



**National Centre for  
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**Capacity Building Towards  
Knowledge Based Economy**

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**„Комерцијализација на  
истражувањето и развојот“**

**“Commercialization of  
Research and Development”**



**12.05.2010**



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## **Комерцијализација на истражувањето и развојот**

10.00 – 13.30 Работен дел

11.30 – 11.45 Кафе пауза

13.30 – 14.30 Коктел



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Г-дин Илијанчо Гаговски  
Директор – Microsoft Македонија



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- **Радмил Поленаковиќ**, Машински факултет: Вовед – „Од научник до претприемач“
- **Јордан Поп Јорданов**, МАНУ, „Науката во функција на одржливиот економски развој“
- **Sara Alkan**, Austin Pock and Partners, Austria, „Комерцијализација на истражувањето и развојот – Австриски најдобри практики“
- **Adi Kovacevic**, WUS Austria, „Трансформација на универзитетските програми според барањата на стопанството“
- **Nimish Jhaferi**, Chief of Party, USAID Competitiveness Project, „Потребата од иновациски центар во Македонија“
- **Clyde Musgrave**, USAID Competitiveness expert, „Искуствата во САД – од иновација до бизнис“
- **Јелена Димитриевиќ**, Министерство за образование и наука, „Поддршка за науката од страна на државата“
- Трибина: „Македонските искуства со комерцијализација на истражувањето и развојот“ (претставници на домашни компании)
  - **Илија Насов**, ПЛАЗМА



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# „Од научник до претприемач“

## Проф. д-р Радмил Поленаковиќ

Машински факултет  
Универзитет „Св. Кирил и Методиј“



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- Innovation System
- Structure of European Innovation Scoreboard – Macedonia 2010
- How to turn a scientist into an entrepreneur?

