Africa Regional Workshop on Science, Technology and Innovation, 28.-29.11.2007 **Finnish Models of Innovation System**

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Finland

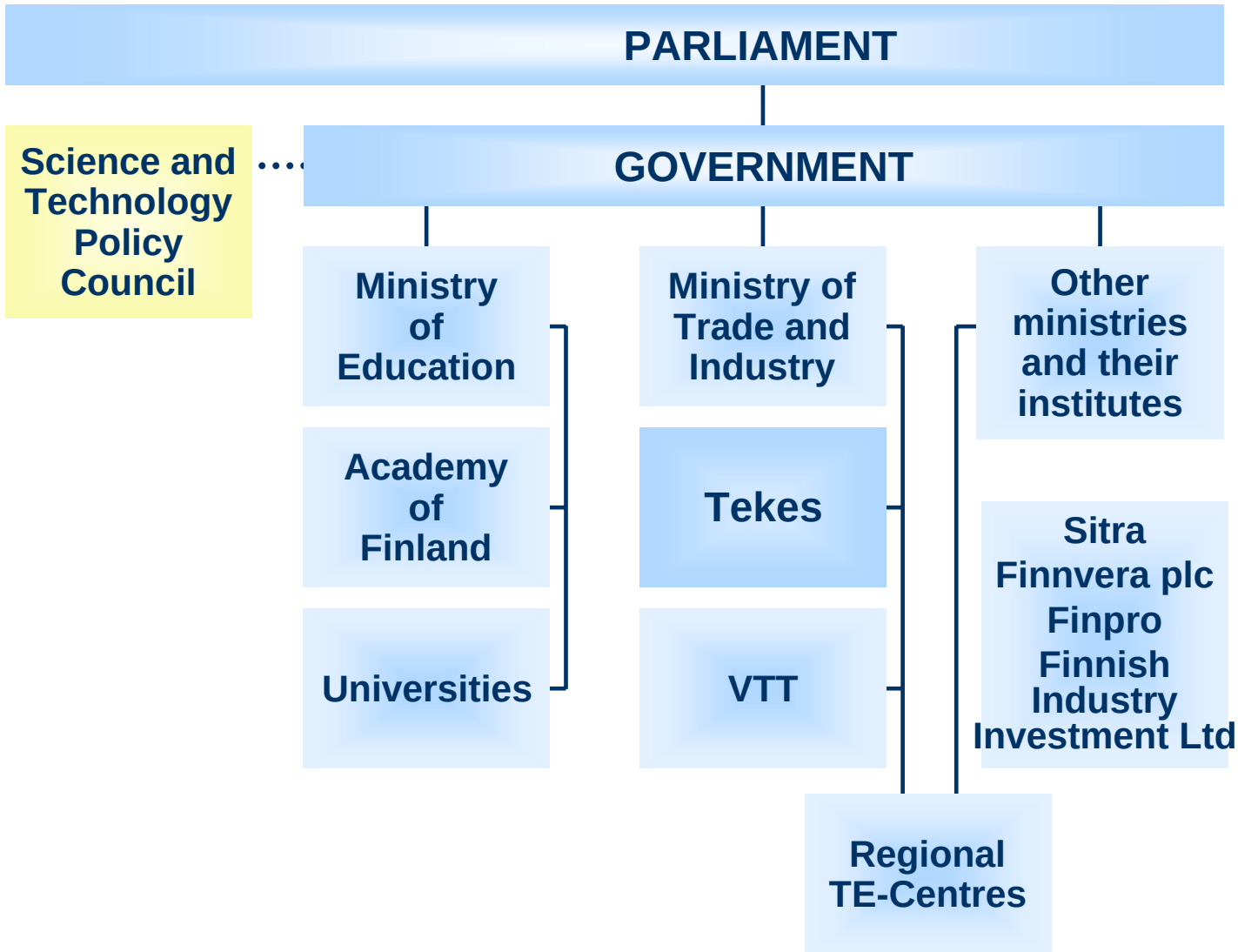
Population 5.2 Million
Area 131.000 sq.miles, of which
10% is water
Forests cover 68% of the country
Economy: GDP 164 BillionEuro (2006)

Characteristics of the Finnish Innovation System

- Collaboration between stakeholders
- understanding the importance of knowledge-base for future development:

  investment in R & D and education
- national vision for innovation system in the global environment

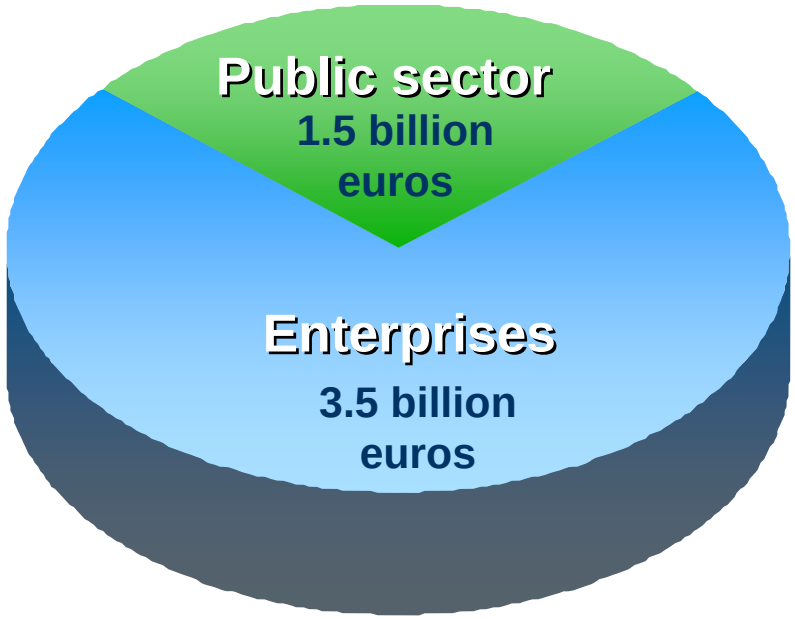
Public sector activities of R&D in Finland



