

The role of innovation policies in regional development – the Finnish case

Innovations generate regional vitality

Knowledge, specialisation and networking determine success in international competition

Dr Veli-Pekka Saarnivaara

Director General

Tekes, the National Technology Agency of Finland



TEKES

Preconditions for the success of regions in Finland

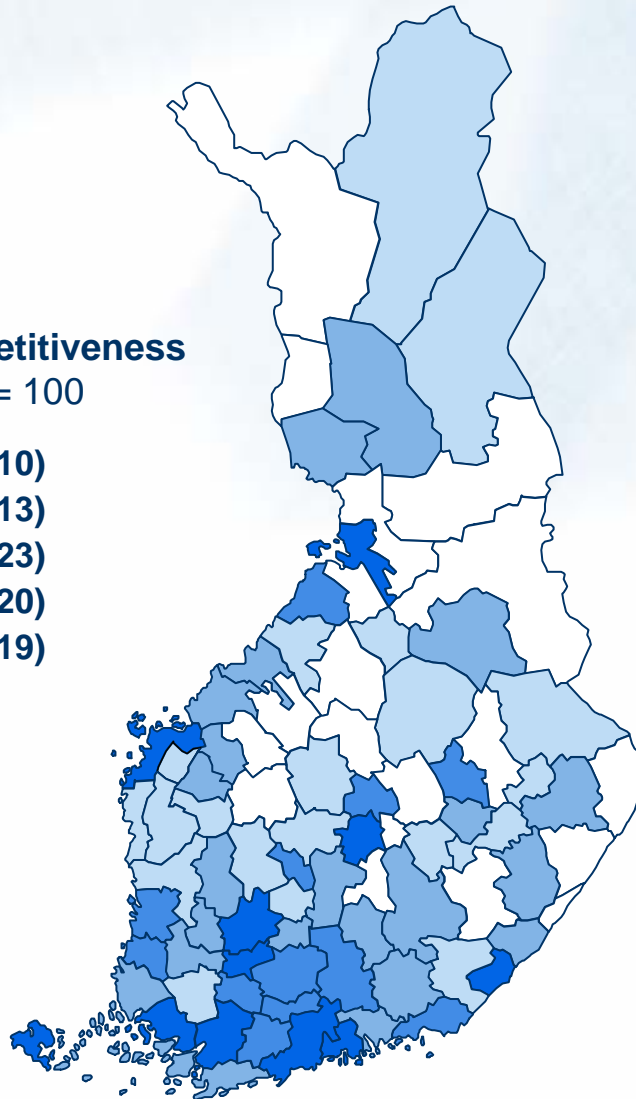
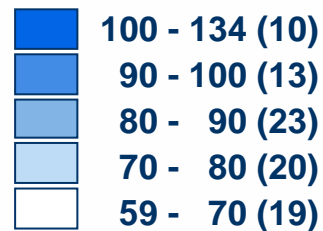
- **Success of a region depends on the success of its companies in global markets**
- **Companies' success on global markets requires internationally competitive technology and know-how**
- **Developing internationally competitive technology and know-how requires focusing and centralisation**
- **Effective networking and co-operation is essential for two reasons:**
 - **Technology in-sourcing: access to multiple technologies from several sources is usually necessary**
 - **Individual companies can also prosper outside the centres if they can access the knowledge and know-how they need through networking**



Competitiveness by region

Index of competitiveness

Whole country = 100



Competitiveness clearly correlates earnings growth, growth in employment, net migration and economic development.

A large part of the competitiveness is explained by human capital, innovation and R&D investment.

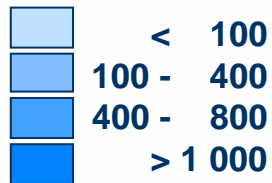
Source: Huovari, Janne - Kangasharju, Aki - Alanen, Aku. 2001. Alueiden kilpailukyky. Pellervo Economic Research Institute PTT, Publication 176.



