CENTRAL EUROPE RESEARCH TO INNOVATION MODELS

findings of CERIM project

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- RSA 2010, Pecs, 25. 5 2010 -

MODELS?

CONTENT

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- About CERIM
- Motivation
- Method
- Results
- Conclusion

This project is implemented through the CENTRAL EUROPE Programme co-financed by the ERDF.

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Short facts

- CERIM is financed by the Interreg CENTRAL EUROPE Programme of the European Union
- 10 partners operating in 7 European countries
- Project duration: 36 months
- Objective: to develop a **tech transfer model** for the Central Europe area

ABOUT CERIM

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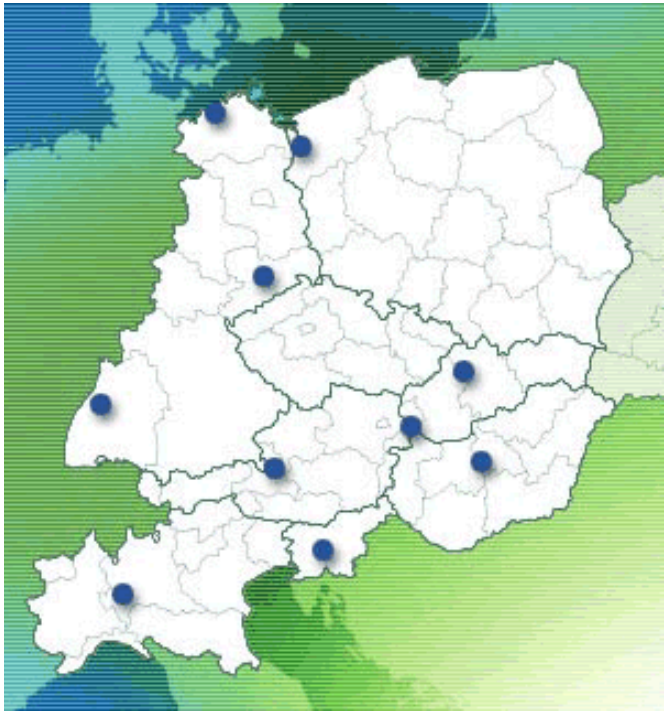
Partnership



- PVA-MV (Rostock)
- inno AG (Karlsruhe)
- Chemnitz University of Technology
- ITG Innovation and Technology transfer (Salzburg)
- Slovak Academy of Sciences (Bratislava)
- University of Zilina
- Foundation Forum GRYF (Szczecin)
- ValDeal Innovation Services (Budaörs)
- Institute for Innovation and Development of University of Ljubljana
- Eurogroup Consulting (Milano)

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Techonology and Knowledge Transfer

TT facts

- Goal: to protect and commercialize the knowledge created at research institutions
- USA as a model: Baye-Dohle act in 1980 & formalized TT
- Result:
  - Legal regulations
  - Research organizations today have a **policy** and a **system** (usually TTOs) for technology transfer