Key actors of the Finnish innovation system

R&D INPUT IN FINLAND

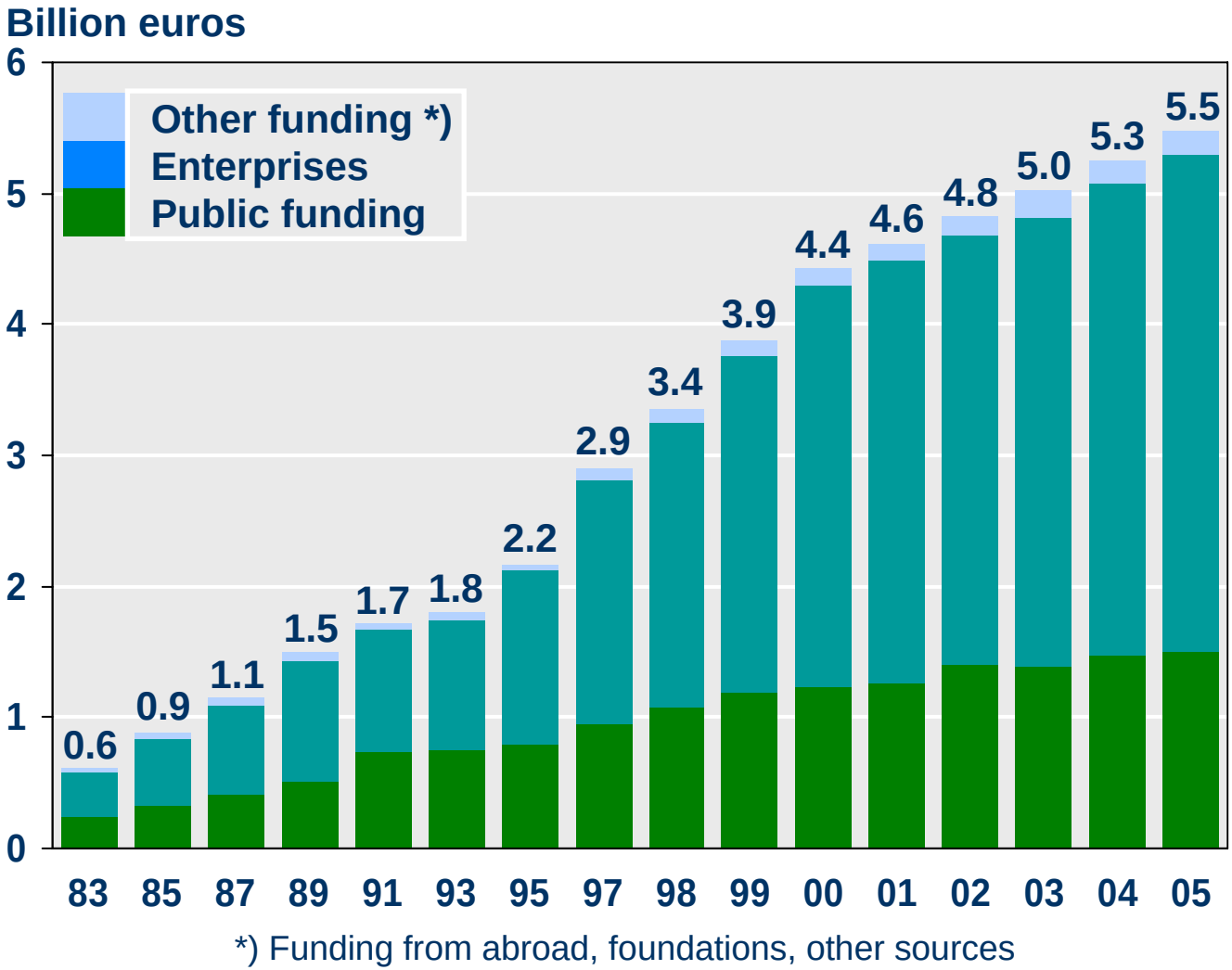
Total 5 000 million euros, 3.5 percent of the Gross Domestic Product (GDP) of Finland



