



27-28 August 2007 in Turku, Finland

## **Towards Excellence in Innovation**

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## **Key Directions of Finland's STI Policies 2007-11**

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# Finnish innovation system/policy SWOT

## STRENGTHS

- Education
- Commitment & continuity
- Co-operation
- Industry structure
- Proactive innovation policy
- Public R&D funding and incentives for co-operation taking

## WEAKNESSES

- Small absolute volumes in R&D
- Dependence on global investments
- Researcher growth-oriented
- Insufficient venture capital volumes for start-up and early growth-phase firms

So far, Finland's strengths in R&D have been based on relatively high and even averages rather than top excellence....

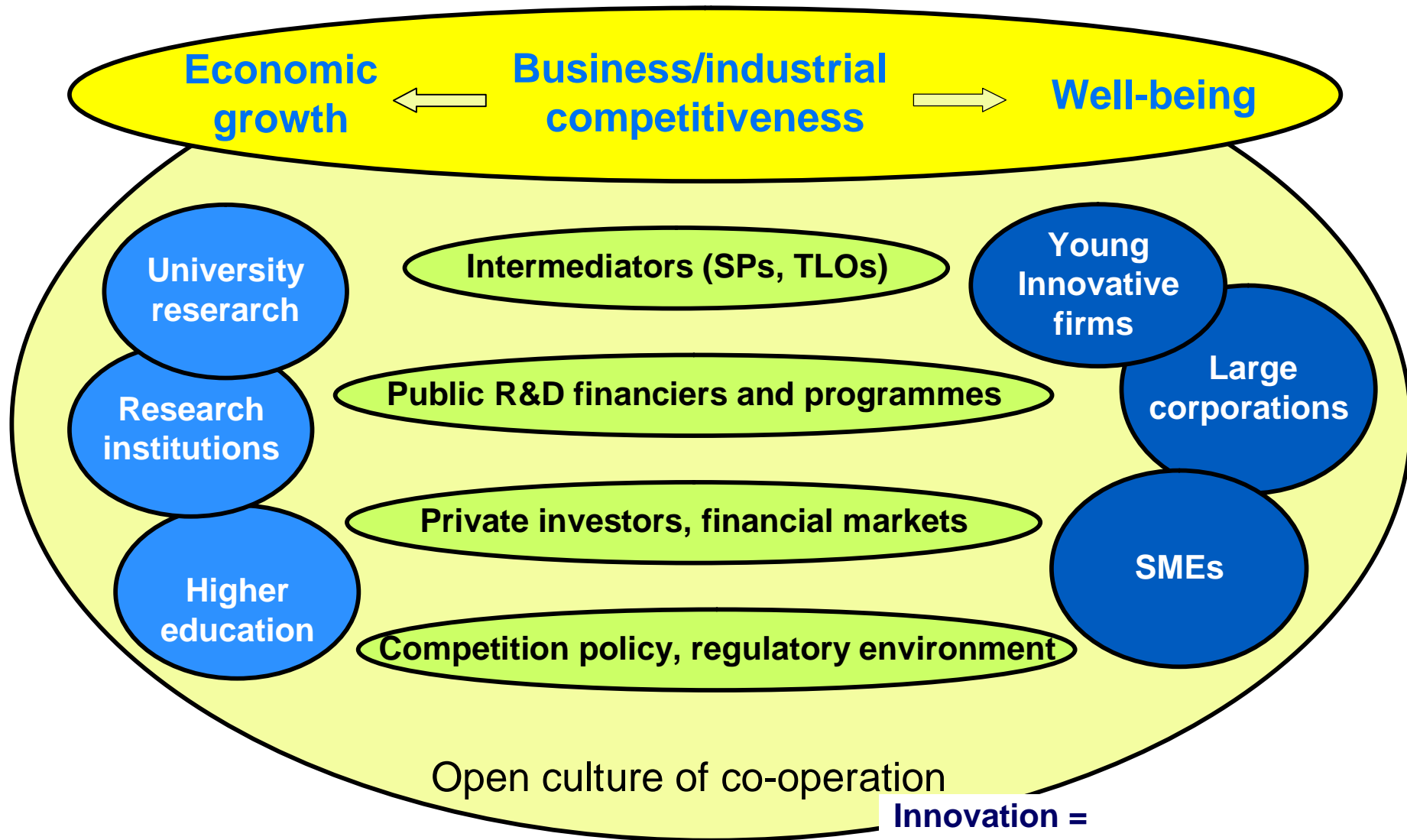
## OPPORTUNITIES

- More coherent and foresightful policies
- Stronger focus on business R&D resources
- Going beyond "innovation": Promotion of private and public services
- Market-pulled innovation stimulation
- Active participation in major EU R&D programmes and platforms
- Going beyond EU: Active linkage with global innovation hotspots

