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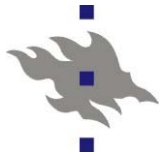
# Connecting rural regions to knowledge flows – Finnish experiences

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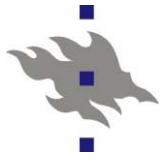
OECD; Investment priorities for rural development

**Ruralia Institute**



## **four points for the discussion**

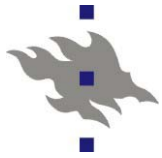
- Some features of the innovation activities in rural SMEs
- Why rural location might be a problem?
- Measures to support rural innovation activity in Finland?
- The case of EPANET – a ‘triple helix’ model to enhance innovation activity of rural SMEs in South-Ostrobothnia, a rural region in western Finland



## Innovation process in rural SMEs

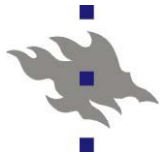
### Research findings:

- There is a great variation in innovation activity among rural SMEs and it is related e.g. to business sector, business network arrangements, company size and particularly internal human capital.
- There are numerous examples of rural SMEs that are highly competitive and their innovation activity and R&D networks are 'world class'.
- Interaction with customers and suppliers is clearly the driving force of innovation activities (vertical business partners).



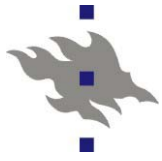
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- Innovation networks regularly include partners from outside the region i.e. 'regional innovation system' approach explains only part of the story.
- According to the SMEs own evaluation the lack of human capital and internal competences are the main hindlers for improving innovation activities.
- Innovations are developed in networks and they are results of social interaction where the role of trust is crucially important
- Informal 'coffee tables' are important units of creativity also in rural SMEs



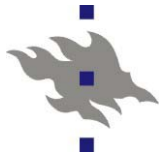
## possible problems with rural location

- Weak local labour markets.
- Less possibilities for informal interaction with external innovation actors (e.g. KIBS, knowledge transferring organisations, universities).
- Difficulties to get information about the needs of distant customers.
- However, clear potential for new innovations i.e. different kind of competences and resources.



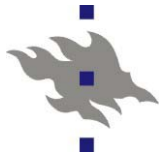
## **Regional approach to Finnish innovation system**

- The concept of 'national innovation system' was adopted in Finland in mid 1990s.
- The target has been to develop a balanced national innovation system that will support variety of key activities from basic research to business development and risk investments.
- Most of the public funding is allocated according to competition (quality of R&D and business plans).



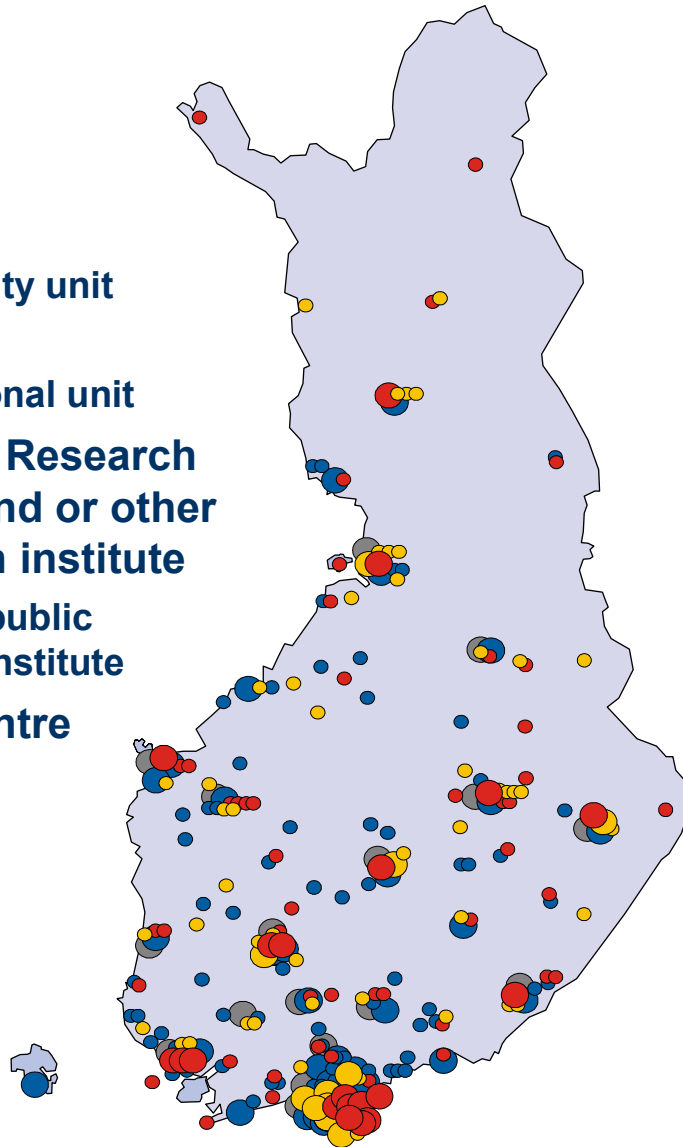
# Key actors of the Finnish innovation environment