In 2007 Tekes allocates about 500 million euros for R&D projects

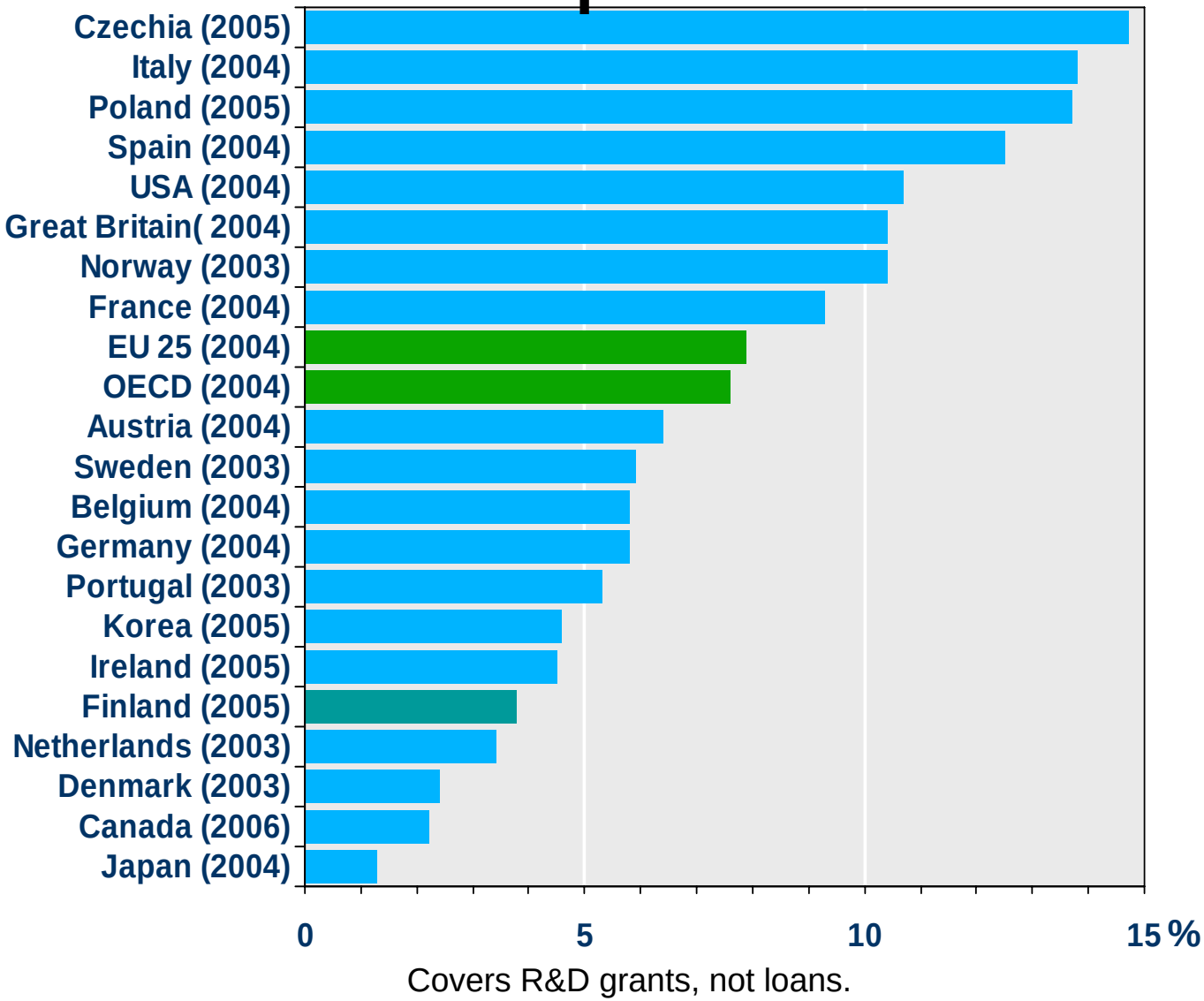
Sources: Statistics Finland and Tekes

Funding of R&D expenditure



Source: Statistics Finland

Public funding for R&D in companies

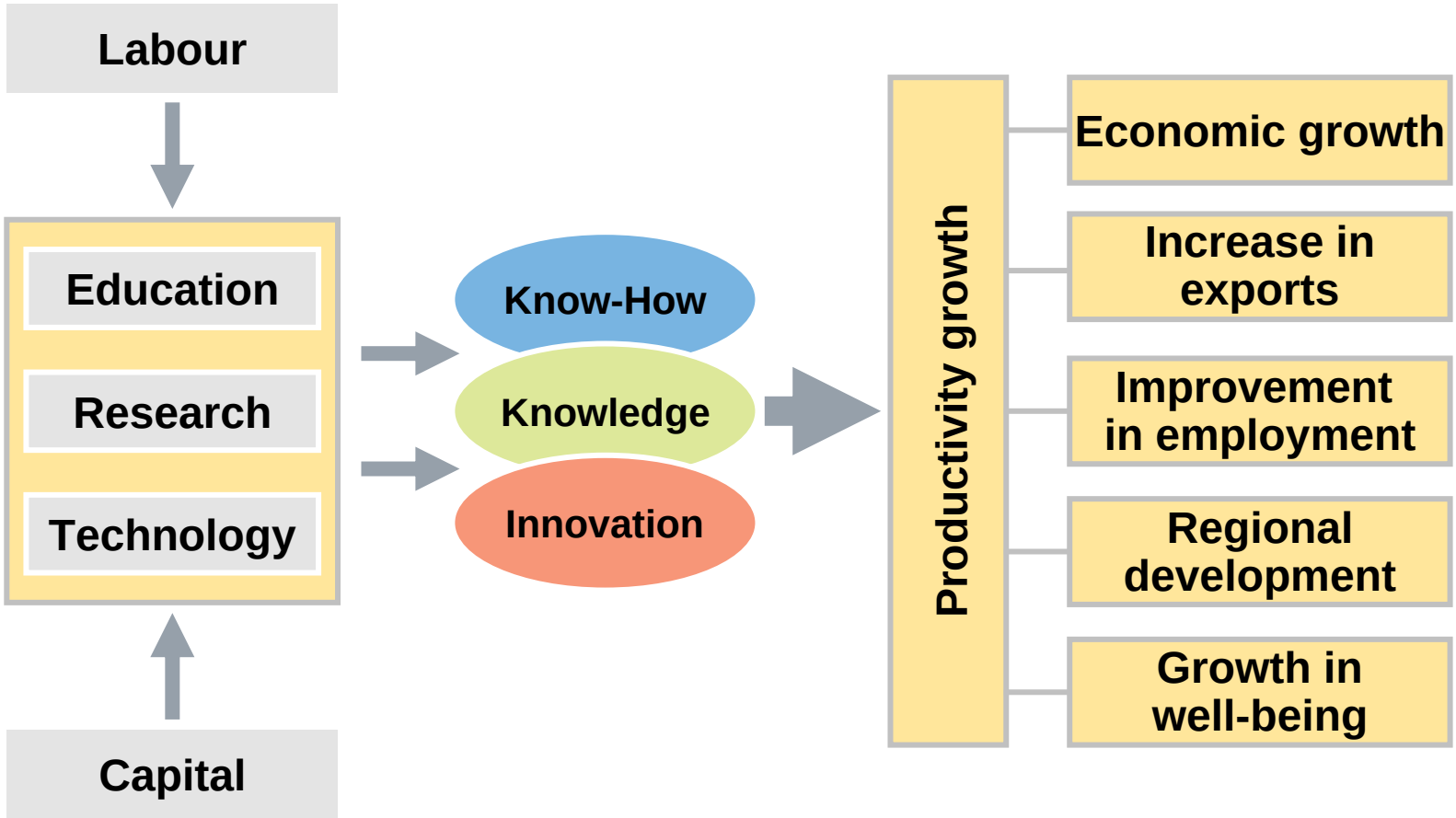


Covers R&D grants, not loans.

