



**The Silesian University of Technology**  
**Gliwice, Poland**

**Jerzy Mościński**  
**International Cooperation in Science & Technology**



# **From idea to business success**

## **The Silesian University of Technology perspective**





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## The Silesian University of Technology mission:

- to be one of the best and leading technical universities in Poland where education of prospective engineers is based on the modern European curricula,
- to be up to any national and international challenges and goals within the European Union,
- to be open for wide international co-operation, especially in the range of common internationalisation of almost all aspects of human activities.

## Seeing its mission as above, the Silesian University of Technology lays out its strategy as follows:

- further international co-operation as one of the main needs of the contemporary academic society,
- promotion and support of the education & training co-operation with the EU Members States including participation in various European programmes.





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## 12 FACULTIES:

- Faculty of Architecture
- Faculty of Automatic Control, Electronics and Computer Science
- Faculty of Civil Engineering
- Faculty of Chemistry
- Faculty of Electrical Engineering
- Faculty of Mining and Geology
- Faculty of Energy and Environmental Engineering
- Faculty of Mathematics and Physics
- Faculty of Mechanical Engineering
- Faculty of Materials Science and Metallurgy
- Faculty of Organization and Management
- Faculty of Transport

### Faculties are located in:

Gliwice – 9

Katowice – 2

Zabrze - 1

The University also includes a subsidiary Engineering Education Centre in Rybnik.

### SUT offers:

B.Sc. Study

M.Sc. Study

PHD Study



## **Regional Contact Point (RCP)**

- **is a part of Contact Points Network and coordinated by National Contact Point (NCP) in Warsaw**
- **was established in 1999**
- **is responsible for providing information, trainings, consultations, assistance within:**
  - **5<sup>th</sup>, 6<sup>th</sup> and 7<sup>th</sup> Framework Programmes**
  - **Structural funds ERDF and ESF**
  - **Regional Mobility Information Centre**
  - **Other international programmes**





## **Examples of SUT's research projects – FP 5**

<b>Lp</b>	<b>PROJECT TITLE</b>	<b>PROJECT ACRONYM</b>
<b>1</b>	<b>Assessment of technologies for the removal of pharmaceuticals and personal care products in sewage and drinking water facilities to improve the indirect potable water reuse</b>	<b>POSEJDON</b>
<b>2</b>	<b>Development, characterisation and scaling of atomizers for a combustion technology that offers significant fuel savings and drastic reductions in both CO<sub>2</sub> and NO emissions</b>	<b>OIL-TECH</b>
<b>3</b>	<b>Advanced infrastructure for Pan-European collaborative engineering</b>	<b>E-COLLEG</b>
<b>4</b>	<b>Thermo-mechanical fatigue – the route to standardisation</b>	<b>TMF STANDARD</b>



## **Examples of SUT's research projects – FP 5**

<b>Lp</b>	<b>PROJECT TITLE</b>	<b>PROJECT ACRONYM</b>
<b>5</b>	<b>Network of European medium- and Large-scale Transport Research facilities Operators</b>	<b>INSTRANSNET</b>
<b>6</b>	<b>Rapid Response Source Term Indicator Based on Plant Status for Use in Emergency Response</b>	<b>EU-STERPS</b>
<b>7</b>	<b>400 years of Annual Reconstructions of European Climate Variability using a High Resolution Isotopic Network</b>	<b>ISONET</b>
<b>8</b>	<b>High-resolution continental paleo-climate record from Lake Baikal: a key-site for Eurasian teleconnections to the North Atlantic Ocean and monsoonal system</b>	<b>CONTINENT</b>





## **Examples of SUT's research projects – FP 6**

<b>Lp</b>	<b>PROJECT TITLE</b>	<b>PROJECT ACRONYM</b>
<b>1</b>	<b>Network of Excellence: General Olfaction and Sensing Projects on a European Level</b>	<b>GOSPEL</b>
<b>2</b>	<b>Research and training on restoration and protection of the city environment in industrial regions</b>	<b>REPROCITY</b>
<b>3</b>	<b>Polish Network of Mobility Information Centres</b>	<b>PL-MOC NETWORK</b>
<b>4</b>	<b>Superhigh energy milling in the production of hard alloys, ceramic and composite materials</b>	<b>ACTIVATION</b>



## **Examples of SUT's research projects – FP 6**

<b>Lp</b>	<b>PROJECT TITLE</b>	<b>PROJECT ACRONYM</b>
<b>5</b>	<b>European Rail Research Network of Excellence</b>	<b>EURNEX</b>
<b>6</b>	<b>European Accessible Information Network</b>	<b>EUAIN</b>
<b>7</b>	<b>Optimization of Systems, Energy Management and Environmental Impact in Process Engineering</b>	<b>INSPIRE</b>
<b>8</b>	<b>Absolute time scales and isotope studies for investigating events in Earth and human history</b> <b>ATIS</b>	<b>ATIS</b>
<b>9</b>	<b>Researchers Night 2006 in Gliwice – Re-search IT in your life!“</b>	<b>Re-search IT</b>







