

Science and Technology in Wrocław

Wrocław EIT+ Programme

Tadeusz Luty
Wrocław University of Technology



JRC Meeting, Wrocław, 6. July 2007

Contents

- European/National/Regional perspective
- High technology investments in Lower Silesia
- R&D sector in Lower Silesia
- Regional Development Strategy
- Preliminary concept of Research Centre DolBioMat/EIT+
- Wrocław EIT+ innovation cluster

European / National / Regional background

- Lisbon Strategy
- Knowledge Based Economy KBE
- Innovation triangle: research - education - innovations
- Commercialisation of knowledge: spin-offs, incubators, technological SMEs
- New role of universities
- Posthumboldtian (3rd generation) university
- Brussels COM(2007) „The European Research Area: New Perspectives”
- European Institute of Technology

EU perspective 2007 - 2013 in Poland:
KBE at national and regional level

Potential of Lower Silesia



- economy
- R&D
- education
- culture
- administration
- business

- 3 mln population
- 20 000 km²

Major Recent Foreign Investments

Examples

LG Philips

LCD Monitors

Toyota

Gearbox manufacturing

GE Electric

Electric equipment

Volvo

Automotive

Volkswagen

Automotive

Bosch

Breaking systems



Toyota Gearbox Plant in Walbrzych



BOSCH Breaking System Plant in Mirkow near Wroclaw - May 2003

Source:

1. Phot.: www.bosch-prasa.pl

2. Phot.: www.invest-park.com.pl



JRC Meeting, Wroclaw, 6. July 2007

R&D and Education in Lower Silesia

- 11 universities (academic schools)
Wroclaw University
Wroclaw University of Technology
Wrocław University of Life Sciences
- 12 non-academic higher education institutions
- 2 PAS institutes + Research Centers
- 140 000 students
- 7 200 academic staff
- 1 150 full professors



R&D Centers / Institutes in Wroclaw

- Low Temperature and Structural Research Institute PAS
- Institute of Immunology and Experimental Therapy PAS
- International Laboratory of Strong Magnetic Fields and Low Temperature
- Space Research Center of PAS in Warsaw - Solar Physics Institute in Wroclaw
- Institute of Power Systems Automation Wroclaw
- Electrotechnical Institute - Division of Electrotechnology and Materials Science
- Wroclaw Center of Networking and Supercomputing (WUT)
- Center of Nanotechnology and Advanced Materials (WUT)
- Research and Development Centre SIEMENS

Technology Parks: technology transfer & education

- **Wroclaw Technology Park**
- **Technology Park in Szczawno Zdrój/Wałbrzych**
- **Wrocław Industry Park**
- **Wrocław Medical Science&Technology Park**
- **Wroclaw Centre for Technology Transfer (WUT)**
- **Wroclaw Centre for Networking and Supercomputing (WUT)**



Universities for Regional Development

New initiatives

- Lower Silesian Centre of Advanced Technologies
- Polish Manufacturing Technology Platform
- Lower Silesian Centre for Regional Studies
- Innovation and Business Park
- Academic Incubator
- Research Consortia (KGHM-R&D institutions)



Regional Innovation Strategy



Innowacje z Dolnego Śląska



- **Identification of the potential co-operation fields between research and industry**
- **Defining regional fields to absorb innovations and new technologies**

Regional Development Strategy 2007-2013

- **Lower Silesian Cluster of Knowledge (2007-2013):**
R&D - technology transfer - Business&Economy
- **Aims:**
 - Knowledge Based Economy (GOW) in Lower Silesia
 - Lower Silesia - most innovative economy in the macroregion until 2013

Conference materials and other editions

How to develop an innovative and creative Region?



