



Potential of the Technical university of Košice to Danube eRegion knowledge society development



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TECHNICAL UNIVERSITY OF KOŠICE (TUKE)

founded in **1952**



challenge for your future

more than 53.000 alumni



TECHNICAL UNIVERSITY
OF KOŠICE

BASIC DATA

16 630 students, **2026** Ing. (MSc.) graduates

405 degree programs (Bc., Ing. PhD.)

927 professors (full, associate, assistant)

945 other staff (administration, technical support)

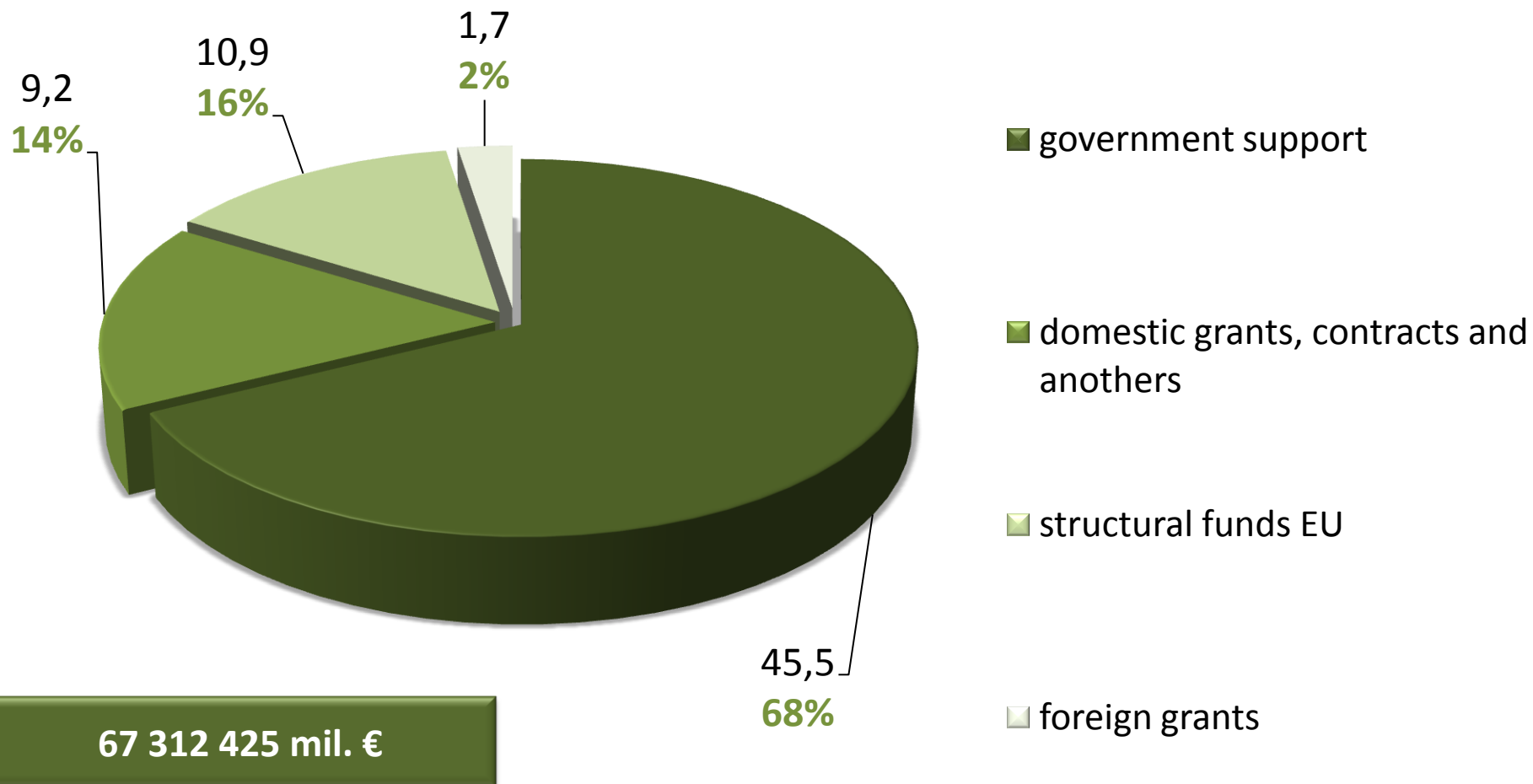
50,4 % female in total, **34 %** female in teaching and research

9 faculties:

- | | | |
|----|---|---------------|
| 1. | Mining, Ecology, Process Control and Geotechnology | (1952) |
| 2. | Metallurgy | (1952) |
| 3. | Mechanical Engineering | (1952) |
| 4. | Electrical Engineering and Informatics | (1969) |
| 5. | Civil Engineering | (1977) |
| 6. | Economics | (1992) |
| 7. | Manufacturing Technologies (campus in Presov) | (1992) |
| 8. | Arts | (1998) |
| 9. | Aeronautics (former University of military) | (2005) |

FINANCE

BUDGET TUKE FY 2010 - Revenue in mil. €



EU, STRUCTURAL and NATIONAL FUNDS

- So far we raised **59,7 mil. EUR** (with TUKE contribution cca 3,1 mil. EUR) from **Structural Funds of EU** in Slovakia
- **68 active international projects in 2010**
(FP6, FP7, Socrates, COST, ERDF South East Europe, ERDF Central Europe, Tempus, INTERREG IVC, CEEPUS, Norwegian finance instrument etc.)
- **269 national projects in 2010**
(VEGA, KEGA, APVV etc.)



FP7 - BEST IN SLOVAKIA

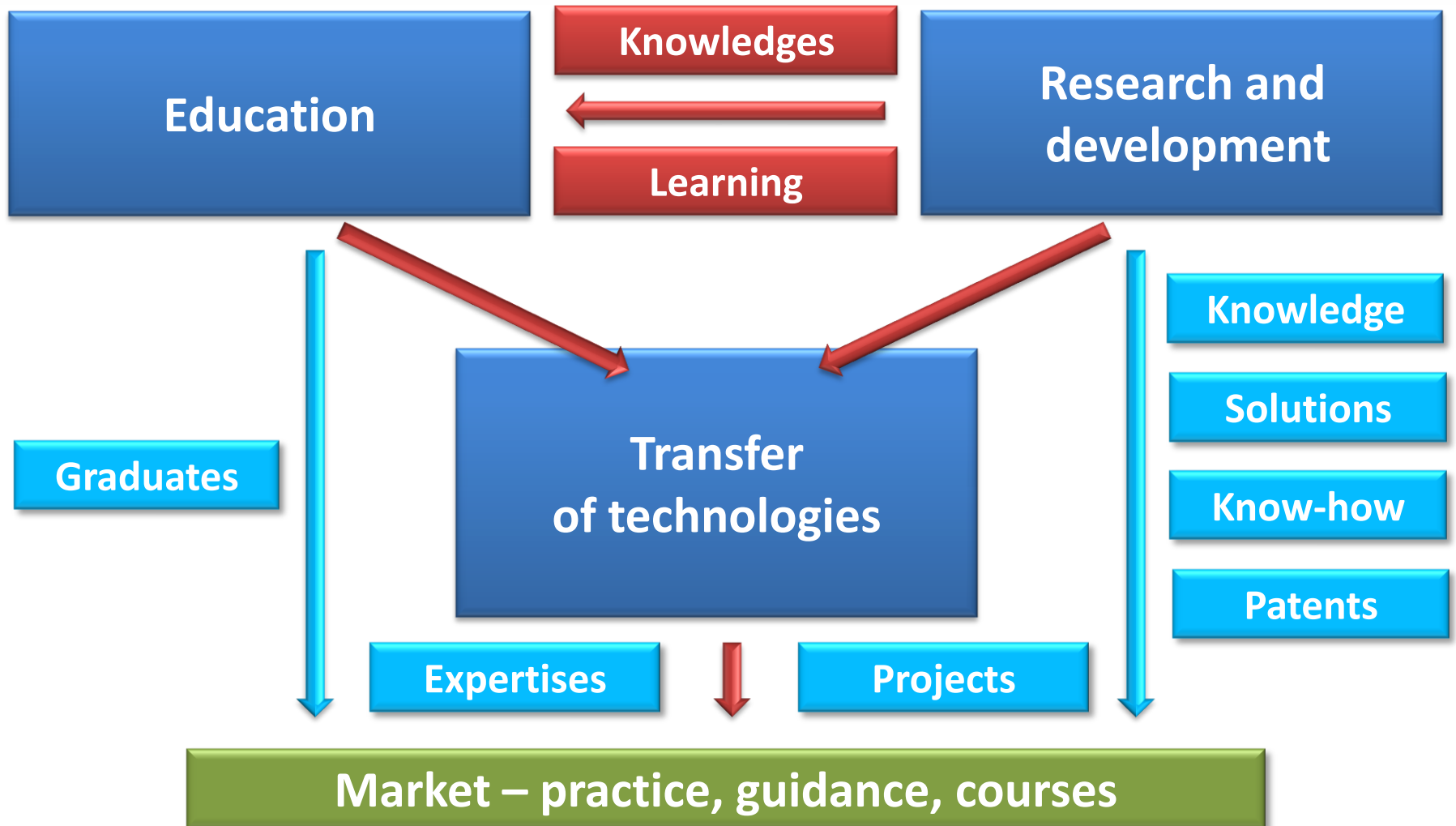
TABLE 5

SK - Slovakia - Most active organisations in terms of EC contribution granted to the FP7 research projects

Legal Name	Number of Participations	% of all SK grant holders	EC contribution (M euro)	% of total EC contribution to SK grant holders
Technical University Kosice (TUK)	11	4.23%	2.29	6.90%