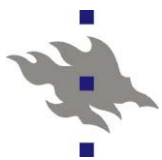




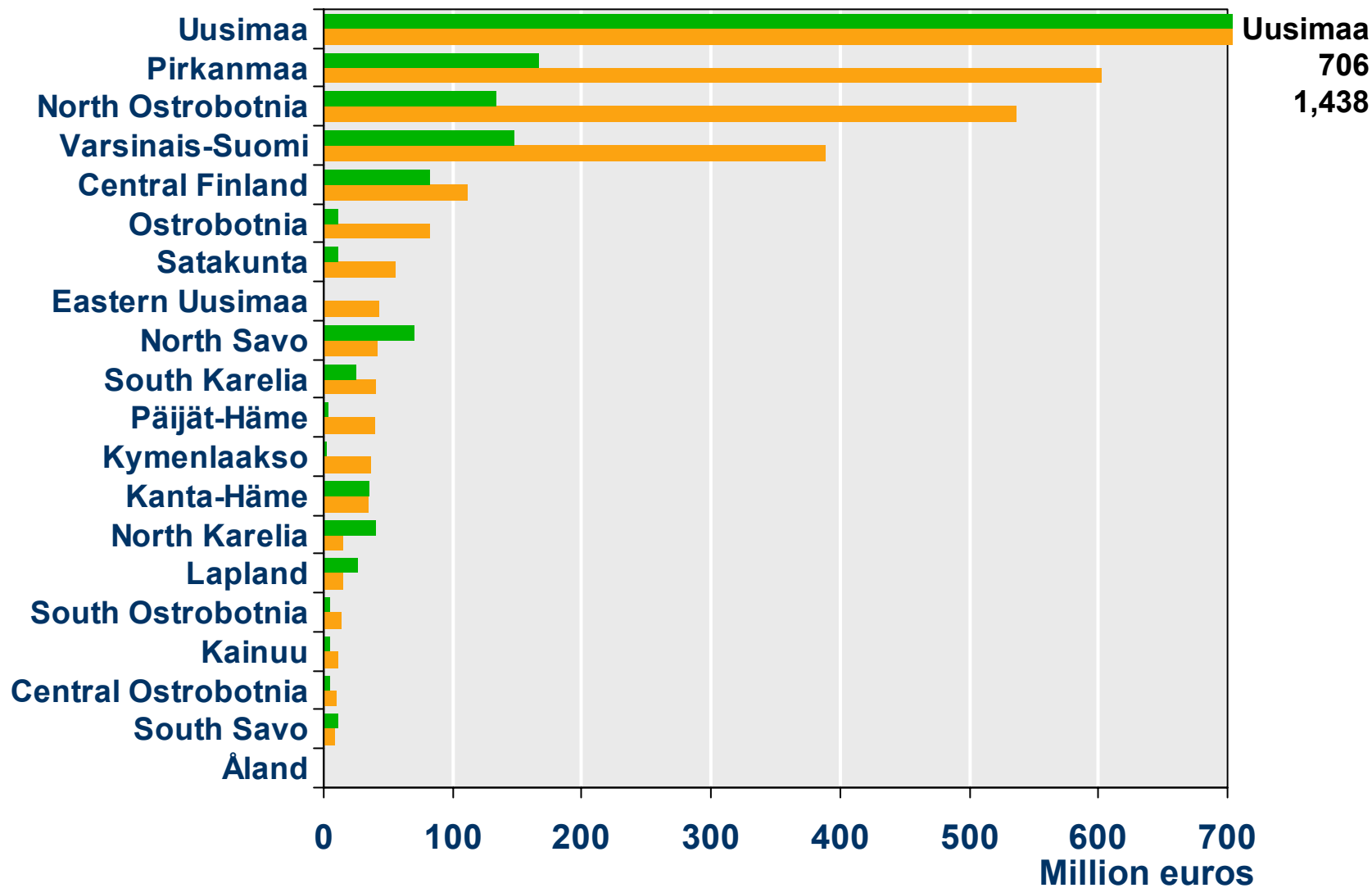
# Network of universities, polytechnics, public research institutes and technology centres in Finland