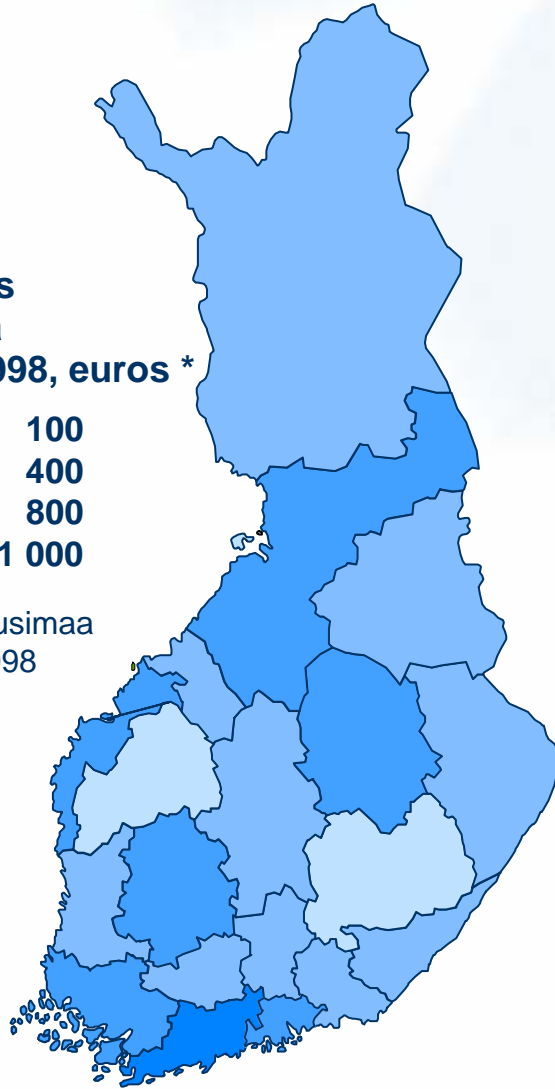
TEKES

Research and development costs and added value three years later by region

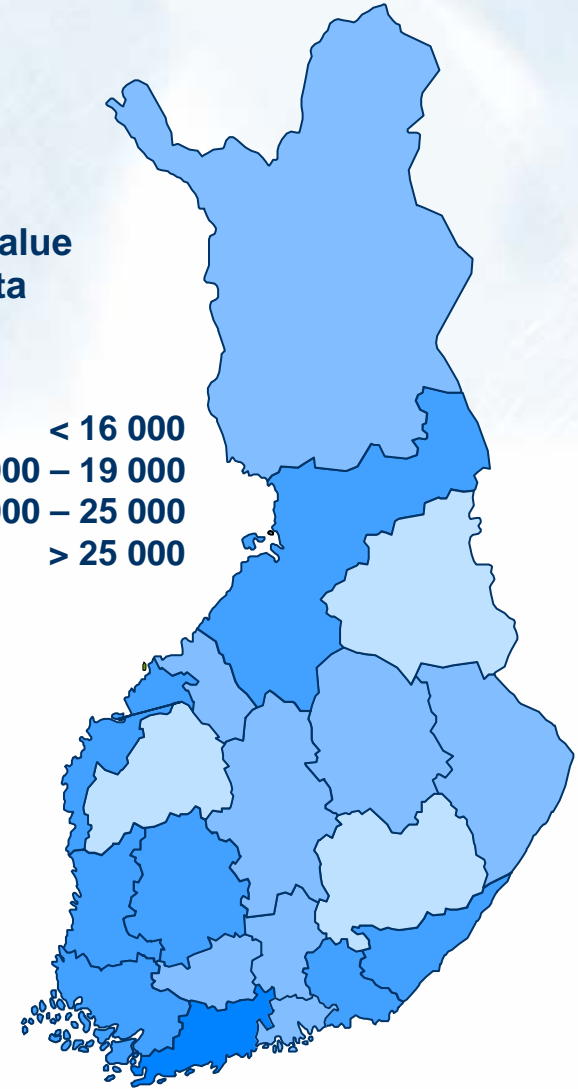
Average R&D costs per capita in 1995-1998, euros *



