

# **SUPPORTING INDUSTRY-SCIENCE RELATIONS IN EUROPEAN REGIONS: GOOD PRACTICES – THE CASE OF THE CZECH REPUBLIC**

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## Structure:

1. General context: instruments of enhancing innovations and transfer of knowledge at a central level
2. Support of regional R&D and innovation activities
3. Practices of regional innovation policy



# 1. General context: instruments of enhancing innovations and transfer of knowledge at a central level

1.1 From R&D support to innovation policy

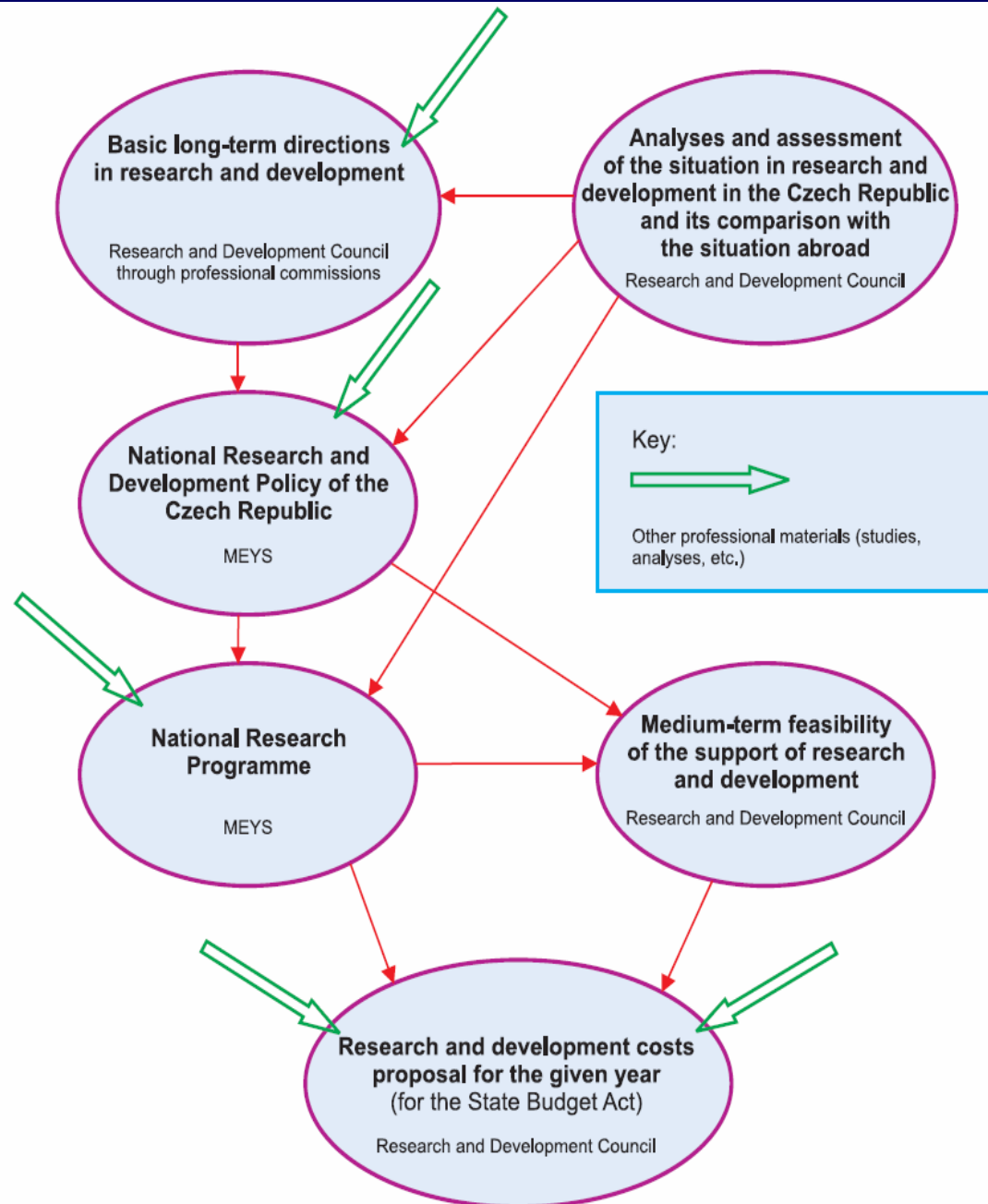
1.2 Governance, key actors and instruments of R&D and innovation support