MOTIVATION

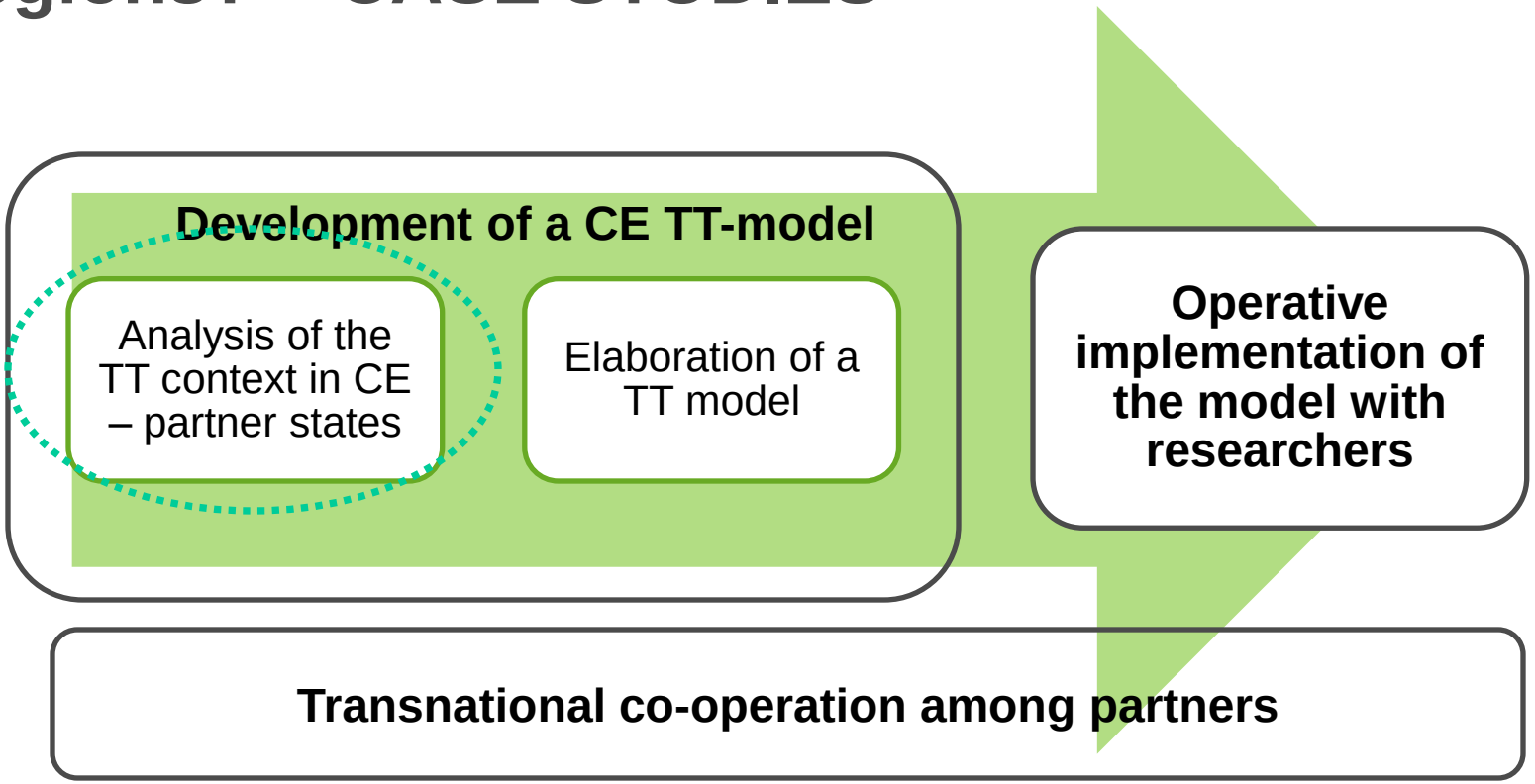
- **Innovation and technological development are important competitive advantages** in an increasingly globalised setting. The contribution of institutions of higher education and research to innovation and the welfare of the European economy is a key concern of regions and nations.
- Most regions and states however **lack well-functioning technology transfer organisations** capable of supporting academic-based innovations and their transition to the markets.

In particular problems are typically related to:

- **Unclear policy and legal frameworks**
- **Lack of motivation of research institutions and of researchers**
- **Lack of qualified personnel managing the technology transfer process**
- **Lack of networks to regional, national and international resources, industrial partners and venture capital**

METHODOLOGY

How to get to the RTT model through these regions? – CASE STUDIES



REGIONAL KEY FACTS

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Region	Pop. (mio)	GDP p.c. (EUR)	Patents p. mio inh.	Tertiary education	R&D intensity
Austria Salzburg	0,5	NA	NA	10,20%	NA
Germany, BW	10,7	33.876	385	13,00%	4,200%
Germany, MV	1,7	21.439	26	1,60%	1,400%
Germany, Saxony	4,2	22.620	69	5,20%	2,300%
Hungary, Budapest	2,9	14.800	39	**42,60%**	1,370%
Italy, Lombardia	9,6	32.326	113	12,00%	1,120%
Poland, Szczecin	1,7	NA	2	4,45%	0,002%
Slovakia, Bratislava	0,6	18.590	NA	**32,79%**	NA
Slovakia, Žilina	0,7	8.552	NA	23,03%	0,310%
Slovenia, Ljubljana	0,5	22.286	NA	(115.944 people)	1,560%

Regions can be classified in relation to the state – effect of centralization, influence of traditional industries, economic changes,…