...in the future, we need both: maintaining good averages and excelling in few selected areas

- Focus on ICT sector (ICT) and business R&D
- Business R&D
- Companies are increasingly moving their R&D activities to other countries, including R&D
- Overcrowding: Participation in too many projects with scarce resources

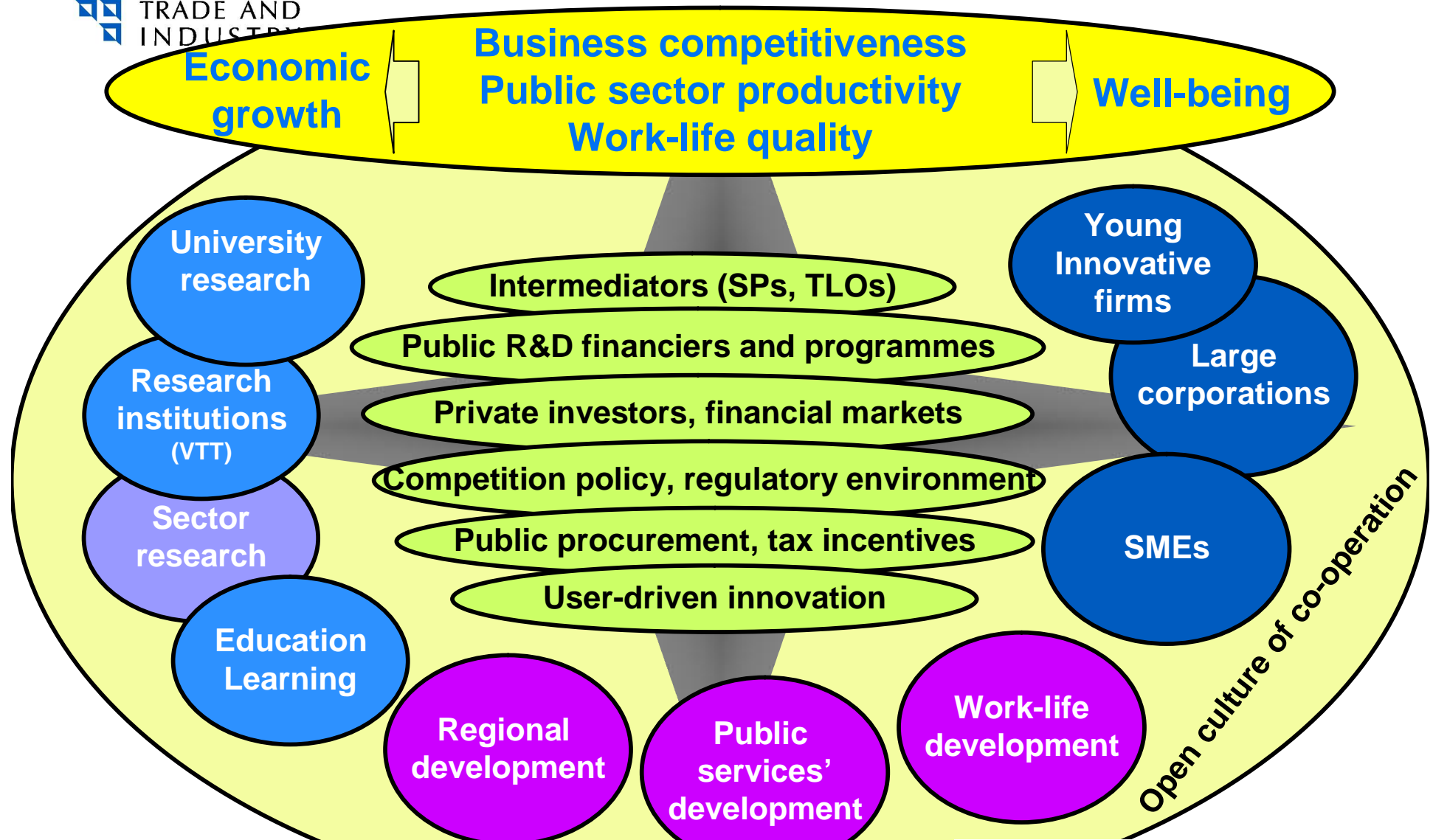
# "Classical" innovation environment



**Innovation =**

- new product, technical solution
- new production process
- new (industrial) service