* Eastern Uusimaa 1997-1998



Added value per capita in 2000, euros

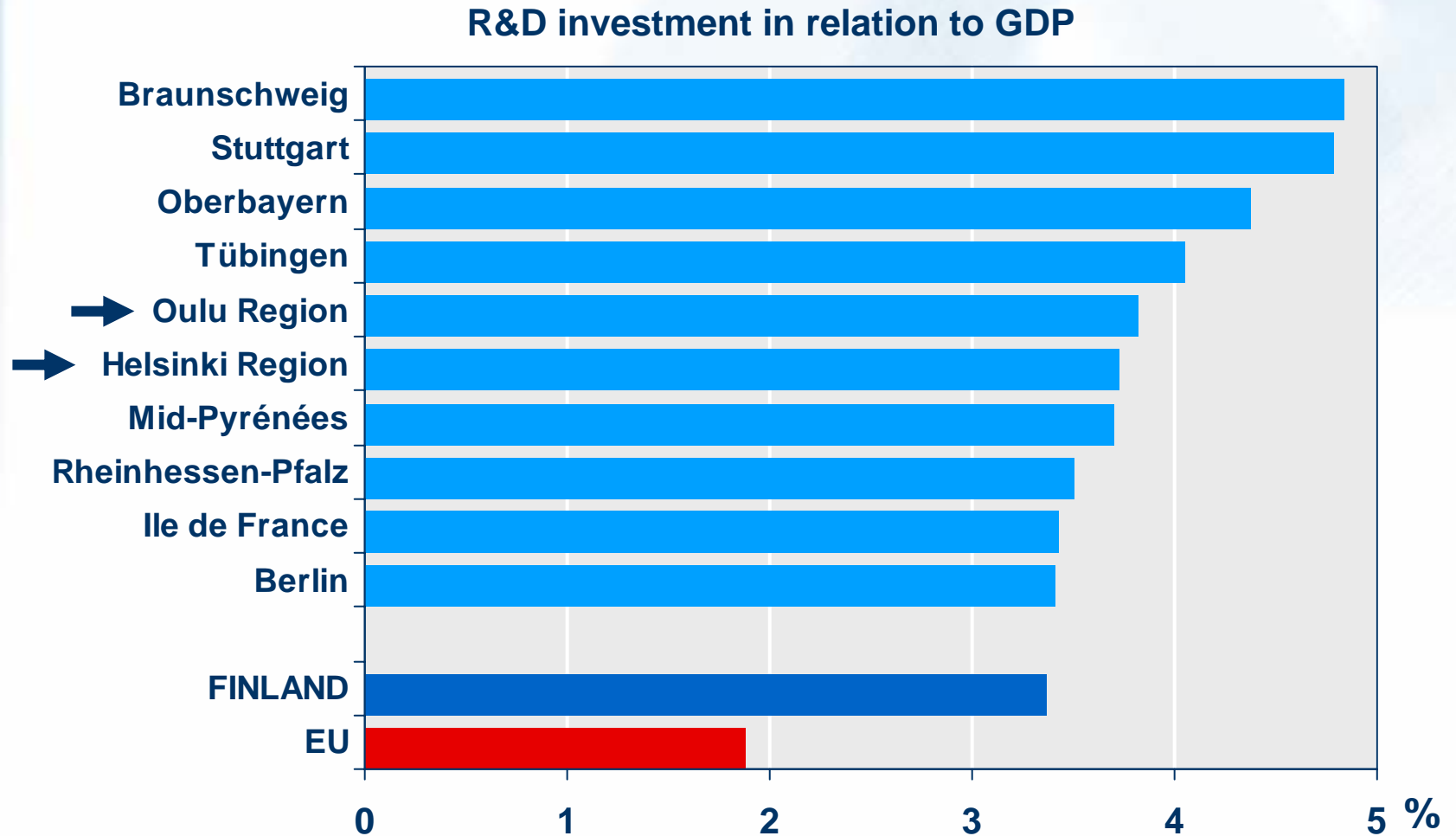


TEKES

Source: Statistics Finland

Top areas of research in Europe

10 top areas represent a quarter of total R&D investment in EU



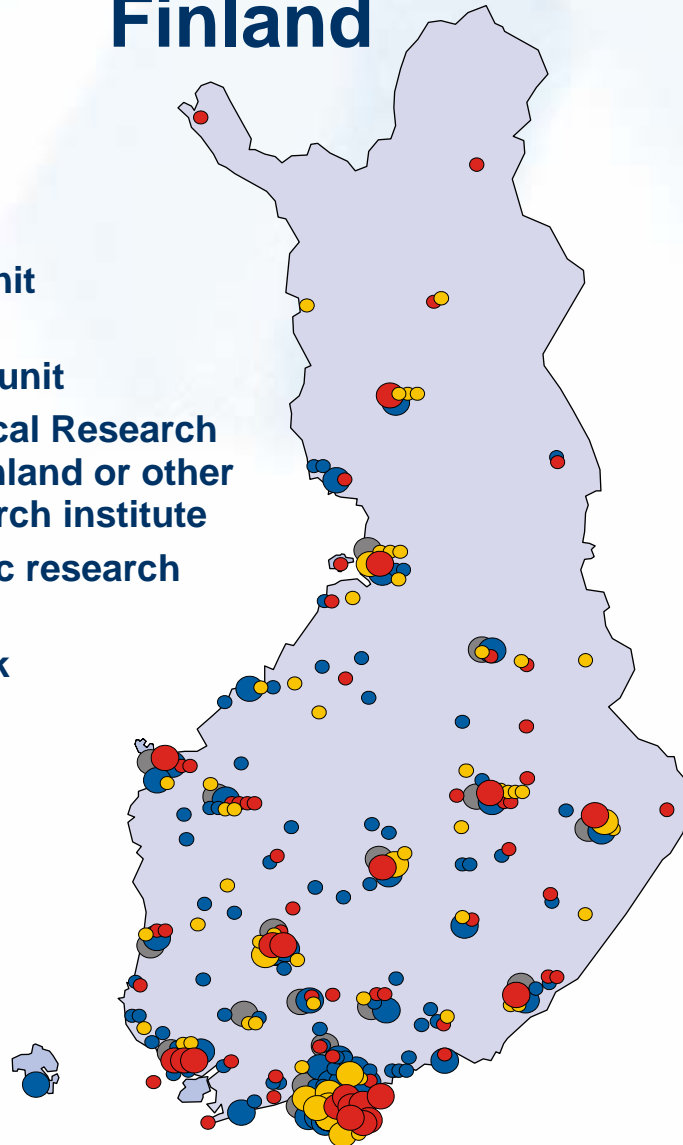
Source: European Commission, 2002



TEKES

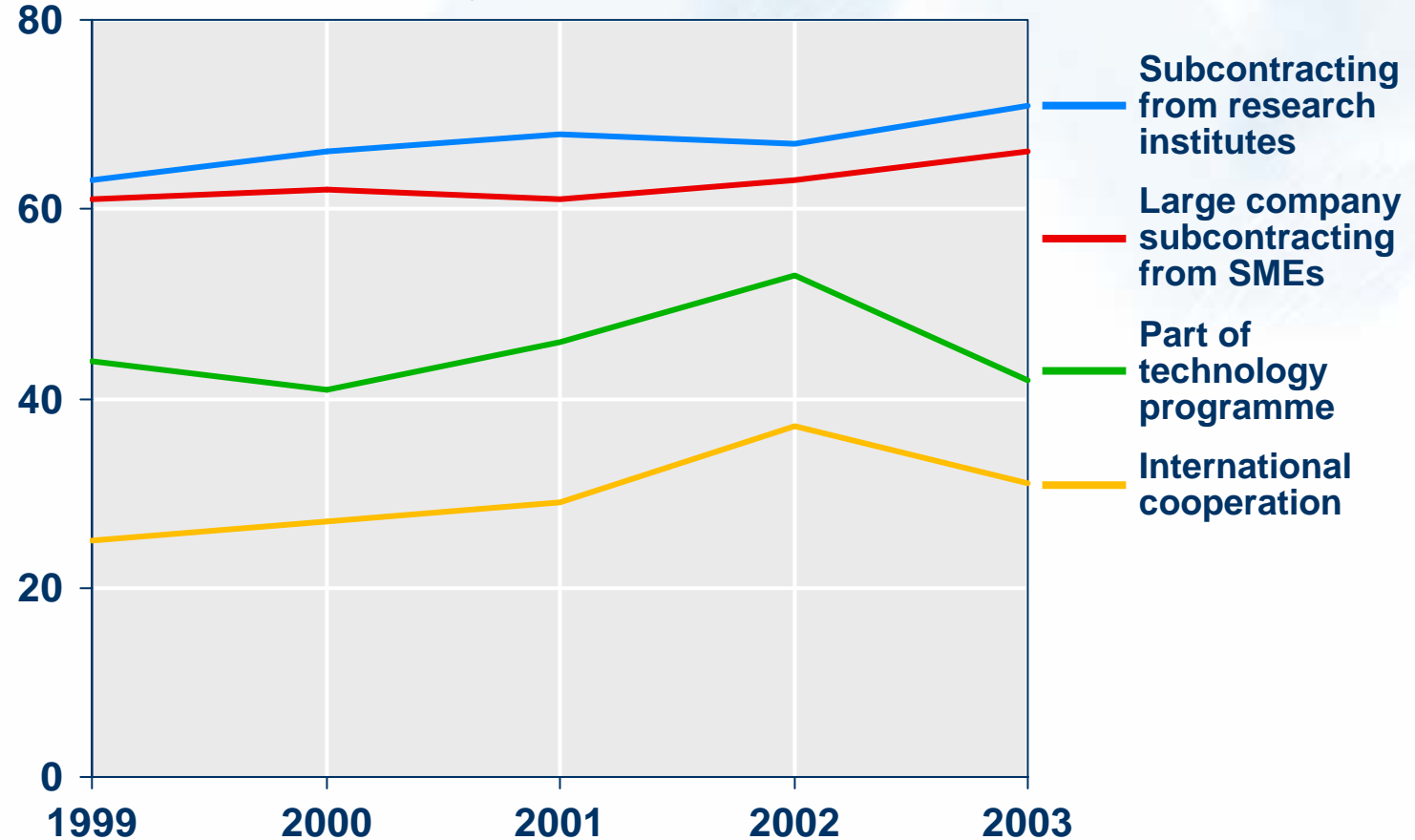
Network of universities, polytechnics, public research organisations and science parks in Finland

- University
- University unit
- Polytechnic
- Polytechnic unit
- VTT, Technical Research Centre of Finland or other public research institute
- Unit of public research institute
- Science Park