1.3 Support of science-industry linkages



## 1.1 From R&D support to innovation policy

- National Innovation Policy
- National Research Programme
- Operational Programmes 2007-2013
  - Research and Development for Innovations
  - Enterprise and Innovation

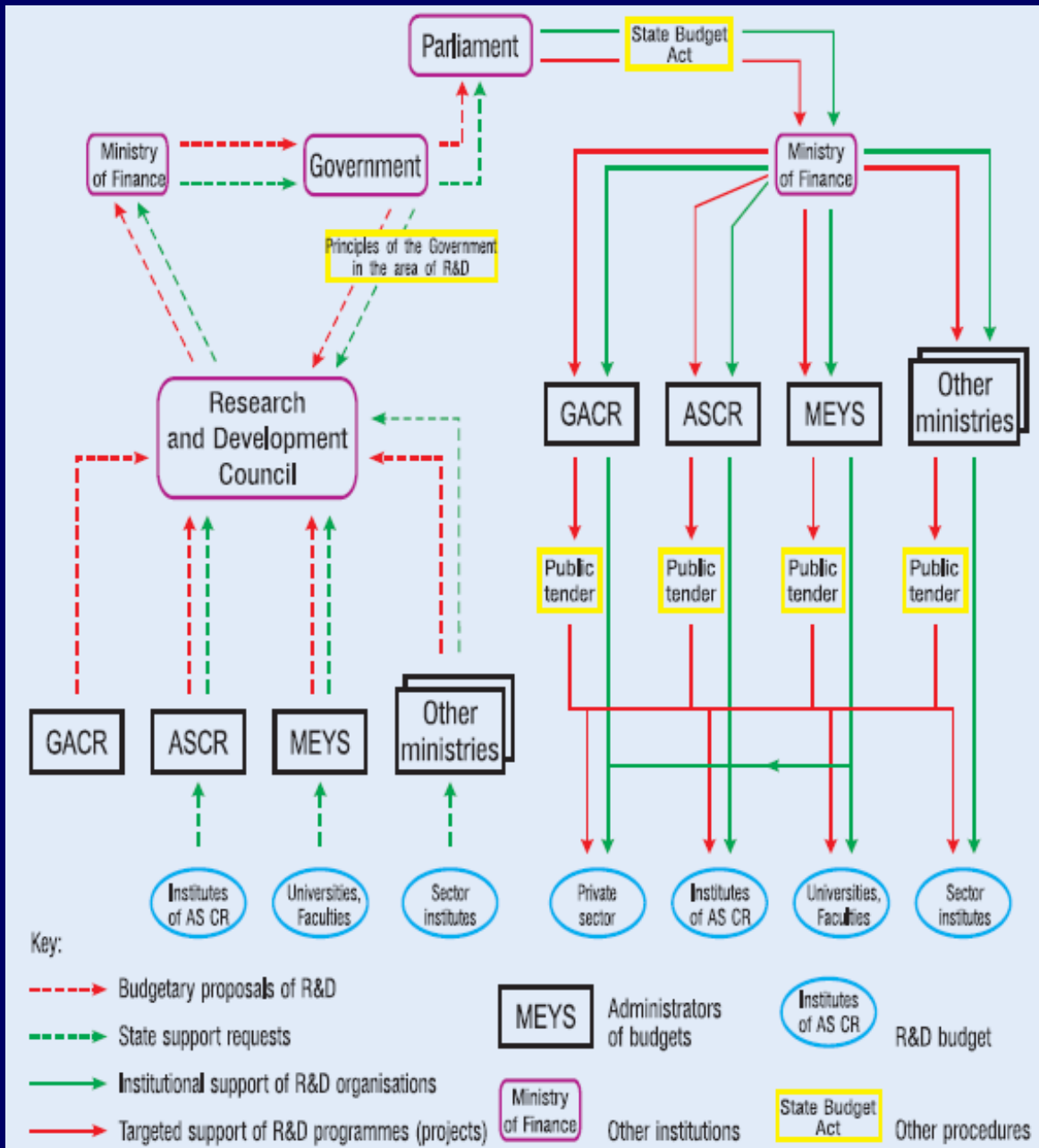


## *Stages of preparation of R&D support from public resources*

## 1.2 Governance, key actors and instruments of R&D and innovation support

- Governance structure
- Fiscal and financial support and its providers
- Budget trends in R&D and innovation support





