

**Opportunities and Barriers for
Increasing the Contribution of Latvia to the FP7-ICT
Theme:**

**Main Findings of Latvia –
RTD Technological Audit**

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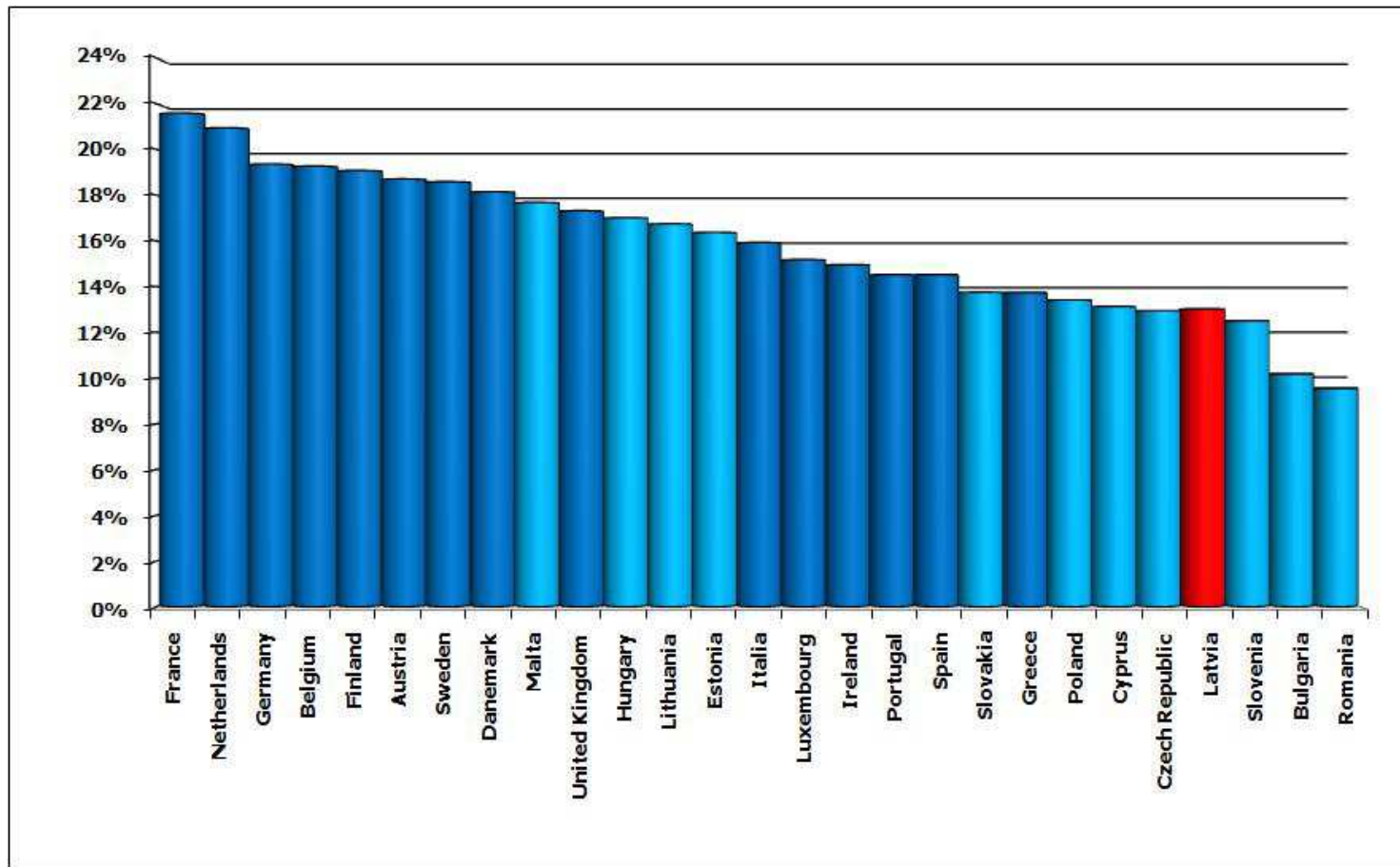
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Participation and financing of proposals with Latvian participation for FP6 IST

