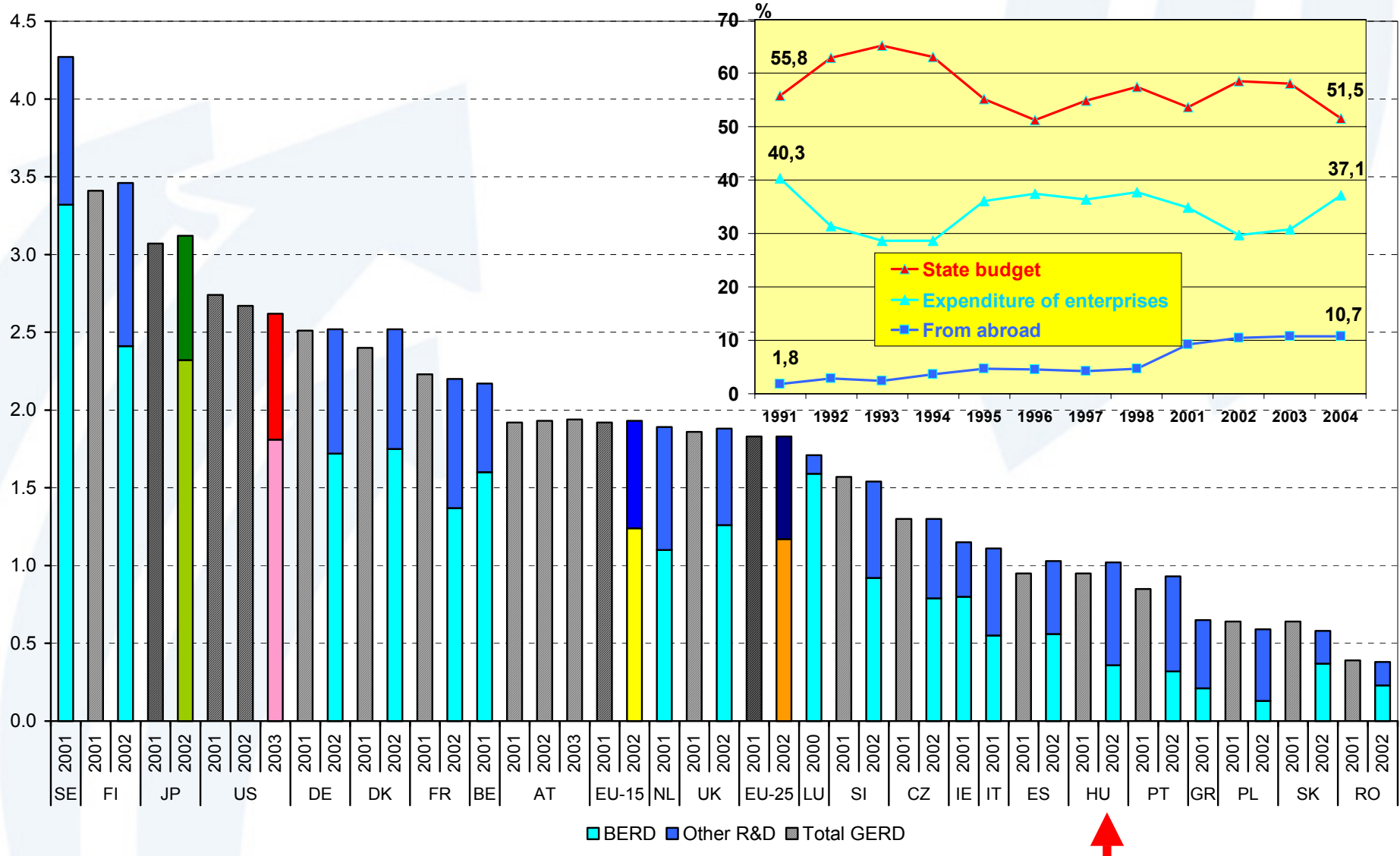


# National Programming in the IST ERA

- Situation & developments in NMS
- Strategy formulation considerations
- Programming
- National programs and the international dimension
- FP participation