Source: OECD, Main Science and Technology Indicators

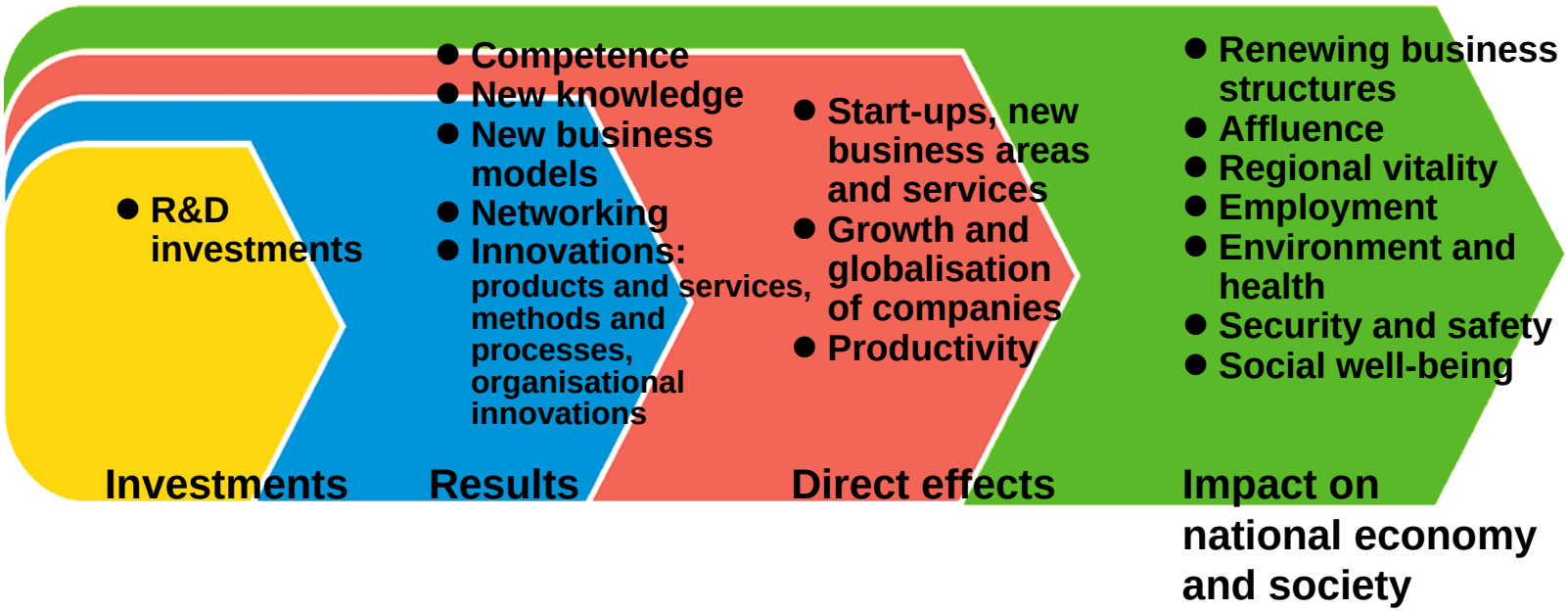
DM 36109, 36054, 58774 and 218475

Economic growth model – sources of economic growth



According to the new growth model, economic growth is rooted in education, research and technology.

Innovation is a profitable investment for the future



Drivers for growth and conditions for their utilisation

Investments are the drivers for growth

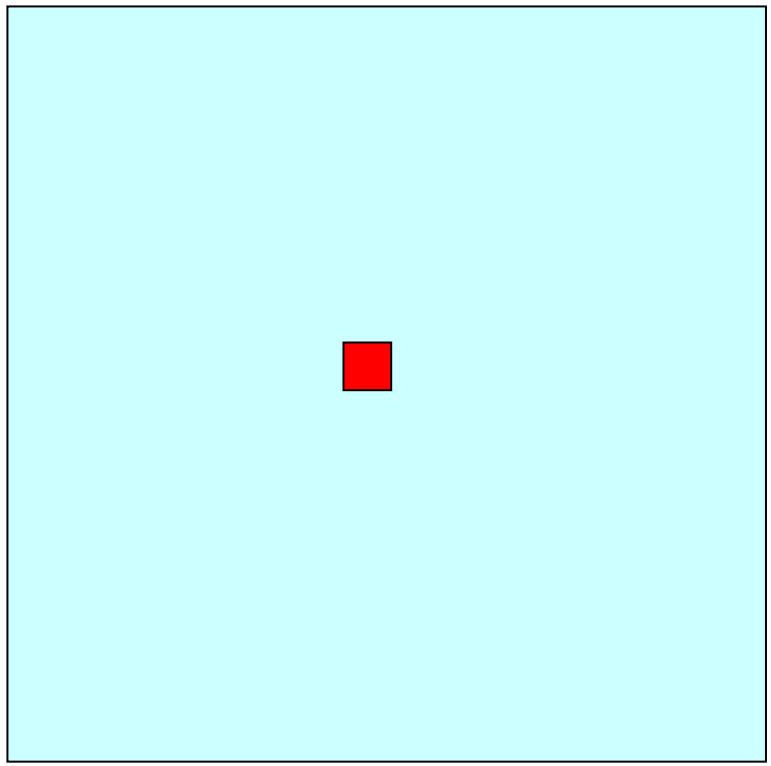
- **Education**
- **Research and development**
- **Innovations**
- **Capital**

Conditions for the utilisation of drivers for growth

- **Opening up of markets**
- **Flexibility of structures and regulations**
- **Incentives**
  - **for the success of innovative companies**
  - **for private risk investments**
- **Macroeconomic policies**