FP6 IST projects	Call 1	Call 2	Call 3	Call 4	Call 5	Call 6	Total
Number of participations	66	36	37	51	21	17	228
Retained participations	3	10	10	4	4	2	33
Percentage of retained participations	4.5	27.8	27.0	7.8	19.0	11.8	14.5
Allocated financing, KEuros	174.1	570.9	356.8	595.7	623.8	208.3	2529.6
Average financing per participant, KEuros	58.0	57.1	35.7	148.9	156.0	104.2	76.7

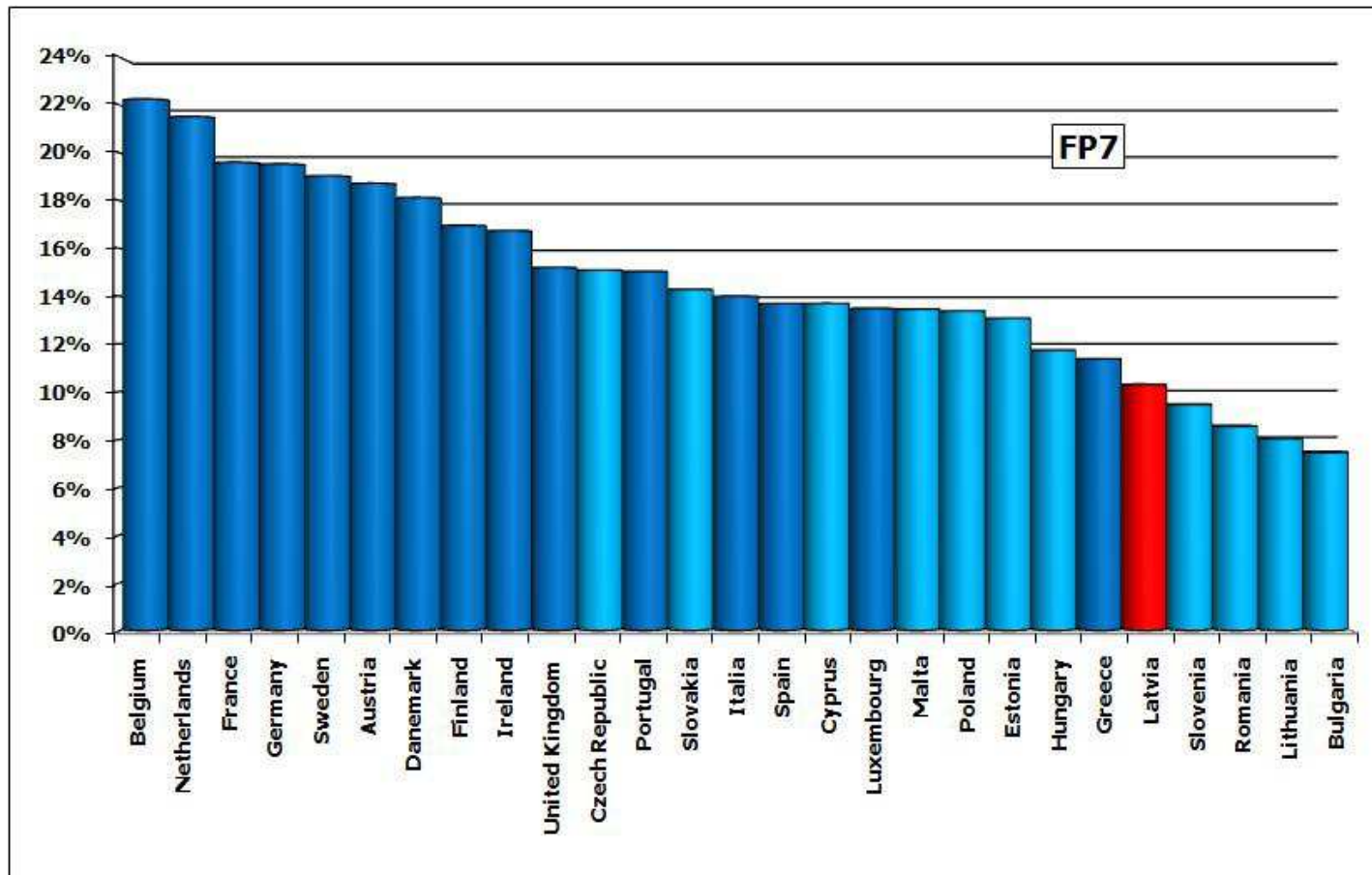
Success rate for the EU27 countries in FP6