# Total R&D expenditure and business expenditure on R&D as percentage of GDP (GERD and BERD) (2001-2003)

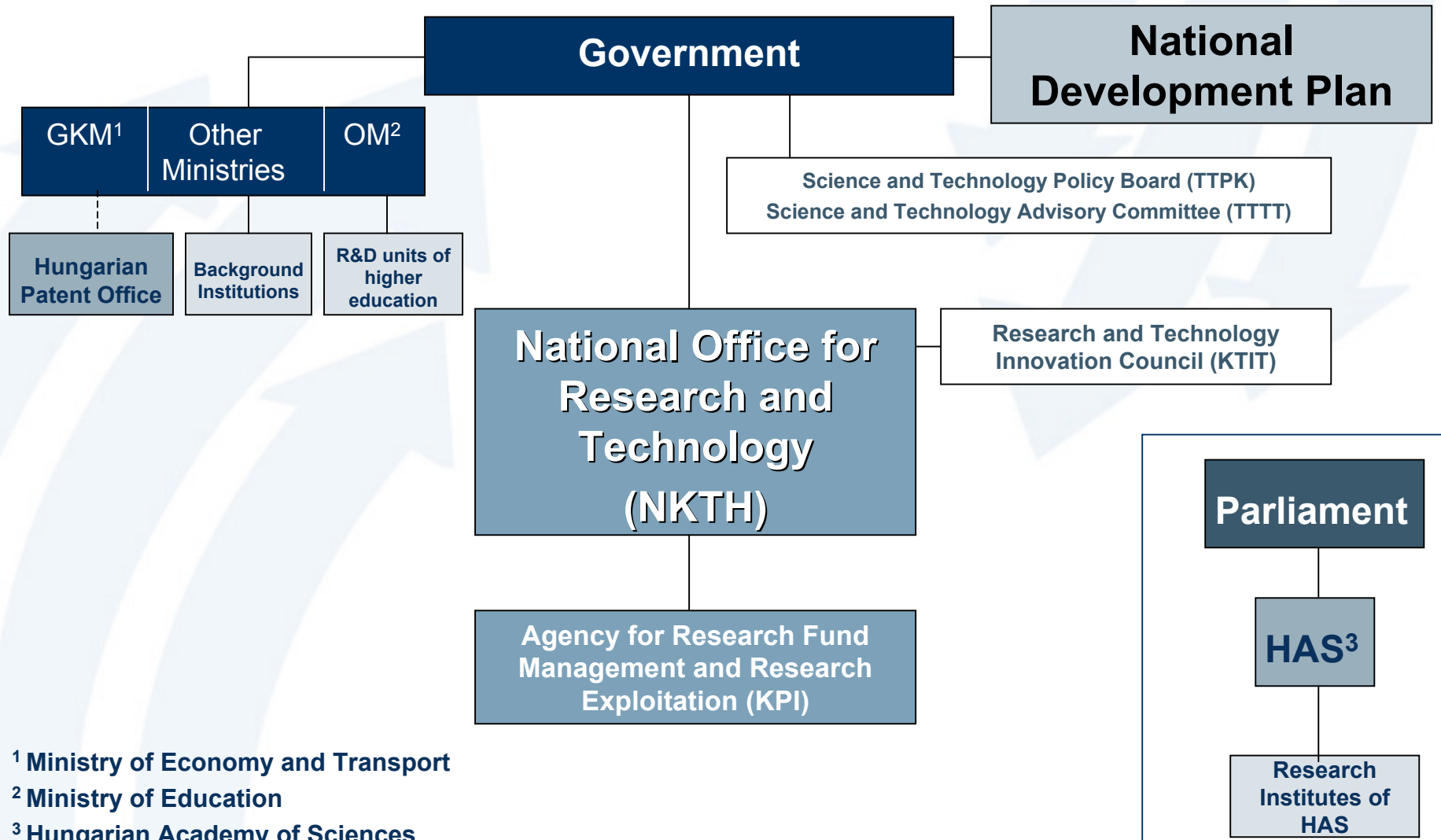


- Low innovation intensity of companies, especially SMEs
- Strong academic background, but with inadequate linkages to industry

## Reforms in Hungary

- Government bodies
- Financing
- Regulatory framework





- Enterprises contribute to the Fund at least 0.25% of their turnover.
- Hungarian government contributes to the Fund with equivalent amount.  
(matching fund)

- It promotes the whole innovation process, from the idea to the realization,
- It clarifies IPR regulations,
- It promotes spin-offs and mobility.



# Transformation of the ratio of private to public R&D expenditures to 2:1.

0,7% GOVERD

1,4% BERD

2,1% GERD

Shift from knowledge production to application.  
3 „C” competition+ cooperation + compromises

There is no perfect answer to a changing  
world, one must be forever searching.

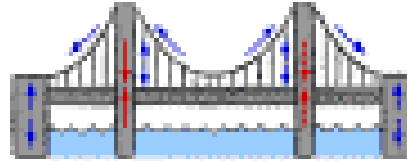
- **R&D Tax relief (200-400%)**
- **R&D FDI promotion**
- **Targeted support schemes**
  - Innovation Fund
  - EU Structural Funds
- **International cooperation**

## Public Research Organisations (PRO):

- HAS (mainly basic research),
- ministerial( mainly policy research)
- Higher Education Institutes (HEI)
- Contract Research Organisations (CRO)
  - Non-profit: Bay Zoltán Foundation
  - Membership based: Branch research organisations
- Firms

## Domestically owned

- Technologically backward
- Low innovation intensity, little R&D
- Dominated by small- and microcompanies, but very few innovative SMEs!



