



BIC
Bratislava
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Experience with Regional innovation strategy (S3) in Bratislava

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- from 1991
 - supporting the innovation in companies and regions
- from establishment of first companies to specialized and qualified services on innovation





- business support & financing
- R&D support
 - National FP7 structures
- technology transfer
 - Enterprise Europe Network
 - establishment of national and regional TT centres
- innovation infrastructure
 - clusters, national TT system
- innovation strategies
- networking



Slovakia: Growing Heart of Europe



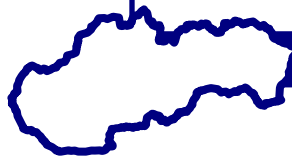
Establishment:	1st January 1993
Official name:	Slovak Republic
Area (km2):	49,035
Population:	5,379,000
Capital:	Bratislava
Member of:	OECD, WTO, NATO, EU, Schengen area
Official currency:	EURO
Official Language:	Slovak
Government:	Parliamentary democracy
Election term:	4 years
Neighbours:	Austria, Czech Republic, Hungary, Poland, Ukraine
Time zone:	GMT + 1hour

Source: SARIO



Journey of Slovakia

Independent
Slovakia
1993



European Union
member
2004



EURO Zone
2009



2000
member
of OECD



2004
member
of NATO



2007
Fully member
Schengen zone

Source: SARIO

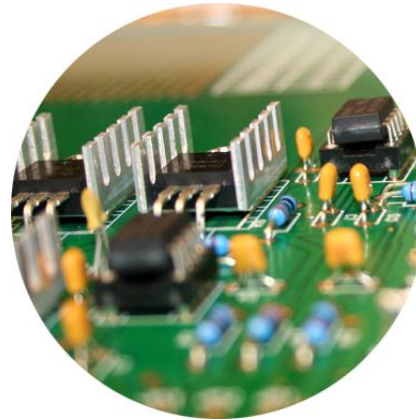


Top-Notch Sectors of Slovakia



Automotive

3rd in world car
production in 2009 - 86
cars/1000 inhabitants



Electronics

Leading Slovak Exporter –
driver of economic and
technological growth



SSC/ICT

SR is becoming a hive
of SSC and ICTs

Source: SARIO



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Why Slovakia? Answer found in Success Stories



Volkswagen Slovakia produced its 500.000th Volkswagen Touareg in Bratislava since the launch of this model's production in 2002. In April 2010 Volkswagen has started to produce the Touareg Hybrid model exclusively in its Bratislava's branch.



The Slovak automobile factory is the latest in technology group PSA Peugeot Citroën. The production started with model Peugeot 207 in 2006 and new Citroen C3 Picasso, which is produced exclusively in Slovakia. Last year left the production lines almost 205 000 vehicles and in this volume, the Trnava car production in 2009 became the largest car manufacturer in Slovakia.



Kia Motors Slovakia is the first production plant of Kia Corporation in Europe. In November 2010 Kia Motors Slovakia produced its 700 000th car since its establishment in 2006. New model C-SUV Kia Sportage as well as Hyundai ix35 is produced in Slovakia since 2010.

Source: SARIO



Key sector - Automotive

- Attractiveness of Slovak automotive industry constantly nourishes, car component companies continue shifting their operations into Slovakia and the country experiences entry of new sub-suppliers and suppliers.
- Slovakia has become one of the leading car producers in V4 Region mainly owing to the presence of three world-class automotive companies: Volkswagen Slovakia, Bratislava; PSA Peugeot Citroën Slovakia, Trnava and Kia Motors Slovakia, Žilina.
- Slovak automotive industry is well diversified, with three different types of car producers and three different groups of car sub-suppliers, all of which are successfully interconnected. While Volkswagen assembles top-end cars, PSA Peugeot-Citroën produces middle-class cars and Kia Motors lower-class models



Source: SARIO



Established SSCs and CCs in Slovakia

- More than **34 SSC/ ICT** altogether employing more than **40 000** professionals
- Unique clustering of the sector creates a fast-paced, enthusiastic IT environment