Financing of FP7 ICT Theme proposals with Latvian participation

	Call 1	Call 2	Call 3	Call 4	Total
Number of participations	24	9	10	20	63
Retained participations	1	0	2	4	7
Percentage of retained participations	4.2	0.0	20.0	20.0	11.1
Allocated financing, KEuros	159.6	0.0	231.8	755.8	1147.2
Average financing per participant, KEuros		0.0	115.9	189.0	163.9

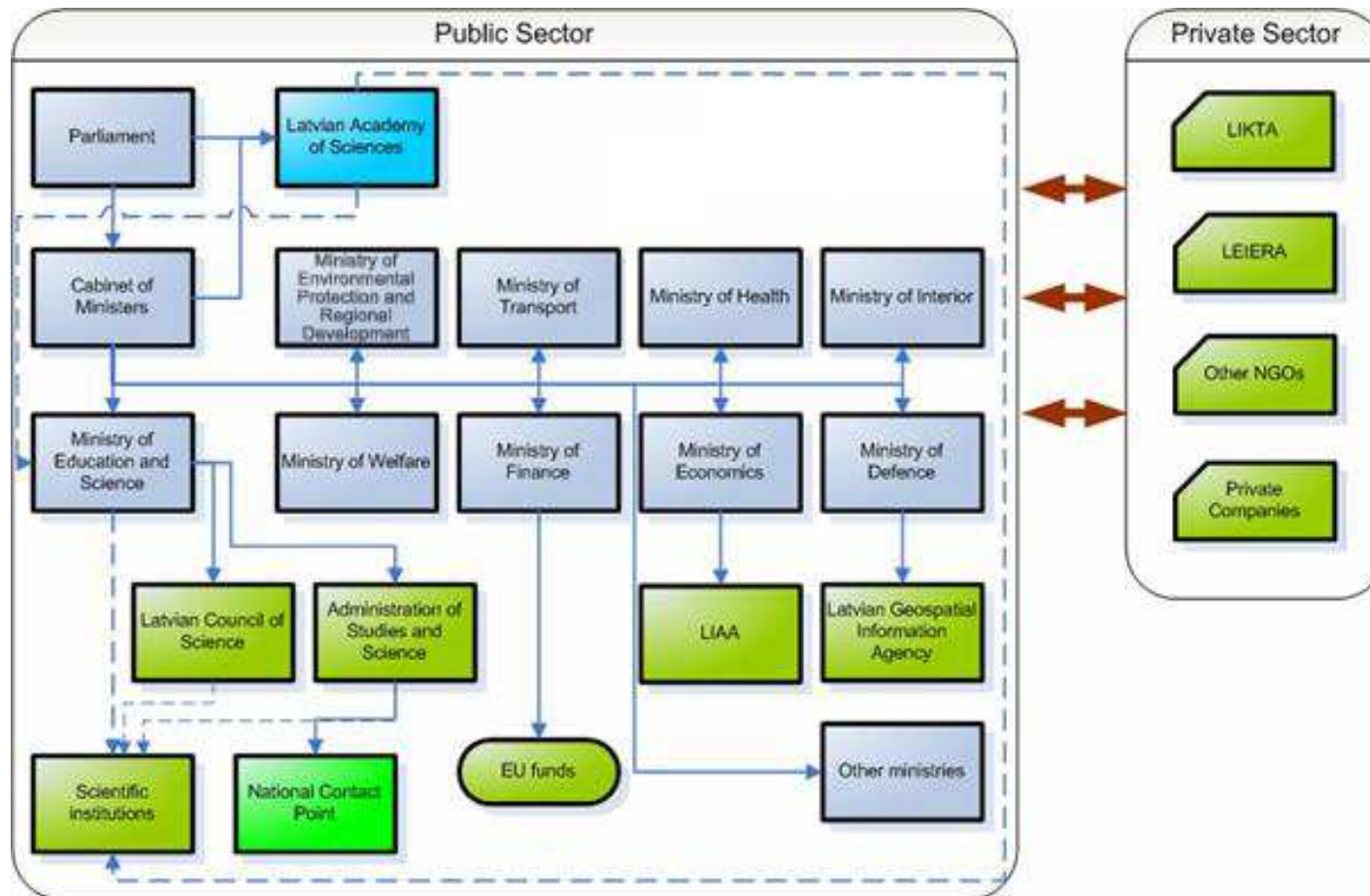
Success rate for the EU27 countries in FP7 (Calls 1 – 4)



