The Baltic R&D in ICT Scene

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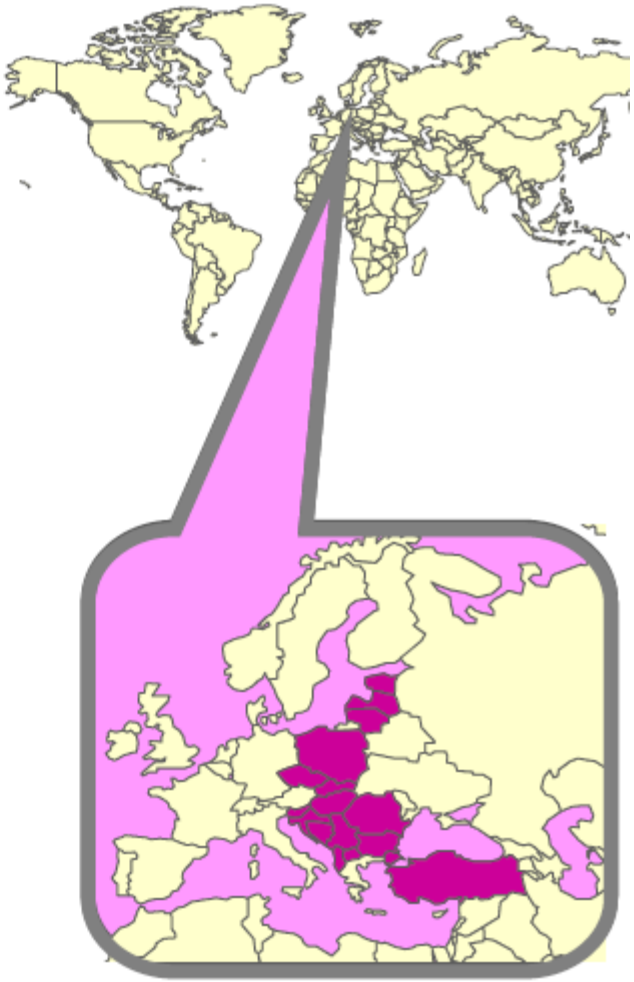
2. ICT RTD Technological Audit project
3. ICT RTD financing authorities
4. Competences and future priorities
5. SWOT analysis of ICT RTD
6. Recommendations
7. Conclusions

1. ICT trends in CEE and Baltic States

- **19 countries***
- Population (total)=**202.1 M**
- GDP per capita=**6'874 USD**

- **Basic ICT Statistics (000s)**
  - Total telephone subscr.=**250'707**
  - Fixed lines subscribers=**54'061**
  - Mobile subscribers=**199'043**
  - Internet subscribers=**22'772**
  - Broadband Subscribers=**15'816**
  - Internet Users=**67'214**

- **Basic ICT Statistics per 100**
  - Mobile= **98.5**
  - Fixed lines=**26.3**
  - Internet subscribers=**11.3**
  - Broadband subscribers=**7.8**
  - Internet users=**33.3**
- *Note:* Albania, Bosnia and Herzegovina, Bulgaria*, Croatia, Czech Rep.*, Cyprus*, Estonia*, Hungary*, Latvia*, Lithuania*, Malta*, Montenegro, Poland*, Romania*, Serbia, Slovak Rep.*, Slovenia*, TFYR Macedonia, Turkey
  * Member of the European Union



Source: ITU World Telecommunications/ICT Indicators Database

Source: http://www.itu.int/infrastructure/docs/2008-ICT-TRENDS-in-EUR-J-Ponder.pdf

1. ICT trends in CEE and Baltic States

CEE

- **16 Countries**
- GDP per capita= **7'169 USD**
- Density= **89 per km2**

- **Basic ICT Statistics per 100**
  - Main lines=**26.21**
  - Mobile subscribers=**27.69**
  - Total (fixed) internet subscribers=**11.4**
  - Total fixed broadband subscribers=**7.62**
  - Effective teledensity=**97.38**

Baltic States

- **Estonia, Latvia, Lithuania**
- GDP per capita= **9'447 USD**
- Density= **40 per km2**

- **Basic ICT Statistics per 100**
  - Main lines= **27.69**
  - Mobile subscribers=**130.11**
  - Total (fixed) internet subscribers=**14.45**
  - Total fixed broadband subscribers=**13.30**
  - Effective teledensity=**130.11**

Source: ITU World Telecommunications/ICT Indicators Database

Source: http://www.itu.int/infrastructure/docs/2008-ICT-TRENDS-in-EUR-J-Ponder.pdf