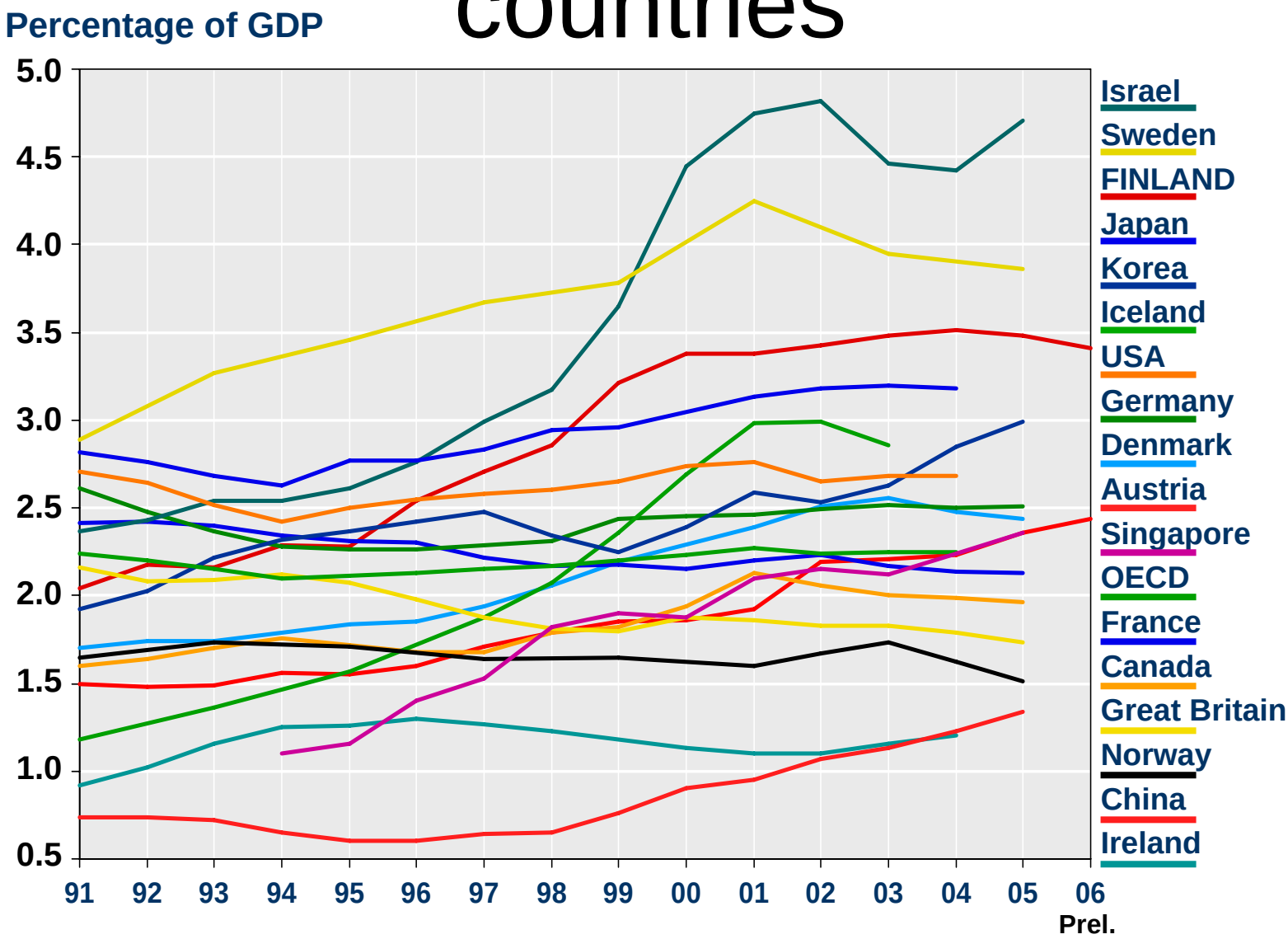
The impact of drivers for growth remain minor without continual structural reform.

Finland in Global R&D



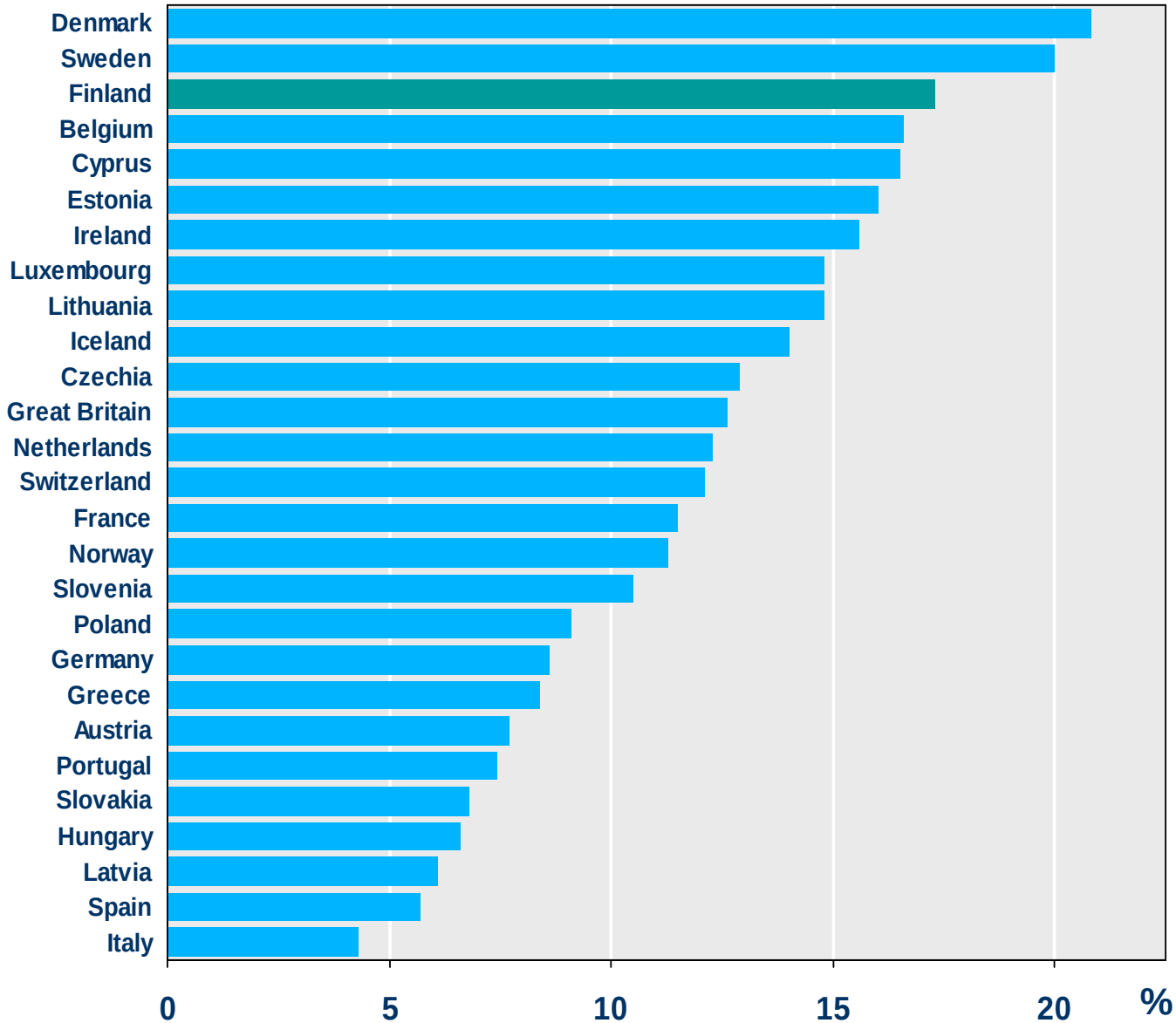
--> there is an apparent need for a specific small country strategy…