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EIS 2009 – RIS results

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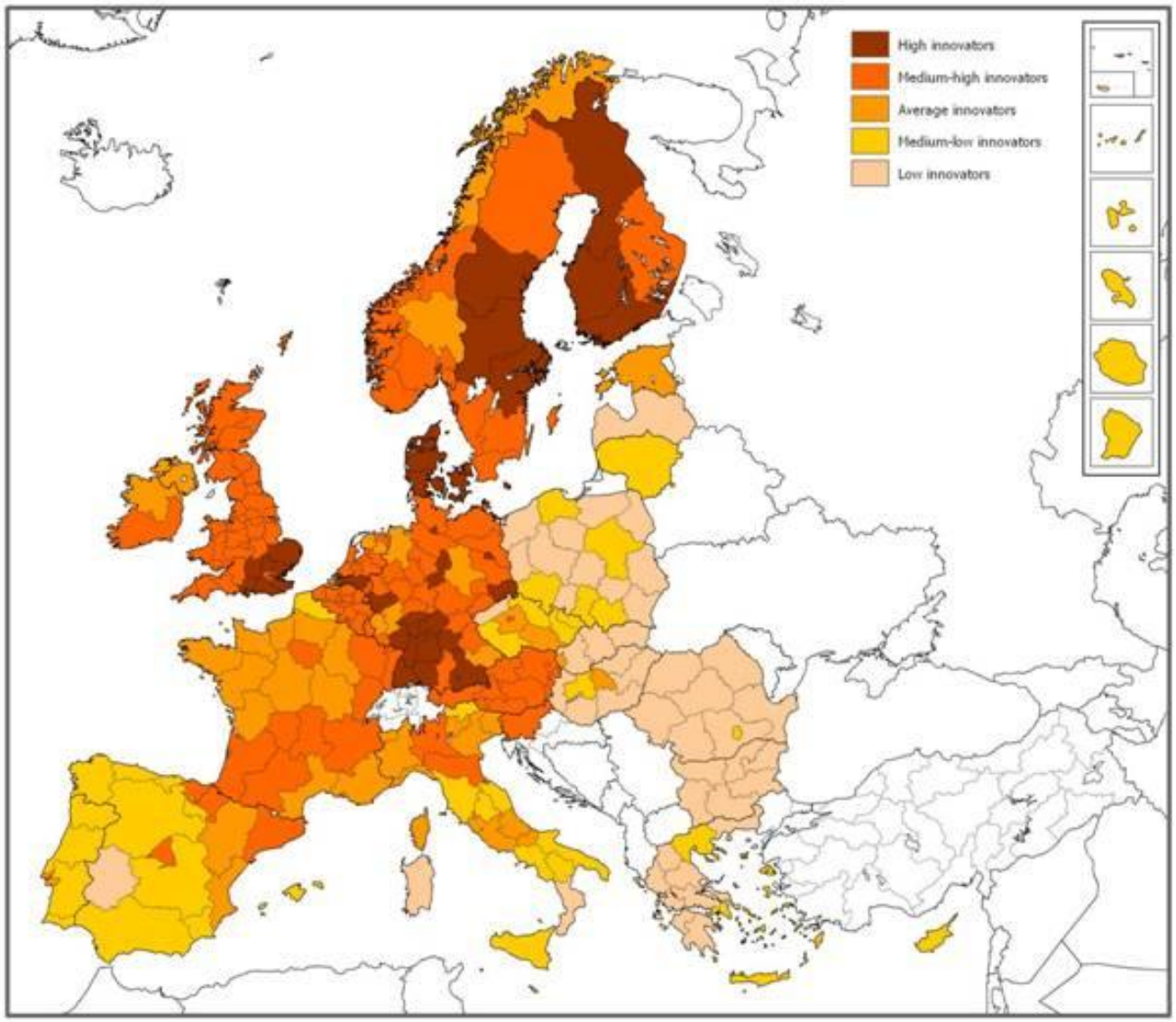

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RESULTS

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European Innovation Scoreboard 2008

Group	Members	Innovation performance
Innovation leaders	Denmark, Finland, **Germany**, Switzerland, Sweden, UK	Well above the EU27 and all other countries
Innovation followers	**Austria**, Belgium, France, Ireland, Luxembourg, the Netherlands	Bellow innovation leaders, above EU27
Moderate innovators	Cyprus, Estonia, Iceland, **Slovenia**, Czech Republic, Greece, **Italy**, Norway, Portugal and Spain	Below EU27
Catching-up countries	Bulgaria, Croatia, **Hungary**, Latvia, Lithuania, Malta, **Poland**, Romania, **Slovakia** and Turkey	Well below the EU average

CERIM includes countries which represent the innovation leaders in Europe; however, most of the countries are below the EU27 average when it comes to innovation performance.

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Innovation structure in the regions

- Innovation policies & NIS developed in all countries
- Increased activity after IPR regulation (year 2000 and later)
- National and regional innovation systems well developed in Austria, Germany, Italy, whereas new member states are lagging behind

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Policy documents

- **National**
  - Cooperation PROs-industry
  - Support for HR
  - Entrepreneurial spirit & SMEs
  - TT management

- **Regional**
  - Specificities of the region (e-tourism in Salzburg; meta-disctricts in Lombardia)

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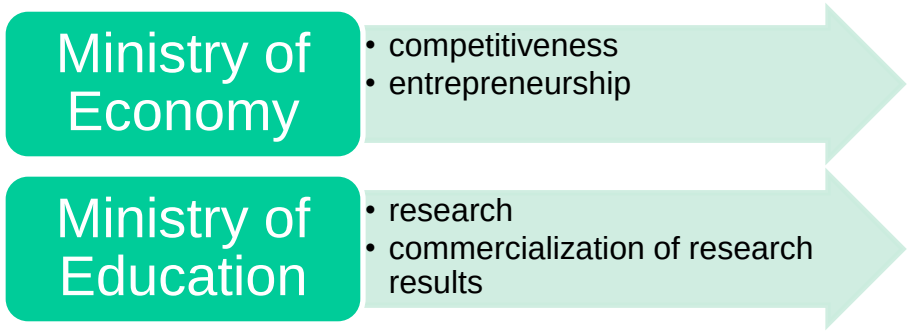
Actors and coordination