GERD (Gross domestic expenditure on R&D – % of GDP) in Baltic States

geo \ time	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
EU (27 countries)	1.83[s]	1.86[s]	1.86[s]	1.87[s]	1.86[s]	1.83[s]	1.82[s]	1.85[s]	1.85[s]	1.92[s]	2.01[s]
EU (15 countries)	1.88[s]	1.92[s]	1.92[s]	1.93[s]	1.93[s]	1.89[s]	1.89[s]	1.92[s]	1.93[s]	2.01[s]	2.1[s]
Euro area (16 countries)	1.82[s]	1.83[s]	1.85[s]	1.87[s]	1.87[s]	1.85[s]	1.84[s]	1.87[s]	1.88[s]	1.96[s]	2.05[s]
Estonia	0.68	0.6	0.7	0.72	0.77	0.85	0.93	1.13	1.1	1.29	1.42[p]
Ireland	1.18[e]	1.12	1.1	1.1	1.17	1.23	1.25	1.25	1.29	1.45	1.77[p]
Greece	0.6	:	0.58	:	0.57	0.55[e]	0.59	0.58[e]	0.58[e]	:	:
Spain	0.86	0.91	0.91	0.99	1.05	1.06	1.12	1.2	1.27	1.35	1.38
France	2.16	2.15[b]	2.2	2.23	2.17	2.15[b]	2.1	2.1	2.07	2.11	2.21[p]
Italy	1.02	1.05	1.09	1.13	1.11	1.1	1.09	1.13	1.18	1.23	1.27[p]
Cyprus	0.23	0.24	0.25	0.3	0.35	0.37	0.4	0.43	0.44	0.42	0.46[p]
Latvia	0.36	0.44	0.41	0.42	0.38	0.42	0.56	0.7	0.59	0.61	0.46
Lithuania	0.5	0.59	0.67	0.66	0.67	0.75	0.75	0.79	0.81	0.8	0.84

:=Not available s=Eurostat estimate e=Estimated value b=Break in series p=Provisional value i=See explanatory text f=Forecast