*Stages of preparation of public financial support from state budget*

## 1.3 Support of science-industry linkages

- National support
  - Nanotechnology for Society
  - TANDEM
  - Research Centres
- Operational programmes: specific measures
  - 2004-2006
  - 2007-2013

# Operational programmes: specific measures 2004-2006

- Industry and Enterprise (OPIE)
  - *Development of business environment: Prosperity, Clusters*
  - *Development of business competitiveness: Innovation*



# Operational programmes: specific measures 2007-2013

- Enterprise and Innovation (OPEI)
  - *Innovation performance: Innovation, Potential*
  - *Business and innovation environment: Cooperation Platforms (Cooperation, Prosperity)*



## 2. Support of regional R&D and innovation activities – BRIS

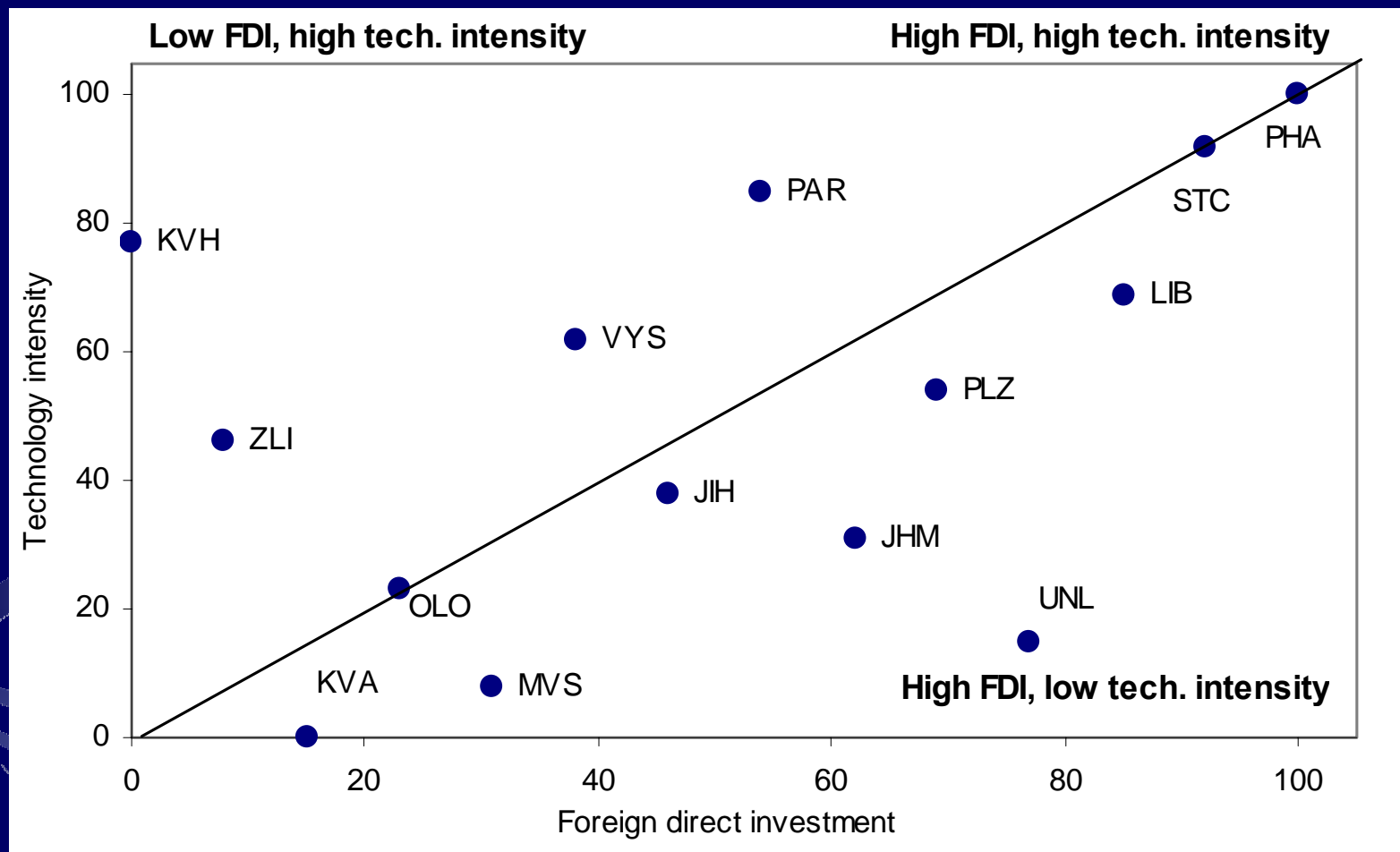
2.1 Development of regional policy and the  
role of FDI in regional development