- **Implementation: Bodies subordinate to ministries**
  - Agencies, banks/funds
  - Providing & administrating funds

- **No formal functioning coordination platform between actors in the country/region**
  - **Social ties**, and not formal ways used for communication and cooperation

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FRAMEWORK CONDITIONS

Legislation and regulation

- **IPR** (year 2000 and later) and R&D regulation
  - Code for Intellectual Property Italy
  - Innovation tax Hungary
  - Innovation support act Poland
- **Legislation for** better conditions and functioning of **companies** (cutting the red-tape)
  - E-services
  - Electronic registers of companies

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Cultural and social attitudes

Key values for successful TT:

- **Entrepreneurial spirit**
  - A scientist does not need to become an entrepreneur, but he must think about the potential of his/her knowledge/innovation might have!
  - Risk-taking, market
  - "Entrepreneurial regions" v. Austria, Italy

RESULTS

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Entrepreneurial spirit – Germany & Poland

*"… programmes support especially regions in **East-Germany** under the innovation **initiative "Entrepreneurial Region" ("Unternehmen Region")** of the Federal Ministry of Education and Research. Specific support measures for the former GDR-states in **Eastern Germany (New Länder)** should respond adequately to the special conditions in this region. EXIST – **Culture of Entrepreneurship**" (EXIST III) promotes **projects at universities and research institutions for a permanent anchorage of a culture of entrepreneurial self-help**."*

*"It is necessary to change Polish scientists' awareness and conviction. So far, scientists **have not been interested in principles of how the market works**. Furthermore, the cooperation between industry and science was very **seldom, based on informal** contacts. This attitude is like a barrier to TT. Distrust and the **fear of revealing know-how** accompanied relations between science and business."*

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RESULTS

- **Common values**
  - Commercialization of knowledge
  - Awareness of IPR and legal consequences
  - a vision of common interest for individual researchers, universities, and industry
  - Different logic and motivation in business (short term efficitent solutions) and science (long-term perspective, autonomy)

- **Tradition**

"The development of intense industry-science relations, high-tech oriented industrial sectors and technical universities built Germany's basis for RTT already in the 19th century. Sectors like the electronics, machinery, chemical and automobile industry are well-known examples for a traditional focus on high-tech areas. "

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Institutional setting

***Higher Education and Public Research institutions**:*

- *Applied-sciences and politechnics / tehnical universities*
- *Strong specialized research institutes*
- *Strong and clear policy framework + long-term financing*

CONCLUSION

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RTT MODELS – can there be one?

Common features of the types

- By content:
  - TTOs
  - Technology centres
  - Support mechanisms (incubators, technology parks, agencies)
- **By level of autonomy**
  - **TTOs as part of university**
  - **PPP (independent ,with regard for public interest, not-for profit)**
  - **Private (for-profit)**

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Area of specialization

- **Austria, Italy, Germany**
  - Large number of institutions
  - Tradition of TT

- **Poland, Slovakia, Slovenia**
  - TTOs at universities cater for the whole university
  - No **critical mass** of innovations
  - Recent (TTOs at universities related to IPR laws)

Two models

Is there background for common model in CE?

YES:

- similar NIS's;
- existing support mechanisms and institutions for TT, existing funding schemes;
- focus on SME's and/or entrepreneurship.

CONCLUSION

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"OLD COUNTRIES"	"NEW COUNTRIES"
• Austria, Germany,Italy • Well developed NIS • Good innovation performance	• Hungary, Poland, Slovakia, Slovenia* • Recent NIS • Critical mass of innovations

What works?

Policy- and institutional framework

- Government must set the formal structure
- Adapting successful models from abroad to local (country/regional) needs
- Clear laws and regulations
- Implementation of policies and measures – "*putting money where your mouth is*"

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What works?

System of financing

- Transparent
- Sustainable
- Motivating the employees

Clear and stable rules

- Laws and IPR policy should be understood by all stakeholders
- Clear policy of TTO's on share of profit and costs

Common values

- Knowledge can and should be commercialized!
- Openness, trust, interaction, communication, entrepreneurial spirit

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AND: Common sense

- Critical mass of researchers and innovations is needed for successful TT
- Copying the model does not mean you can copy its success!
- TT is symbolized by learning on mistakes and it never brings short-term results!
- A copy-cat can't turn into a tiger without the right attitude

TT is a marathon, not a sprint …

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Many lessons to learn …

Before you reach the finish!

Thank you !

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