Networking in corporate R&D projects

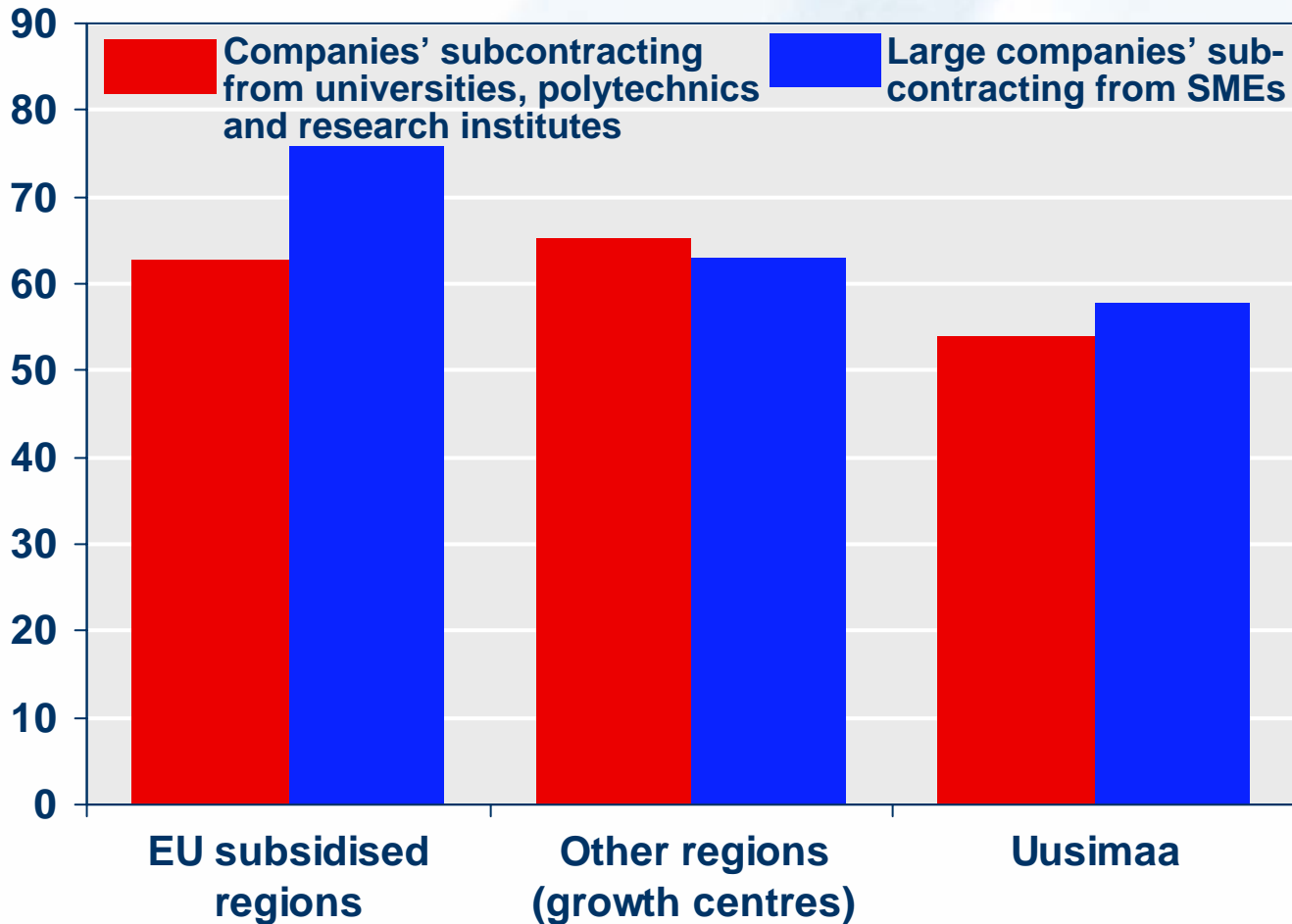
Share of networked projects, %



Almost all projects funded by Tekes in large companies and more than 80 per cent of all R&D projects were networked. The figures include corporate R&D projects, but not smaller feasibility studies.

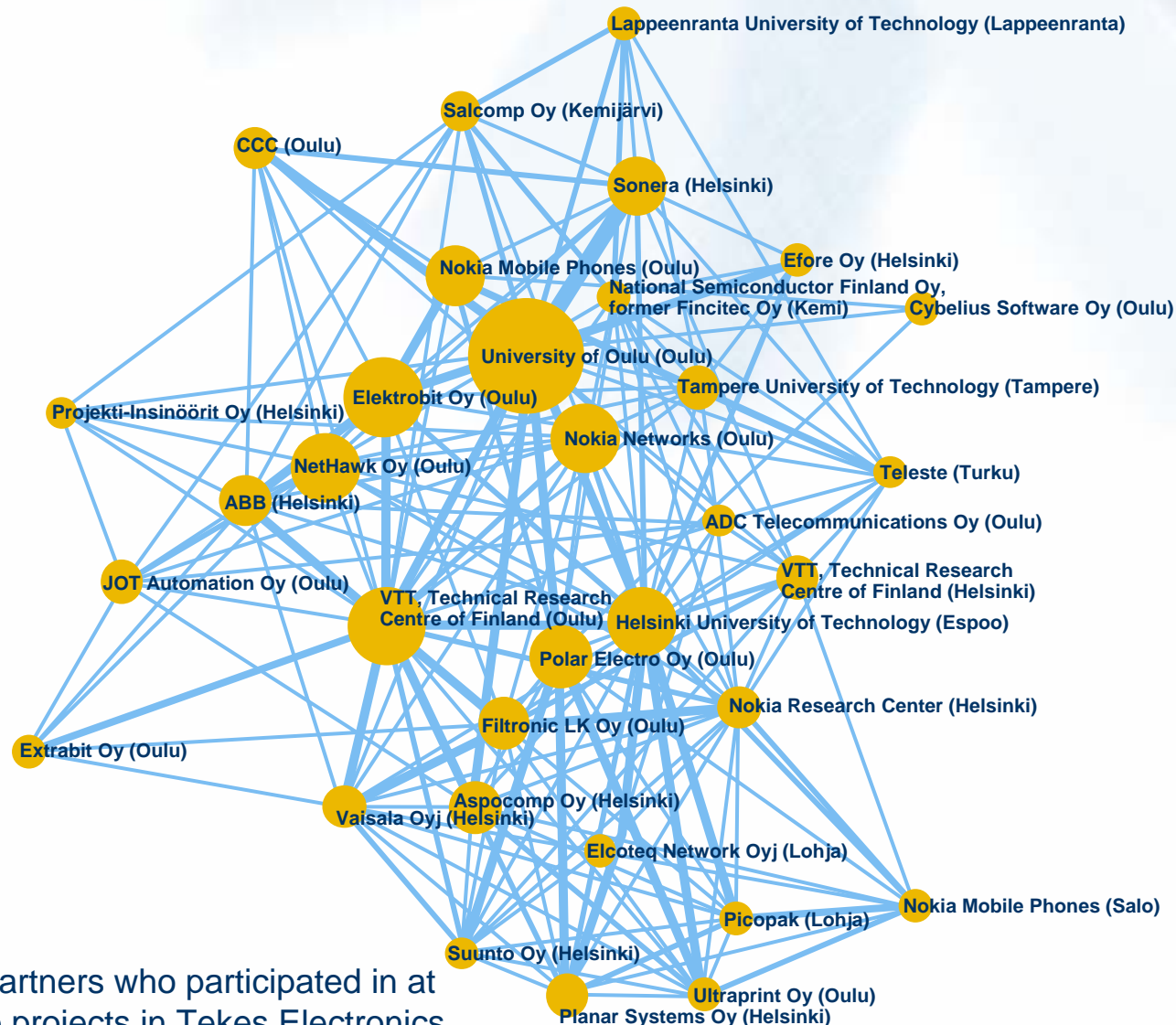
Networking by region in corporate R&D projects funded by Tekes