2.2 Regional R&D policy and regional  
innovation performance

2.3 Regional development and innovation  
strategy

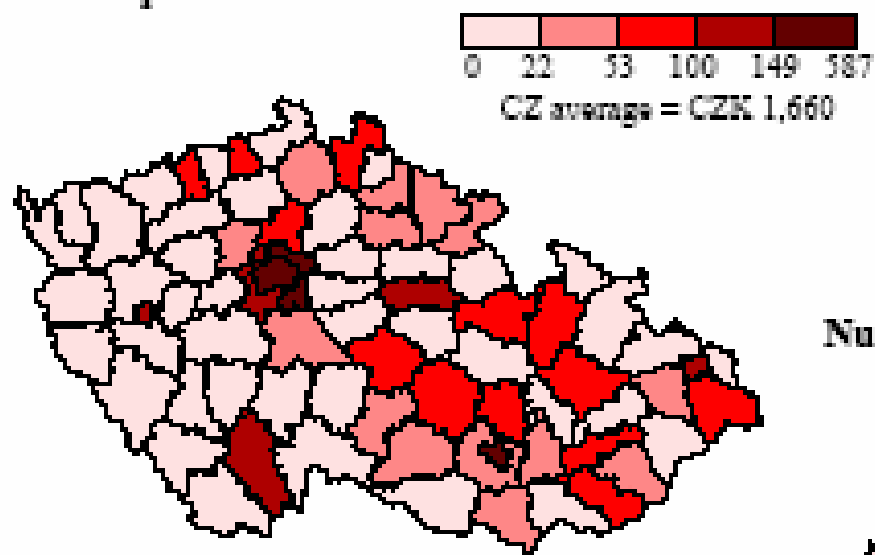


## 2.1 Development of regional policy and the role of FDI in regional development

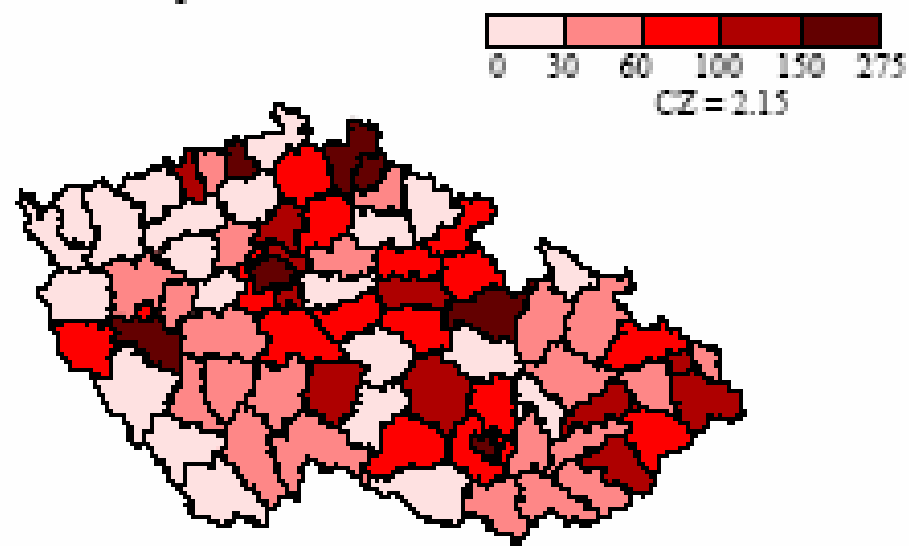


## 2.2 Regional R&D policy and regional innovation performance

R&D expenditures



Number of patents



## 2.3 Regional development and innovation strategy

- Regional innovation strategy - the case of BRIS in Prague
- Single Programming Document for Prague (2004-2006)
- Operational Programme Competitiveness Prague (2007-2013)



## *Bohemian Regional Innovation Strategy*



- initiative of Technology Centre of Czech Academy of Sciences with the EU funding available for elaboration of regional innovation strategies
- product driven not demand driven
- extensive field-study at 490 enterprises and at 60 research organizations in the field of innovation generation