# “Extended” innovation environment



- Innovation =**
- new product, technical solution
  - new production process
  - new (industrial) service

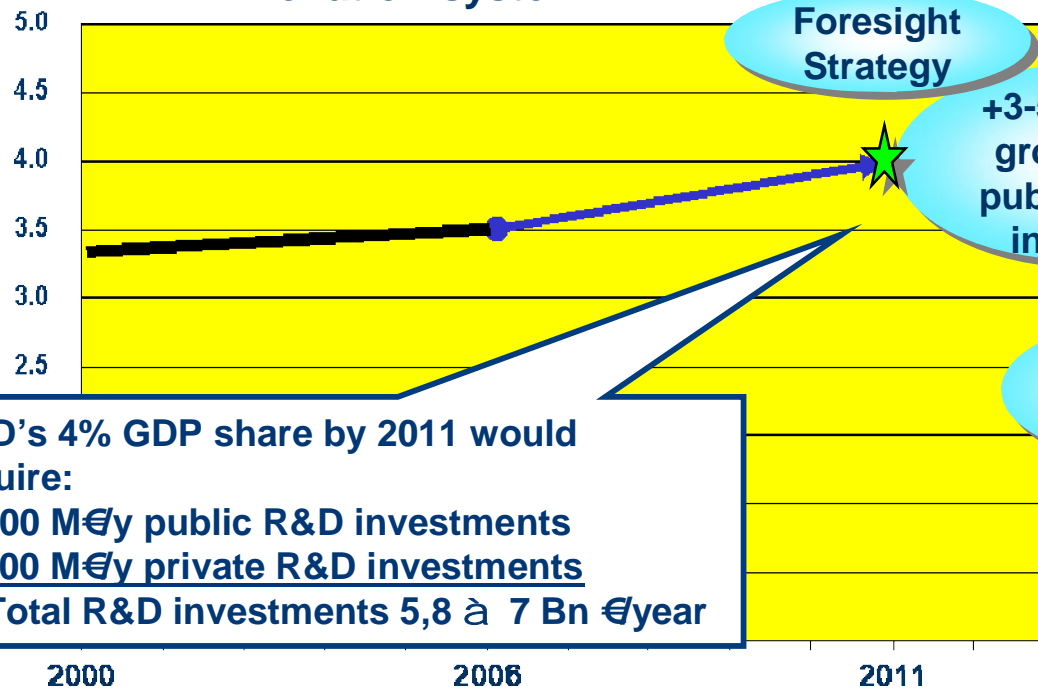
- Innovation =**
- new expert-service
  - new business model
  - new design or brand

- Innovation =**
- improved public service
  - organisational or structural improvement

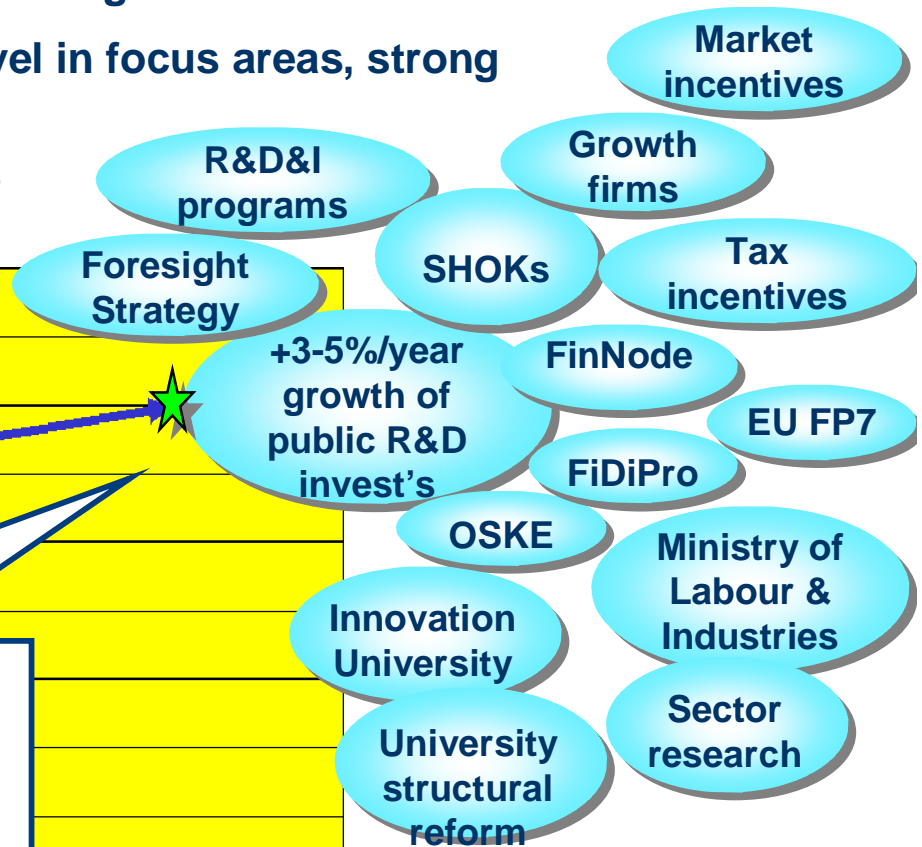
# Key directions of Finland's STI policy 2007-11