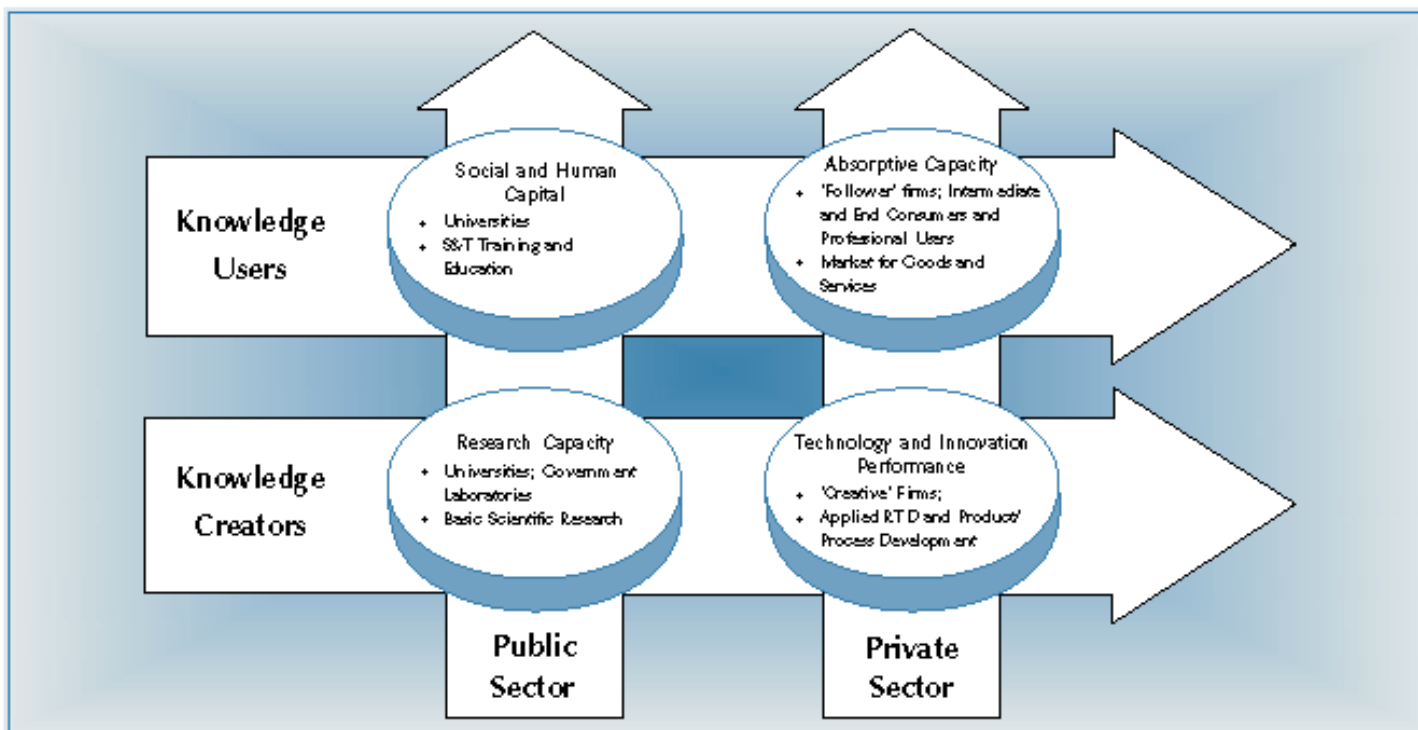


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**Innovation System - Guy and Nauwelaers (2003)**



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### **R&D covers:**

- **Basic research** is experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundation of phenomena and observable facts, without any particular application or use in view.
- **Applied research** is also original investigation undertaken in order to acquire new knowledge. It is, however, directed primarily towards a specific practical aim or objective.
- **Experimental development** is systematic work, drawing on existing knowledge gained from research and/or practical experience, which is directed to producing new materials, products or devices, to installing new processes, systems and services, or to improving substantially those already produced or installed.
- R&D covers both formal R&D in R&D units and informal or occasional R&D in other units. (Definition according to Frascati manual – chapter 2)



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## EIS 2008-2010 INDICATORS

### ENABLERS

#### *Human Recourses*

- New S&E and SSH graduates per 1000 population aged 20-29 (first stage of tertiary education)
- S&E and SSH doctorate graduates per 1000 population aged 25-34 (second stage of tertiary education)
- Population with tertiary education per 100 population aged 25-64
- Participation in life-long learning per 100 population aged 25-64
- Youth education attainment level



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## EIS 2008-2010 INDICATORS

### ENABLERS

#### *Finance and Support*

- Public R&D expenditures (% of GDP)
- Venture Capital (% of GDP)
- Private credit (relative to GDP)
- Broadband access by firms (% of firms)



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## EIS 2008-2010 INDICATORS

### FIRM ACTIVITIES

#### *Firm Investments*

- Business R&D expenditures (% of GDP)
- IT expenditures (% of GDP)
- Non-R&D innovation expenditure (% of turnover)



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## EIS 2008-2010 INDICATORS

### FIRM ACTIVITIES

#### *Linkage and Entrepreneurship*

- SMEs innovative in-house (% of firms)
- Innovative SMEs collaborating with others (% of SMEs)
- Firm Renewal (SME entries plus exits) (% of SMEs)
- Public Private co-publications per million population



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## EIS 2008-2010 INDICATORS

### FIRM ACTIVITIES

#### *Throughputs*

- EPO patents per million population
- Community trademarks per million population
- Community designs per million population
- Technology Balance of Payments flows (% of GDP)



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## EIS 2008-2010 INDICATORS

### OUTPUTS

#### *Innovators*

- SMEs introducing product or process innovation (% of SMEs)
- SMEs introducing marketing or organizational innovations (% of SMEs)
- Resources efficiency innovators, calculated as the average of:
  - Share of innovators where innovation has significantly reduced labor costs (% of firms)
  - Share of innovators where innovation has significantly reduced the use of materials and energy (% of firms)



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## **EIS 2008-2010 INDICATORS**

### **OUTPUTS**

#### ***Economic Effects***

- Employment in medium-high and high-tech manufacturing (% of workforce)
- Employment in knowledge-intensive services (% of workforce)
- Medium and high-tech manufacturing exports (% of total exports)
- Knowledge-intensive services exports (% of total services exports)
- New to market sales (% of turnover)
- New to firm sales (% of turnover)