Ardaco, A.S. (ADO)	5	1.92%	2.23	6.70%
Univerzita Komenského v Bratislave (Univerzita Komenského)	15	5.77%	1.99	5.99%
Ustav Informatiky, Slovenska Akademia Vied (UI SAV)	5	1.92%	1.76	5.29%
Virologicky Ustav Slovenskej Akademie Vied	5	1.92%	1.54	4.64%

SOURCE: <http://ec.europa.eu/research/innovation-union/pdf/competitiveness-report/2011/countries/slovakia.pdf>

BASIC ROLES OF THE UNIVERSITY



SCIENCE AND RESEARCH



Centre of information and communication technologies for knowledge-based systems



Centre of excellent research of gaining and processing of earth resources



Centre of excellence for integrated research of progressive building structures, materials and technologies

5 CENTERS OF EXCELLENCE



Center of research and control of technical, environmental and human risks of sustainable development of production and products in mechanical engineering



Centre of excellence of integrated research and use of progressive materials and technologies in auto electronic



UCITT - University center for innovation, technology transfer and protection of intellectual property rights



Developing of services able to ensure required performance of R&D activities, collaborative projects, transfer processes etc.

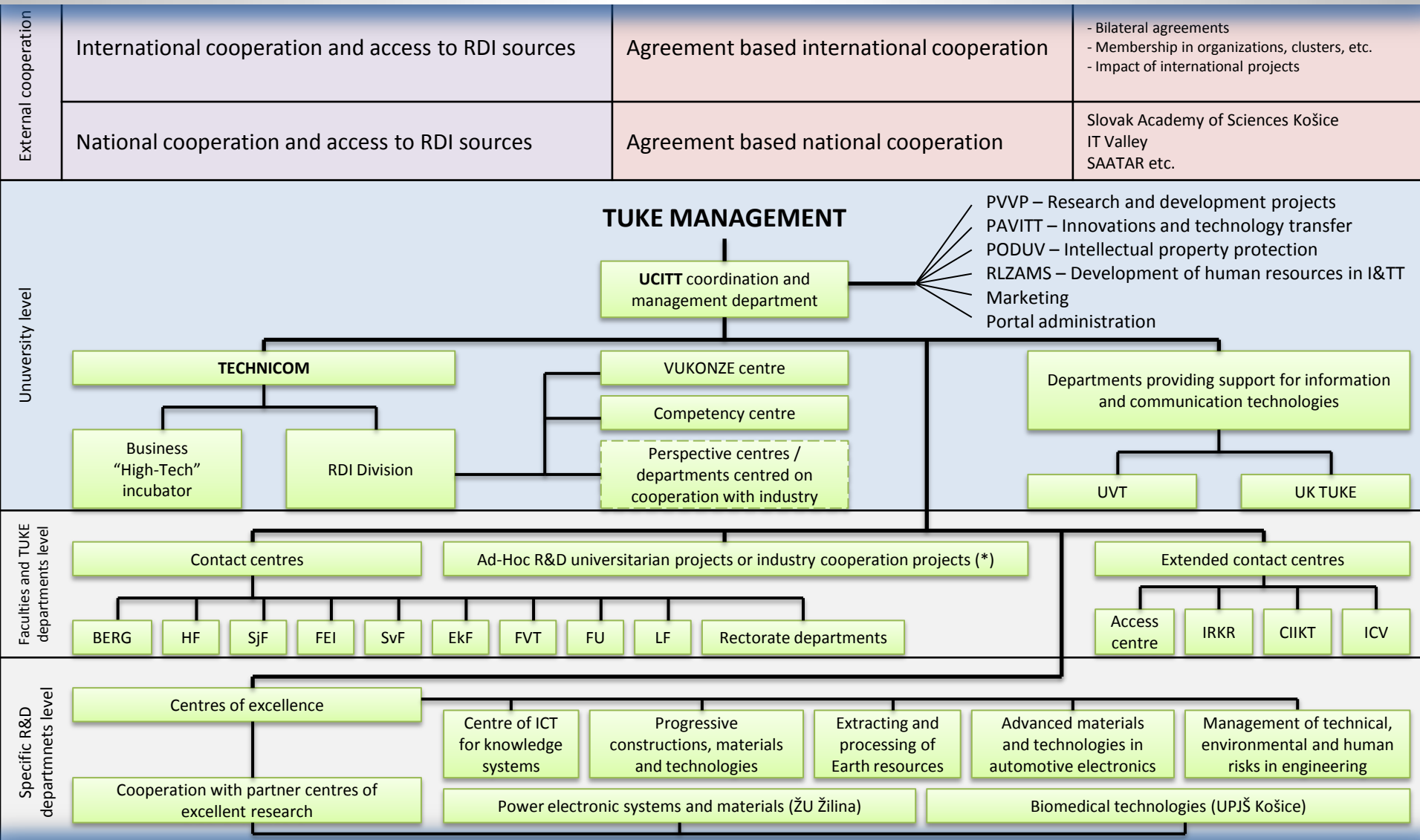
The services fully support:

- *Preparation, development and performance of national and international R&D activities and projects recovered mainly from public resources.*
- *Active and efficient collaboration (Win to Win) and technology transfer with social and commercial (mainly industrial) practice.*
- *Initiation, development and establishment of relevant „Spin – off“ and „Start – up“ institutions.*
- *Human resource development for management and administration of research and technology transfer activities, processes and projects.*
- *Marketing in the fields of R&D and Technology Transfer*

For more information, visit the website <http://ucitt.tuke.sk>



UCITT PORTAL



CENTER VUKONZE



Research centre for efficient integration of the renewable energy sources (Centre VUKONZE)



Main R&D activities are oriented to:

- *Technologies of the biomass utilisation in energy sector;*
- *Collection and utilization of solar energy and technologies for hydrogen utilisation and storage;*
- *Efficient exploitation of the geothermal resources obtaining from the short and long depths;*
- *Efficient integrations of different renewable energy (multi – valence)sources according to customer need and conditions (model of the customer as smart low energy building is applied);*
- *Intelligent control systems for production, distribution and consumption of the electricity produced from renewable energy sources ;*
- *The integrated support for the risk's life-cycle management in the production and utilisation of the renewable energy sources.*

COMPETENCY CENTRE

KC ZATIPS COMPETENCY CENTRE FOR KNOWLEDGE TECHNOLOGIES APPLIED AT INNOVATION OF PRODUCTION SYSTEMS FOR INDUSTRY AND SERVICES

Žilinská univerzita - The University of Žilina is unique in Slovakia as it has a long tradition of providing education in the fields of transport and communications. During the last period the University became an educational and research institution with a broad profile in areas of science, technology, economics, management, and recently, educational and natural sciences. The Faculty of Mechanical Engineering is the partner of KC ZATIPS

IPM SOLUTIONS- R&D activities in areas of CAD/CAM/CAE solutions and products .

ELCOM – SME with R&D activities in application of information and communication technologies and support systems for SMEs

Prešovská univerzita v Prešove - The University of Prešov has provided the highest standards of academics across a wide range of studies in the fields of humanities, natural, theological, and managerial sciences, health and sports.. In the KC ZATIPS the University is represented by the Faculty of Humanities and Natural Sciences with the Department of Geography and Regional Development .

