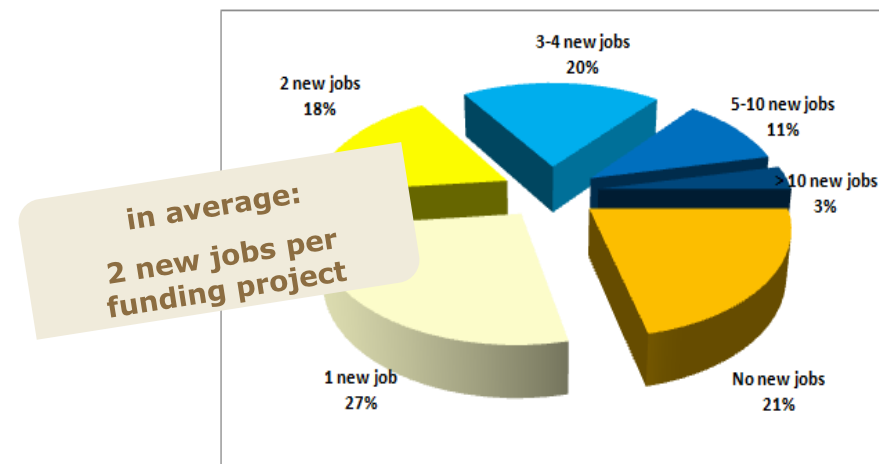
Results: Innovation Assistant Monitoring and evaluation

- ▶ Strengthening of competitiveness
 - ca. 85 % innovative products / services
 - ca. 80 % significant technological improvements
- ▶ Introduction of modern management methods
 - More than 95 % improved their project management
 - Ca. 85 % organisational change activities
- ▶ Stimulation of cooperation culture and know how transfer
 - Ca. 70 % established new long term cooperations, 50% improved collaboration with RTD and/or universities
- ▶ Growth of the companies funded
 - More than 80 % created new jobs
 - More than 70 % with rising sales
 - More than 90 % with rising market shares

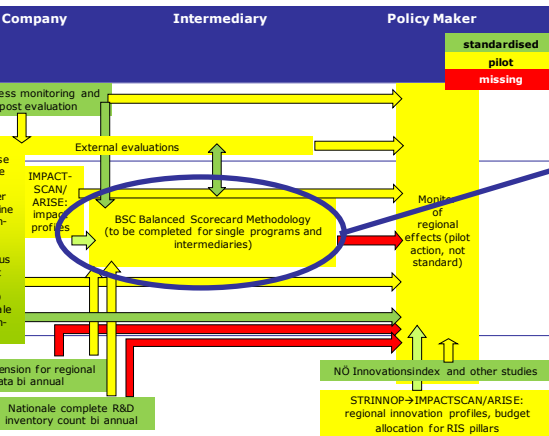
Companies' investments stimulated by the funding programme



Employment effect

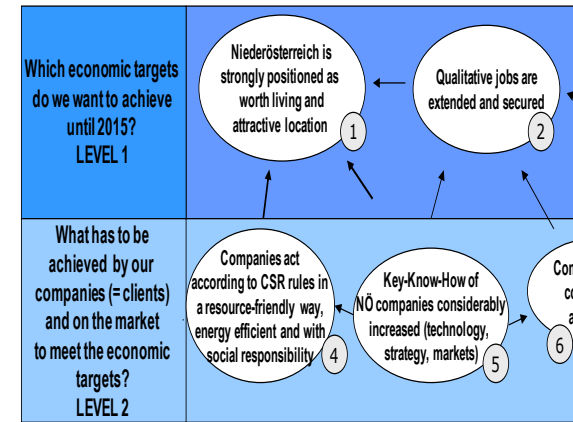


Monitoring Impacts of Regional Innovation Policy



BSC - Balanced Score Card

- ▶ Which economic objectives do we want to achieve by 2013?
- ▶ What do we need to do for our customers and in the market in order to reach these economic objectives?
- ▶ Which processes do we require to achieve excellence and to reach our customer, market and economic objectives?
- ▶ What must we learn and where must we innovate in order to achieve our process, market and economic objectives?