Main Objectives of the Audit

- ❑ Study the ICT RTD policy environment and the opportunities and barriers it presents
- ❑ Identify the centres of excellence and centres with development potential per FP7 – ICT Theme Challenges and Objectives
- ❑ Propose actions that need to be taken at national and European levels to increase the participation of organisations carrying out ICT RTD in both the private and public sector

ICT sector stakeholders in Latvia



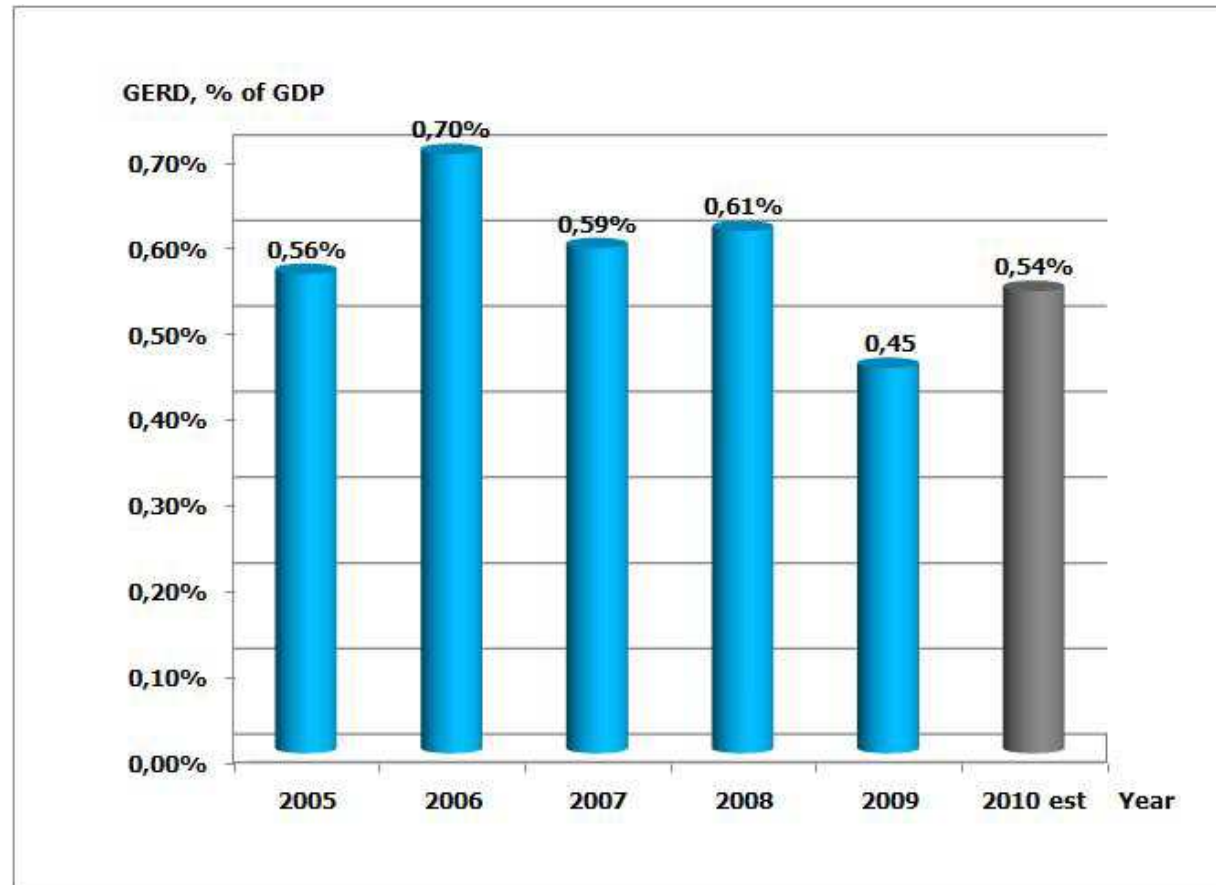
National Strategy Documents

Document	Adoption date	Relevance		
		ICT	IS	FP7-ICT
National Concept of the Republic of Latvia on Research Development 1998-2010	March 1998	4	2	4
A Growth Model for Latvia: People First	Oct. 2005	1	2	0
National Lisbon Programme of Latvia 2005-2008	Oct. 2005	2	3	1
Latvian National Development Plan 2007-2013	July 2006	2	3	1
The Information and Communication Technologies for the Quality of Education 2007-2013	Dec. 2007	5	5	3
Latvia's Plan of Strategic Development 2009-2013	July 2009	1	1	0
Strategy of the Sustainable Development of Latvia 2009-2030	June 2010	1	2	0

Programmes supporting ICT research & innovation

- Financed by EU Structural Funds – ESF, ERDF
 - Operational Programmes “*Human Resources and Employment*”, “*Entrepreneurship and Innovation*”, “*Infrastructure and services*”
 - Total ICT research support for 2010-2013 is 70 MEuros
- Financed or co-financed by the Latvian state budget
 - ICT support for 2010/2011 is 1.85 MEuros per year
- Other support instruments and programs
Regional funds, private initiatives
- Time frame 2007-2013
- Due to current crisis budget constraints, support programs will be curtailed and/or postponed