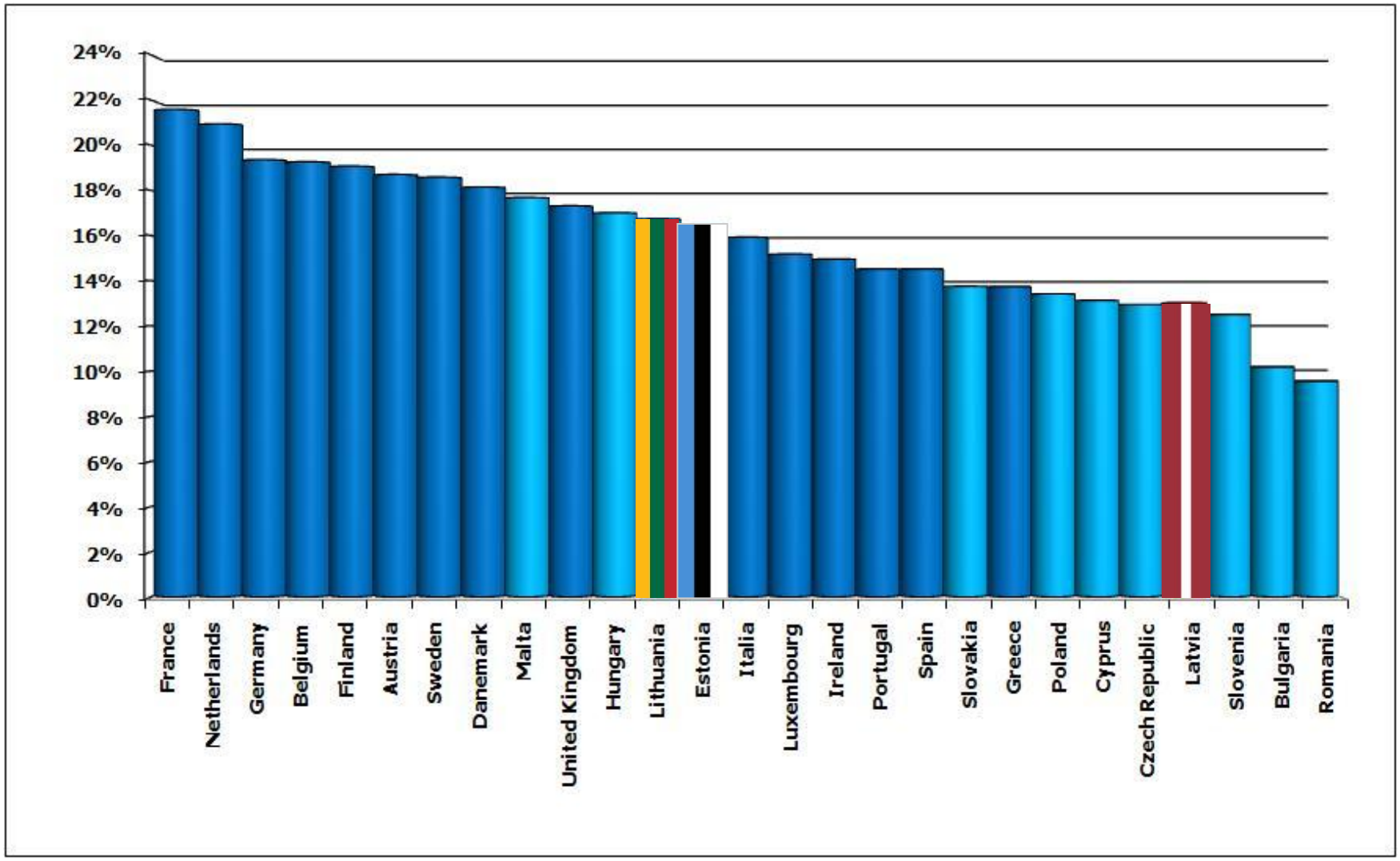
Source of Data: Eurostat

Source: http://epp.eurostat.ec.europa.eu/tgm/refreshTableAction.do?tab=table&plugin=1&pcode=tsiir020&language=en

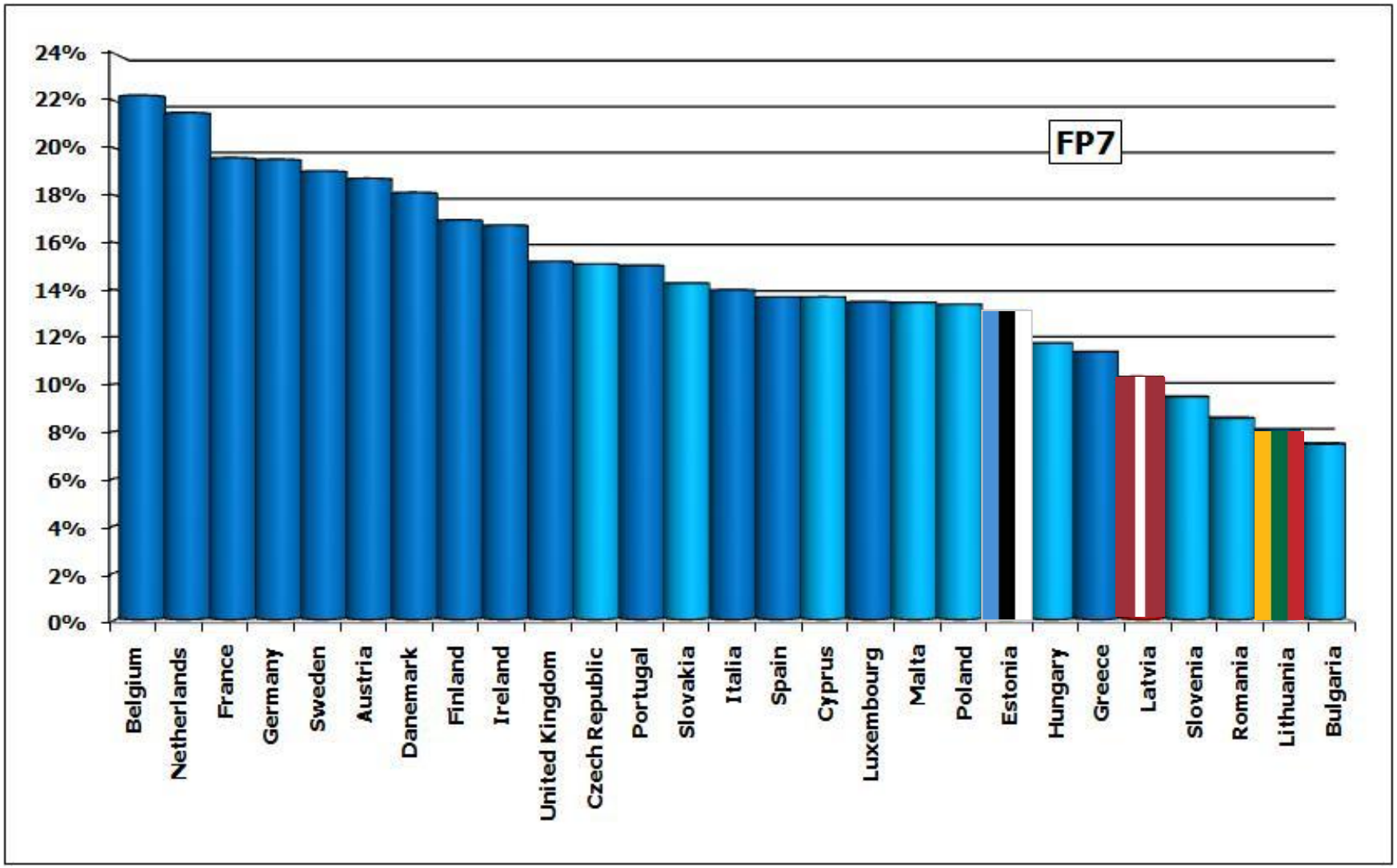
GERD (Gross domestic expenditure on R&D – % of GDP) in Baltic States

