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# Smart specialisation strategy in Bratislava Region

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## Innovation strategies on the state and lands level – present situation

- State level: No complex National innovation strategy was developed in 20 years of existence of the Slovak Republic so far
- Lands level: all lands have carried out the RIS 2, but due to low competencies of the land government's insufficient implementation
- Insufficient support of SMEs, tax and insurance increase , unemployment of 14 % / 32 % young people, low R&D expenditures of 0.49 % / 0.68 % incl. SF expenditures
- Results: Innovation scoreboard 22/27, FP7 participation 22/27, unemployment 22/27
- **Challenge to change: Central government systematic intervention is necessary**



## Preconditions of Innovation strategy development and implementation

- GDP growth caused by FDI - the automotive industry development (VW, PSA and KIA and their supply chain) and by the electro technical industry, much less by domestic SMEs
- Systematic SME support in access to finance, to market, to qualified working force necessary
- Support of research universities, SAS, emphasis on applied, “problem solving” research related to SK and EU industry needs
- Structural Funds inflow OPs education, infrastructure, SMEs, R&D,
  - but very low SF administration efficiency EC **support needed**
- SF forms main part of R&D financing
- Smart Specialization Strategy – priority definition related to limited R&D and Innovation expenditures on national and regional level



- BSK is a developed region, but certainly less than stated by the Eurostat
- High concentration of companies and financial institutions, full employment
- VW Slovakia, investments in hi-tech, e.g. e-car manufacturing, impact of supply chain companies
- Concentration of ICT companies – IBM, Siemens, HP and others
- Dynamic development of Slovak R&D ICT companies, e.g. ESET, Sygic, Ardaco, Sitel
- Operation of energetic companies



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## Concentration of Slovak R&D base in Bratislava

- 53% of national R&D staff
- 62% of FP7 financial means run in Bratislava (20% in Košice)
- 70%+ scientific publications and quotations and 50%+ new knowledge and technology generation
- Critical mass on basic and **applied** research in main SS domains
- Related to regional and international industry, e.g. automotive
- Creation of modern R&D infrastructure financed from SF, but
- Low financing of R&D activities: 1.2% of the GDP
- Low wages of R&D staff especially young researchers (much less than in Brno or Vienna)
- Insufficient national R&D financing “substituted” by SF



- Smart specialisation enables concentration of limited financial means on domains with highest efficiency
- Mandate of the Land BA governor to BIC Bratislava to work out the RIS 3 BSK 2014-2020
- Smart Specialisation Criteria
- BIC Bratislava criteria: FP participation / coordination, SF means obtained, cooperation with the industry, patents, PhD students, (publications and quotations)
- Commercialised R&D results in EU 15, USA, SE Asia (BMW, Audi, Ferrari, Intel ...)
- Critical mass on R&D potential, international networking, R&D continuity and sustainability
- Consultations with the UK and STU rectors, SAS vice-president, CSTI director and prestigious scientists



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## Smart Specialisation in Bratislava: 3 main domains

- Materials
- ICT
- Biotechnologies



- Construction materials:
  - Light materials (aluminium)
  - Plastics and polymers
  - Composites
- Materials diagnostics on nano level
- Intelligent surfaces
- Application in electrotechnics, photovoltaic, sensors
  
- Use: In automotive industry (VW and suppliers), RE technologies (PV panels), aerospace industry, medicine





- Security
- Navigation systems
- Control, automation and robotics
- Data recognition a data mining
  
- Use: in manufacturing, telecommunication and marketing processes



- Molecular biology and biomedicine
- R&D in diagnostics of oncology diseases and monogenetic diseases
- R&D in biology active materials, biopolymers, biocompatible and biodegradable materials (e.g. vas implanters)
- Use: mostly in medicine



## RIS 3 Bratislava: Vision, Objectives and Instruments

- Vision and objectives
- **Creation of an R&D and Innovation region of European meaning**
- In the context of Vienna and Brno (JIC) region, Central Europe and the Danube region via:
  - In identified domains – construction and intelligent materials, selected ICT and molecular medicine biotechnologies
  - Achievement of critical concentration of technology based companies, incl. hi-tech ones in the defined domains in the region – support of new technology companies creation and allocation of foreign technology based companies
  - Relocation of chosen R&D activities of MNC being present in the land Bratislava to Bratislava



- Creation of Competence centres, Science parks and “Science City”
- Sciences parks oriented on 3 main domains
  - SAS, STU, UK
- Incubators
- Technology and Innovation centres
  - VW Innovation centre
- Further upgrade of laboratory equipment



## Instruments: Development of non-material infrastructure

- Research university status assigned to the UK and STU – more funding
- Transformation of SAS
- Support of PhD students
- Infrastructure for spin-off creation
- IPR protection
- Knowledge and TT support (patent fees)
- National Knowledge and Technology Transfer Centre at CSTI
- Research cluster development in defined 3 smart specialisation domains



## Instruments: Financial infrastructure development

- Stimulation of risk funds development (e.g. with support of EIF “new generation JEREMIE”)
- Investment stimuli activation for the allocation of foreign high tech companies
- IPR financial support
- Development of specific loan and grant programmes
- Establishment of the Regional Innovation Fund (RIF)
- Funds rising for co-financing of PhD students, young scientists and foreign scientists
- S3 development as “ex ante” condition for Structural funds planning and implementation
- Exception / Flexi solution for SF for R&D in Bratislava region – 2/3 of national R&D potential versus small portion of national SF for R&D (15% ?)
- EIB Instruments (loan guarantees / equity investments)



- Political and regional consensus achieved  
Political: city, land, state, **EU** (still to be achieved, SF problem)
- Regional: SAS, STU, UK and regional industry- to be continued
- Critical mass on defined domains – smart specialisation
- People – HR in R&D & Innovation emphasis
- International context (Vienna and Brno region),
- EU excellence
- Integration to ERA
- Infrastructure development in R&D & Innovation
- Exception / Flexi conditions in SF
- Cooperation with central governments – across the relevant ministries (MF)
- Cooperation with the EC – across the relevant DGs



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