ICT Research and Innovation – Slovakia

(not necessarily politically correct facts and opinions)

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The Situation

UNSATISFACTORY

The Situation – not IT specific

Distant Past

Government funded research
(Universities, Academy of Sciences, Industry Research Institutes)

Institutionalized Research – Application – Innovation path

Recent Past

Industry Research Institutes disappearing

Government funding decreasing, EU funding scarce

Private financing negligible

Braking the Research – Application – Innovation path

Present

Government funding still decreasing, EU funding scarce

Some positive signs in private financing (ESET, HP, ...)

The Situation – IT

Distant Past

- ICT research crippled by government policies
- Excellent theory (e.g., Gödel Prize)

Recent Past

- Theory hit by brain drain
- Local IT industry does not encourage research (box shifting)
- Some EU projects participation

Present

- ICT research teams shrinking
- Some positive signs in private financing (ESET, HP, ...)
- EU funding more difficult to reach
  - Slovakia ranks at the bottom in all statistcs

Main Inhibitors – Research

Research is not a priority of the government

- Declarations do not materialize
- Long term research investment does not fit 'next elections' strategies

Decades of low government funding

- Competitiveness of research teams is decreasing

EU Policies

- Strong research teams in EU-15 countries prefer hiring the best
- EU-12 researchers to cooperation with institutes due to EU policies

Multinational IT companies keep most of their research at home

Local IT companies lack funds and can still live without research

Administrative complexity of research funds (both EU and local)

Support structure for FP7 projects neglected

Main Inhibitors – Innovations

The pool of knowledge in IT is drying out (not SK specific)

Breakthrough innovations need breakthrough research results

We seem to be happy with 'cosmetic' improvements

Broken Research – Application – Innovation path

Traditional role of Universities of Technology – Applied research – replaced by publications due to evaluation criteria

Most companies lack 'Innovation departments'

i.e., people capable of understanding new research results and communicating 'pressing issues' back to research

Most companies lack courage to leave the tried out path

Can we succeed?

Let us Assume Ideal Conditions (via some miracle)

Enough Money

Research to Innovations Pyramid Functioning

Industry Eager to Change

...

Would We Get to Research and Innovation Heaven?

How Long Would It Take to Imitate the Miracles?

How Long Would It Take to Imitate the Miracles?

Money Miracle

Potentially the next budgeting period (Slovakia is small)

Pyramid Miracle

20+ years

(needs restart of quality education and build up of human resources)

Industry Miracle

?? Probably needs reincarnation of quality

Can we succeed?

Miracles Are Unreliable → Changes at Meta Level Needed

- **Reconsider the INTENTION of Innovation**
  I find *Improving Life* more appealing than 'Helping EU Economy' or 'Increasing Profit'
- **Reconsider oversimplified success CRITERIA**
  Using 'Profit' as THE success criterion is convenient but treacherous
- **Reinvent QUALITY**

These (+ more) should lead to better education, better understanding, and teams capable of moving

from innovation=improvement to INNOVATION

THANK YOU FOR YOUR ATTENTION