#	Country / Region	Latest available data ↓	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998
	Number of values in column →	37	4	29	34	36	36	36	33	33	32	32	29
	Average →	1.61	2.18	1.5	1.47	1.52	1.5	1.5	1.45	1.55	1.49	1.46	1.36
1	Sweden	3.64		3.64	3.74	3.8	3.62	3.85		4.17		3.61	
2	Finland	3.39	3.39	3.47	3.45	3.48	3.45	3.43	3.36	3.3	3.34	3.16	2.86
3	Japan	3.32				3.32	3.17	3.2	3.17	3.12	3.04	3.02	3
4	Switzerland	2.9					2.9				2.53		
5	Iceland	2.77				2.77		2.82	2.95	2.95	2.67	2.3	2
6	Austria	2.65	2.65	2.56	2.46	2.44	2.26	2.26	2.14	2.07	1.94	1.9	1.78
7	United States of America	2.61			2.61	2.61	2.58	2.67	2.64	2.74	2.73	2.65	2.61
8	Denmark	2.55		2.55	2.48	2.46	2.48	2.58	2.51	2.39	2.24	2.18	2.04
9	Germany	2.53		2.53	2.54	2.48	2.49	2.52	2.49	2.46	2.45	2.4	2.27
10	France	2.08		2.08	2.1	2.1	2.15	2.17	2.23	2.2	2.15	2.16	2.14
11	EU (15 countries)	1.91		1.91	1.91	1.89	1.89	1.92	1.93	1.92	1.91	1.89	1.84
12	Belgium	1.87		1.87	1.88	1.84	1.87	1.88	1.94	2.08	1.97	1.94	1.86
13	Euro area (15 countries)	1.86		1.86	1.86	1.84	1.85	1.86	1.87	1.86	1.84		
14	EU (27 countries)	1.83		1.83	1.84	1.82	1.82	1.86	1.87	1.86	1.85	1.84	1.79
15	United Kingdom	1.76			1.76	1.73	1.69	1.75	1.79	1.79	1.81	1.82	1.76
16	Netherlands	1.7		1.7	1.71	1.72	1.78	1.76	1.72	1.8	1.82	1.96	1.9
17	Norway	1.65		1.65	1.52	1.52	1.59	1.71	1.66	1.59		1.64	
18	Luxembourg	1.63		1.63	1.66	1.56	1.63	1.65			1.65		
19	Czech Republic	1.54		1.54	1.55	1.41	1.25	1.25	1.2	1.2	1.21	1.14	1.15
20	Slovenia	1.53		1.53	1.56	1.44	1.4	1.27	1.47	1.5	1.39	1.37	1.34
21	Ireland	1.44	1.44	1.31	1.3	1.25	1.24	1.17	1.1	1.1	1.12	1.18	1.24
22	Spain	1.27		1.27	1.2	1.12	1.06	1.05	0.99	0.91	0.91	0.86	0.87
23	Estonia	1.24	1.24	1.14	1.15	0.94	0.86	0.77	0.72	0.71	0.61	0.69	0.57
24	Portugal	1.18		1.18	1	0.81	0.77	0.74	0.76	0.8	0.76	0.71	0.65
25	Italy	1.14			1.14	1.09	1.1	1.11	1.13	1.09	1.05	1.02	1.05
26	Hungary	0.97		0.97	1	0.94	0.88	0.93	1	0.92	0.78	0.69	0.68
27	Croatia	0.86		0.86	0.87	1	1.13	1.05	1.04				
28	Lithuania	0.82		0.82	0.79	0.75	0.75	0.67	0.66	0.67	0.59	0.5	0.55
29	Latvia	0.63		0.63	0.7	0.56	0.42	0.38	0.42	0.41	0.44	0.36	0.4
30	Malta	0.6		0.6	0.64	0.6	0.53	0.26	0.26				
31	Turkey	0.58			0.58	0.59	0.52	0.48	0.53	0.54	0.48	0.47	0.37
32	Greece	0.57		0.57	0.57	0.58	0.55	0.57		0.58		0.6	
33	Poland	0.56			0.56	0.57	0.56	0.54	0.56	0.62	0.64	0.69	0.67
34	Romania	0.53		0.53	0.45	0.41	0.39	0.39	0.38	0.39	0.37	0.4	0.49
35	Bulgaria	0.48		0.48	0.48	0.49	0.5	0.5	0.49	0.47	0.52	0.57	0.57
36	Slovakia	0.46		0.46	0.49	0.51	0.51	0.57	0.57	0.63	0.65	0.66	0.78
37	Cyprus	0.45		0.45	0.43	0.4	0.37	0.35	0.3	0.25	0.24	0.23	0.22