JRC Meeting, Wrocław, 6. July 2007

Looking for regional technology specializations

- Electronic control and automatic systems
- High technology optic and medical instruments
- Nanotechnology, photonics
- Hydrometallurgy, biometallurgy, special materials (copper industry)
- Biotechnology: pharmaceuticals components
- Electronics, computer systems of special utilities
- Computer science, software
- Alternative and renewable energy sources (agroenergy plants)

- Goal: to integrate research and education community
- Regional research&development entity
- Joint initiative of universities, the City of Wrocław, Regional Authorities and financial institutions
- Commercial venture: commercialising of knowledge
- Strong links to Lower Silesian economy
- Disciplines and areas of interest:
 - **NanoMat**: advanced materials, nanotechnology
 - **BioMed**: biochemistry, biophysics, biotechnology
 - **Info-Applicata**: applied computer sciences

Key projects in the perspective 2007 - 2013

Projects in the Operational Programme Innovative Economy

Key research&technology programmes:

- *Biotechnology and advanced medical technologies*
- *Nanotechnology and advanced materials*

Infrastructure for S&T development:

- *Lower Silesian Research Centre for Materials and Biomaterials DoBioMat / EIT+*



Scientific Board:

- Joint for Education and Research
- Science, industry and business representatives

Strategic Board:

- Drawing up development strategy
- Reviewing and assessment
- Key national and international figures

Research groups

- Task- / project-based teams
- Competitive selection process
- 3-5 year contracts for leaders, optional affiliation with home institutions

Research Laboratories

- Permanent structure units
- Management independent from research team leaders
- mid-staff hired on closed contracts

Operating costs: 20 - 30 mln PLN per year

- Innovative Economy Operation Programme
- Regional Operation Programme
- Technology Initiative Programme (national)
- Innovative business
- EU schemes (including FP's)
- Grants

Lower Silesian Research Centre DolBioMat / EIT+

Key regional industry partners

Materials

- KGHM/Cuprum
- PCC Rokita
- LG Philips
- 3M
- Whirpool
- Wrozamet
- Lower Silesian Mineral/Ore Cluster

Biomaterials

- Hasco-lek
- Novasome
- Finepharm
- Herbapol
- Lower Silesian Food Cluster



Lower Silesian Research Centre DolBioMat / EIT+

Location - Campus Pracze

- good connections
- 27 hectares
- 23 500 sq. metres usable space
- 5 hectares for development



JRC Meeting, Wrocław, 6. July 2007

Lower Silesian Research Centre DolBioMat / EIT+

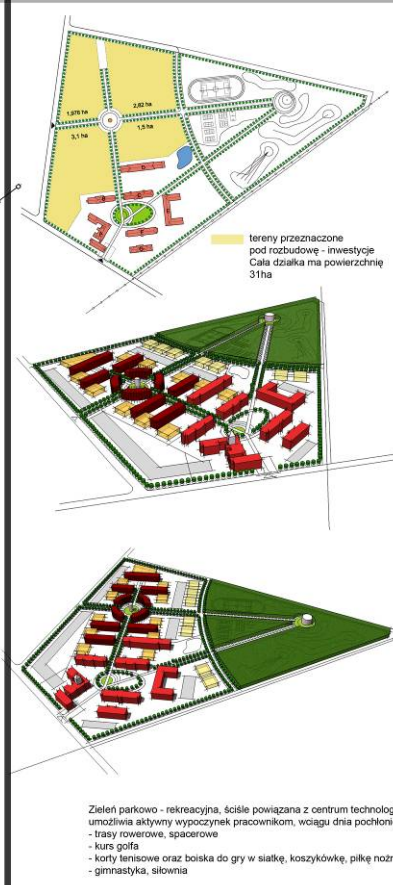
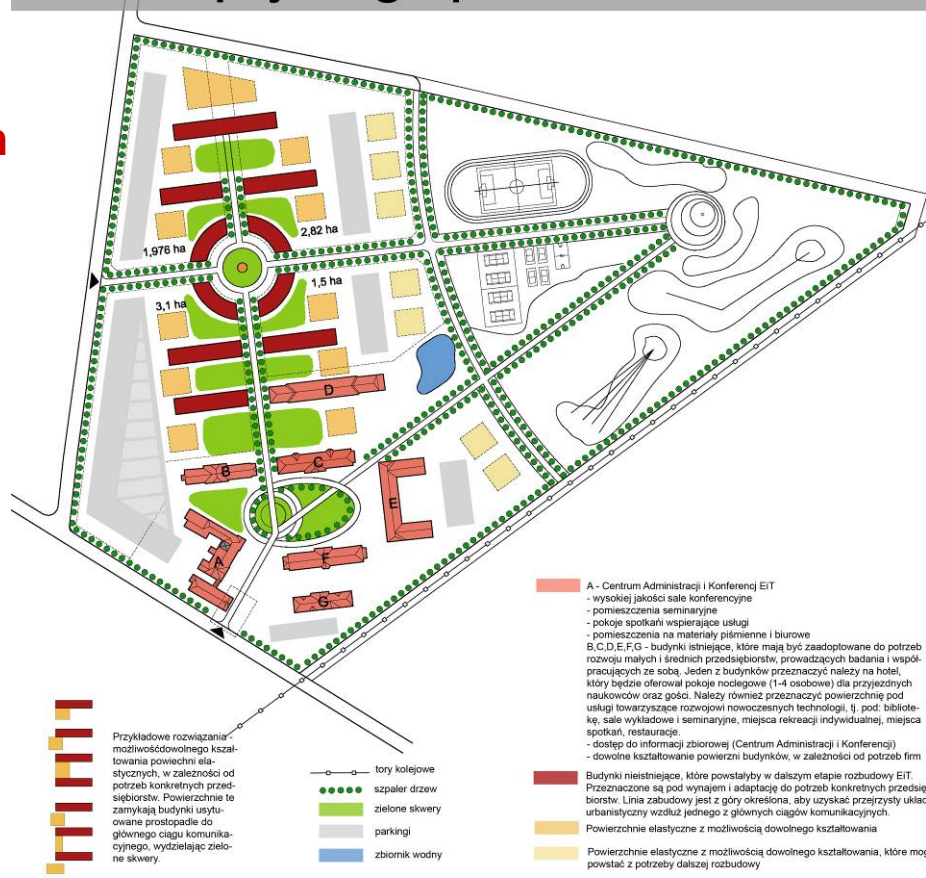
Campus Pracze