1. Strengthened public R&D investments catalysing growing corporate R&D investments in Finland à aiming at 4% GDP share
2. Wider-range promotion of innovations:
  - à technologies, services, business, branding/design, public sector
  - à direct support, market-driven incentives, tax incentives
3. Strategic choices and focusing of resources
4. Reaching world-class level in focus areas, strong international interaction
5. Structural reforms of the innovation system

R&D's share of GDP (%)



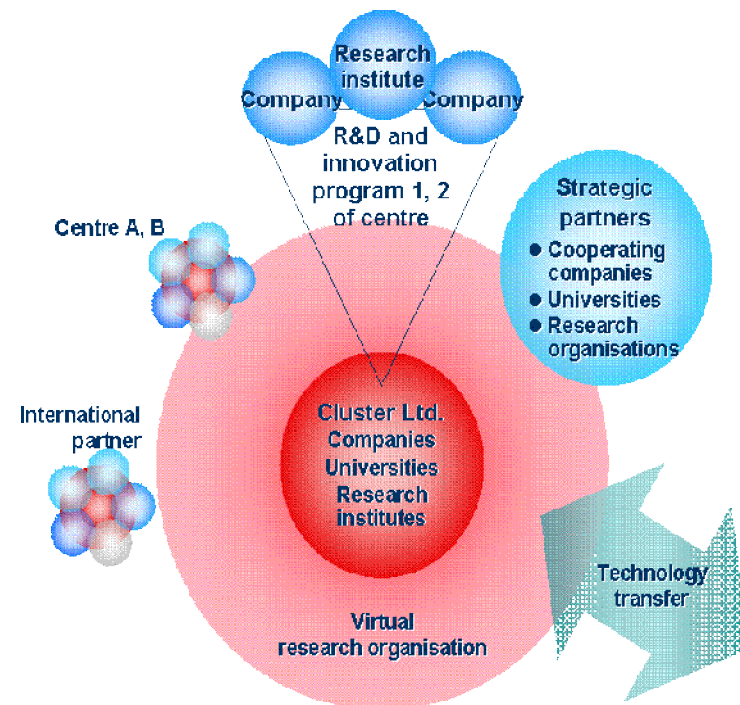
R&D's 4% GDP share by 2011 would require:  
 + 400 M€y public R&D investments  
 + 800 M€y private R&D investments  
 à Total R&D investments 5,8 à 7 Bn €year