Success rate of EU27 countries in FP6



Success rate of EU27 countries in FP7



2. ICT RTD Technological Audit project

- *Tender:* European Commission DG INFSO
- *Countries covered:*
  - EU12

    Bulgaria, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovenia, Slovakia
  - 5 FP-associated countries

    Albania, Bosnia and Herzegovina, Montanegro, Serbia, Turkey
- *Time period:* May 2009 – April 2011

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Main Objectives of the RTD Audit

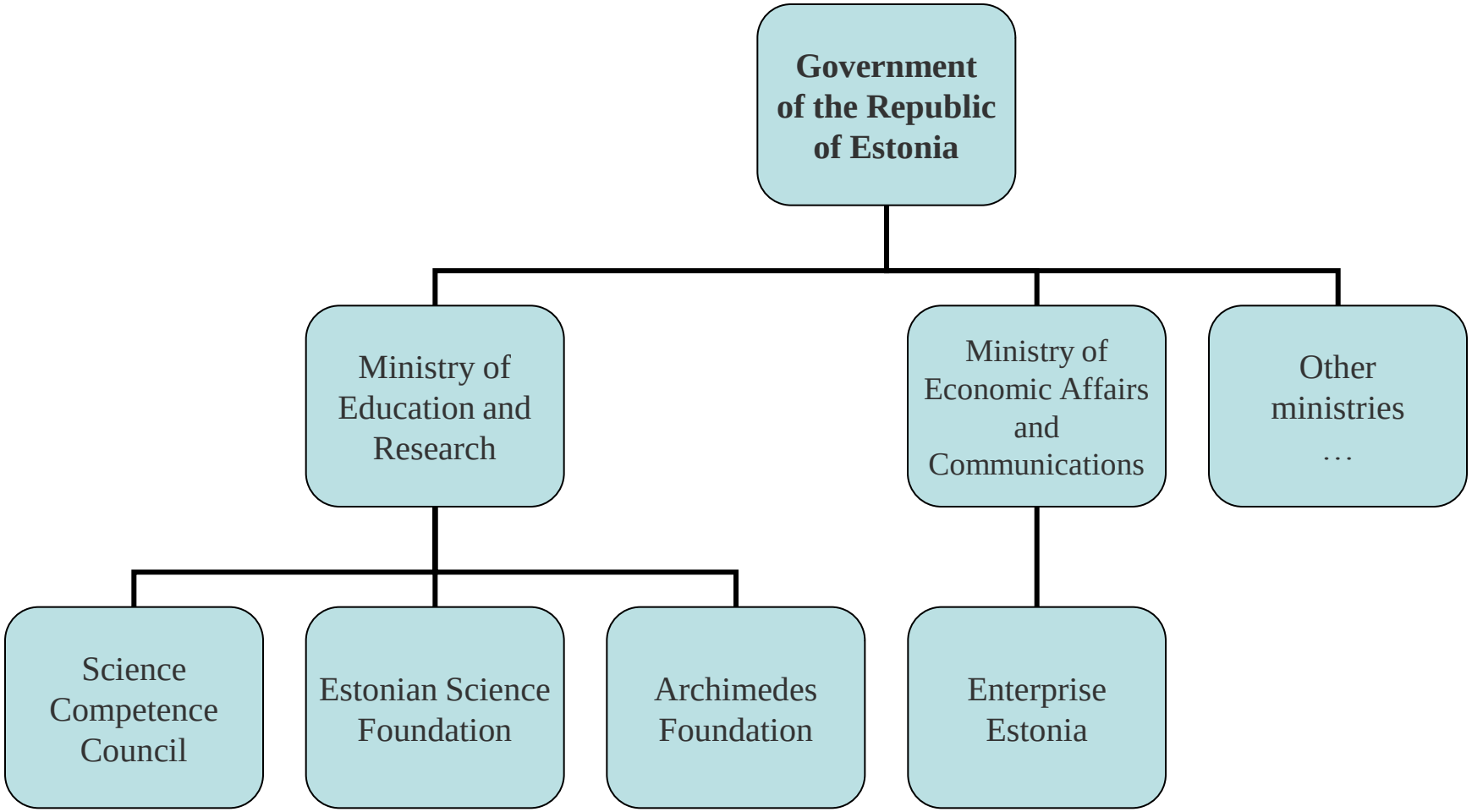
- Identify the barriers and obstacles to successful participation of ICT RTD entities in EU research programs
- Identify the centres of excellence and centres with development potential per **Framework Program FP7 – ICT** Theme Challenges and Objectives
- Propose actions that need to be taken at national and European levels to increase the participation of organisations carrying out ICT RTD in both the private and public sector.

