

# **Technology Transfer Centres – unexploited opportunities for social capital in Lithuania**

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# Social capital

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## □ Social capital:

- strong connections, social networks of individuals, groups, institutions, etc.
- represents economic and societal development
- Embeds norms of reciprocity, tolerance, trustworthiness

# Social captial - II

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Social capital is prerequisite for higher social, scientific and economic achievements.

# Knowledge transfer as social capital

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- Education, science systems and industries impact maturing of social capital
- Knowledge transfer between these social institutions is important social interaction, part of existing social capital

# Knowledge commercialization

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- It is a process of valuable scientific knowledge transfer from science to business establishments
- Knowledge commercialization (transfer) is a source of innovations and social, scientific and economic development

# Knowledge commercialization - II

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- ❑ It is important for narrowing gap between education, science and practical needs of the society
- ❑ Knowledge commercialization helps to create social capital, oriented towards demands of global market
- ❑ It is vital for enhancing businesses' competitiveness and creating knowledge economy

# Science and business systems

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- ❑ Science and business establishments usually think in different terms (basic science vs. competitiveness)
- ❑ World Bank (Report, 2003) recommends shifting from basic to applied research and institutions, oriented toward supporting innovation for business
- ❑ Institution facilitating interactions between science and business systems is necessary

# Technology transfer centre (TTC)

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- ❑ TTC works as a mean and platform for social networks between science and business establishments
- ❑ TTC helps to identify knowledge and technology offers and requests for innovations from business
- ❑ TTC helps to exploit knowledge and know-how arising from scientific research



# Most common TTC models

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- Non-profit public organization:
  - Fully owned by university or research centreor
  - Operating as a part or near university or research centre
- Function which is carried out by technology and science park or incubator

# Main TTC functions

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- ❑ Assistance to researches  
(identification, protection, marketing of commercially valuable research)
- ❑ Technology scouting and monitoring
- ❑ Patents and licensing
- ❑ Spin-out companies
- ❑ Consulting and other services to business
- ❑ Science and business network

# Successful examples of TTC

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- Stanford University: Office of Technology Licensing filed more than 300 patents in 2004 and it has spun off some familiar companies such as Google, Sun Microsystems, Silicon Graphics, Netscape, Cisco Systems, and Yahoo!.
- Massachusetts Institute of Technology: Technology Licensing Office each year executes almost 100 licenses and launches about 20 new technology firms. Moreover, about 150 new businesses every year are associated with MIT faculty, students and alumni.

# Successful examples of TTC – II

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- Oxford University: Isis Innovation files one patent application a week on average, has assisted in the formation of more than 40 spin-out companies, negotiated over 200 license and option agreements, and managed over 100 consulting contracts for University researchers.
- Turku University (Finland): Research and Industrial Services Unit increased the amount of research funding from external sources from the 1989 total 8 mill. euros to the 2002 total of about 34 mill. eur. The Unit participates actively in the protection of intellectual property (eg. patents, inventions covered by patents, copyright, know-how designs and trademarks, and business promotion) and exploitation of other research expertise.

# Successful examples of TTC – III

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- University of Copenhagen: Tech Transfer Unit has been established in 2003 and already has 13 published patent applications.

# Lithuanian innovation policy

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- ❑ Innovation policy underlines necessity to strengthen relations between science and business
- ❑ Importance of knowledge and technology transfer to the scientific and economic development is acknowledged
- ❑ Legal environment is favourable for technology transfer

# Main legal documents

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- ❑ Strategic plan of Vilnius city (2002 – 2011)
- ❑ Innovation in business program
- ❑ Long-term strategy for research and development
- ❑ Lithuanian science and technology white book and its Action plan
- ❑ Concept of science and technology parks development
- ❑ Development program of high technologies
- ❑ Strategic plan of the Ministry of Economy for 2005 – 2007

# Technology transfer in Lithuania

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- Only few examples of technology transfer:
  - Kaunas Technology University's Innovation Centre
  - Lithuanian Innovation Centre
  - Science and Technology Park (Vilnius)
  - Kaunas High-tech and IT Park
- Biggest universities (Vilnius University, Vilnius Gediminas Technical University) do not have technology transfer offices



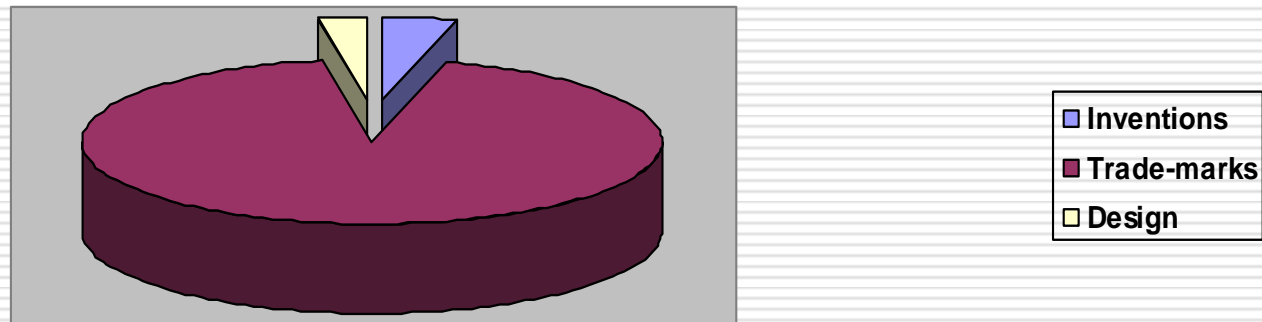
# Obstacles for TTC in Lithuania

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- Low level of commercially valuable research output

Diagram: Lithuanian applications to State Patent Bureau

Lithuanian applications 2001-2004



# Applications to European Patent Office

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Country	Year	2000	2001	2002	2003
Croatia		8	18	11	13
Cyprus		9	9	16	28
Denmark		714	816	778	867
Estonia		0	3	0	7
Finland		1223	1571	1608	1480
Iceland		9	10	27	22
Ireland		212	257	238	270
Latvia		0	1	1	2
Lithuania		0	2	1	2
Norway		306	330	365	358
Slovakia		13	8	10	14
Slovenia		25	31	31	43

# Obstacles to TTC in Lithuania – II

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- ❑ Intellectual property (IP) as a form of social capital does not operate
- ❑ IP is alien as a social institute
- ❑ There is no trust in IP protection system in society
- ❑ IP protection (patents) is extremely expensive and time-consuming process
- ❑ Innovation in society is still not perceived as a necessary prerequisite for successful business and economy development

# What model is suitable for Lithuania?

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- ❑ Public organization owned by universities / research institutions
- ❑ Establishing network between science and business and facilitating partnership
- ❑ Identifying supply and demand of knowledge and technology
- ❑ Representing and marketing universities and scientists
- ❑ Orienting basic science research to more applied research
- ❑ Providing services to business by competence derived from universities / research institutions

# Thank you for your attention!

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