# *Strategic thematic areas and priority measures of Bohemian Regional Innovation Strategy*

Thematic area	Proposed measures
A. Competitive sector of innovative enterprise	A.1 Support to the formation and development of regional sectoral clusters A.2 Support to progressive and hi-tech branches in the region
B. Active involvement of the R&D base in the development of innovative entrepreneurship	B.1 Strengthening technology transfer, commercialization of R&D results and cooperation between R&D institutions and the business sphere B.2 Support to establishing spin-off companies B.3 Greater involvement of enterprises in R&D at regional and European level
C. Human resources innovation	C.1 Training system for a dynamic labour market C.2 Lifelong learning for a knowledge-based economy
D. Consulting services and innov. infrastructure	D.1 Development of a regional innovation infrastructure D.2 Qualified consulting and services for innovation
E. Financing innovation	E.1 Public financial support to innovation, entrepreneurship and building the innovation infrastructure E.2 Stimulation of the use of commercial resources for innovation
F. Innovation as a part of regional development	F.1 Innovation culture and framework conditions for innovations F.2 Coordination of activities and strategic management of regional development in the field of innovation
G. Interregional cooperation	G.1 Cooperation with EU regions and transfer of time-tested practices G.2 Prague – national initiation and innovation centre

## *BRIS: weaknesses*

- The sectors with the largest innovation potential not identified,
- Missing clear priorities, the strategy is “to improve everything”,
- Missing link to budget of City of Prague,
- Excessive focus on SMEs, the role of foreign enterprises as innovation actors not considered,
- Building of a new innovation infrastructure instead of improving the existing one,
- Selection of some support priorities not justified adequately,
- Missing clear responsibility (and time-schedule) for implementation of actions and for monitoring

### 3. Practices of regional innovation policy – Clusters, Prosperity

- The subject of support
- Programme assessment
- Supporting activities
- Changes in the new programming period (2007-2013)



## Benefits of clusters

### For companies:

- ✓ Identification of common needs and pressure for their improvement
- ✓ Joint development projects
- ✓ Cost savings
- ✓ Human resource development
- ✓ Increase of innovation
- ✓ Improvement of business environment
- ✓ Access to new markets

### Pro VŠ:

- ✓ Knowledge of industry needs
- ✓ Tailored education and training
- ✓ Applied research
- ✓ Benefits from joint projects
- ✓ Technology transfer
- ✓ Access to other source of financing

### For government:

- ✓ Targeted support of businesses
- ✓ Support of prospective industries
- ✓ Regional specialization
- ✓ Attracting investors in the region
- ✓ Competitiveness improvement

Improvement of communications, knowledge of common needs  
Creation of joint projects

# Building clusters in the CR

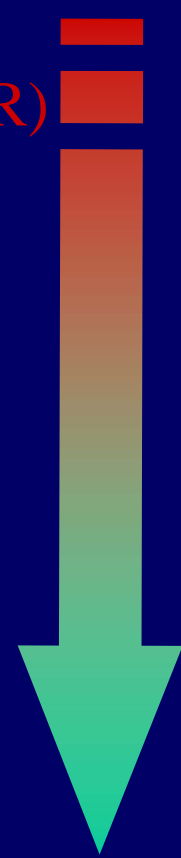


■ Completed

■ In process

- Training regional authorities, universities and firms
- Active collaboration with facilitators
- Promotion of the concept at different levels (conferences, PR)
- Adapt programme to company needs (eligible costs)
- Study on legal forms of the cluster and organizational and communication structure
- International co-operation
- National Cluster Strategy – adopted 06/2005
- National Cluster Study - the 1<sup>st</sup> part completed
- Establishment and development of clusters
- Certification of cluster facilitators and managers