**Technology transfer**

**Spillovers**

**Supplier chains**

**Mobility**

**Partnerships**

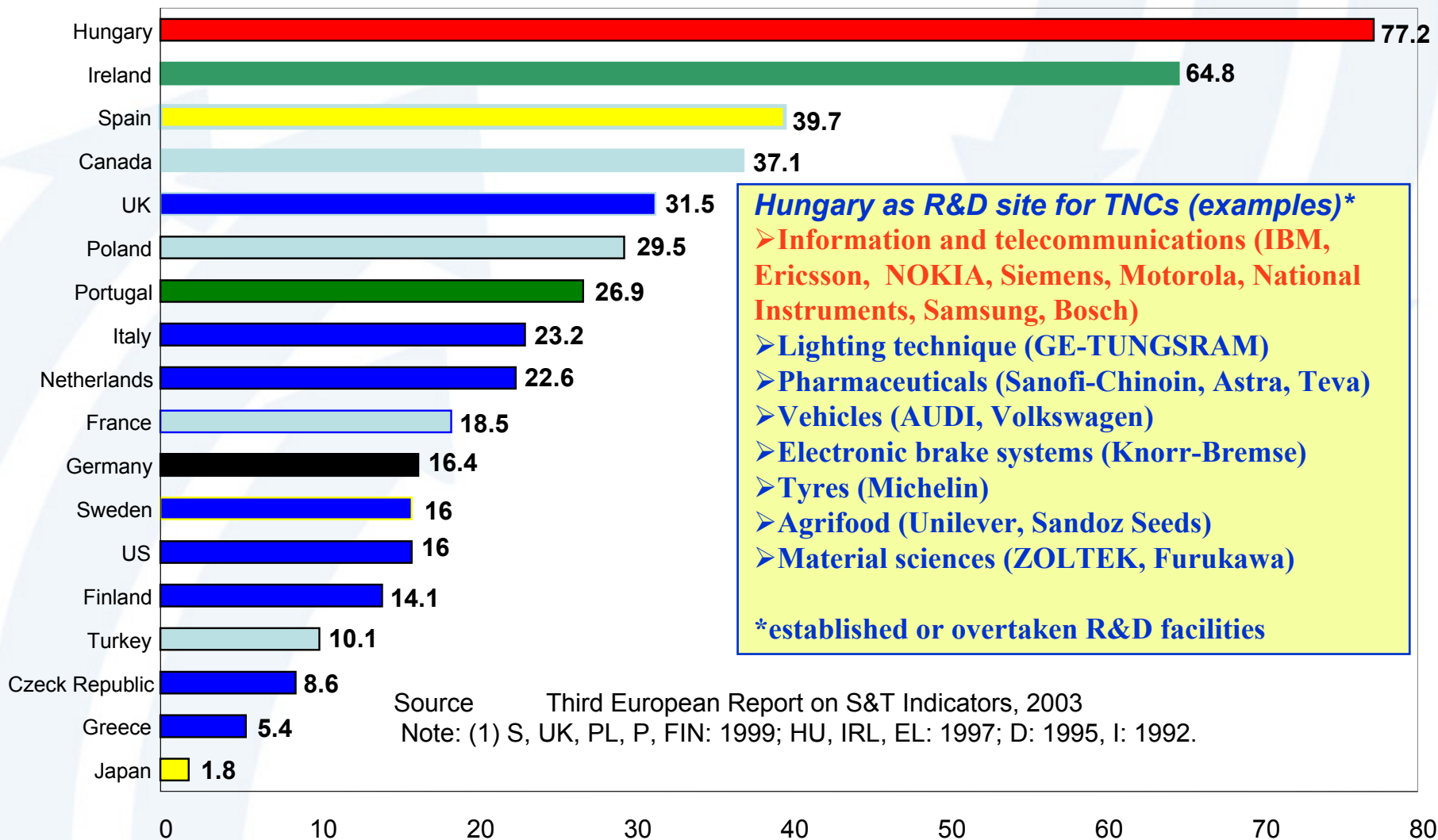
**Connections to public R&D base**



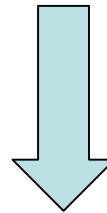
## Foreign owned

- Typically high tech
- R&D and innovation operations, increasingly high value added
- Dominated by multinationals

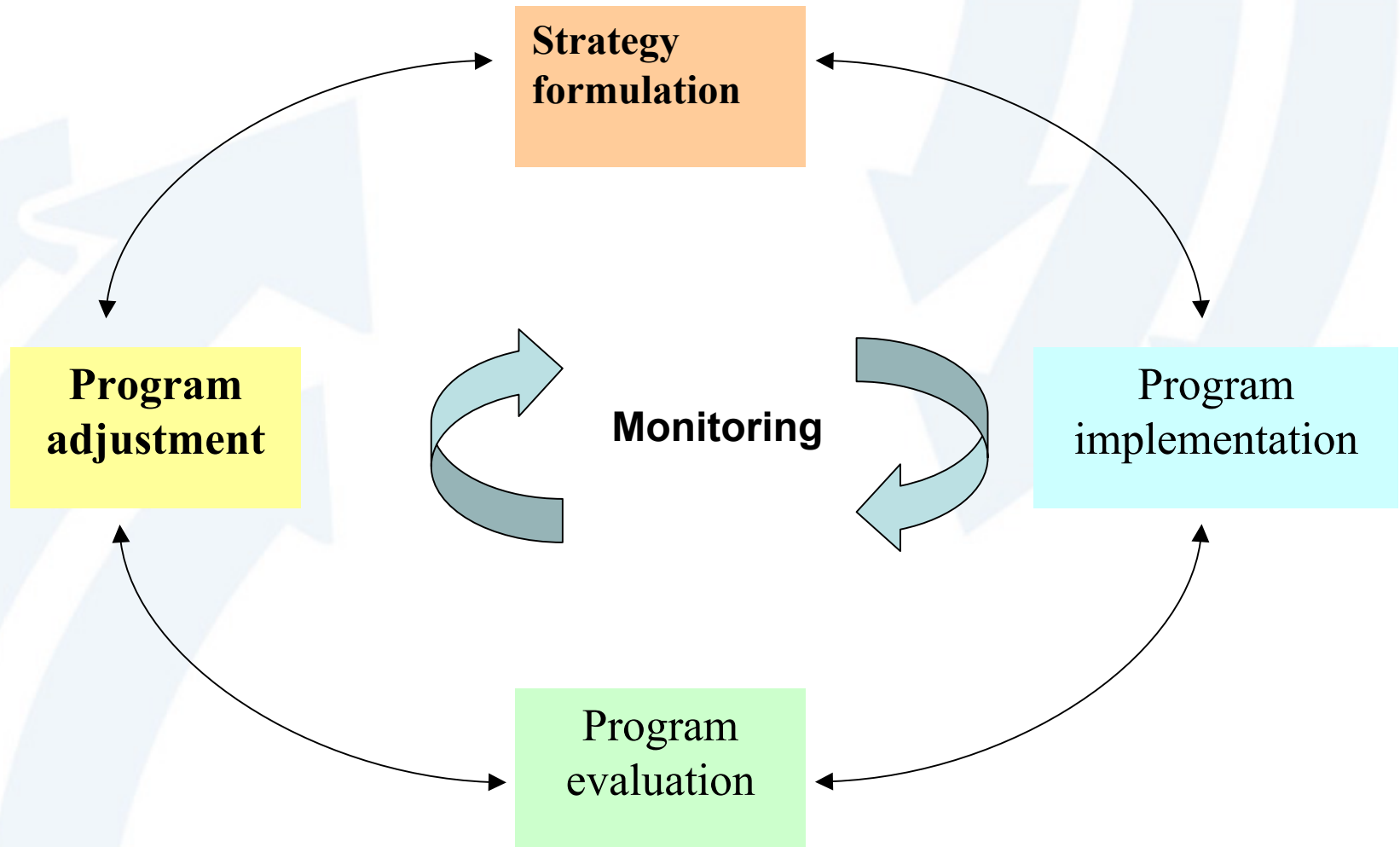
Share of foreign affiliates in manufacturing R&D, %, 1998 or latest available year (1)