Percentage of GDP spent on R&D in Latvia

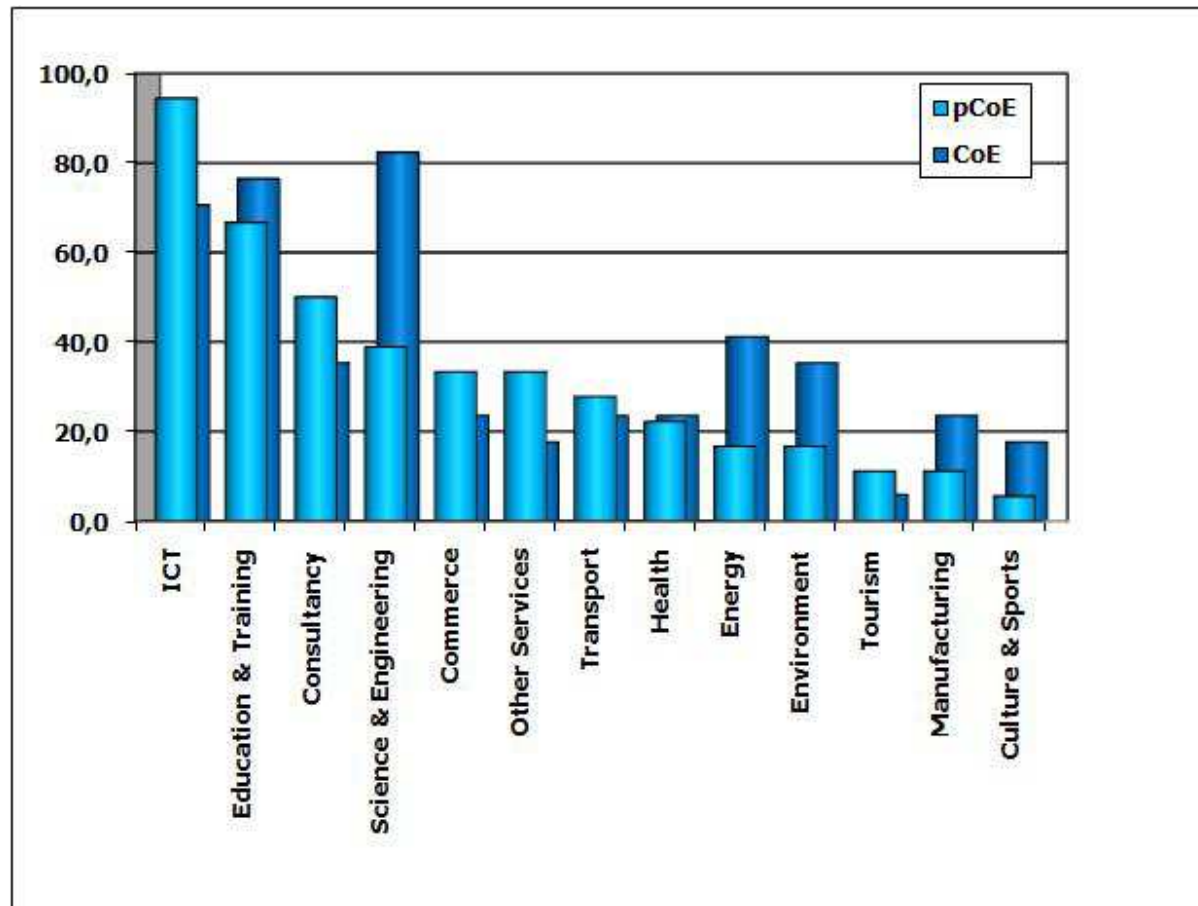


Source: EUROSTAT

Identification of ICT RTD centres of excellence

- The capabilities of Latvian ICT research organizations were evaluated with respect to their ability for integration into the FP7 – ICT Theme
- A total of 35 organisations have been identified
- Live interviews were carried out in order to assess RTD capabilities, technological expertise and human resources
- A consolidated list of 17 identified Centres of Excellence in Latvia is presented
- A list of 18 potential Centres of Excellence is compiled

Areas of expertise and relevance to FP7 ICT Theme



Participation capability level in the FP7 ICT Theme (Calls 1-4)

Expertise level	Number of Objectives	Percentage of Objectives
CoE expertise level	15	34.9
Potential CoE expertise level	25	58.1
No expertise	3	7.0
Total	43	100.0

The most appropriate Challenges

- Challenge 1. Pervasive and Trustworthy Network and Service Infrastructures
- Challenge 2. Cognitive Systems, Interaction, Robotics
- Challenge 3. Components, Systems, Engineering
- Challenge 4. Digital Libraries and Content