2004



2006

# *Cluster support programme*

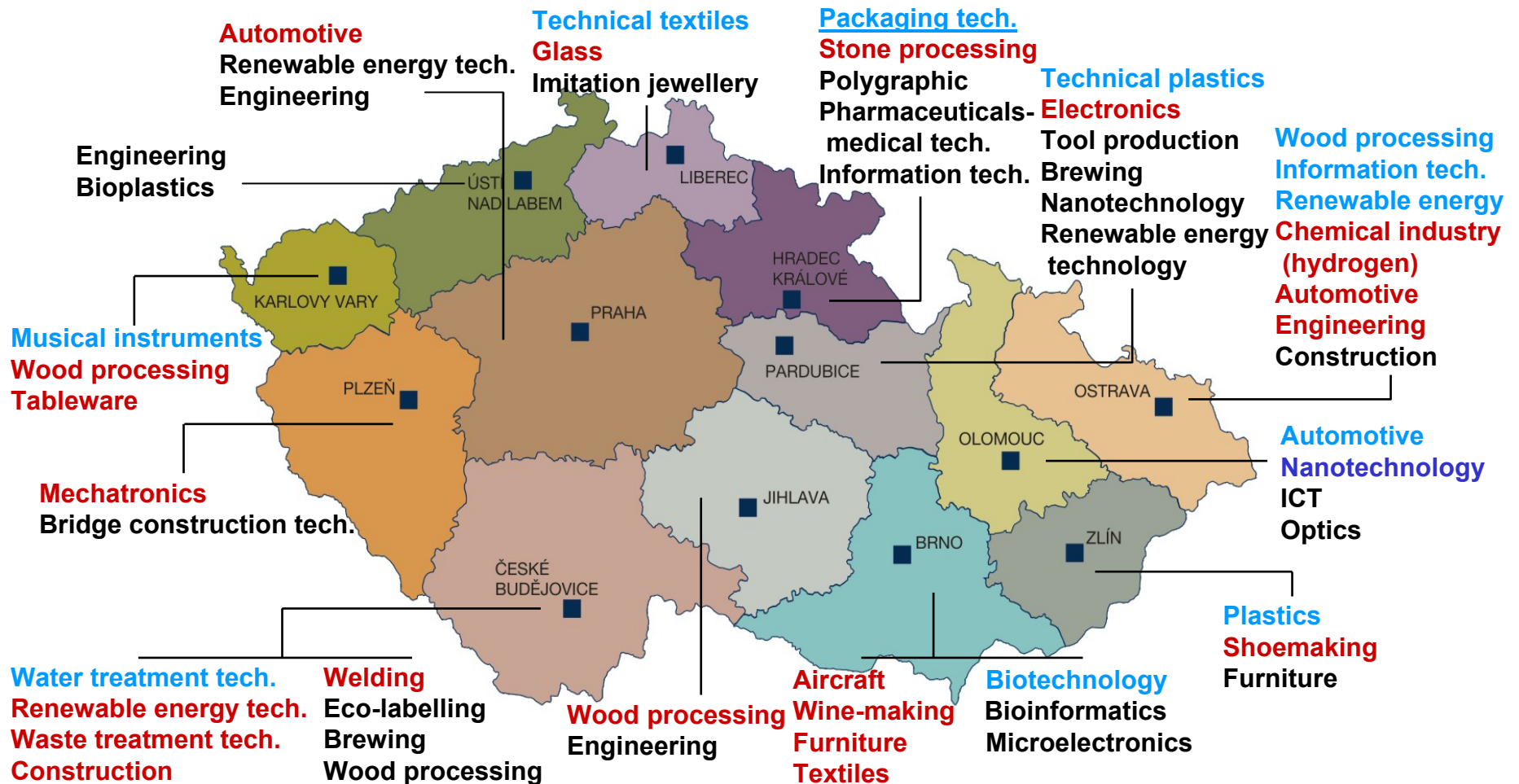


- Mapping (1<sup>st</sup> phase)
- Subsidy for facilitators
- Organised by regions or universities, supported by businesses
- 75 % of eligible costs, max. €35,000
- Eligible costs: All necessary costs for mapping
- Cluster management (2<sup>nd</sup> phase)
  - max. €1.6 million with decreasing tendency:
  - 1<sup>st</sup> year 75 % => 2<sup>nd</sup> year 65 % => 3<sup>rd</sup> year 55 % of eligible costs
  - Eligible costs: All necessary related to cluster management
  - Mutual projects supported via other programmes, not only
  - Operational Programme Industry and Enterprise

# Map of clusters in the Czech Republic



■ Established clusters    
 ■ Projects underway    
 ■ Initial activities



June 2006: 28 projects underway, 1 project in 2<sup>nd</sup> phase; approved allocation €2.35 million