Too many objectives to tackle  
Fragmentation of resources  
Funding efficiency low  
Little impact

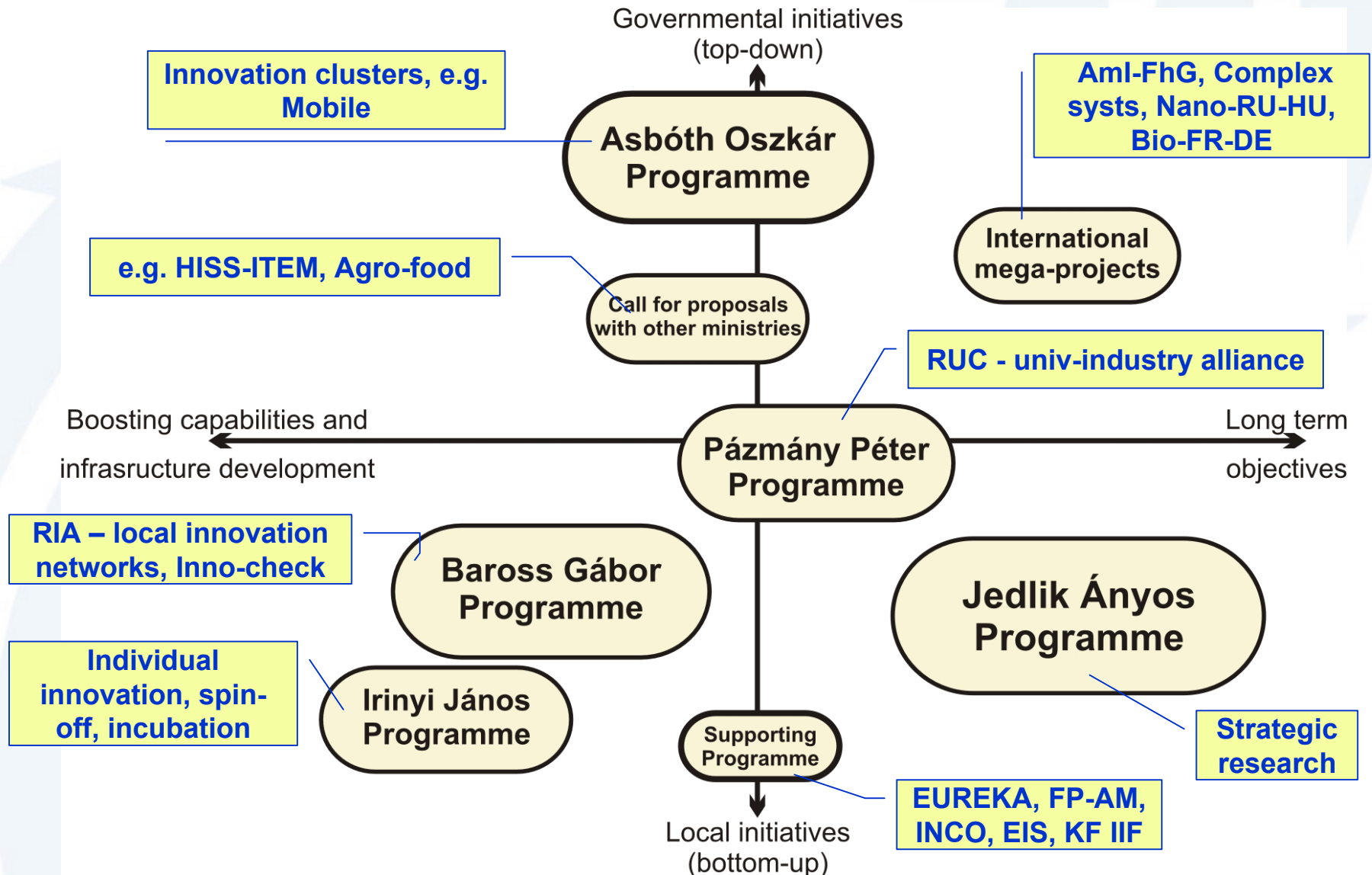


More focus needed, setting priorities  
Changing the mindset





- **Strong focusing**  
(on key technologies areas)
- **Commercialisation - utilization**  
(new products, and new spin-off firms)
- **Special regional efforts**  
(build a well functioning innovation system)