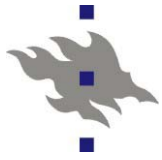
- **University**
- **Regional university unit**
- **Polytechnic**
- **Polytechnic regional unit**
- **VTT, Technical Research Centre of Finland or other public research institute**
- **Regional unit of public sector research institute**
- **Technology centre**





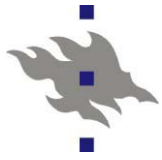
## R&D expenditure by region in 2003 (public and private)





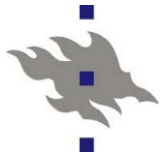
## Examples of actions to improve the performance of regional innovation systems

- Founding several new universities ( a total of 20) across Finland 1950-
- Investments to quality of expertise of polytechnics (30) 1990-
- Technology centres 1995-
- New funding instruments for R&D activities in SMEs
- Centres of expertise -programme
- A new university law, a 'regional development task task' for universities in addition to research and education 2004-



## **To which extent the 'critical mass' is spatial phenomenon?**

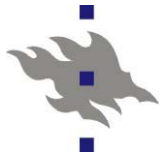
- Rather heated debate in Finland: Instead of regional approach should we support the development of few (4-6) internationally competitive innovation centres
- How the critical mass really works and to which extent it is spatial phenomenon?



## **EPANET – a case of 'triple helix' model in South-Ostrobothnia, Western Finland**

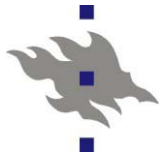
Situation in 1999:

- 200 000 inhabitants, capital Seinäjoki with 30 000 inhabitants
- Rather weak regional innovation infrastructure
- Low 'scientific creditability' to attract competed national and international R&D funding (R&D investments were one of the lowest in the country)
- Some nationally important clusters (food, wood-processing, metal industry, service sector), strong SME culture
- Political will to develop regional innovation infrastructure and culture



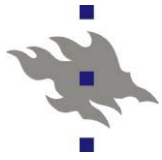
## **EPANET – objectives**

- Connect SMEs in the region better to the national and international knowledge flows
- Create a practical network model that will strengthen the regional research infrastructure and innovation activity in rural SMEs
- Support active networking between regional actors and important national bodies (universities, research institutions, active SMEs)
- Support the development of regional human capital and build-up innovative ‘coffee tables’
- Create model that is also at national level interesting and provides added value for all partners involved



## **EPANET – in brief**

- Establish new research professorships into nationally new (mainly multidisciplinary) and growing research fields that are also important for the regional clusters.
- Professors belong to the staff of different universities but they are acting in the capital of the region.
- Create research teams around each professor using national and international funding resources
- Ultimate goal is a multidisciplinary research community of 60 researchers focusing on interaction with rural SMEs.
- Funded by region, universities, over 100 SMEs, EU and ministry of education