## *Best practice: OMNIPACK Cluster in the Hradec Králové region*

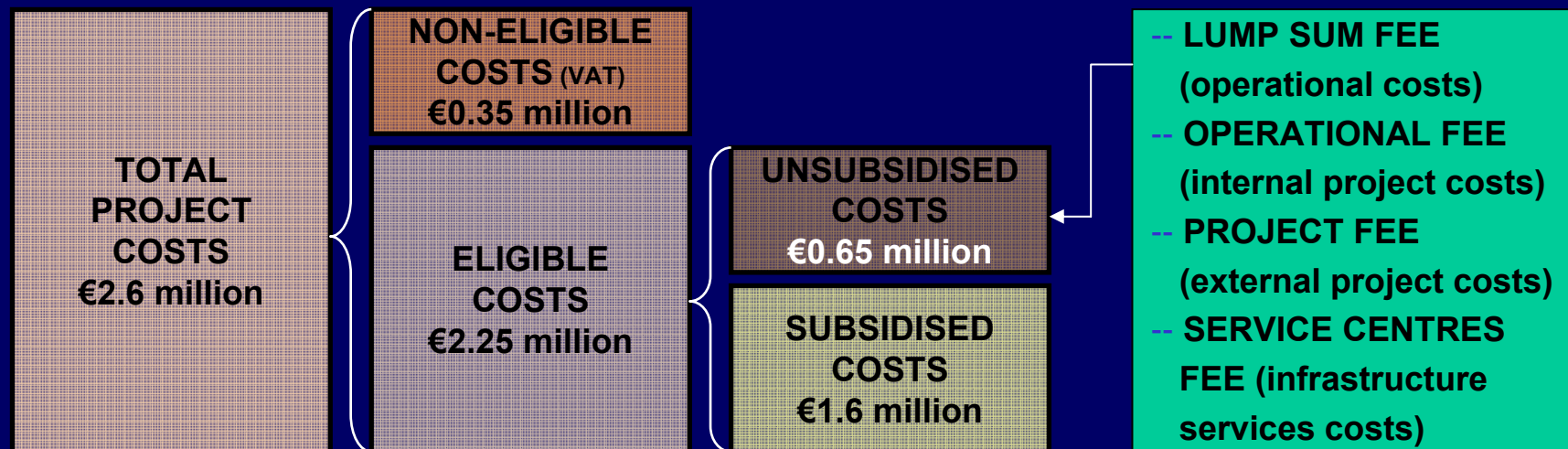


- **Cluster characteristics:** Support and development of packaging industry, promotion of the region as a packaging centre of excellence,
- 22 founding firms + 4 universities, cluster production: 44 % plastic, 21 % paper, 21 % wooden, 14 % metal packaging
- **Joint projects:** Innovation, development, research (testing and development centre, innovation system management), Information technology development (information system, marketing and business portal, central purchasing system), Human resource development (knowledge management system, e-learning, training), Waste recycling system (“perpetum” system), Marketing, export support, consultancy, etc.