## **Examples of SUT's research projects – FP 7**

<b>Lp</b>	<b>PROJECT TITLE</b>	<b>PROJECT ACRONYM</b>
<b>1</b>	<b>Researchers' Night – Cracow and Gliwice Together , 2007</b>	<b>RESEARCHERS' NIGHT</b>
<b>2</b>	<b>Teachby Play. Enjoy Yourself with Researching</b>	<b>TEACHBY PLAY</b>
<b>3</b>	<b>Chernobyl Tissue Bank</b>	<b>CTB</b>
<b>4</b>	<b>Nanoporous Anodic Oxides for the Functionalization of Metal Surfaces</b>	<b>NANOXID</b>





## **Technopark Gliwice**

- **Science & Technology Park, SUT area**
- **Creating new innovative technological enterprises**
- **SME targeted technology transfer**
- **Research, specialized services, SMEs promotion**
  
- **To enable modern and efficient environment for young entrepreneurs – SUT graduates – aiming at creating high-tech innovative enterprises**





## **Technopark Gliwice tasks**

- **Supporting transfer of innovative technologies from SUT and other units to Silesian SMEs – efficient management, access to technologies, laboratories and researchers**
- **Promoting incubator activities – creating new innovative enterprises by SUT graduates and PhD students – information technologies, teleinformatics, electronics, biotechnology, biomedical engineering, ecology and environment protection, ...**
- **Promoting high-tech enterprises at Technopark – creating high-tech jobs, utilization of SUT graduates capabilities, Silesia region transformation**



## **Technopark Gliwice projects**

- **Creating technical infrastructure, Creating information & management infrastructure (2005-2006)**
- **INNTECH (2006) – promoting commercialization of technologies at Silesian University of Technology**
- **INNTECH II (2008) – Knowledge for innovation, advisory project, summer business schools: Marketing in microenterprises, Alternative funding of innovative enterprises (VC, BA), Intellectual Property Rights, small business organization, commercialization of ideas**





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## **Silesian Centre of Advanced Technologies**

- **Consortium of 24 Silesian science & technology units: Universities (6), Polish Academy of Sciences Institutes (5), Research & Development Units (13)**
- **Science & technology parks + industrial enterprises**
- **Initiated by SUT**
- **Science & technology potential of Silesian units for Silesian industry – advanced technologies generator**
- **Common Research Programmes – coordinated by regional leaders**





## **SCAT Programmes**

- **Biocybernetics and biomedical engineering**
- **Special chemical compounds, biotechnologies, environment engineering**
- **Teleinformatic infrastructures**
- **Nanomaterials and materials engineering**
- **New materials and composites**
- **New informatics services, computer and telecommunication networks**
- **Control and technological processes automation**





## **My Business Idea Competition**

- **Initiated by Vattenfall Distribution Poland and Silesian University of Technology**
- **Preferably: innovative, sustainable development friendly, possible to implement, creating new jobs**
- **6th edition in 2007/2008**
- **Promoting innovation and entrepreneurship among students, graduates and staff of SUT**
- **Accompanied by workshops on innovation, technology transfer and entrepreneurship**





## **My Business Idea Competition**

- **1st edition: 6th March, 2002, 39 applications**
- **2nd edition: 2003, 92 applications, 51 accepted for competition (17 from students)**
- **3rd edition: 2004, new sponsors from Silesian Region, 168 applications, 71 accepted for competition (42 from students)**
- **4th edition: 2005, new sponsors, 161 applications, 96 accepted for competition**
- **5th edition: 2006, 172 applications, 91 accepted for competition**







## **My Business Idea Competition - first winners**

- **Intelligent autonomous robots**
- **Equipment for sewage treatment plants**
- **New materials and implants**
- **Solar technologies for low energy consumption buildings**
- **Thermoplastic materials and elastomers**
- **Building transformation – helioactivity and mechanical ventilation**





## **My Business Idea Competition - true winner**

- **Hexor – mobile robot, Faculty of Electrical Engineering**
- **First winner of My Business Idea Competition (2002)**
- **Additional support from Vattenfall – Laboratory of Mobile Robots creation (2005)**
- **New versions of Hexor robot created and used for mobile robots idea promotion and teaching**
- **Hexor successful as educational and research tool at schools, universities and research institutes, also in other European countries and USA**





## **Ellipse car**

- **Ellipse – innovative 2-person car with electric drive**
- **Pilot scale production in Radom, cooperation with ENEL company and Department of Power Electronics, Electrical Drives and Robotics of SUT**
- **SUT involved in design and commercialization of innovative control system for Ellipse car**





## **Regional Contact Point and SUT**

- **Good examples of successful ideas commercialization plans – rather rare**
- **Majority of project proposals concerns basic research, „frontier” research**
- **Difficulties in finding partners from industry (SMEs) for the implementation of research results**





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**Thank you for your attention!**