## **Professor chairs 2006 (17)**

**Intelligent Systems**

**Logistics Systems**

**Electronic Business**

**Development of Entrepreneurship**

**Consumer Behaviour**

**Food Development**

**Aluminium Technology**

**Competitiveness of Urban Areas**

**Popular Music**

**Virtual Technology**

**Health Care Information Technology**

**Rural Entrepreneurship**

**Concept Management**

**Food Chains and Food Safety**

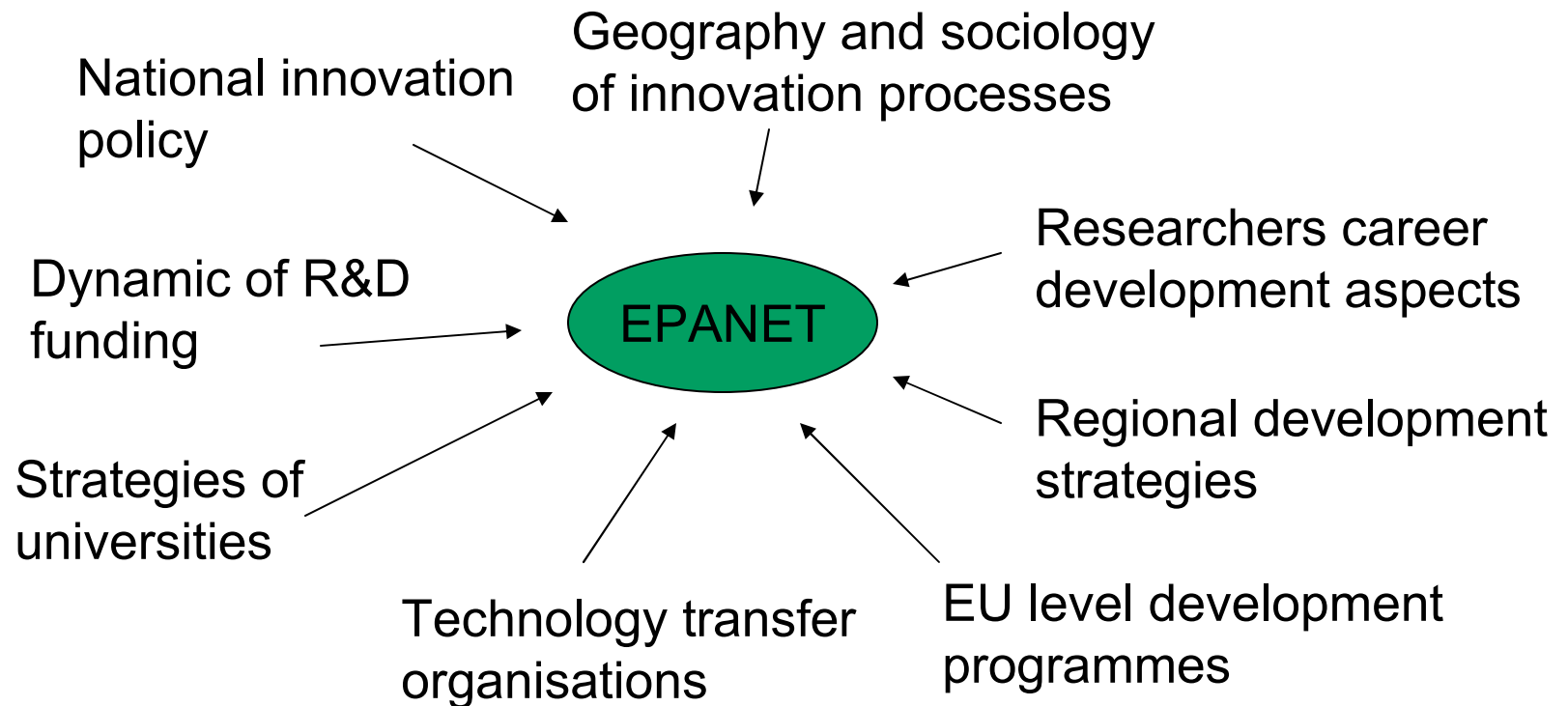
**Polymer Matrix Composites Technology**