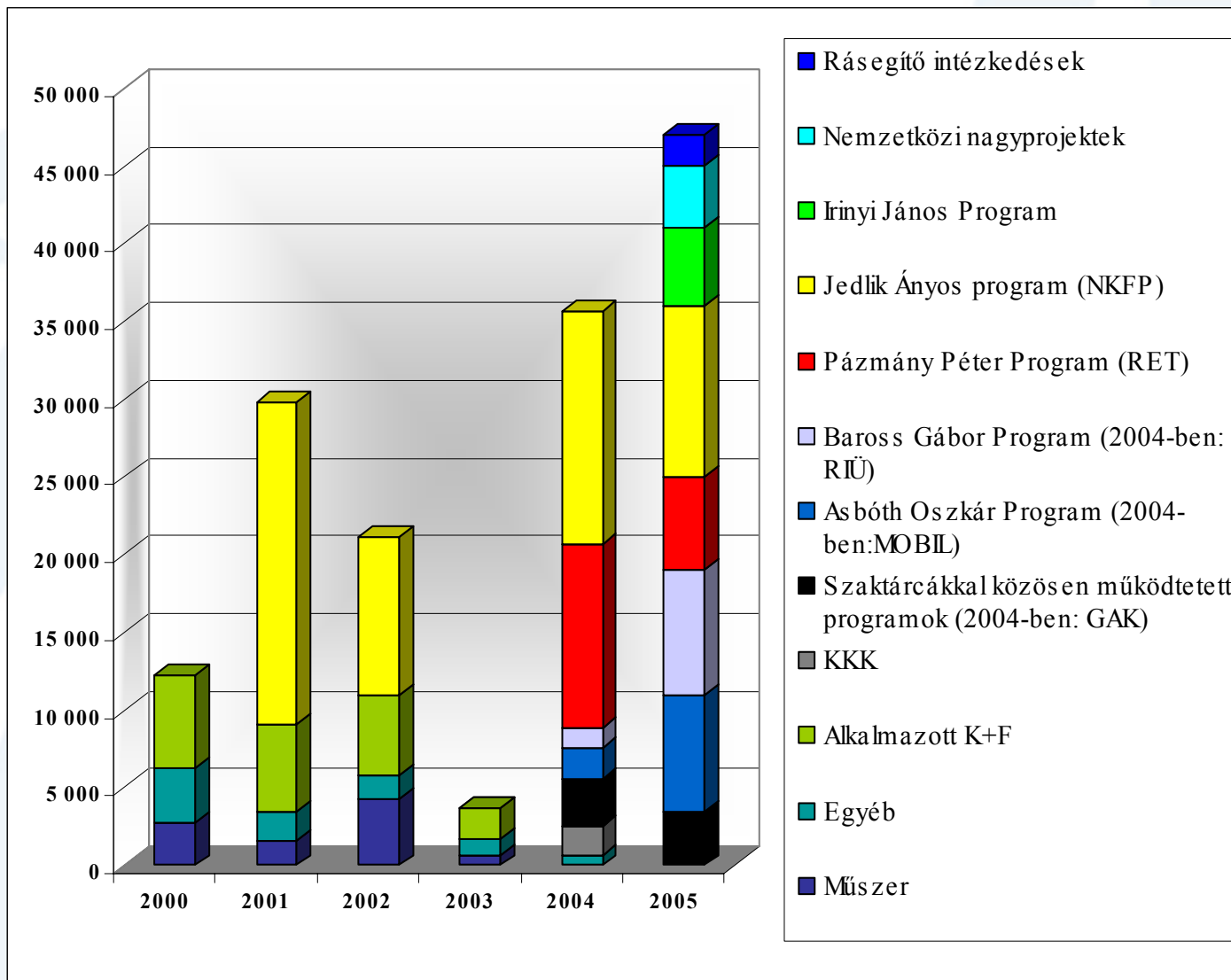
Pázmány= focus + commercialisation+  
regional dimension