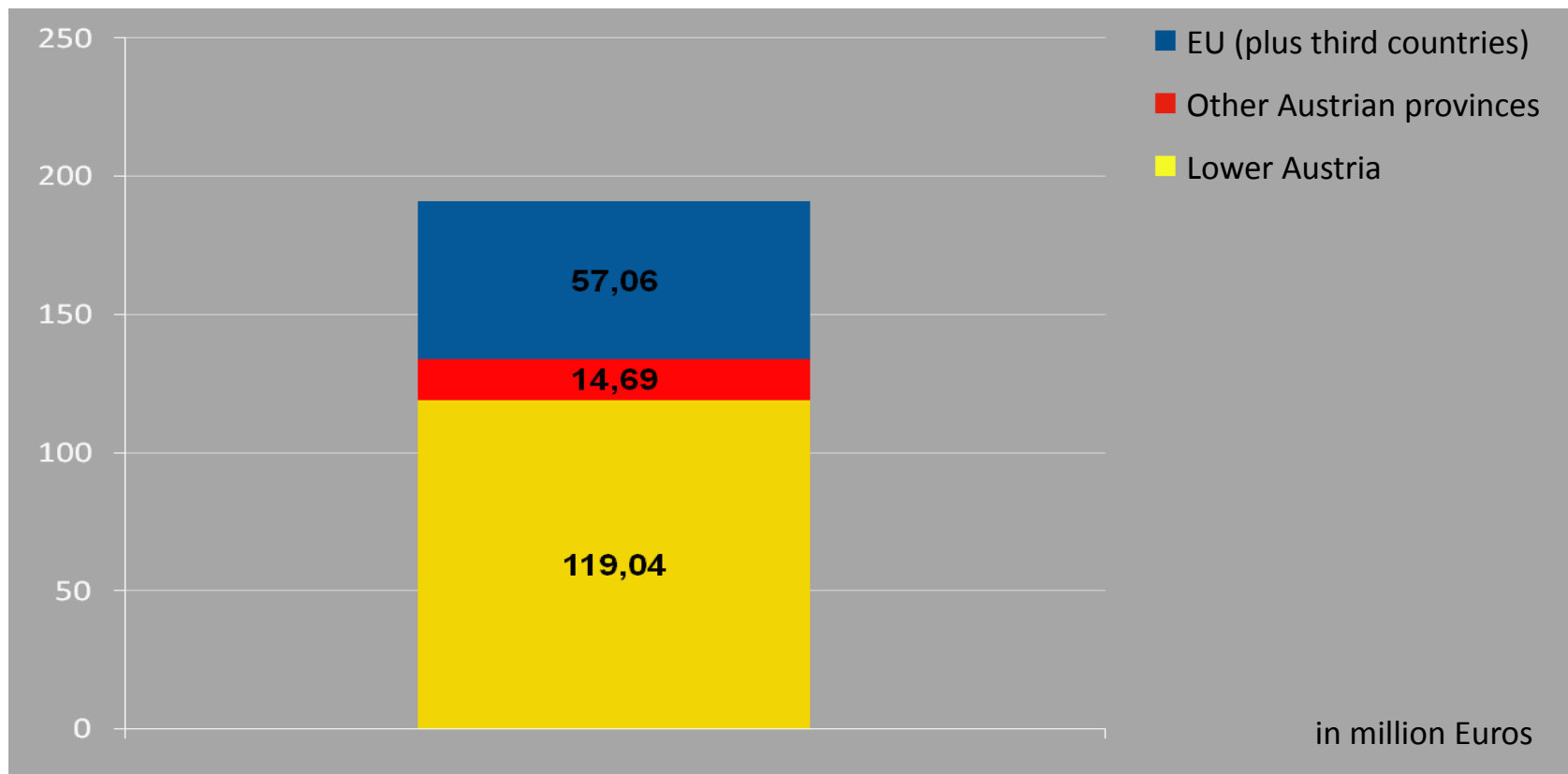


➔ **Measurable Indicators**

Example results: Measurable indicators – Technopol Wr Neustadt

R&D in Technology Center TFZ	2004	End 2011
number of technology fields	22	5
researcher per field	10	83
researcher total	180	425
m ² in Technologiezentrum TFZ (rentable)	7.100	17.500
Publikations and Patents	2004	End 2011
Publications reviewed	217	816
Patents	3	97
New industrial locations on Technopol Wiener Neustadt 2004		End 2011
new companies on site	3	10
new jobs since 2004	15	409

Example Technopol: Overall Economic Effect - Gross Value Added



Example Technopol: Structural Change Employees (excl. self-employed) by economic sector

Change 2004-2009		All NÖ districts	Technopol districts
Total		9.24%	11.49%
A	Agriculture, forestry, and fishing	-2.43%	-3.81%
B	Mining and quarrying	13.86%	27.74%
C	Manufacturing	0.68%	1.36%
D	Energy supply	15.44%	7.99%
E	Water supply	23.41%	24.14%
F	Construction	2.28%	3.50%
G	Wholesale and retail trade	8.26%	8.89%
H	Transportation and storage	-2.11%	-1.44%
I	Hotels and restaurants	9.39%	14.83%
J	Information and communication	19.96%	20.59%
K	Financial and insurance activities	13.10%	15.89%
L	Real estate activities	11.09%	17.96%
M	Professional services (scientific, technical)	23.84%	26.39%
N	Other services (administrative, support services)	22.30%	28.42%
O	Public administration	14.35%	15.72%
P	Education & childcare	31.71%	39.62%
Q	Healthcare and social work activities	15.20%	12.13%

Results: Example Technopol

- ▶ Technopols enhance **regional value** creation chains and networks
- ▶ Technopols support the **structural transformation** of the Lower Austrian economy
- ▶ Technopols promote the creation of a **knowledge-intensive economy**