R&D investments in some countries



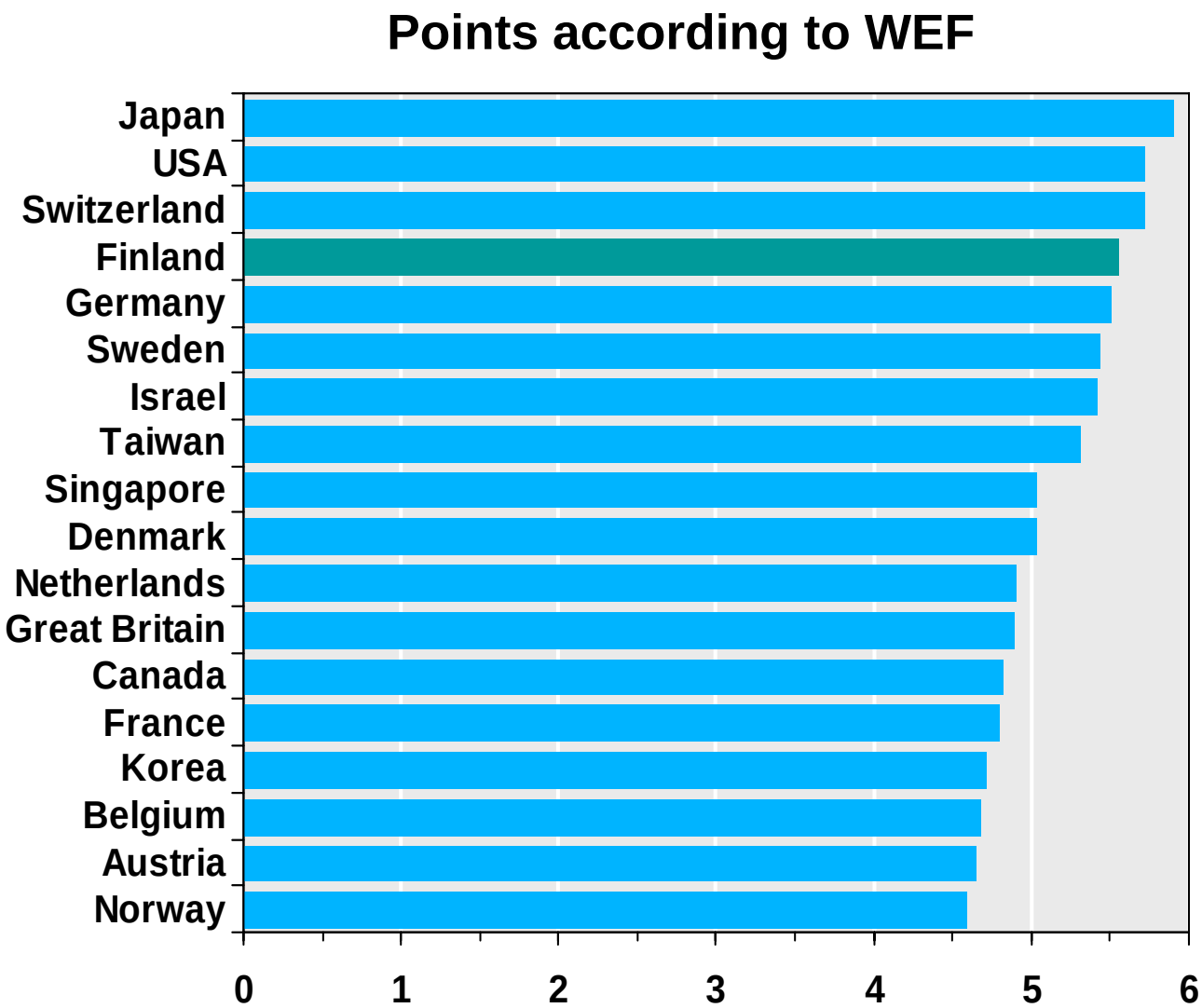
Sources: OECD, Main Science and Technology Indicators, Finland 2005 and 2006, Statistics Finland