Source: SARIO



Research and Development



■ R&D and Design in Automotive



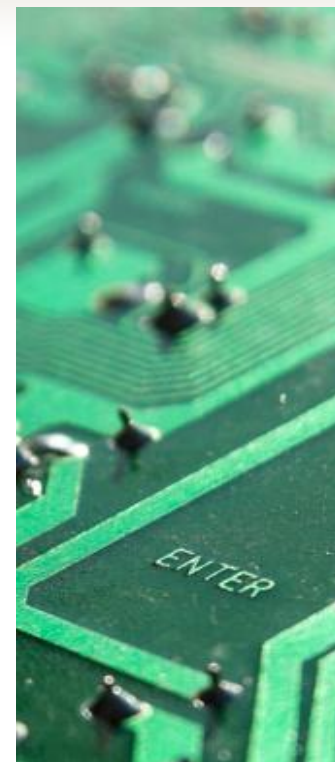
■ ICT and Software Development



■ R&D in Nuclear Power



■ R&D in Renewable Energy



■ R&D in Electronics

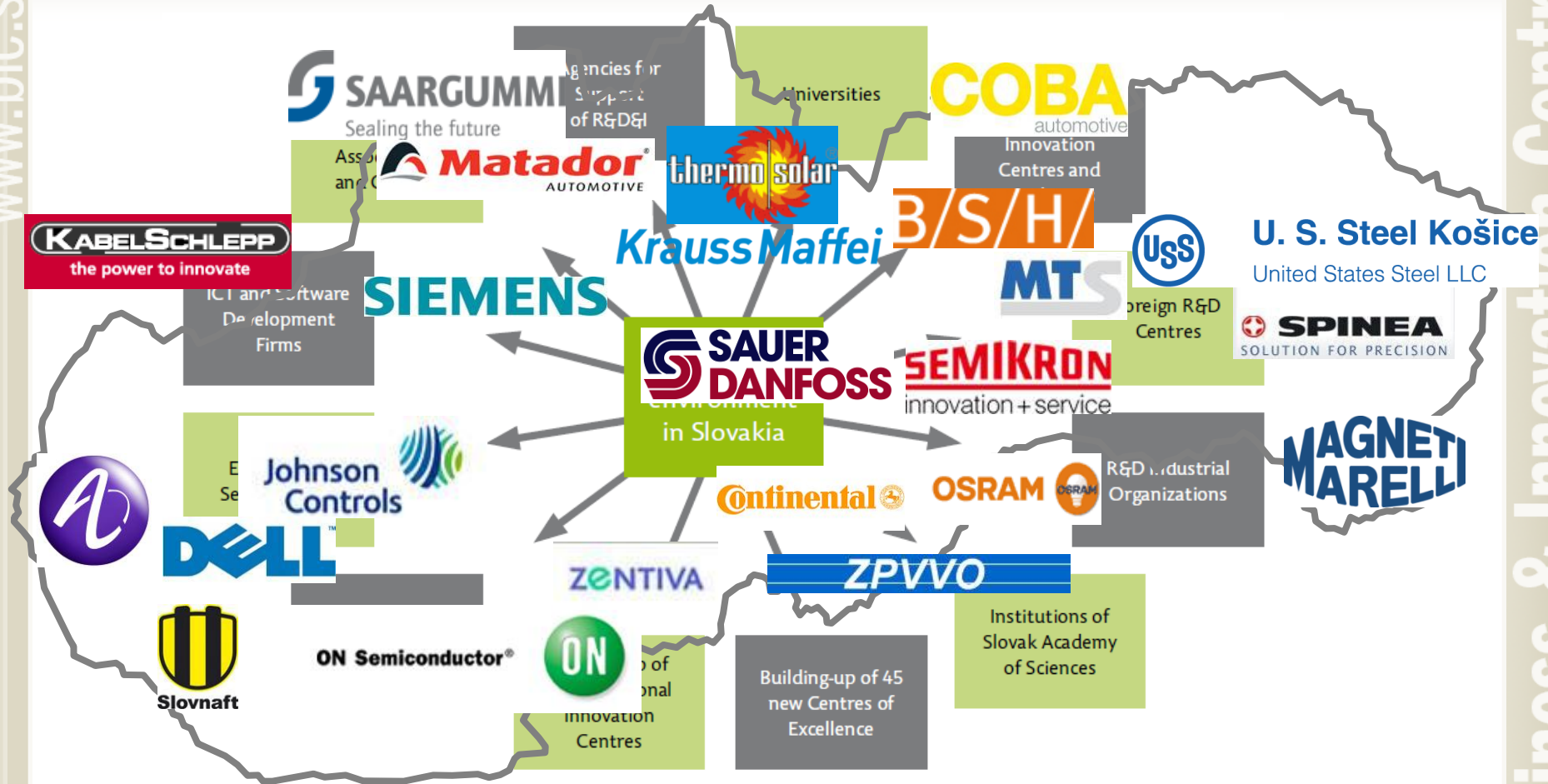


Source: SARIO



Local R&D network and success R&D stories

www.bic-sk



Business & Innovation Centre



■ Regional Innovation Strategy Bratislava Self-Governing Region 2014-2020





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



Bratislava Region: basic facts

- **Population:** 628 000 (2012)
- **Area:** 2,053 sq.km
- **GDP per capita (PPS):**
€ 43,100 (2010)
- **Capital:** Bratislava





- 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
- Operation of energetic companies



- 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 form 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



- Materials
- ICT
- Biotechnologies
- Horizontal priority: proactive participation in global EU issues: renewable energies, digitalization, aging population, other social challenges...



- 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



- Analysis of the R&D base (SAS, STU)
- Identification of 900 companies actives in materials in BA region – from that just 30 companies involved in material research / developmnet
- Visit of 15 companies, technology audit (TA) performance in 5 of them
- Science park creation (SAS, STU, UK) in material science, ICT and biotech
- Coopearation with external industrial companies esp. From the automotive industry



- 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



- 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
- Cluster development in main industrial domains
- Awareness and success stories – awareness in innovations and establishment of Innovation forum
- Educational innovation (dual education at secondary schools)



- 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
- BSK role: managing, implementation, networking and monitoring of RIS 3 process
- awareness, promotion, presentation of success stories – innovation approach



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