KNOW
HUB



Interreg IV “Regional Initiative Project” KNOW HUB

**Enhancing the regional competencies in strategic
management of innovation policies**

priority “Innovation and the knowledge economy”

www.know-hub.eu

Partner



Adam Mickiewicz University Foundation, Poznan Science and Technology Park - Lead Partner (PL)



European Association of Development Agencies (BE)



INNOVA Észak-Alföld Regional Development and Innovation Agency Nonprofit Ltd (HU)



Basque Government, Department for Industry, Innovation Commerce and Tourism (ES)



North France Innovation Development (FR)



Méditerranée Technologies, Provence-Alpes-Côte d'Azur (FR)



Amt der NÖ Landesregierung, Abteilung Wirtschaft, Tourismus, Technologie (AT)



Arbeitsgemeinschaft der Landkreise und kreisfreien Städte in Weser-Ems (DE)



Banská Bystrica Self-governing Region



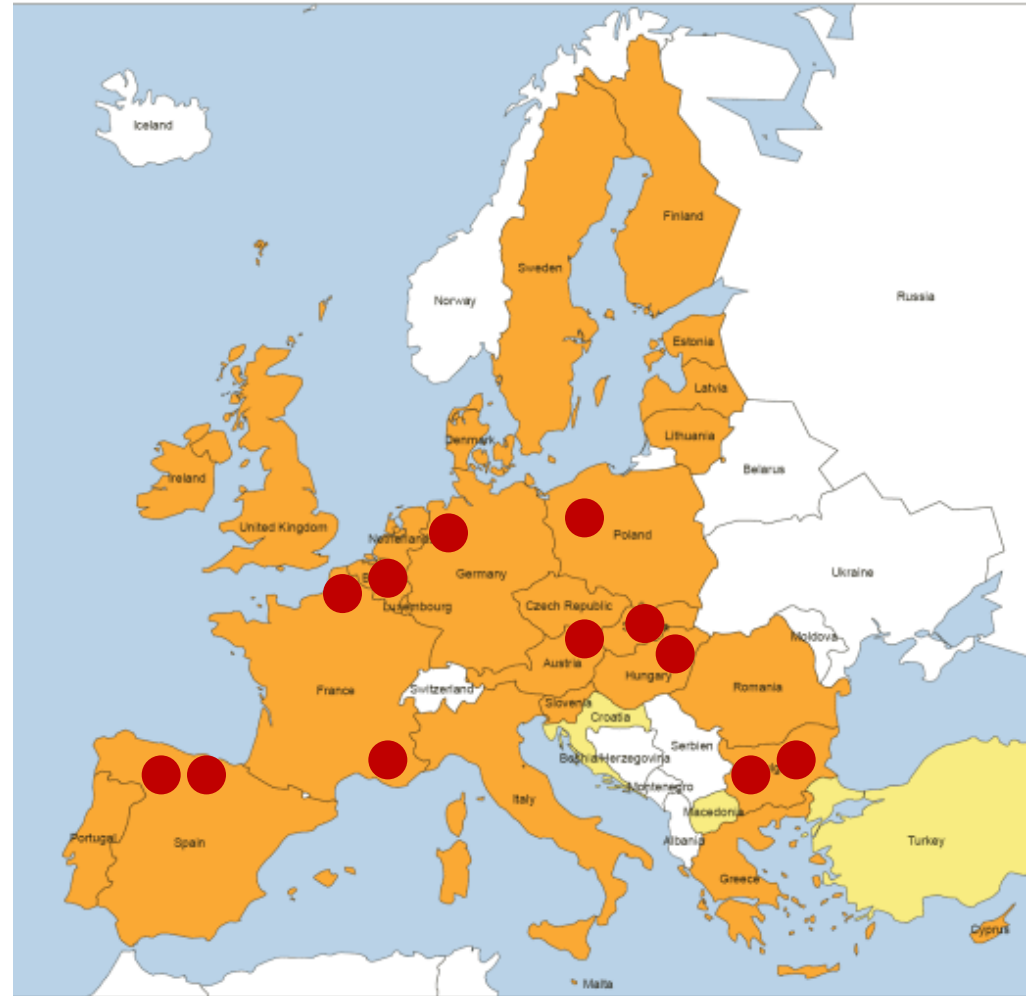
Castilla y León Regional Government – the Castilla y León Universities Foundation (ES)



Applied Research and Communications Fund Sofia (BG)



Municipality of Gabrovo (BG)



About the KNOW HUB project

- **Main issues:**
 - „Regional Innovation Smart Specialisation Strategies“ – RIS3
 - Successful instruments of regional innovation policy
- KNOW-HUB bridges the gap of shortage of knowledge, skills and experience of European regions in designing and implementing smart and effective strategies for innovation.

First analysis results: hot topics

- R&D&I = technology focus
- Lack of innovation culture
- Limited regional power in terms of budget & decision making
- Lack of budget – process of budget allocation
- Lack of coordination
- Too few – too many RIS actors
- Too many priorities
- Historical & structural particularities
- Sector – cross sectorial approach

Thank you for your attention!

Any questions?

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Amt der Niederösterreichischen Landesregierung
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