Average of networked projects in 2000-2003, %



TEKES

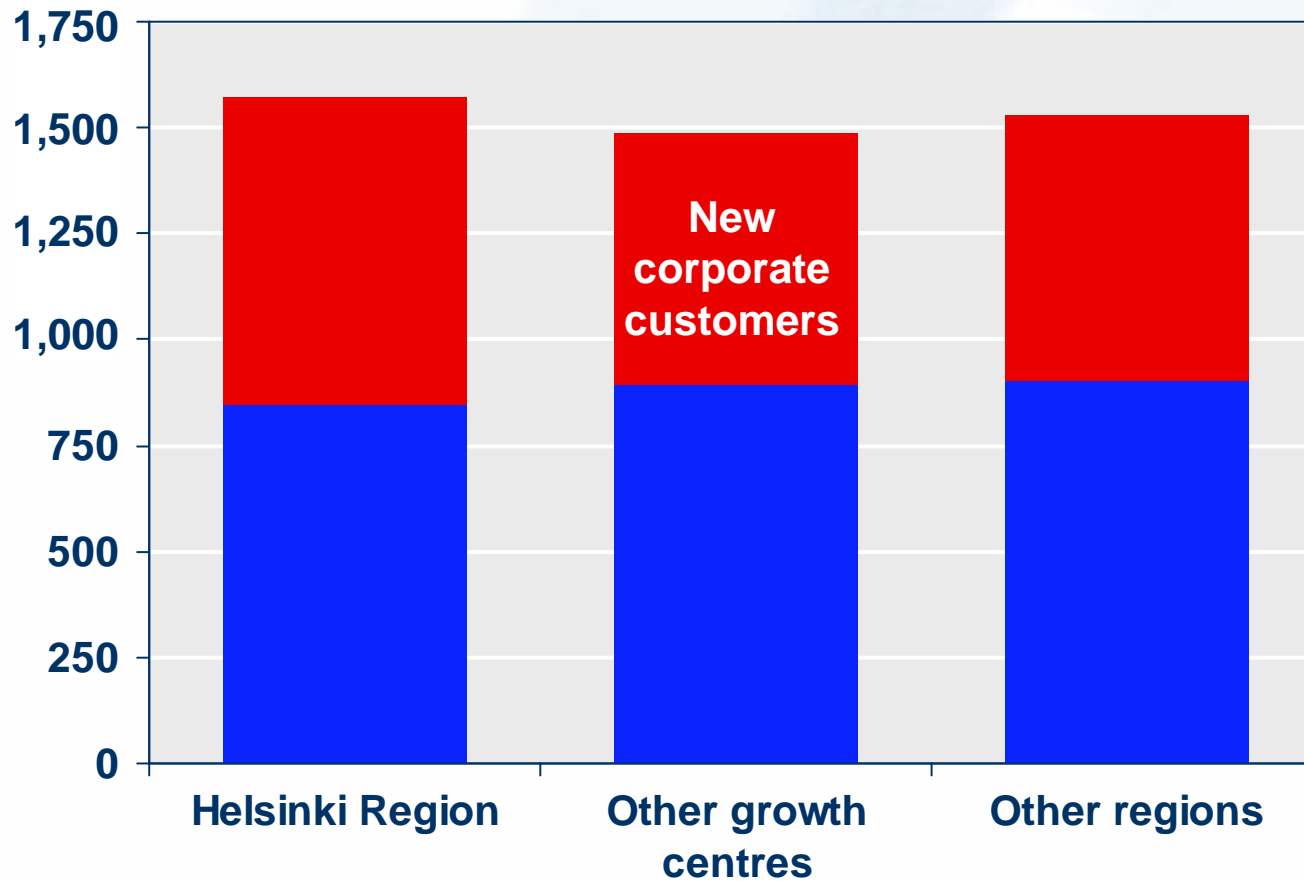
Regional networking with partners from Oulu in electronics and telecommunications programmes



Includes partners who participated in at least three projects in Tekes Electronics and Telecommunications technology programmes.

