Using corporate foresight effectively - a case study from Poland

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Presentation agenda

1. Foresight in Poland – an overview
2. Corporate foresight process at ITeE – PIB
3. The use of ITeE – PIB foresight results
4. Methodology modification for the current ITeE-PIB foresight
1. Foresight in Poland

1969 - onwards
"Poland 2000 Plus" Forecast Committee of Polish Academy of Sciences

2003 – 2005
National Foresight Programme "Poland 2020"

2006 – 2008
Regional Foresight Projects of the “Poland 2020” programme

2009 – 2011
Sectoral & regional foresight projects

2011 – 2013
Sectoral & regional foresight projects

Low-tech industries:
* Mining industry
* Foundry industry
* Woodworking industry

High-tech industries:
* Nanotechnologies
* Space technologies
* Biotechnologies
* Medical technologies
* Aviation technologies
* Advanced production technologies
* Latest thematic trends:
  * human resources and economic development
  * higher education system and economic development
  * knowledge transformation systems and economic development
  * information society technologies
  * cognitive sciences
  * sustainable land use

European Conference „Technology Assessment and Policy Areas of Great Transitions”
Prague, 13-15.03.2013
2. Corporate foresight process at ITeE – PIB

2009 – 2010
1st iteration
Methodology developed
Process executed
Results achieved

2011 – 2012
2nd iteration
Methodology updated
IT expert system developed & tested

2013 – 3rd iteration
Current foresight process focused on technological and environmental safety

Methodology will be verified

Lessons learned

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2. Corporate foresight process at ITeE – PIB

- SWOT
- Workshops
- Brainstorming
- Benchmarking
- Key technologies
- Technology roadmapping
- Questionnaire survey
- Structural analysis
- Scenario building
- Expert panels
- STEEP

R&D priorities and technologies in five research areas:

- Basic Research
- Market
- Sustainable Development

A strategic R&D programme
3. The use of ITeE – PIB foresight results (Strategic R&D Programme)

Technological line for RFID tags implementation

Manipulator for the positioning of the measuring microphone in the anechoic chamber

Device for the regeneration of aqueous technological fluids

Pneumatic gun for impact tests in aviation

[Images of various devices and apparatuses related to the strategic R&D programme]
3. The use of ITeE – PIB foresight results (Strategic R&D Programme)

- Advanced technologies supporting production and unique technical devices
- Test apparatus
- Technology transfer mechanisms and structures
- Systems of diagnosis and safe maintenance of technical objects
- Systems and methods for the rationalisation of the use of the resources
- IT support for technology commercialisation
- Systems of knowledge transformation, advanced technologies transfer and commercialisation of innovative solutions
- Technology assessment and R&D program evaluation
- Foresight methodology, IT tools supporting foresight
- Innovation determinants & trends in global context

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4. Methodology modification for the current ITeE-PIB foresight

Updated foresight methodology (algorithms)

- Identification of key factors
- Identification and prioritisation of key technologies and R&D topics
- Assignment of probability of technology development scenarios

Database

Key factors database

Key technologies database

R&D priorities database

IT expert system
4. Methodology modification for the current ITeE-PIB foresight

TECHNOLOGICAL AND ENVIRONMENTAL SAFETY

Aim

Development of R&D strategy for 2015-2020

Experts

More experts from (local/regional) companies

Methods

Probability theory, Dempster-Shafer theory, fuzzy logic
Intellectual potential analysis
Patent analysis
Bibliometrics
Wild cards, weak signals, global challenges

Tools

IT expert system
iLAB Innovation Laboratory + software