Campus Pracze - a vision

- Centre of regional innovation cluster
- Meeting place research - innovation industry
- Other innovative institutions:
 - Research Centre Hasco-lek
 - Innovation and Business Park
 - incubators
 - technology spin-offs
 - Congress Centre
 - hotels
 - restaurants
 - sport facilities

konceptcja zagospodarowania EiT

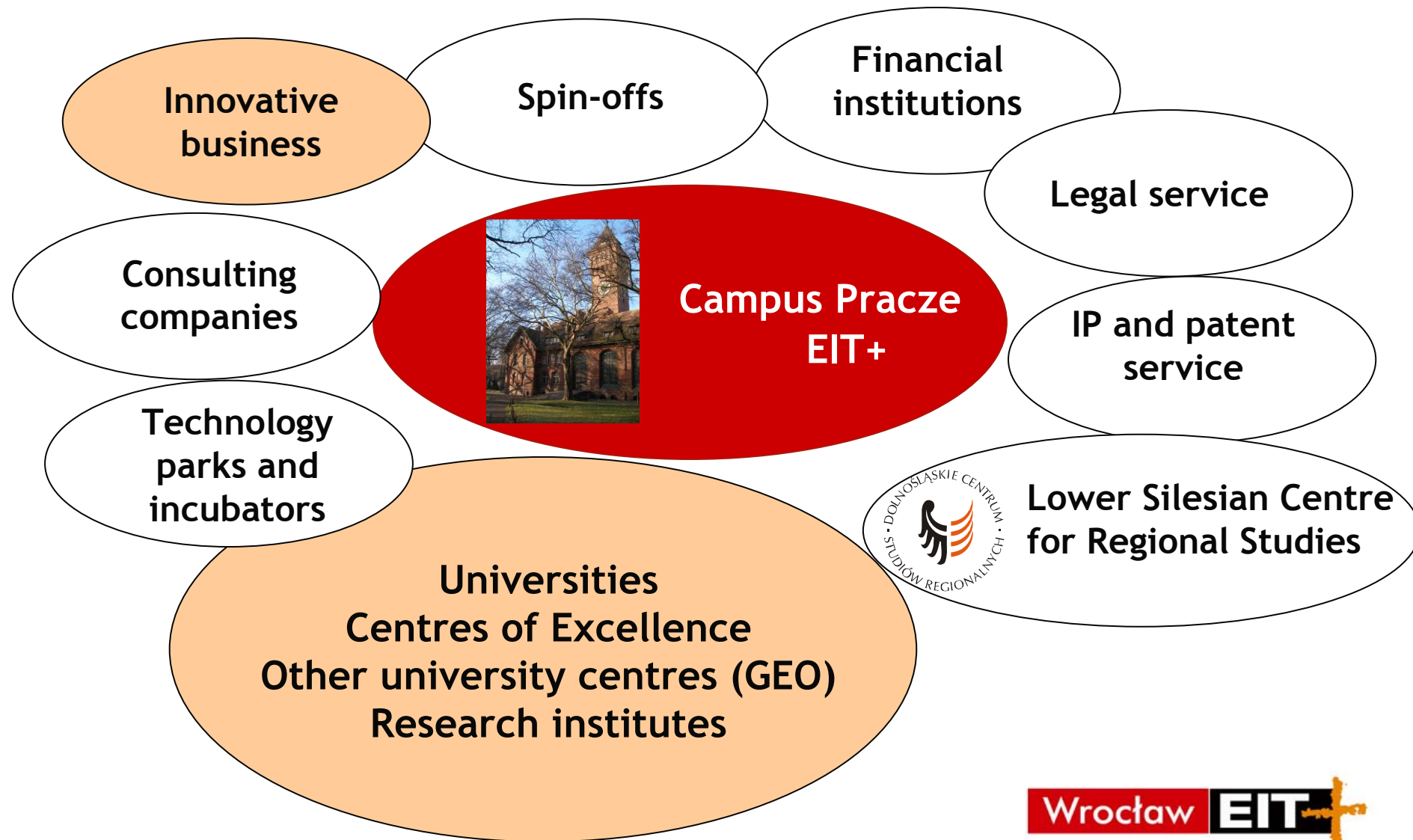


European Institute of Technology
 Knowledge and Innovation Community

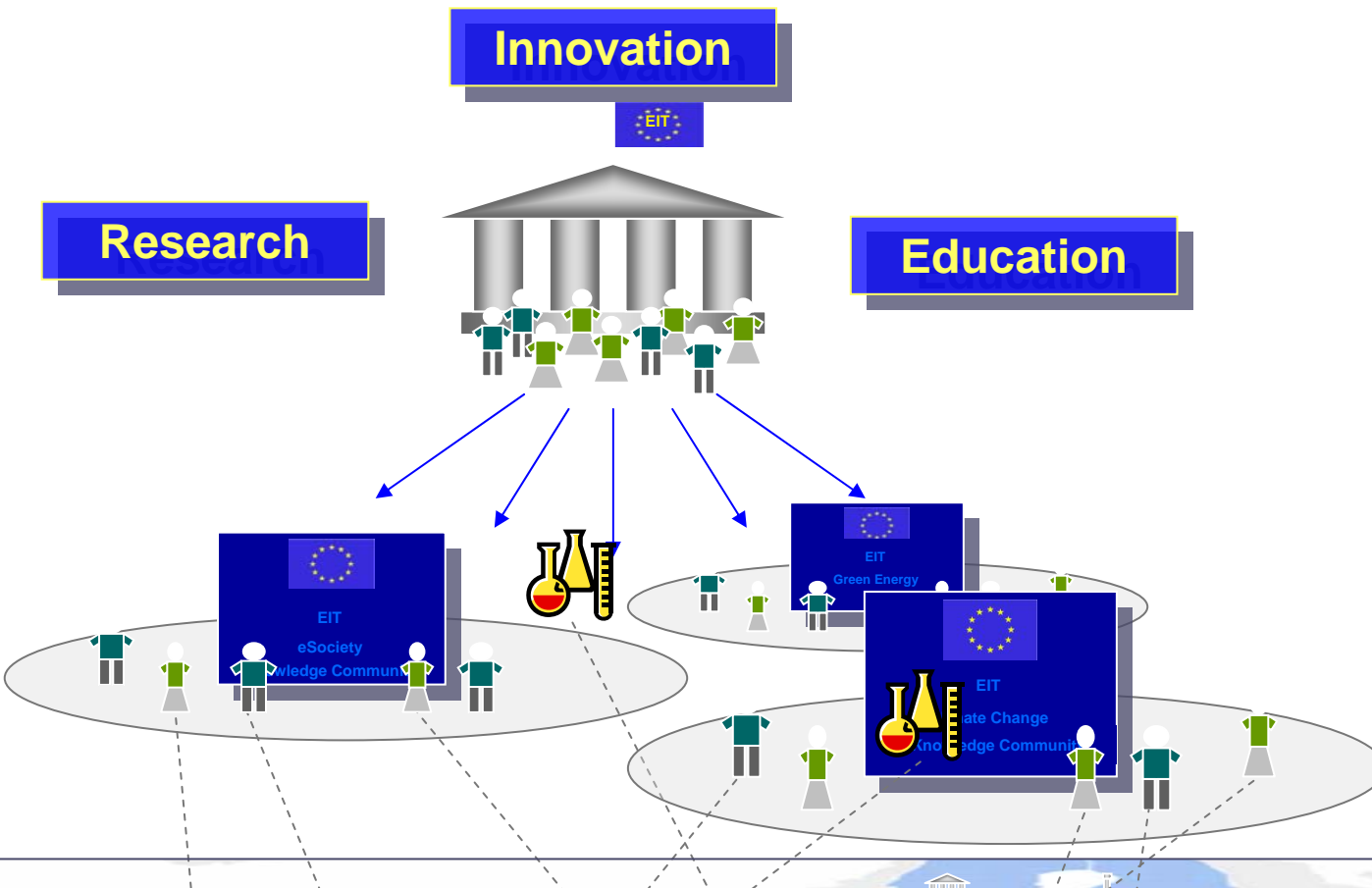


Wrocław EIT+ Innovation Cluster - a vision

Knowledge Based Economy in Lower Silesia