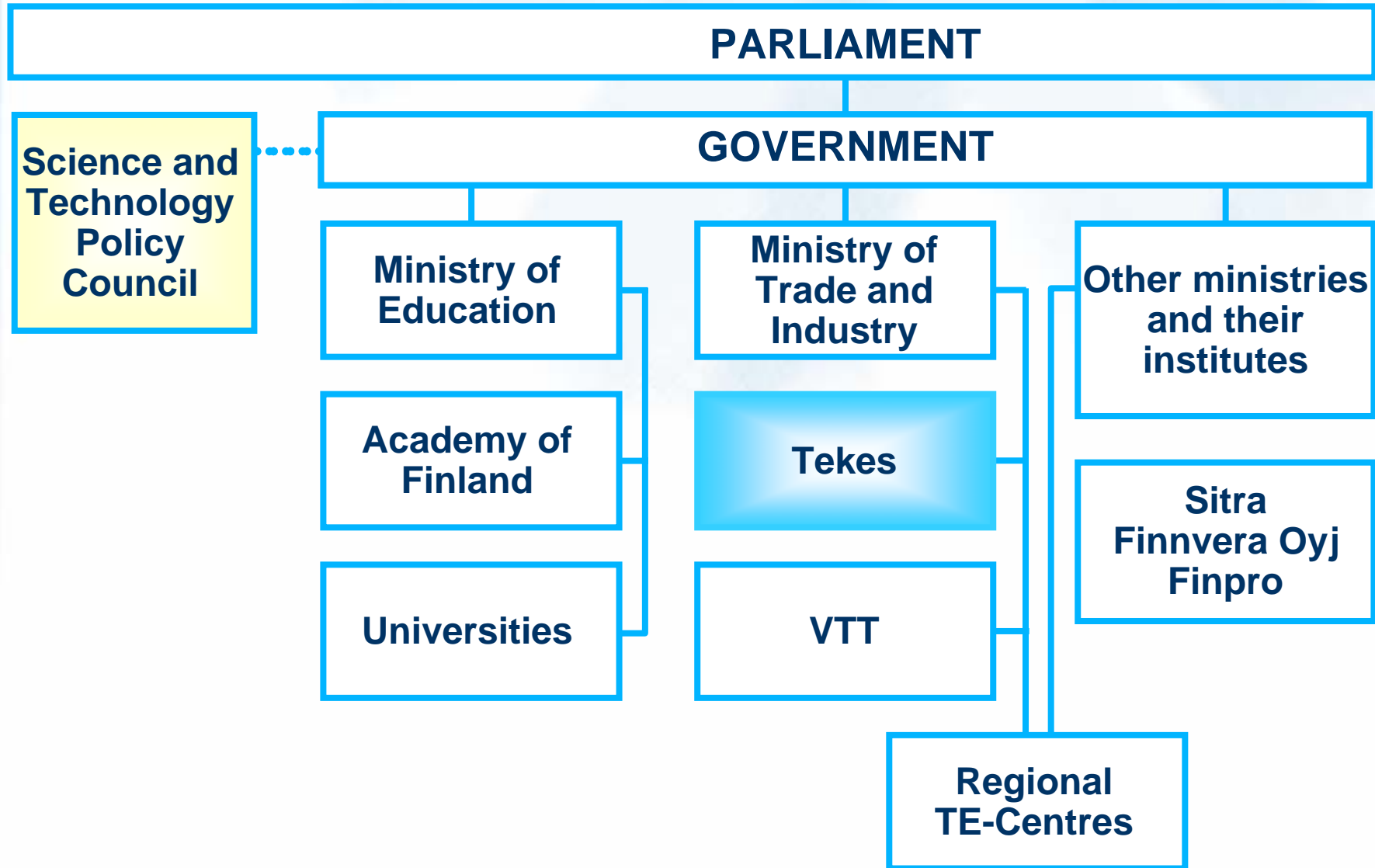
TeKes' corporate customers by region

Number of customers in 2000-2003



TEKES

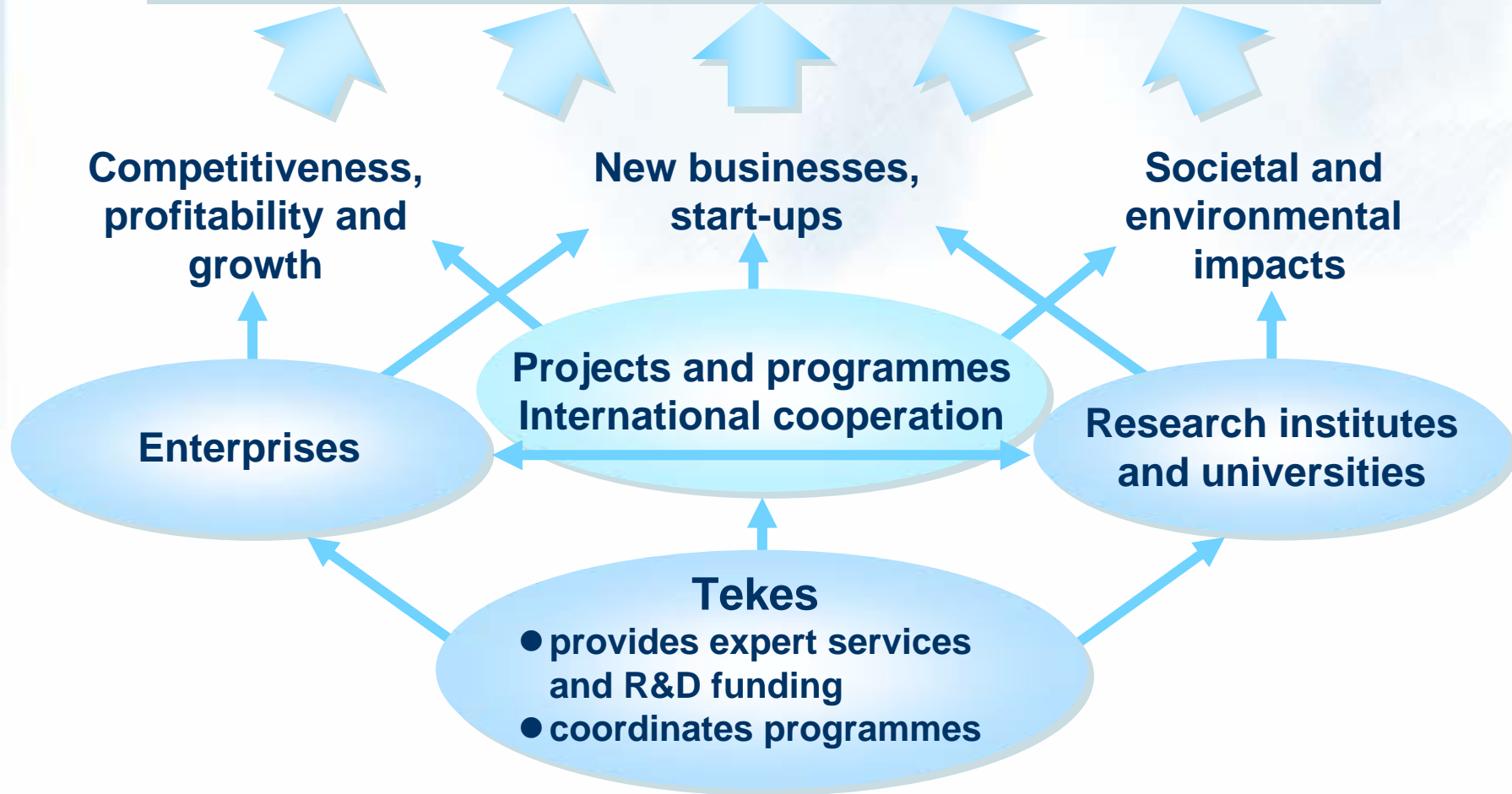
Public sector activities of R&D in Finland



TEKES

Impact of Tekes activities

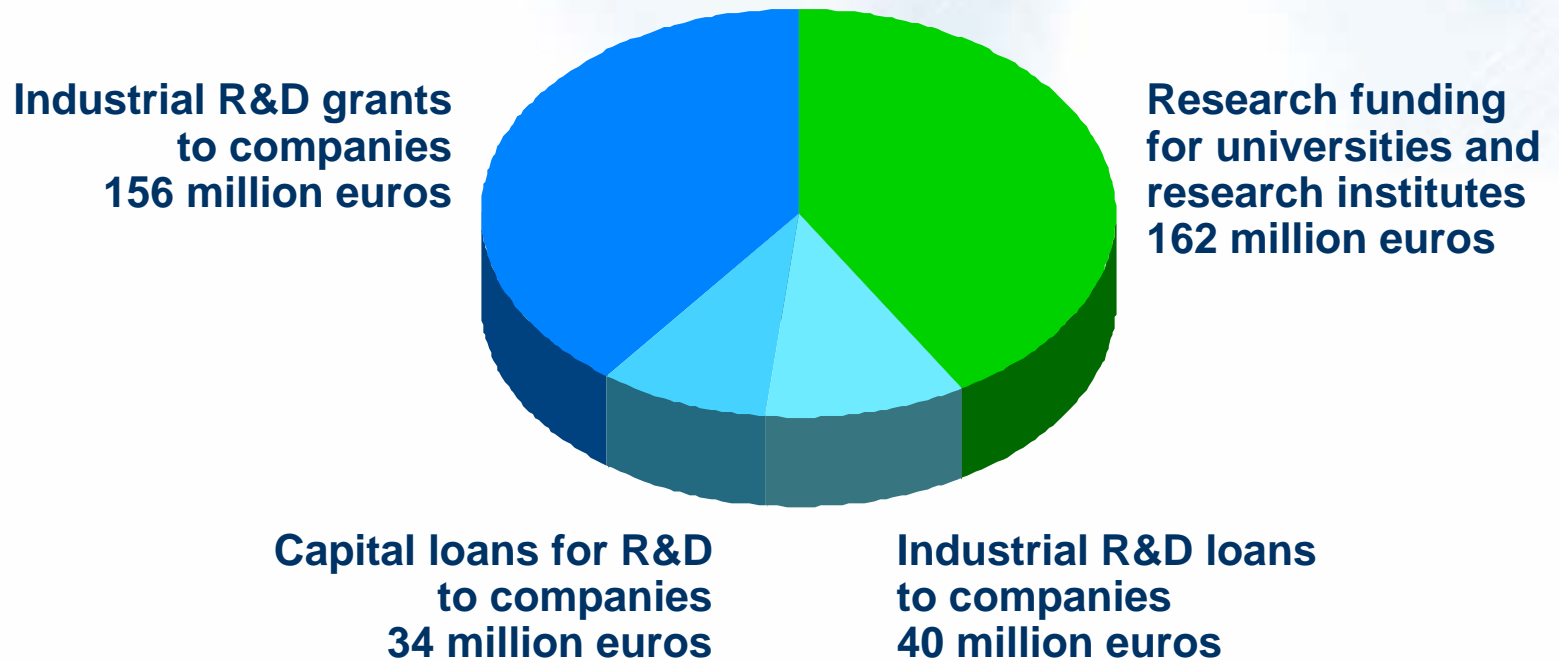
Boosting exports, broadening industrial and economic base, generating new jobs and improving well-being.