SMEs participating in innovation



Source: European Innovation Scoreboard 2006

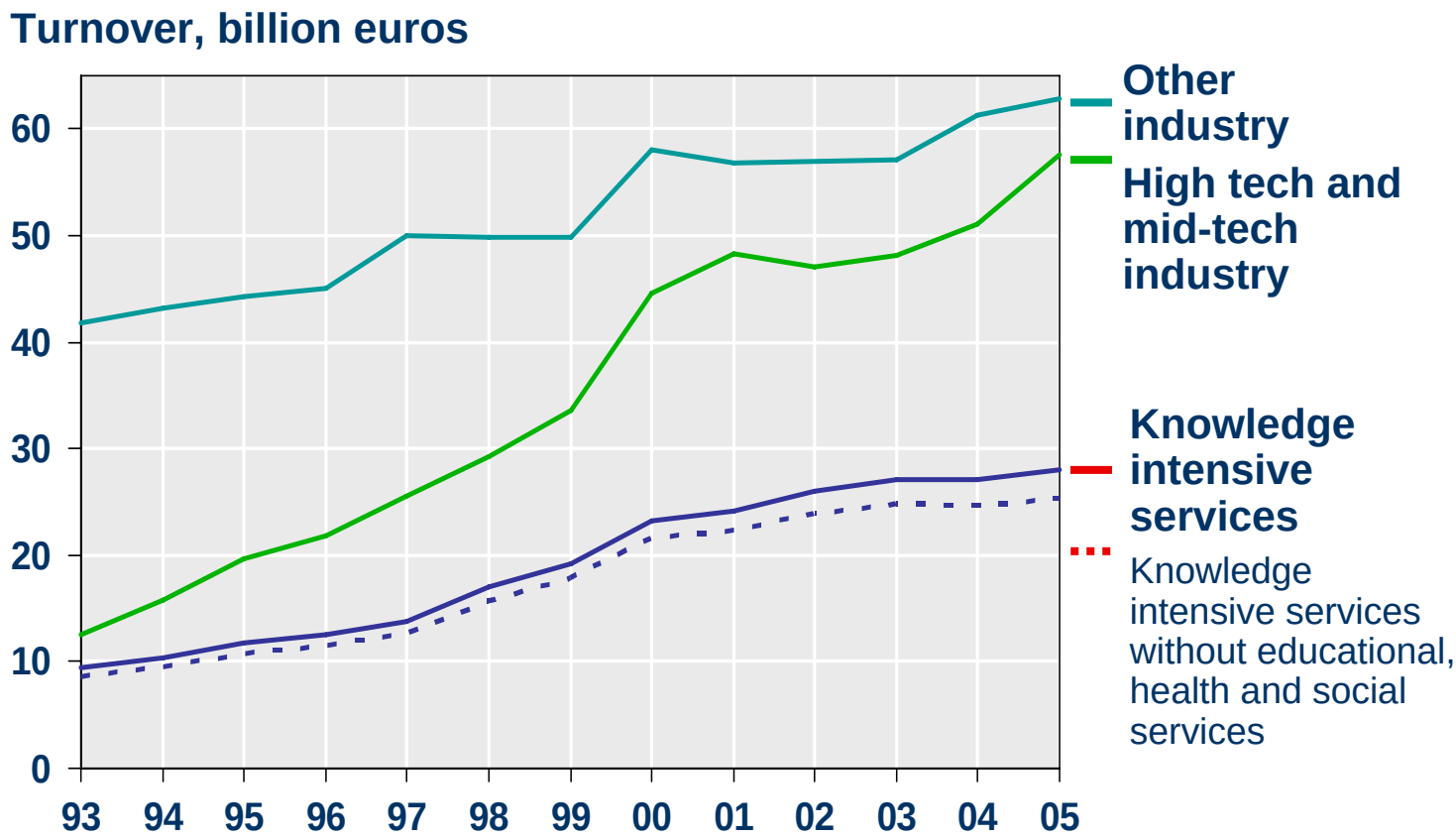
Innovation



The Innovation index covers quality of research institutions, company spending on R&D, university and industry research collaboration, availability of scientists and engineers, utility patents and intellectual property protection.

Source: WEF, The Global Competitiveness Report 2006-2007

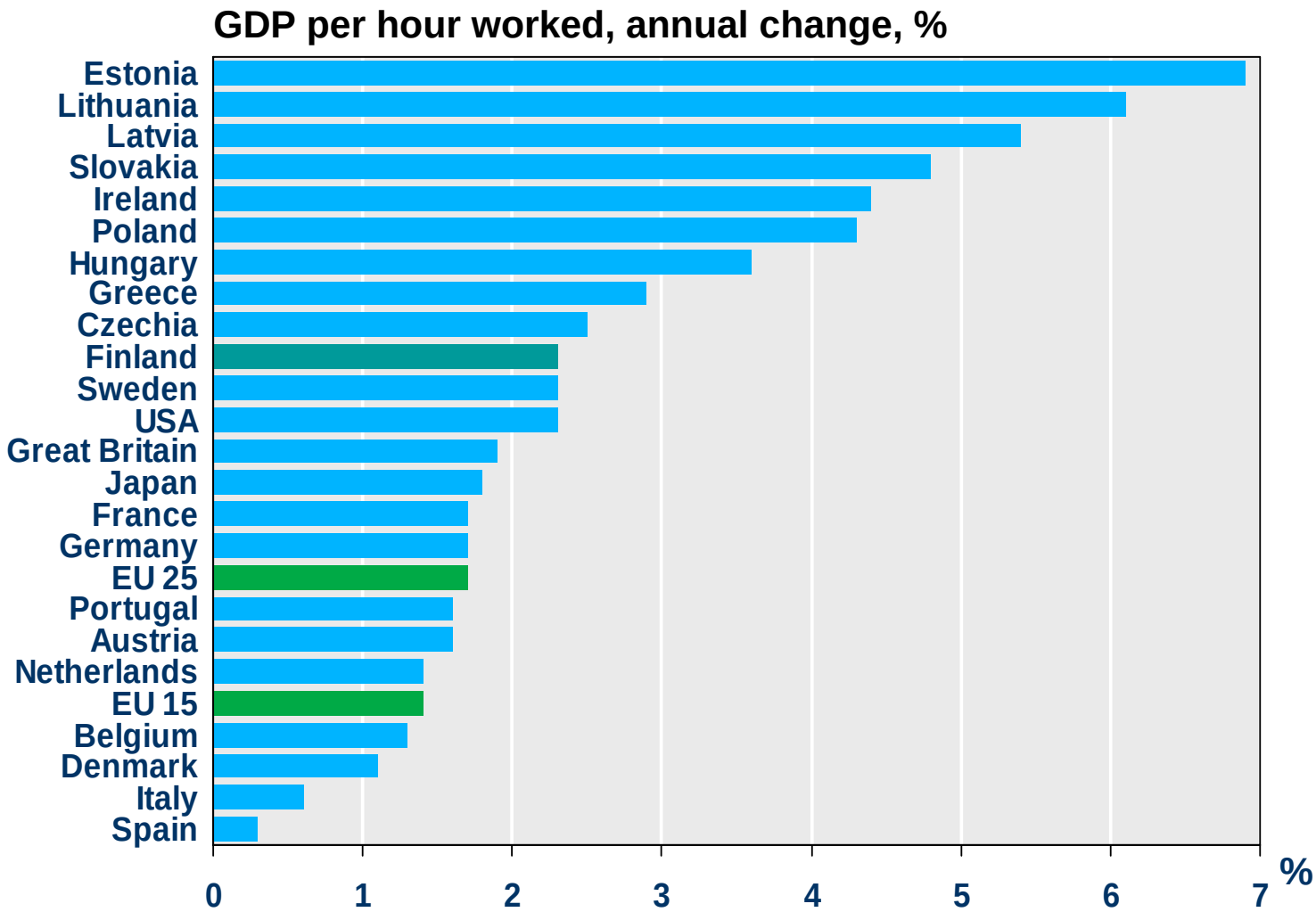
Turnover in industry and knowledge intensive services



R&D investments in the high tech and mid-technology sectors are at least 2 per cent, in other industries less than 2 per cent of turnover. Knowledge intensive services include banking and insurance services, postal services and telecommunications, leasing of equipment, R&D, information technology and other business services and education, health and social services.