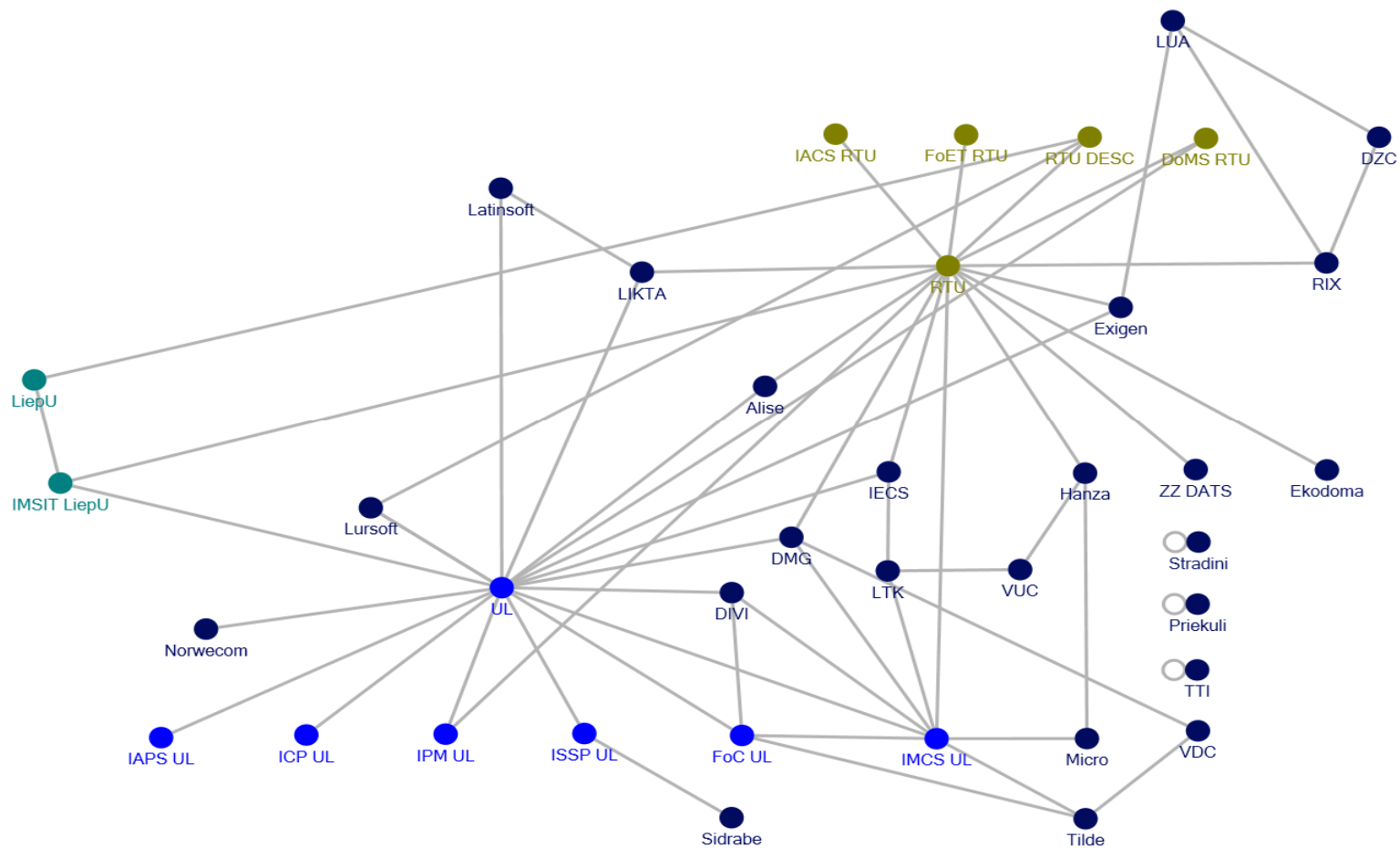
Competence/share matrix: HC-HS

- 7.3. ICT for Governance and Policy Modelling;
- 4.2. Technology-Enhanced Learning;
- 1.2. Internet of Services, Software and Virtualisation;
- 4.1. Digital Libraries and Digital Preservation;
- 4.3. Intelligent Information Management;
- 6.3. ICT for Energy Efficiency;
- 2.1. Cognitive Systems and Robotics;
- 5.1. Personal Health Systems;
- 1.3. Internet of Things and Enterprise environments;
- 1.1. The Network of the Future;
- 3.7. Photonics;
- 3.3. Flexible, Organic and Large Area Electronics;
- 2.2. Language-Based Interaction

Competence/share matrix: HC-LS

- 6.4. ICT for Environmental Services and Climate Change Adaptation;
- 7.1. ICT & Ageing;
- 3.6. Computing Systems;
- 3.4. Embedded Systems Design;
- 7.2. Accessible and Assistive ICT;
- 5.2. ICT for Patient Safety;
- 1.4. Trustworthy ICT;
- 3.5. Engineering of Networked Monitoring and Control systems;
- 1.6. Future Internet experimental facility and experimentally driven research;
- 6.1. ICT for Safety and Energy Efficiency in Mobility;
- 3.1. Nanoelectronics Technology;
- 8.0. FET-Open: Challenging Current Thinking;
- 6.2. ICT for Mobility of the Future;
- 3.2. Design of Semiconductor Components and Electronic Based Miniaturised Systems;

Policy network analysis



SWOT table: Strengths

- S1. Policies and instruments supporting ICT RTD in Latvia
- S2. Organisations with strong ICT research background and international experience
- S3. Institutions with high level RTD expertise in areas related to ICT
- S4. Impressive number of SCI publications for some organisations
- S5. Good contacts with international partners for some organisations
- S6. Well organised ICT education system in higher education institutions
- S7. Well trained staff for programming and software development in research institutions and commercial organisations
- S8. Well established technological infrastructure for most of the organisations
- S9. Well-developed networking facilities
- S10. World-level expertise of researchers in some areas
- S11. Successful academic research activities in computing science, system modelling, quantum computing, etc.
- S12. Prospective investigations started in the areas of sensor networks, semantic web, computer linguistics, etc.
- S13. Established traditions and success of academic research in the areas of solid state physics, including nano-level physics