Wrocław Innovation Cluster - core of KIC / EIT

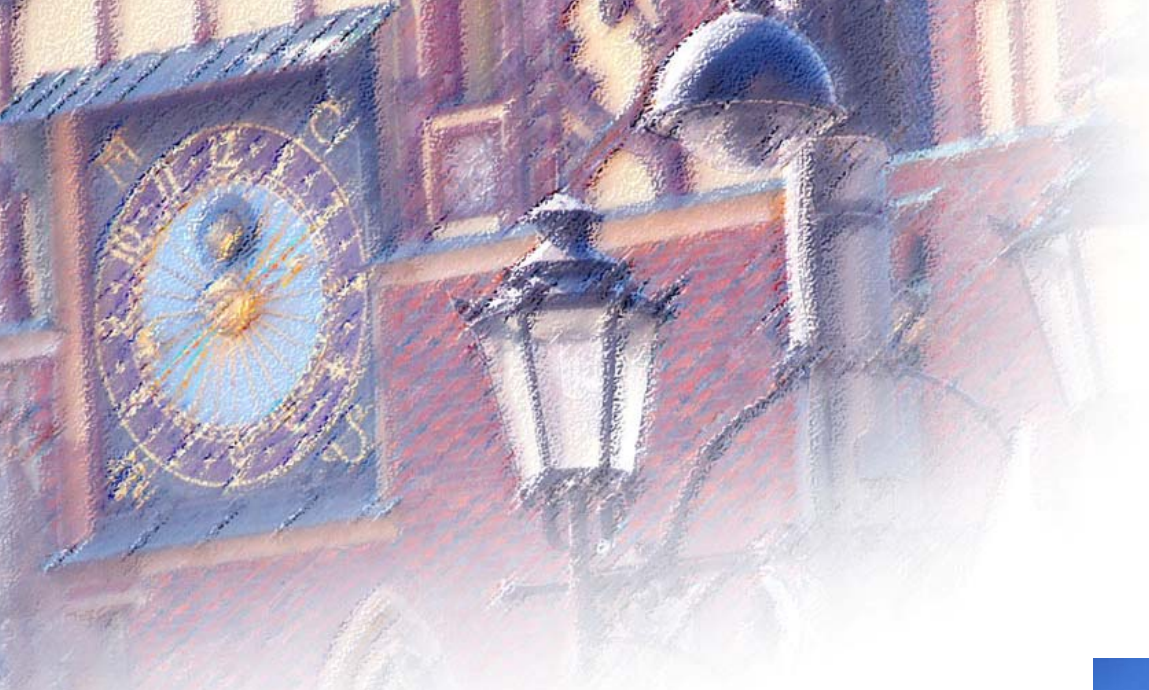


The Central
Core /
Governing
Board

Knowledge and
Innovation
Communities

KIC Novel Materials for Advanced Technologies

Partner
organizations



Thank you



<http://www.eit.pwr.wroc.pl>



JRC Meeting, Wrocław, 6. July 2007