CEIT SK - research SME, R&D activities, projects and products mainly in bioengineering, bionic, digital and virtual enterprises and intelligent control for production systems and smart products

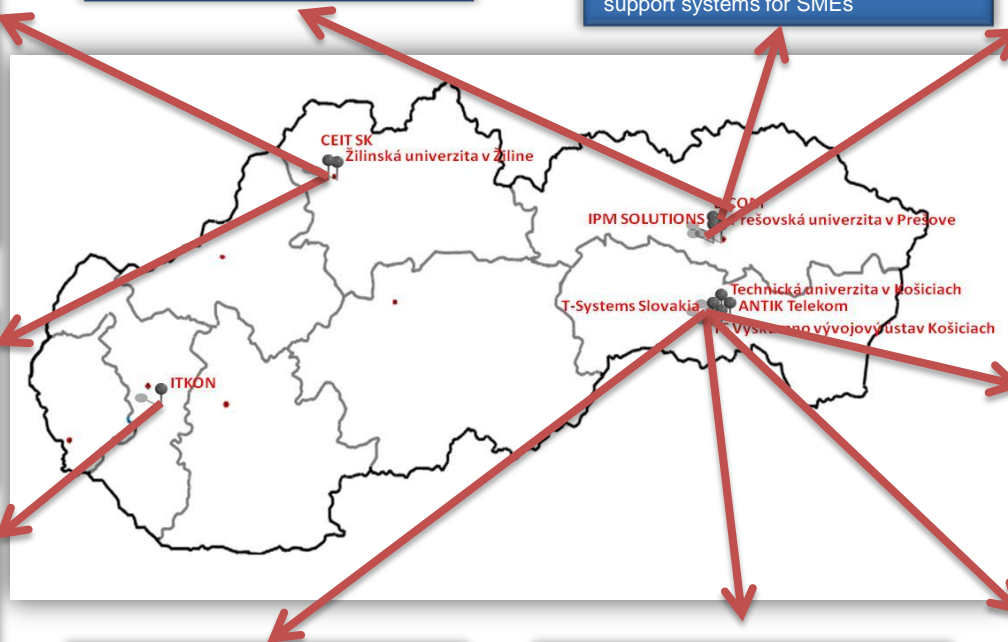
ITKON – SMEs with R&D activities in customer driven applications of ICT mainly in different areas of water resources management

T-Systems Slovakia – doter company of Deutsch Telecom with research oriented on field of cloud computing


ZTS VVÚ – research oriented SME with orientation on development and production intelligent mobile robotic systems.

Technická univerzita v Košiciach - The Technical University of Kosice is holder and coordinator of the KC ZATIPS . Relevant departments from three Faculties (the Faculty of Electrical Engineering and Informatics, the Faculty of Mechanical Engineering, the Faculty of Manufacturing Technologies with a seat in Prešov) are leaders of eight research laboratories .

ANTIK Telekom - SME with R&D activities in internet and telecommunication services, technologies and systems . v oblasti doručovania Internetového



**TECHNICAL UNIVERSITY
OF KOŠICE**

Zdroj: Analýzy SOVVA 

TECHNICOM



**TUKE science park
design - project - realization**



TECHNICOM

MISSION



- **“Win to Win” collaboration between academic and public research organisations**
- **Producing expected and required outcomes for technology transfer**
- **Incubator for „Hi-Tech“ companies and Spin-off“ initiatives**
- **Management, development and operation issues are provided by the UCITT**
- **Consultancy, expertises, technical and technological support for the transfer of research and development knowledge and products**
- **Relevant support for education and training activities**

JOINT TUKE - INDUSTRY LABORATORIES



CISCO IPv6 Lab



CISCO Telepresence



VW robotic cell



Laboratory ABB



Laboratory IBM



METRONOM Carl Zeiss

TUKE – INDUSTRY COOPERATION



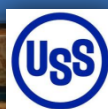
T Systems



U. S. Steel Košice
United States Steel LLC



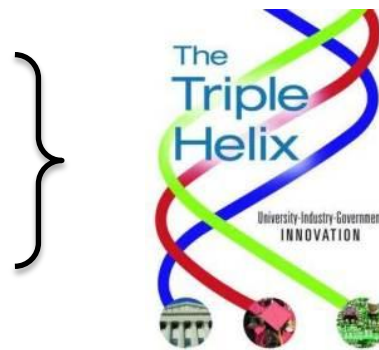
Water model – simulation of continuous casting of steel



KOŠICE IT VALLEY ASSOCIATION

The role of regional actors:
to improve the quality of life of citizens and
to make region more attractive for its people

1. Regional and local government
2. University
3. Business community



TRIPLE HELIX
higher quality

Košice IT Valley integrates all the major players.



Košice IT Valley

Founding Members (10), year 2006:

- Universities (TUKE, UPJŠ)
 - Košice Region
 - ICT companies (T-Systems, NESS, Siemens PSE, VSE IT, Cisco Systems, ST, Microsoft)
- at present ... more than 30 members
- about **4000** new job positions !!!



THANK YOU !