## *Best practice: OMNIPACK Cluster in the Hradec Králové region*



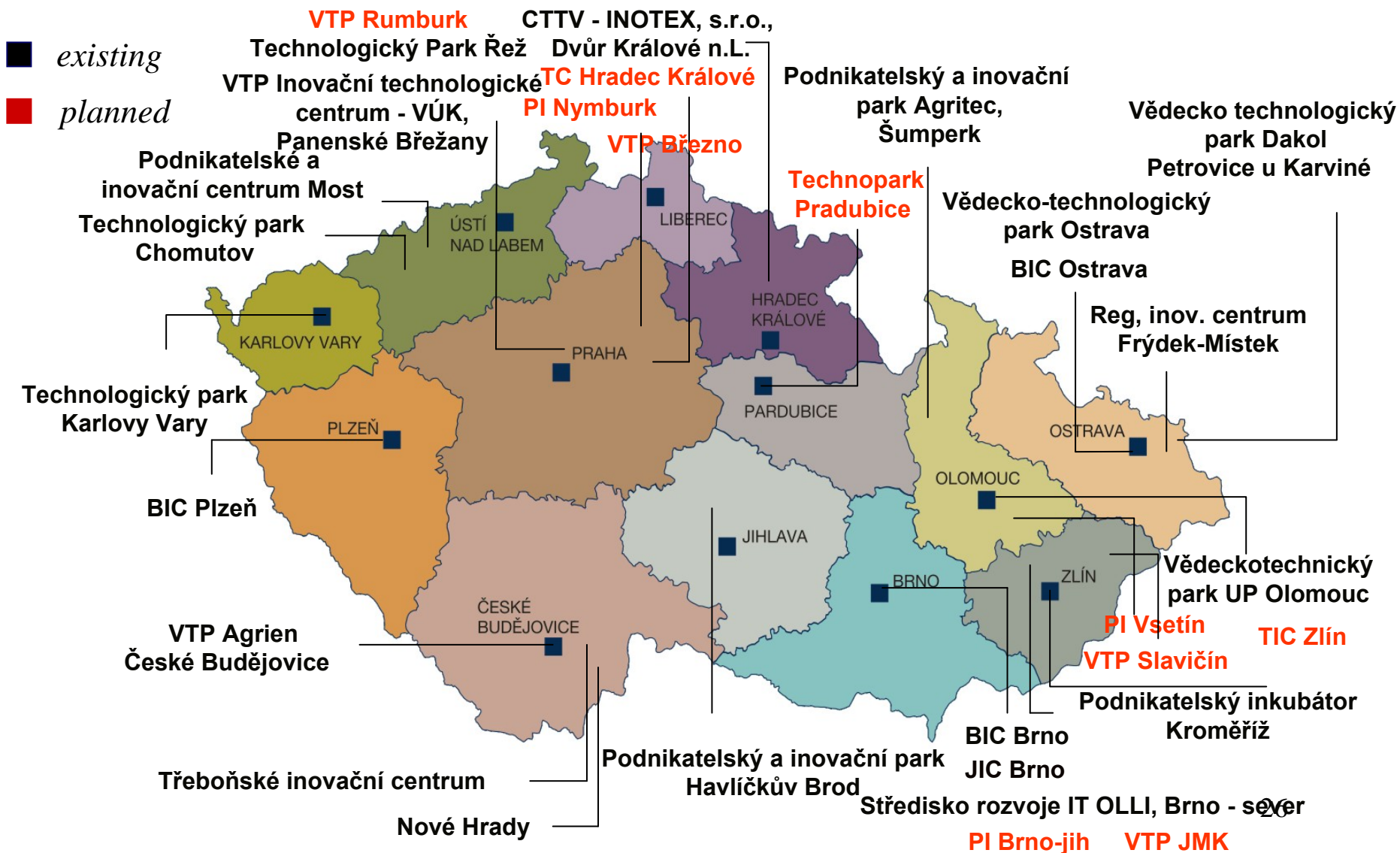
- Duration of project: March 2006 - July 2008
- 88 projects in 8 fields of activity through 4 service centres
- Financing (subsidy + self-financing):



## Science-technology parks, business incubators, technology transfer centres

- Support in the form of subsidy to eligible project cost
- Available sources (2004 – 2006): 56 mil. EUR
- Maximum 75% of eligible project cost
- When construction cost included: subsidy in the range 3 - 150 mil. CZK
- When construction cost not included: subsidy in the range 0,5 - 30 mil. CZK
- Project may be divided into individual stages

# Science-technology parks, business incubators, technology transfer centres



## 2.3 Regional development and innovation strategy

- Regional innovation strategy - the case of BRIS in Prague
- Single Programming Document for Prague (2004-2006)
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## Conclusions

### *From R&D to innovation policy*

- research and development policy in shift towards innovation policy support and its higher efficiency
- influence of EU membership, including the preparation of operation programmes for exploitation of structural funds
- support of the underdeveloped science-industry linkages to increase of innovation system effectiveness particularly in regions

# Conclusions

## *Regional innovation strategies*

- regional dimension of innovation support still missing in the Czech Republic
- efforts developed in formulation of regional innovation strategies
- problems:
  - programme documents of low quality, lacking a clear strategy capable of bringing effective results
  - formulated targets are often of general nature, missing clearly defined priorities and related measures (including adequate financial resources from regional or national budgets)
  - non-reflection of specificities of individual regional innovation system,
  - passive role of its most important interest groups (businesses, universities and policy representatives) with minimum interactions across institutional sectors,
  - insufficient integration of innovation strategy into development of regional competitiveness

# Conclusions

## *Regional support practices*

- examples of regionally specific measures are very scarce in the Czech Republic,
- not systematically and independently evaluated as to their innovative effects in regional development
- example of regionally specific interactions but potential for future regional innovation development not identified
- missing evaluation as a significant obstacle to increasing efficiency of the new support programmes in innovation policy
- questions about the practical feasibility of the BRIS strategy (and therefore its contribution to the regional innovativeness),
- inclusion in the long term development programme of the region and in development strategies of the key regional agents
- desirable form and intensity of policy interventions in the support of regional innovation development
- more general problem of the so far obscured role of regional policy in long-term economic development in the Czech Republic