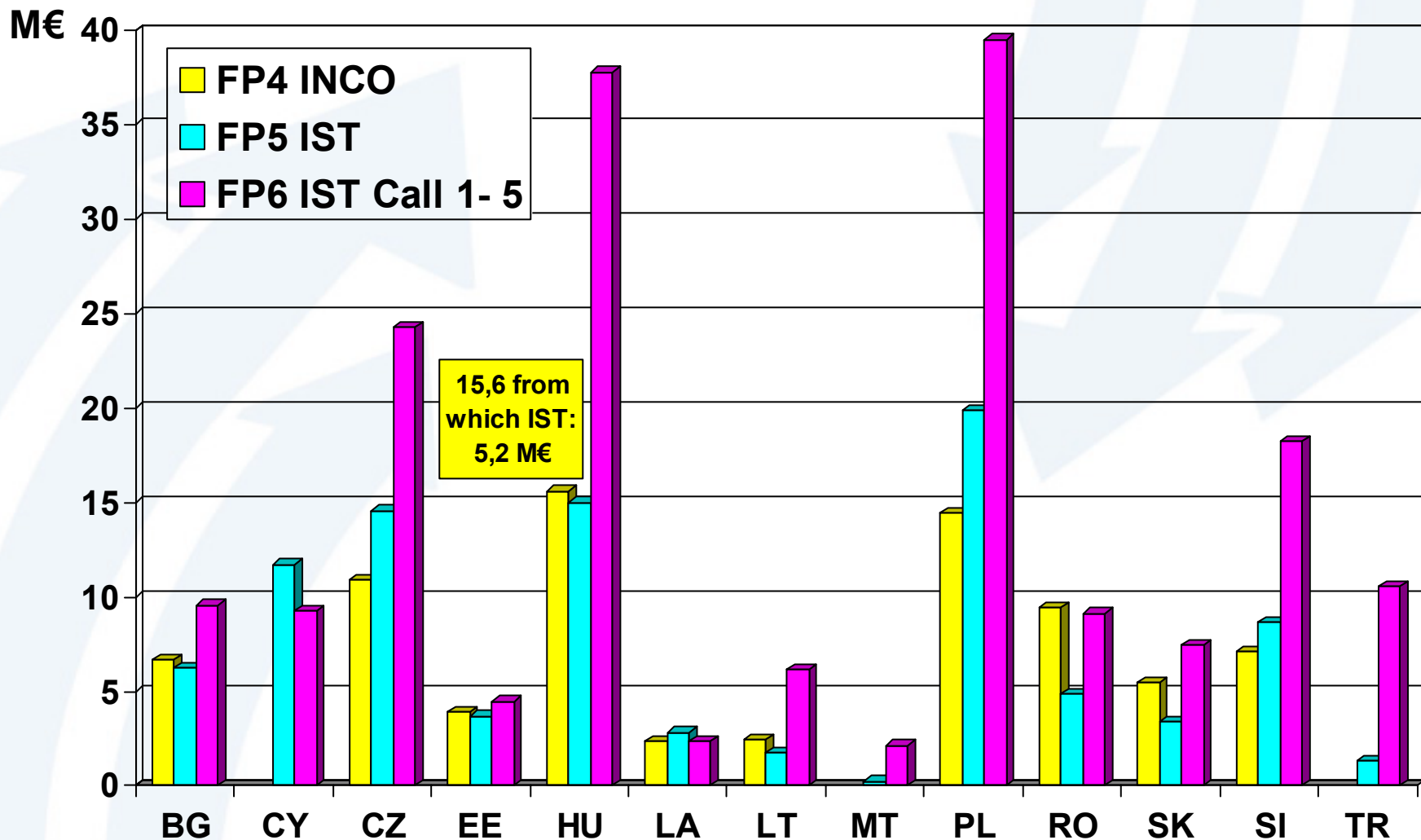
Asbóth= focus+ commercialisation + national  
dimension

International Mega-projects = focus  
+commercialisation+ international dimension

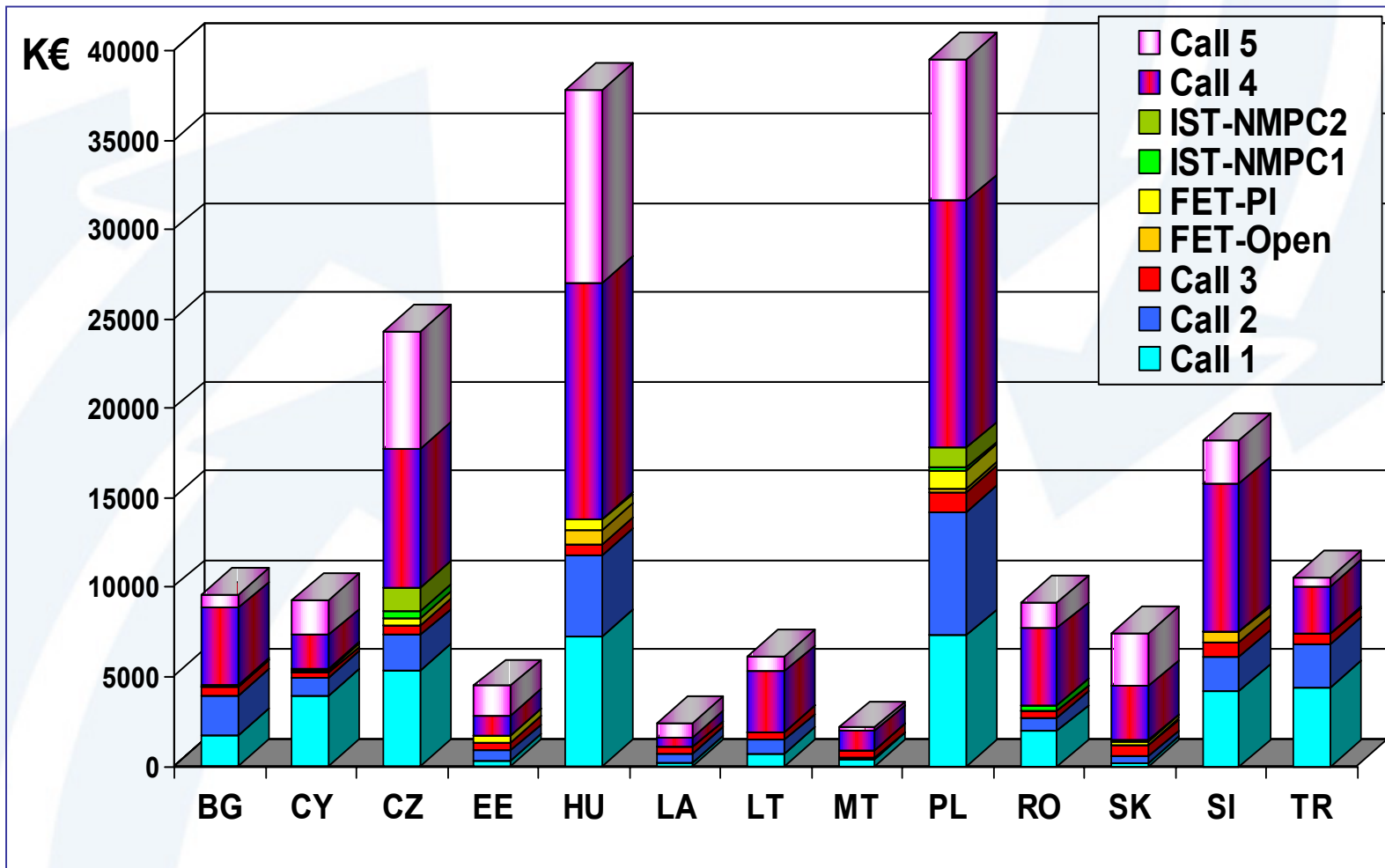
- Building on international cooperation in areas with breakthrough potential but new to Hungary
- Multidisciplinary. multicultural in approach
- Focus on entire innovation chain from basic research to commercialisation
- Strengthen research infrastructure
- Diffuse knowledge
- Setting up of novel joint research teams in biotech, ambient intelligence, nanotech
- Introduction of new organisational, management techniques