SWOT table: Weaknesses

- W1. Fragmented instruments for ICT RTD support in Latvia, with excessive administrative overhead
- W2. No specific strategy for ICT RTD, nor for the ICT sector in general
- W3. Governmental strategic documents related to research, Information society and ICT lacking a European Dimension
- W4. Low level of cooperation for ICT RTD activities
- W5. Weak industry - academic relations
- W6. Low level of international cooperation of many organisations with plans to participate in FP projects
- W7. Lower quality of FP proposals with Latvian participants, compared to EU average
- W8. Insufficient experience in project coordination for FP6 and FP7
- W9. High average age of the leading researchers
- W10. Habitual and set ways of thinking and working
- W11. Poor knowledge of English in some organisations
- W12. Excessive workload of researchers in some organisations

SWOT table: Opportunities

- O1. Prioritisation of e-education and ICT in government strategy documents
- O2. Stimulation of closer collaboration between academic institutions and the commercial sector
- O3. More active participation in various Framework programmes
- O4. Promotion of European science politics and European RTD cooperation
- O5. Development of the National Research and Education Network (NREN)
- O6. Joining the European Infrastructures
- O7. Regular infrastructure upgrading with the support of EU funds
- O8. Development of innovative ICT companies and research planning
- O9. Modernisation of training of ICT specialists

SWOT table: Threats

- T1. Global economic crisis and its aftermath in Latvia
- T2. Importance of research not well understood by the public
- T3. Decreased funding for education and research
- T4. Little improvement of regulatory measures related to ICT research
- T5. Rise of competition on global and European scales
- T6. Brain-drain of scientist
- T7. Functional and moral depreciation of the existing ICT infrastructure
- T8. Regional inequality of infrastructure available to research institutions and companies

General barriers for all types of organizations

Barrier	Actions level
No access to EU leading partnership networks	<i>National; EU</i>
No access to EU leading networks in specific (target) research areas	<i>National, EU</i>
No or minimal experience of participation in collaborative projects	<i>National</i>
No clear understanding about participation rules, conditions, financing schemes	<i>National, EU</i>
Not enough resources (staff, financial) to prepare qualitative project applications	<i>Internal, National</i>
Lack of necessary support to prepare projects (information, finances)	<i>National, Organizational</i>
Preparation, application and evaluation period too long.	<i>EU</i>

Barriers specific to Academic sector and Higher education institutions

Barrier	Action level
Weak cooperation with industry sector in Latvia and abroad	<i>National, EU</i>
Participation in national projects (funded by EU funds) dominates over FP7 applications	<i>National</i>
Not enough (no dedicated) resources to follow up EU ICT research work programs and calls	<i>National</i>
Lack of orientation to research results and outcomes in national projects; this creates an inappropriate research project attitude/ culture	<i>National, EU</i>
Unclear future support for science, RTD and education in Latvia; this leads to low motivation to work on future projects	<i>National</i>
Brain-drain of young researchers	<i>National</i>
Some RES and HE can't find objectives and challenges in the current FP7 work program that would correspond to their main research priorities	<i>EU</i>

Barriers specific to Industry and SME sector

Barrier	Action level
Companies do not have an RTD strategy or plans	<i>Organizational-Internal</i>
Participation in EU ICT research projects is not a target for company management	<i>Organizational-Internal</i>
Companies don't have clearly defined responsibilities for RTD and innovation	<i>National, Organizational</i>
Weak cooperation with academic sector inside Latvia and abroad	<i>National</i>
Strong focus only on obtaining financial support	<i>National, Organizational</i>
Importance of access to leading edge technologies and international experience underestimated	<i>Organizational, National</i>
Too much focus on short term goals and markets	<i>Organizational</i>
Development of services dominates over product and technology development	<i>Internal, National</i>
Advantages of registered patents and licenses questionable, practically no experience to register patents at EU level	<i>National, Organizational</i>
Insufficient participation in international / EU events and networking activities; this decreases opportunities to contact best consortiums.	<i>National, EU, Organizational</i>

Thank you!
Any questions?