UNIVERSITY - INDUSTRY COLLABORATION
at the TECHNICAL UNIVERSITY of KOSICE
... we are not bad, but we want to be better!

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Nordic - Slovak Innovation Forum

October 26, 2011, Bratislava
1. Description of the institutional framework for the innovation-driven approach and the latest development in the field of university-industry collaboration ➔ (... we are not bad)

2. To find some new ways in order to accelerate innovation initiatives ➔ (but we want to be better!)
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.
• Efficient collaboration and technology transfer with social and commercial practice.
• Development and establishment of relevant „Spin – off“ and „Start – up“ firms.
• Human resource development for management and administration of research and TT.
• Marketing in the fields of R&D and Technology Transfer.

For more information, visit the website http://ucitt.tuke.sk
UCITT - VALUE CHAIN

**EXTERNAL LOGISTICS**
- UCITT PAVITT: Support for cooperation with practice, applied research, innovation and technology transfer
- UCITT PUVIP: Support for scientific, research and innovative projects
- PODUV: Support for intellectual property rights protection
- ALZAMS: Support for human resources development and service methodologies in R&T
- MPS: Marketing promotion of UCITT services

**INTERNAL LOGISTICS**
- Science and technology park (TECHNICOM Park) and its departments
- Facilities and TUKE autonomous departments level
- Project departments – PD, Trans-University Projects
- Contact centers – CC (persons, departments)
- Extended contact centers - ECC
- Centres of Excellence

**INPUT**
- Contractual organizations of social and economic praxis
- RDI projects consortium partners
- Co-operating, consulting and “broker” organizations and professional organizations, clusters and associations
- Offered, consulting, supporting and executive services of UCITT
- Financial sources for R&D (national and international)

**OUTPUT**
- Monitoring of R&D projects and activities and practice cooperation initialized by UCITT
- Market environment

**UCITT INFORMATION PORTAL**
# UCITT - NETWORK STRUCTURE

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| AUTONOMOUS RDI UNITS LEVEL | |
|---------------------------| |

- **INTERNATIONAL AND NATIONAL COOPERATION AND SOURCES FOR RDI**
- **AGREEMENT BASED INTERNATIONAL AND NATIONAL COOPERATION**
- **SCIENCE AND TECHNOLOGY PARK TECHNICOM**
- **DEPARTMENT FOR COORDINATION AND MANAGEMENT**
- **UCITT NETWORK ADMINISTRATION AND INFORMATION SOURCES**
- **CONTACT DEPARTMENTS (CONTACT POINTS) FACULTIES AND AUTONOMOUS DEPARTMENTS**
- **EXTENDED CONTACT DEPARTMENTS (CENTRES, LABORATORIES, ETC.)**
- **AD-HOC DEPARTMENTS FOR PROJECTS WITH IMPACT ON ENTIRE UNIVERSITY**
- **RESEARCH CENTRES OF EXCELLENCE**
- **CENTRES (OF EXCELLENCE) COOPERATION WITH SPECIFIC SECTOR**
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, Start-up 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
Main R&D activities are oriented to:

- Technologies of the **biomass** utilisation in energy sector;
- **Solar** energy and technologies for **hydrogen** utilisation and storage;
- Efficient exploitation of the **geothermal** resources;
- Efficient integrations of different renewable energy (smart low energy building);
- **Intelligent control systems**;
- The integrated support for the risk’s life-cycle management.
UCITT - PORTAL

TUKE MANAGEMENT

- Bilateral agreements
- Membership in organizations, clusters, etc.
- Impact of international projects

Slovak Academy of Sciences Košice
Košice IT Valley
SAATAR, etc.