# R&D commitment in period 2000-2005 (million HUF)

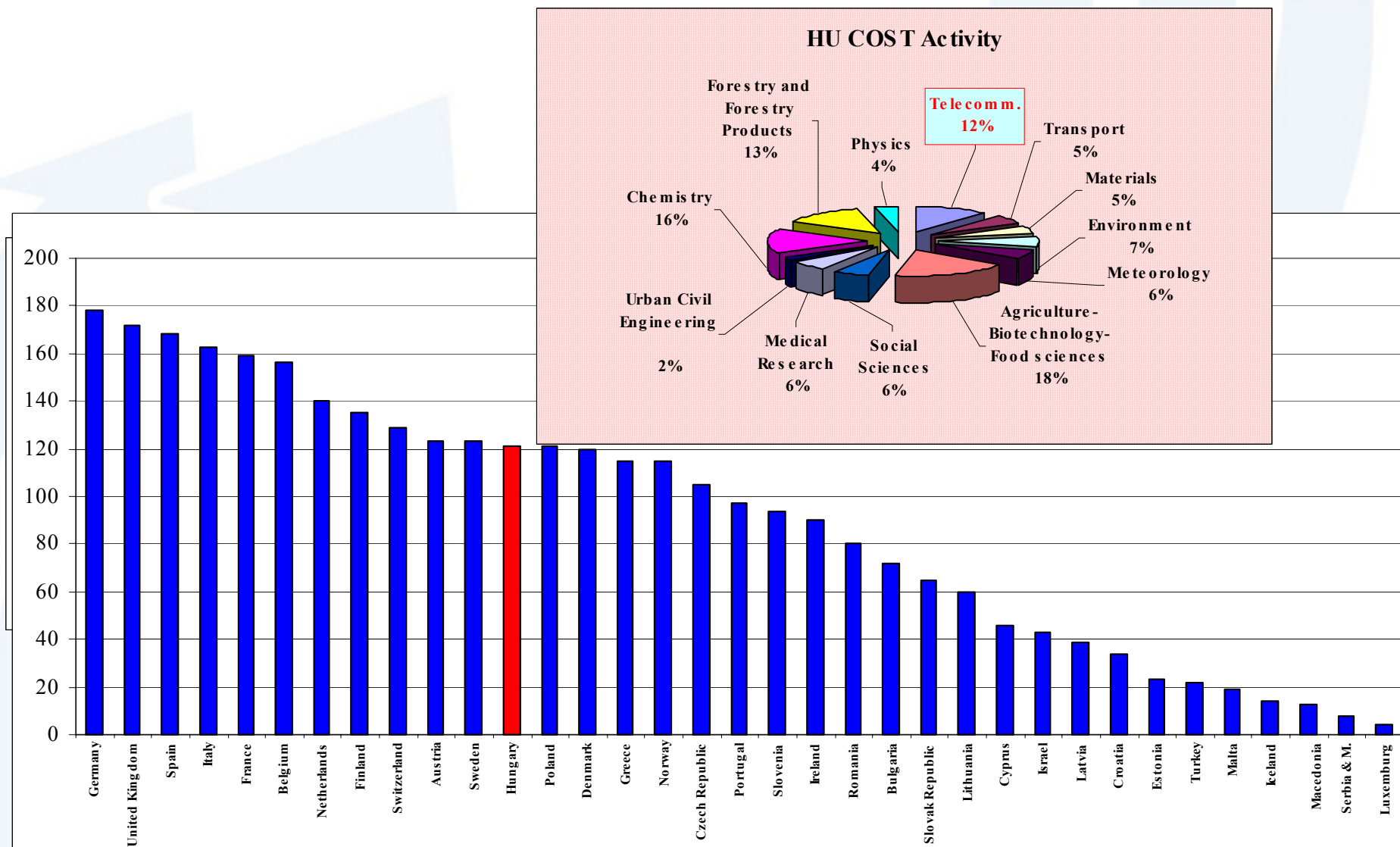




- Budapest 2004. workshop on NMS integration: IST Call 3 (10 M€), Call 4 (70 M€), Call 5 (impetus), Call 6 (bridge to the future)
- NKTH Participation in COSINE & CISTRANA – strengthening trans-national co-operation: ARTEMIS, AAL
- Defining/starting of new §169, §171 actions, EU-wide initiatives?
- Proposal on DMMOM (Distributed Milestone Monitoring and Outcome Mapping) pilot?

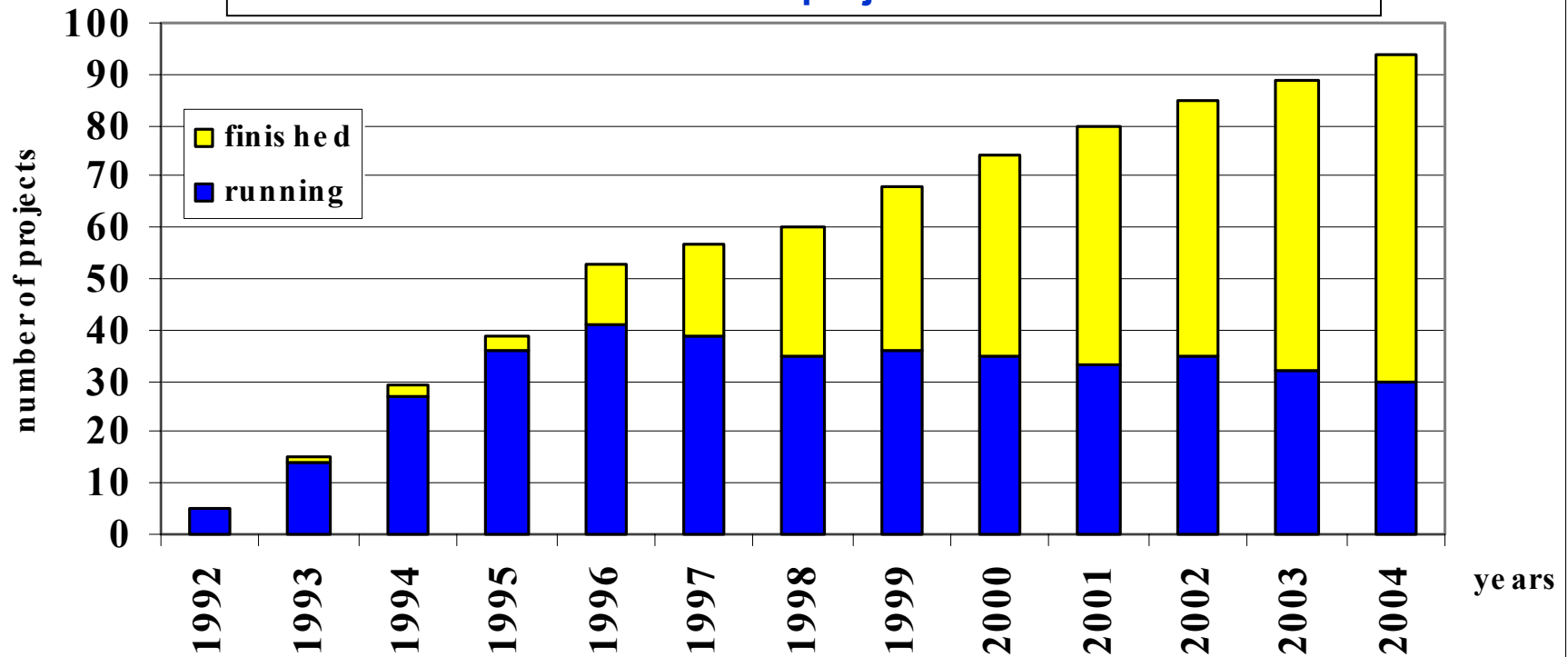






## HU in 33 running projects:

- Information Technology: 4 projects + 1 umbrella
- Communications: 2 projects + 1 cluster
- Robotics: 2 projects + 1 umbrella



- **1990's: “enter every possible organization and form of cooperation”**
- **After the integration process completed:**
  - Measure the cost against the benefits
  - Not interested in selling Hungarian R&D capacities
  - Promote utilization of R&D results within Hungary
- **Create and strengthen Hungarian competences while also promoting mobility**
  - Ambient intelligence (Germany)
  - Biotechnology (France, Germany)
  - Nanotechnology (Russia)

- ARTEMIS & AAL commitment
- NFT (National Development Plan) II. Structural Funds
- Implementing new government R&D strategy  
Preparing multi-annual R&D programmes of  
ICT open for trans-national co-operation
- Introducing/enhancing programme  
monitoring practice



Thank you for your attention

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