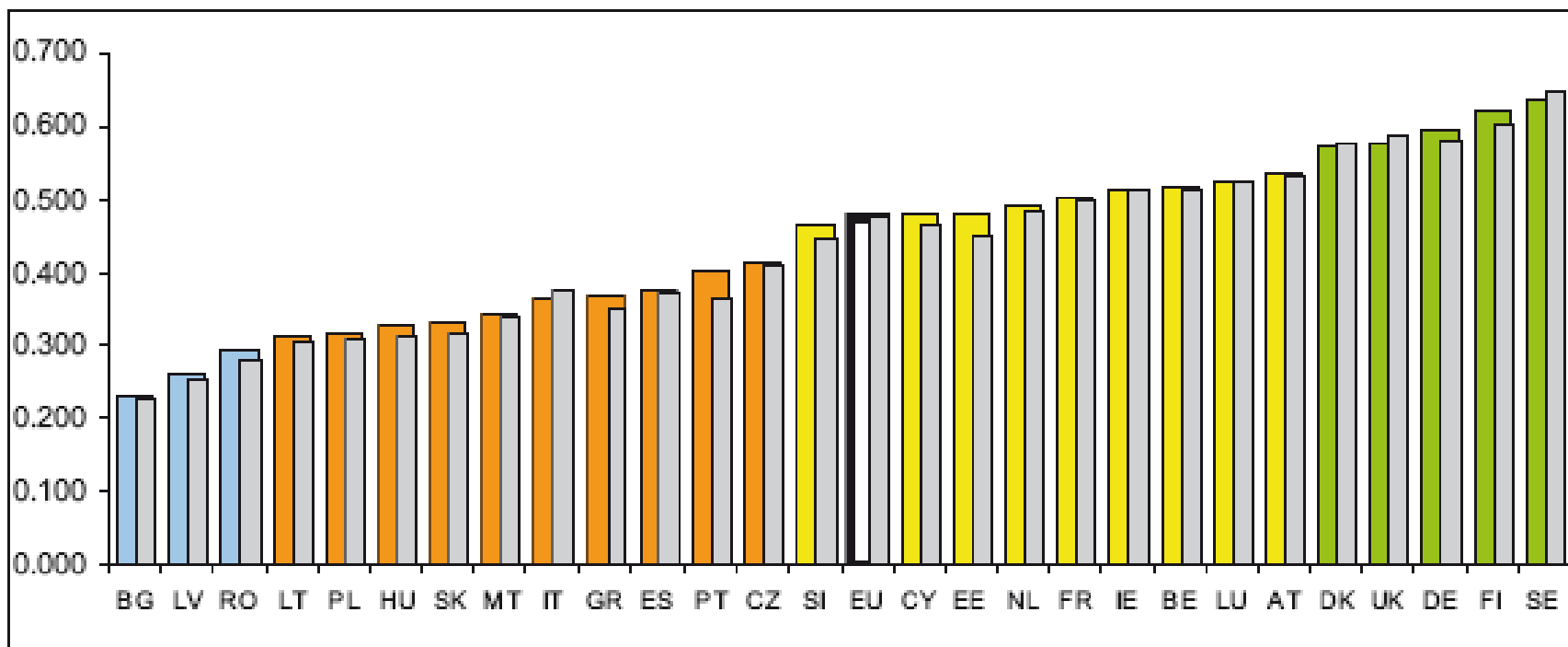
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# EIS 2009





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## How to turn a scientist into an entrepreneur?

March 01, 2010





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- The dragons were sitting in an elegant den at the Royal Society in London, Britain's national academy of sciences. Overlooked by portraits of great 18th-century scientists, the judges heard four powerful pitches for science-based businesses.
- These included an image analysis system to assess the facial mobility of people who are suffering from paralyzing diseases or have had surgery on the face; a "text mining" tool to extract chemical information from the world's scientific literature; an educational venture, called Big Bang in a Box, to sell images of high-energy particle collisions at Cern's new atom smasher; and a lightweight material stronger than steel, for use in body armour and the aerospace industry.
- The Dragons' Den competition - modelled on the popular venture capitalist television format - was the climax of a Business of Science programme put on by Imperial College Business School for the Royal Society's University Research Fellows . These are some of Europe's brightest scientists, typically in their 30s, who are funded for five years to work in a UK university.



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- That is UK . . .

but

- Where is Macedonia . . .



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- Today conference should open this discussion . . .
- Do MK scientists have any support to commercialize their research???



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## THE WALL STREET JOURNAL.

### Teenage Entrepreneurs

by Geoffrey A. Flower

Tuesday, May 11, 2010



- In March, the 18-year-old **Cupertino High School senior Diane Keng** launched Internet company MyWeboo.com to help teens manage their digital lives and social-network identities in one place. She is now pitching the company to venture capitalists, and earlier this week presented at the Web 2.0 Expo in San Francisco.



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Thank you very much  
for your attention