PVVP – Research and development projects
PAVITT – Innovations and technology transfer
PODUV – Intellectual property protection
RLZAMS – Development of human resources in I&TT
Marketing
Portal administration

Contact centres
Ad-Hoc R&D university projects or industry cooperation projects
Extended contact centres

BERG  HF  SjF  FEI  SvF  EkF  FVT  FU  LF  Rectorate departments

Centres of excellence

Cooperation with partner centres of excellent research

Centre of ICT for knowledge systems
Progressive constructions, materials and technologies
Extracting and processing of Earth resources
Advanced materials and technologies in automotive electronics
Management of technical, environmental and human risks in engineering

Power electronic systems and materials (ŽU Žilina)
Biomedical technologies (UPJŠ Košice)
IPM SOLUTIONS - R&D activities in areas of CAD/CAM/CAE solutions and products.

Žilinská univerzita - The University of Zilina is unique in Slovakia as it has a long tradition of providing education in 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.

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ČEIT 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.

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

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Prešovská univerzita - The University of Prešov has provided the highest standards of academic 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.

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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.

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

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Development and realization workplace (VRP) of raw materials extracting and treatment

Development and realization workplace of Raw Materials Extracting and Treatment

Basic research | Applied research | Development | Transfer | Implementation

Idea generating | Transforming idea into solution | Solution implementing

Centre of excellence for research of RMET | Collaboration with the practice centre for RMET | Technological centre for the RMET area

TU Košice/VRP - A member of FP7 Large Project – IntelliMine

- 23 important mining companies and research institutes including 4 universities

- Participants from Nordic countries:
  - Sweden:
    - Luossavaara-Kiirunavaara AB / LKAB – project coordinator
    - ABB AB
    - Boliden Mineral AB
    - Lulea University of Technology
  - Finland:
    - Agnico-Eagle Finland Oy
    - Aalto-korkeakoulusäätiö
## UCITT - PORTAL

### University level

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### TUKE MANAGEMENT

- UCITT coordination and management department
- VUKONZE centre
  - Competency centre
- Perspective centres / departments centred on cooperation with industry
- Departments providing support for information and communication technologies
- UVT
- UK TUKE

### Facilities and TUKE departments level

- Ad-Hoc R&D university – industry labs, projects
- Contact centres
  - BERG
  - HF
  - SfJ
  - FEI
  - SvF
  - EkF
  - FV
  - FU
  - LF
  - Rectorate departments
- Extended contact centres
  - Access centre
  - IRKR
  - CIKTI
  - ICV

### Specific R&D department level

- Centres of excellence
  - Centre of ICT for knowledge systems
  - Progressive constructions, materials and technologies
  - Extracting and processing of Earth resources
  - Advanced materials and technologies in automotive electronics
  - Management of technical, environmental and human risks in engineering
- Cooperation with partner centres of excellent research
  - Power electronic systems and materials (ŽU Žilina)
  - Biomedical technologies (UPJŠ Košice)

### Access centre

- IRKR
- CIIKT
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- **UK TUKE**

#### Centres of excellence

- Centre of ICT for knowledge systems
- Progressing constructions, materials and technologies
- Extracting and processing of Earth resources
- Advanced materials and technologies in automotive electronics
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- Power electronic systems and materials (ŽU Žilina)
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#### Contact centres

- Ad-Hoc R&D university projects or industry cooperation projects
- Extended contact centres
- Access centre
- IRKR
- CIKT
- ICV

#### Faculties and TÜKE departments level

- Business “High-Tech” incubator
- RDI Division

#### University level

- TECHNICOM
- VUKONZE centre
- Competency centre
- Perspective centres / departments centred on cooperation with industry

#### Specific R&D department level

- Cooperation with partner centres of excellent research
SCIENCE AND RESEARCH

5 CENTERS OF EXCELLENCE

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

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
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KOŠICE IT VALLEY ASSOCIATION

EASTERN SLOVAKIA DESPERATELY NEEDS!

1. to improve the quality of life
2. to make region more attractive

KOŠICE IT VALLEY integrates all the major players:

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

EASTERN SLOVAKIA DESPERATELY NEEDS!!!

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 ICT job positions !!!
... we are not bad, but we want to be better!

Main challenges!

- International know-how
- University culture of innovation
- Prepare students for innovation leadership
- Commercialization of innovative ideas

- Improving public uptake
- Venture capital
- Financial support
- Porsche effect?
- Slovak idol in innovation?

THANK YOU!