



Knowledge Transfer and IP Management at Universities and Public Research Organisations in Bulgaria

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The Bulgarian Research System – Key Facts

- 51 universities – 38 state, 13 private
- 285 000 students
- 175 000 researchers
- For research – 0,4% GNP (EC – 1.84)
- Sofia University - the oldest and the biggest:
 - 16 faculties and 6 departments
 - 24 000 students, 1 600 lecturers
 - Leading in research – 300 projects per year
- Bulgarian Academy of Science (BAS)
 - 42 institutes, 3 000 researchers (17%)
- 14 universities conduct research (as Medical University)
- Agricultural Academy

Knowledge Transfer Infrastructure



- **Governmental institutions**
 - Ministry of Economics, Energy and Tourism (MEET)
 - Ministry of Education and Science (MES)
 - The Bulgarian Patent Office (BPO)
 - The Agency for SMEs

- **Academic institutions**
 - The Bulgarian Academy of Science (BAS)
 - The IP Center at the University of National and World Economy (UNWE)
 - Sofia University
 - TTO's in 9 Universities and in BAS

- **NGO's**
 - The Applied Research Fund (ARF)
 - The Enterprise European Network
 - The Federation of the Scientific and Technical Unions
 - The Union of Inventors



Knowledge Transfer Performance

- About 19% of the Bulgarian enterprises introduced successfully process innovations in 2010/2011
- The share of companies that launched new and improved products or services was slightly higher (26%)
- As a rule, the technological solutions introduced by Bulgarian companies are borrowed from foreign partners
- The necessary mechanisms to monitor and review progress made by national public research organisations in knowledge transfer activities are not available at governmental level yet. Monitoring and review is performed by an NGO (Arcfund Innovation Reports)



Current Policy Documents

- Patent Act adopted in 1993
- National Reform Program 2010 – 2013
- National Strategic Reform Framework 2014 – 2020
- National Strategy for Research and Development
- The Innovation Strategy
- Strategy for development of scientific activities approved in July 2011 - sets the national scientific priorities for the period until 2020
- Operational programme "Development of the Competitiveness of the Bulgarian Economy" 2007-2013:
Priority 1: Development of knowledge-based economy and innovative activities with specific objectives:
 - Fostering research and innovation implementation in enterprises
 - Industrial property protection of enterprises and research organizations
 - Development of pro-innovative business environment

Planned Policy Activities



- New Act on Innovations under preparation, expected to be adopted mid 2012
- Merge of the National Research Fund and the Innovation Fund
- Fostering establishment of Technological Parks (such as Sofia TechPark)



IP Protection

- **IP Protection** is determined by the Patent Act
- **The Bulgarian Patent Office (BPO)** has established a network of 12 IP Contact points in 11 universities and in the BAS. They provide consulting and information services in IP issues, training in usage of the patent data bases, and maintain the links to the BPO
- **The IP Center at the UNWE** offers consultations, publications and performs research in IP; regularly organizes seminars in IP
- **The TTO at Sofia University** has elaborated Regulations for Technology Transfer and IP Protection
- **BAS** adopted in 2009 new Guidelines for IP management and knowledge transfer



Patents

- Patents
 - Majority by individuals (72%)
 - BAS – 154 (3,6%)
 - 11 Universities -136 (3,2%)
 - Business – 20%
 - Of all patents granted for investors to foreign patent holders, 72% went to EU Countries
- In the last ten years an average of 103 protection documents (half of the submitted applications) were issued annually
- Significantly more applications were submitted by individuals than by research institutes or SMEs
- Only 63 licensing contracts with insignificant market value were concluded for obtaining rights on inventions.
- *Source: ARCFUND Innovation report 2011*



Instructive Cases - BAS

- Three TTOs were established in 2007 to realize the knowledge transfer as continuation of the technology transfer policy started with the establishment of GIS-Transfer Center Foundation – independent non-profit organization co-founded by BAS in 2000
- The BAS policy is to establish new 10 TTOs
- BAS in collaboration with the Bulgarian Industrial Association has been carrying out since December 2010 the establishment of 6 knowledge regions as infrastructure for effective knowledge transfer
- BAS adopted in 2009 new Guidelines for IP management and knowledge transfer, as well as Guidelines for establishment of spin-offs

Instructive Cases – TTO at Sofia University



- Established in 2008 (Phare Project) and since 2009 part of the Scientific & Research Center at Sofia University
- Two patent applications
- Two technology transfers
- 400 researchers and students trained in commercialization of scientific results
- 60 contacts with the industry
- 15 technologies identified for transfer to the industry
- Regulations for Technology Transfer and IP Protection
- Member of the CERN TTOs network



Key Challenges

- No institution is solely responsible for measures regarding the knowledge transfer and IP management - responsibility is shared among different public authorities
- Only 0,48% of the total employment is engaged in research (1,3% in the EU)
- Lack of entrepreneurial culture and skills among researchers
- Limited co-operation with the industry
- Low interest from the industry to invest in innovations
- Low interest among the researchers to transfer scientific results to industry
- Researchers not aware about IP protection and various commercialization opportunities as licensing etc.
- Only a small portion of the enterprises are aware of the significance of innovation as factor for overcoming the negative effects of the financial crisis



Policy Activities Required

- **Overall improvement of the innovation system by:**
 - updateing the National Innovation Strategy and its linkage with the National Strategy for Scientific Research (developing a unified strategy);
 - One institution to coordinate the actions of all "players" in the field of innovation.
- **Improving access to funding by:**
 - introduction of guarantee schemes to finance research, innovation and Knowledge transfer
 - providing access to venture capital for science-intensive enterprises
- **Improving the research base and its links with business through:**
 - creation of business incubators, science and technoparks, spinn-offs and development of new forms of public-private partnership;
 - active involvement of business representatives in prioritizing research organizations;
 - support for innovation at regional level by developing regional programs to support SMEs;
 - raising awareness about IP protection among the researchers



Conclusions

- Knowledge transfer and IP management are recognized as essential part of the research policy by the government and research organizations in Bulgaria, but it is not a primary priority for the public funding and for the research yet
- New policy measures are planned and will be implemented
- There is potential for innovation research and fostering the knowledge transfer
- Most of the measures taken and planned in this areas are in line with the EC Recommendations on the IP management in KT activities and Code of Practice for universities and other public research organisations



THANK YOU VERY MUCH!