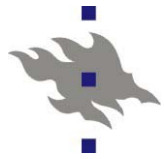
**Metal Engineering**

**Laboratory Medicine**



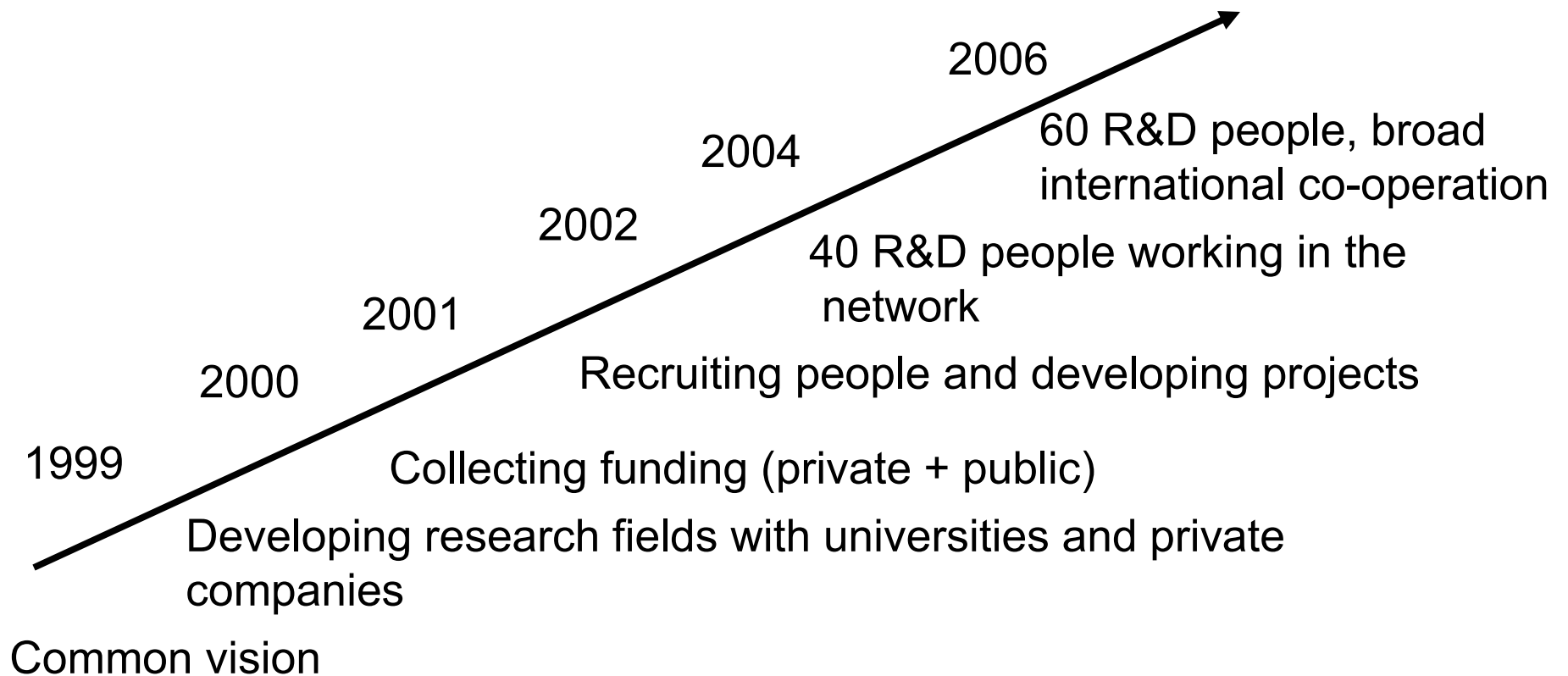
## EPANET – combining variety of aspects





## EPANET – after 7 years

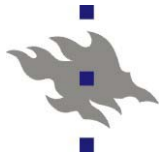
- Innovation culture in the region has developed to new level
- 200 SMEs are involved with R&D projects





## Conclusions

- Rural location is a challenge but not a total hinder for innovation activities in SMEs
- There are several examples of extremely innovative rural SMEs with ‘world class’ networks
- Internal competences are in critical role when developing innovation activities in rural SMEs
- Proximity matters because it creates informality and trust
- External knowledge and competences are usually behind the radical innovations in rural SMEs
- There is need for new practical ‘social innovations’ how to combine internal and external knowledge in rural development.



## Investment priorities

- Development of new practical models how to combine internal and external knowledge in rural SMEs (e.g. advisory boards, KIBS, business angels, investors, new interaction models for SMEs+universities+development organisation etc).
- Support the development of internal competence level in rural SMEs