Source: Statistics Finland

Growth in labour productivity 1995-2004



Source: EU KLEMS Database 2007

Jurilab / Teknia


Prodetec / Jyväskylä


Seinäjoki

Science Parks Progress

1982	First Finnish science park
1985	Premises for enterprises near universities, incubators
1988>	Finnish Science Park Association TEKEL
1990	Commercialising research-based business ideas
1994 >	Centre of Expertise Programme
1995 >	Developing regional clusters, specialized services
2000 >	Internationalisation

Strategic Centres for Science, Technology and Innovation

What?

Strategic Centres for Science, Technology and Innovation will provide a new way of coordinating dispersed research resources

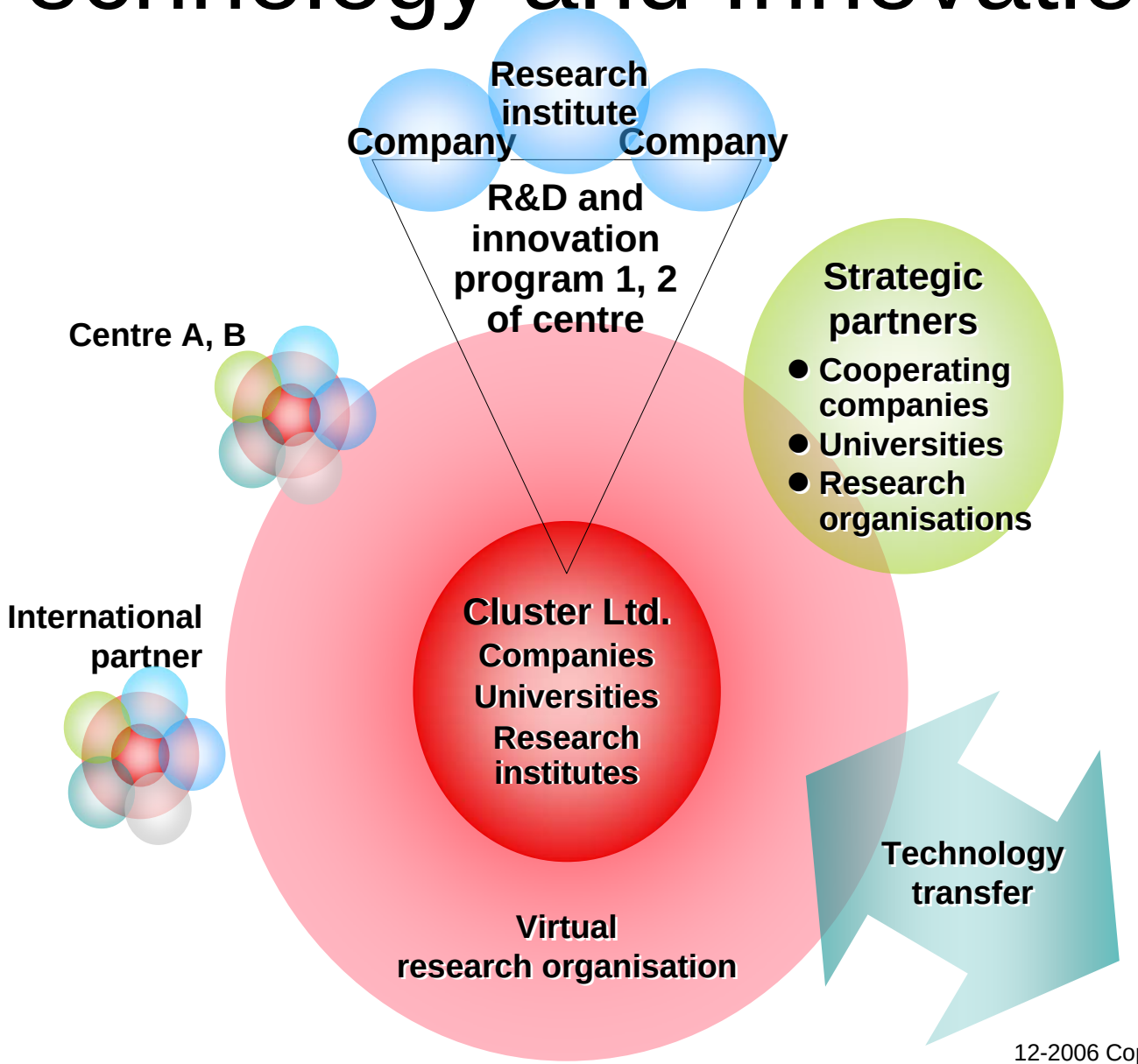
to meet targets important for Finnish business and society.

In the strategic centres:Companies, universities and research institutes will

agree on a joint research plan. The plan will aim to meet the application needs for practical application by companies within a 5-10-year period.

- In addition to shareholders, public funding organisations will commit themselves to providing funding for the centres in the long term.

Strategic Centres for Science, Technology and Innovation



Why?

- Research, development and innovation, and funding for them, have taken place mostly as fragmented short-term projects
- International exposure has only been managed by a handful of organizations and individual top researchers
- A new approach is needed to strengthen areas of research and technology that are important to Finland and to create new areas of national competence.

How will the centres help companies?

At the centres, companies will be able to

- Improve the speed and effectiveness of their innovative activities
- Participate in determining a research plan for the centre so that it meets their needs
- Harness diverse know-how necessary for meeting their targets
- Obtain longer-term public research and development funding than is currently available

How will the centres support universities and research institutions?

At the centres, universities and research institutions will be able to

- Participate in long-term strategic research and development
- Network with other scientific top researchers in their field
- Create and strengthen contacts with businesses and researchers in them
- Improve both the qualitative and quantitative operational preconditions of their high-level research teams

Five centres in the first phase

- In the first phase, centres will be established,
  as decided by the Science and Technology
  Policy Council of Finland, for the following
  areas: Energy and environment
  - Metal products and mechanical engineering
  - Forest cluster
  - Health and well-being

– Information and communication industry and services

•Any proposals concerning other possible centres will be made by a management group set up by the Ministry of Trade and Industry

Thank you!

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