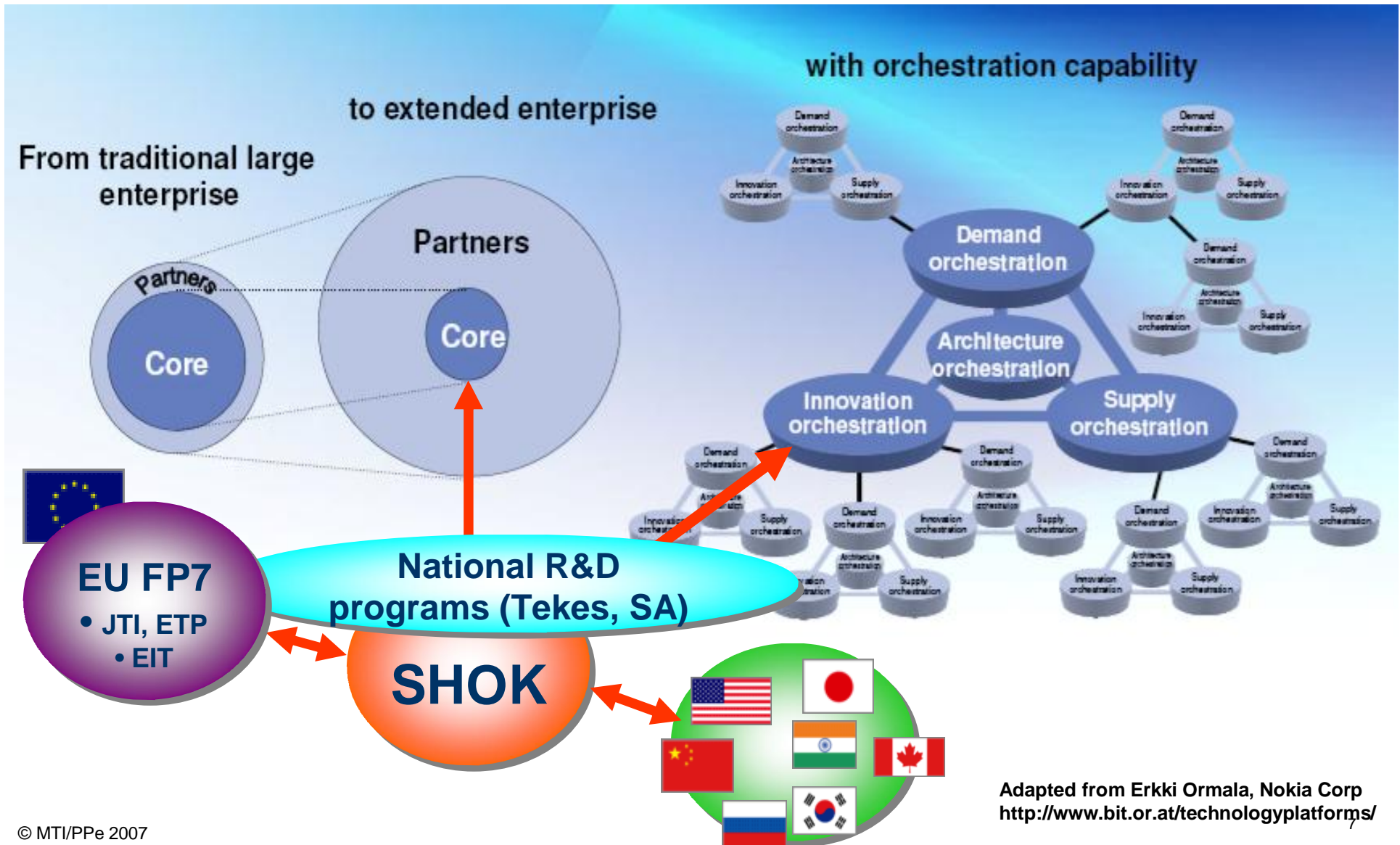
# Strategic Centres for Science, Technology and Innovation ("SHOKs")

- A new approach to
  - à strengthen strategic areas of science and technology development
  - à stimulate cross-disciplinarily in research and innovation
  - à focus resources and increase international visibility
- Industry and academia joint venture (Cluster Ltd)
- Long term focus (10à years)
- Strong support by public R&D funders (Tekes, Academy of Finland)

1. Forest cluster (started 2007)
2. Energy and environment
3. Metal products and mechanical engineering
4. Health and well-being
5. Information and communication industry and services
6. Others...



# Innovation networks, ecosystems and open innovation enable new ways of knowledge creation and utilization



Adapted from Erkki Ormala, Nokia Corp  
<http://www.bit.or.at/technologyplatforms/>



- **Finland's recognition for life-improving innovations**
- **The world's largest technology award: one million euros**
- **2004: Professor Tim Berners-Lee, developer of the World Wide Web**
- **2006: Professor Shuji Nakamura, developer of bright-blue, green and white LEDs and a blue laser**
- **The Prize is presented by Tarja Halonen, the President of Finland**
- **The Prize is awarded every second year, next time in 2008**
- **[www.millenniumprize.fi](http://www.millenniumprize.fi)**