TEKES

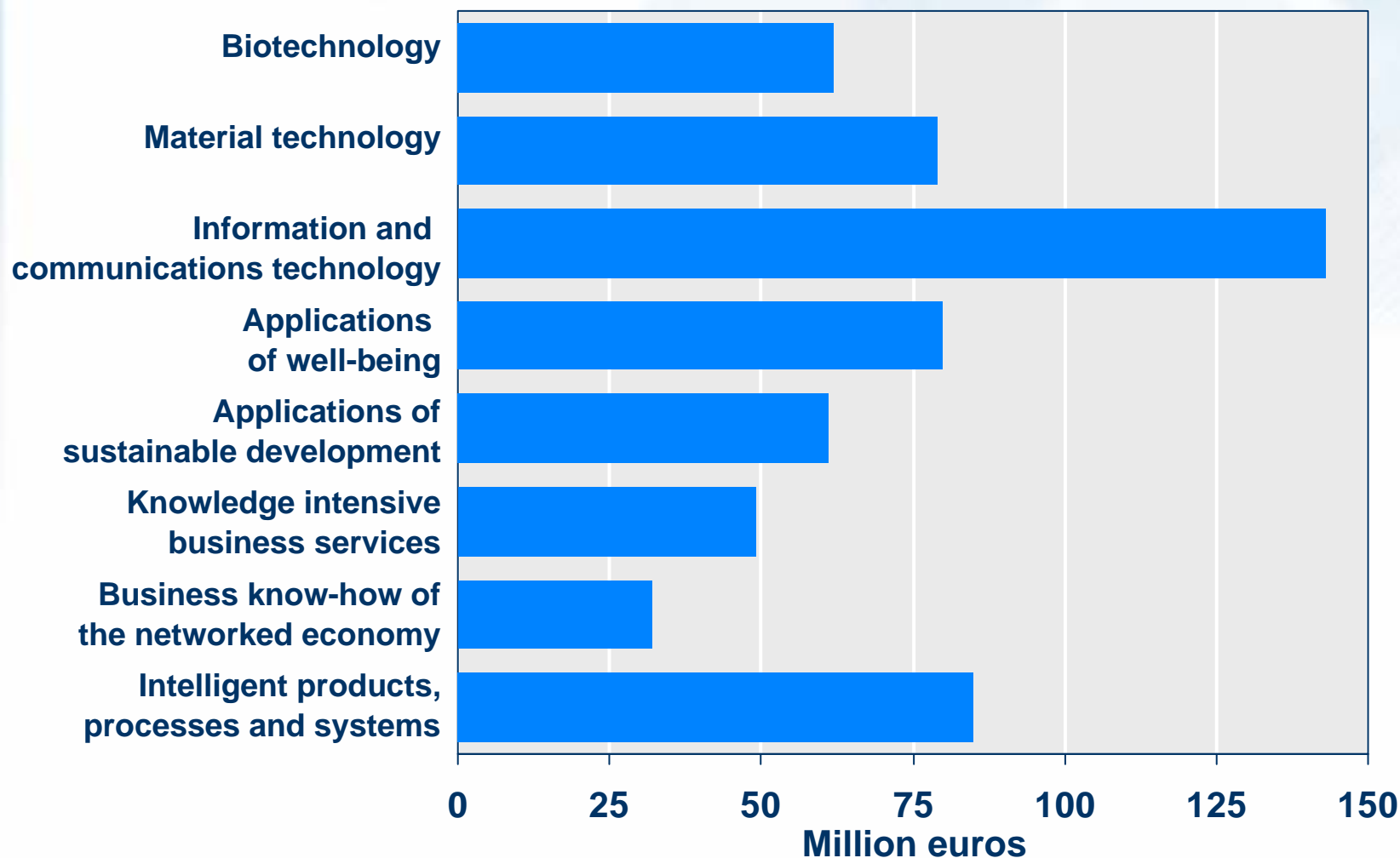
Total Tekes R&D funding in 2003

**Total 392 million euros and
2,196 projects**



TEKES

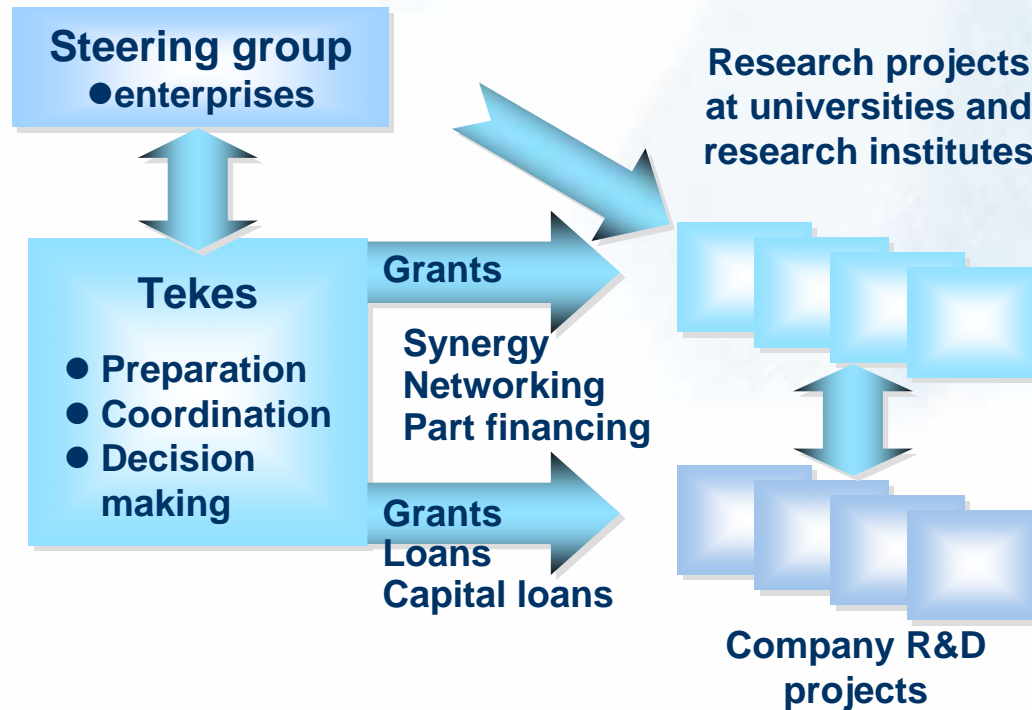
TeKes R&D funding per technology application areas in 2003



TEKES

Each project may be targeted to several areas.

Technology programmes in brief



- 24 ongoing programmes in the beginning of 2004 with a total cost of 1.3 billion euros
- Each programme typically lasts 3-5 years
- 2,000 company participations annually
- 800 research unit participations annually
- Tekes usually finances
 - 60-80% of university projects
 - 25-50% of company projects

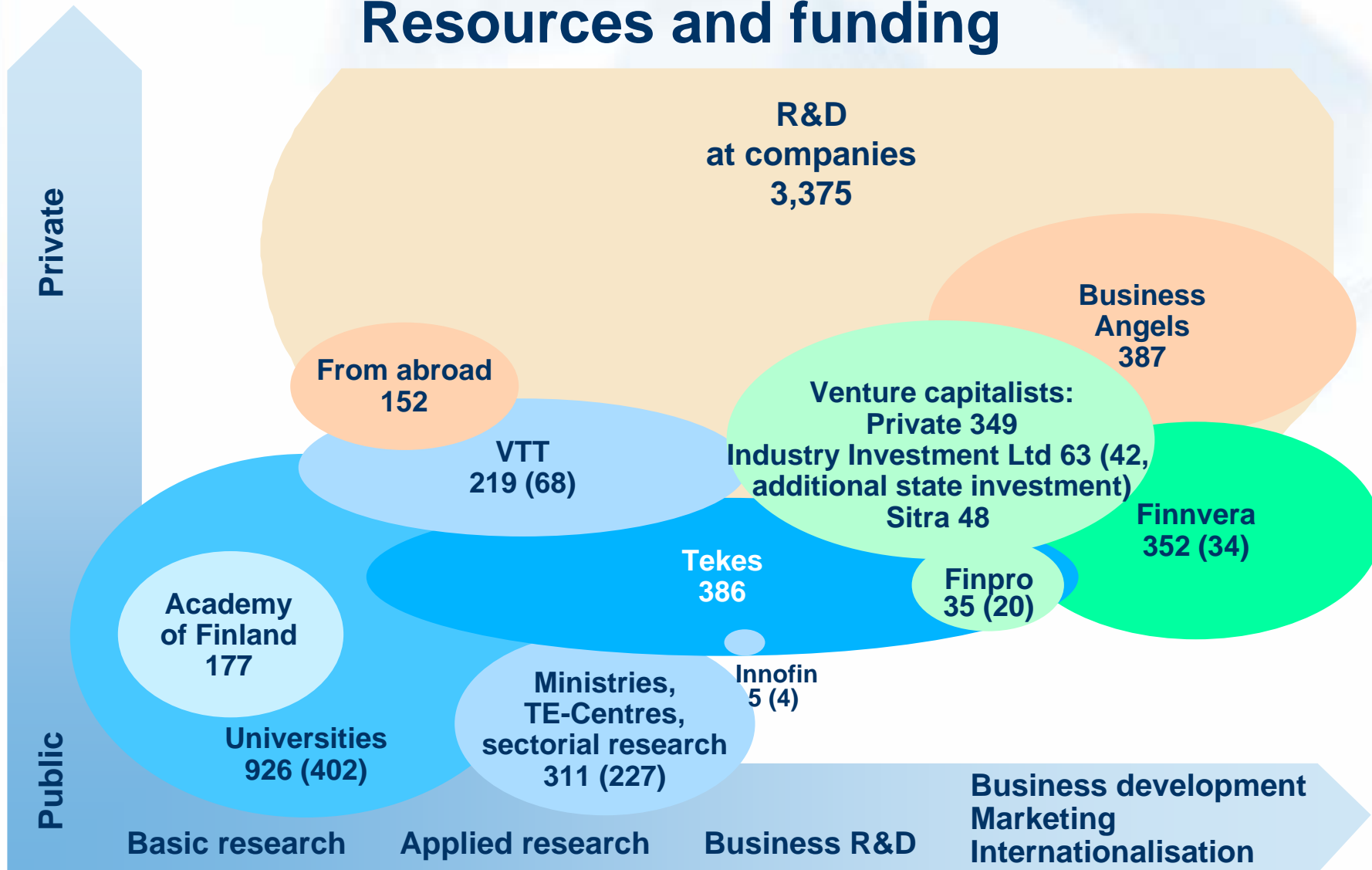
Effective utilisation of research results is ensured by scheduling the projects of research institutes and universities concurrently with company R&D projects, and by networking with them.



TEKES

Innovation environment in Finland

Resources and funding



The figures represent the total extent of each organisation in million euros in 2002. In parenthesis the share that is funded from the State budget. The funds of Tekes, the Academy of Finland and Innofin are funded entirely from the State budget.



TEKES

Preconditions for the success of regions in Finland

- Success of a region depends on the success of companies on global markets
- A core is needed to ensure availability of skilled people and to create and disseminate knowledge: **UNIVERSITY, RESEARCH INSTITUTE, POLYTECHNIC**
- Effective interchange of information and knowledge between research units and companies: **CO-OPERATION**
- Low threshold and bureaucracy for start-ups: **ENTREPRENEURSHIP** and supportive, innovative environment: **TECHNOLOGY PARKS AND CENTRES, INCUBATORS**
- Pre-seed, seed, R&D and venture capital financing: **FLEXIBILITY AND CO-OPERATION IN FINANCING**
- Partners on regional, national and international level: **NETWORKING, EXPERT SERVICES TO FIND PARTNERS**
- Tools and incentives for risk taking and networking
 - **TECHNOLOGY PROGRAMMES** for technology development
 - **TECHNOLOGY CLINICS** for technology transfer
 - **PRE-SEED INSTRUMENTS** for searching ideas and preparing business plans
 - **PARALLEL R&D- AND VC-FUNDING** for growth and internationalisation of companies