ICT RTD TA project deliverables

1) ICT-RTD technological status of <*Country*>
2) Activities and capabilities of ICT RTD entities
3) Participation in FP6-ICT and FP7-ICT
4) Present and planned infrastructure
5) Capabilities and measures to max. potential
6) Latent potential (Delphi survey)
7) Opportunities and bariers
8) Detailed Report
9) Simplified Report [public document – @ DG INFSO]

Prior to ICT audit: foresight study in Estonia EST_IT2018

3. RTD financing authorities in Estonia

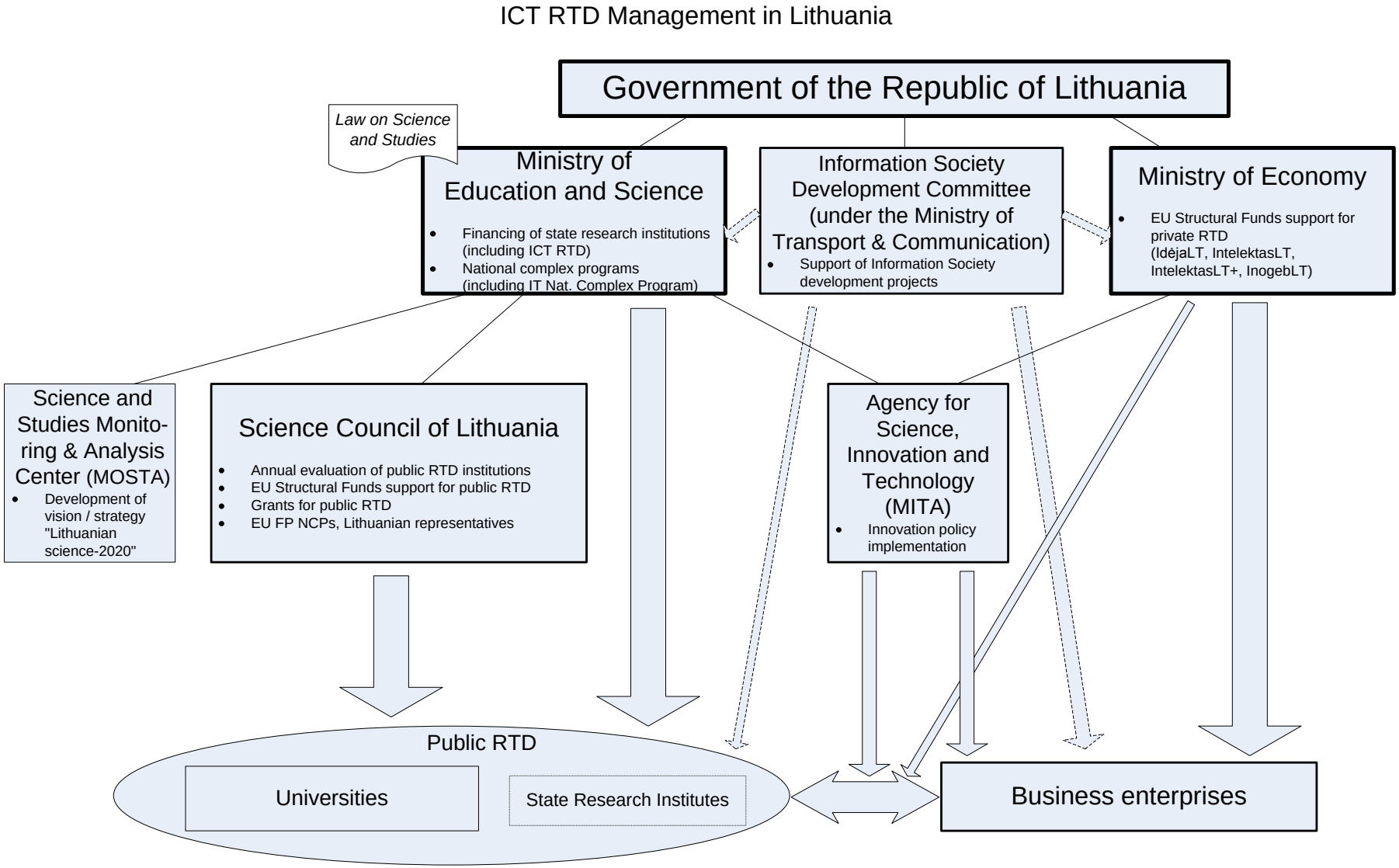


RTD financing authorities in Latvia

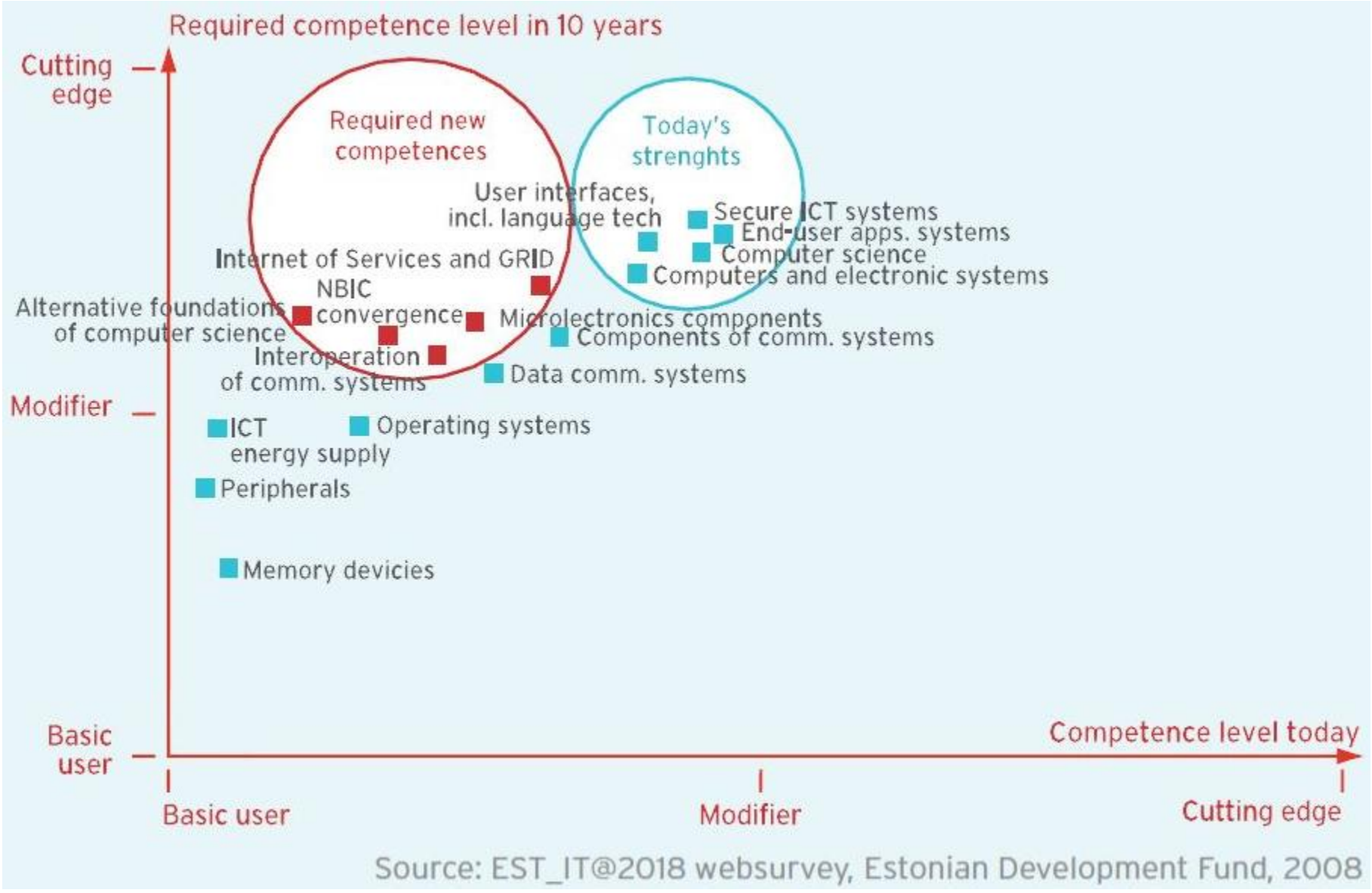
ICT sector stakeholders:

- **Governmental sector**: important Ministries for R&D policies and support are
  - Ministry of Economics
    - Incl. Investment and Development Agency of Latvia - LIAA
  - Ministry of Education and Science
    responsible for the Academic sector
- **Academic sector**:
  - Latvian Academy of Science
  - Latvian Council of Science: distribution of funding and coordination of research activities, science policy
  - Research institutes and Universities (ICT sector is prioritary in research programs)
- **Private sector**
  - ICT business sector, mostly SMEs
  - ICT Industry associations (**LIKTA**, LEtERA, LIA)

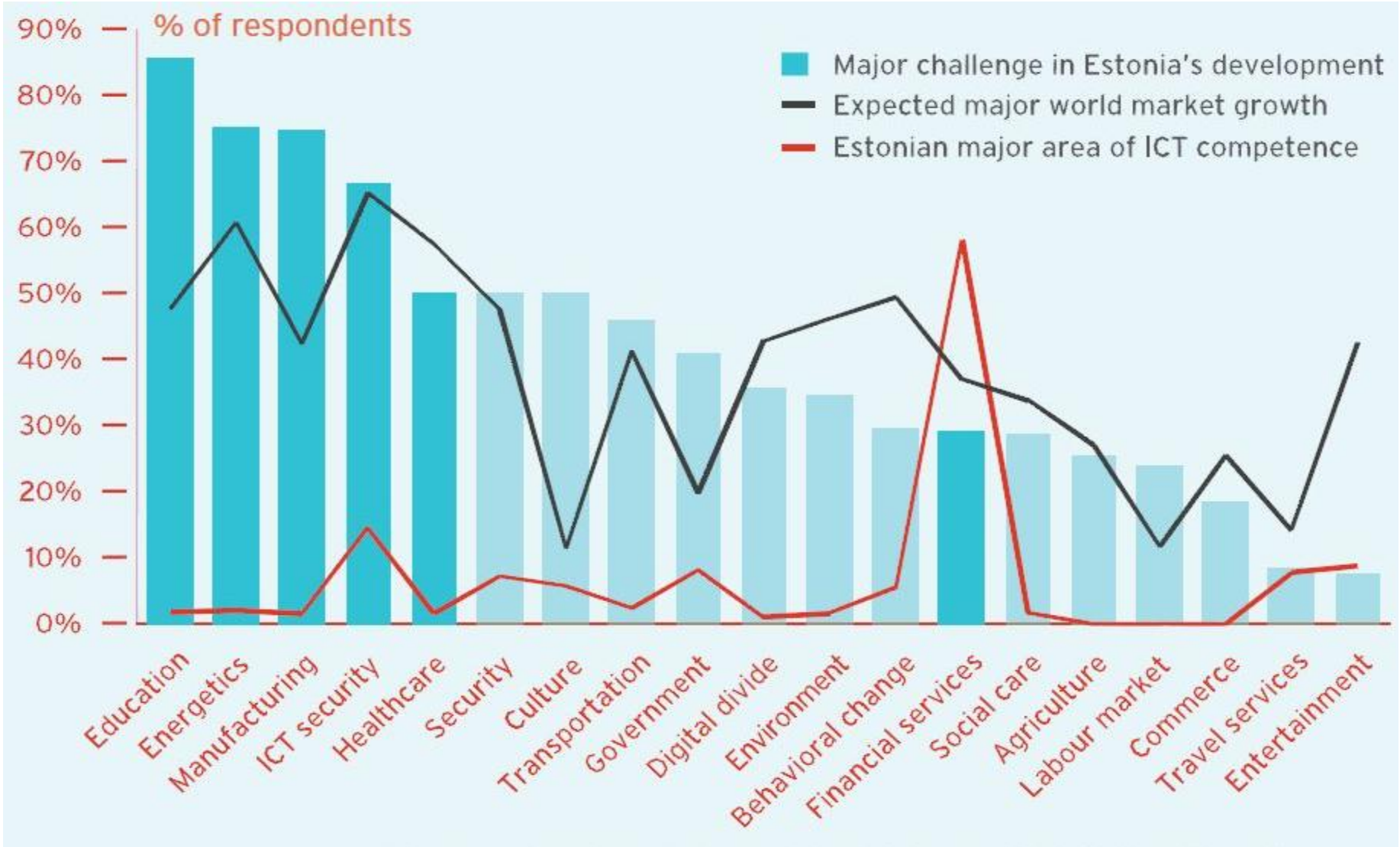
RTD financing authorities in Lithuania



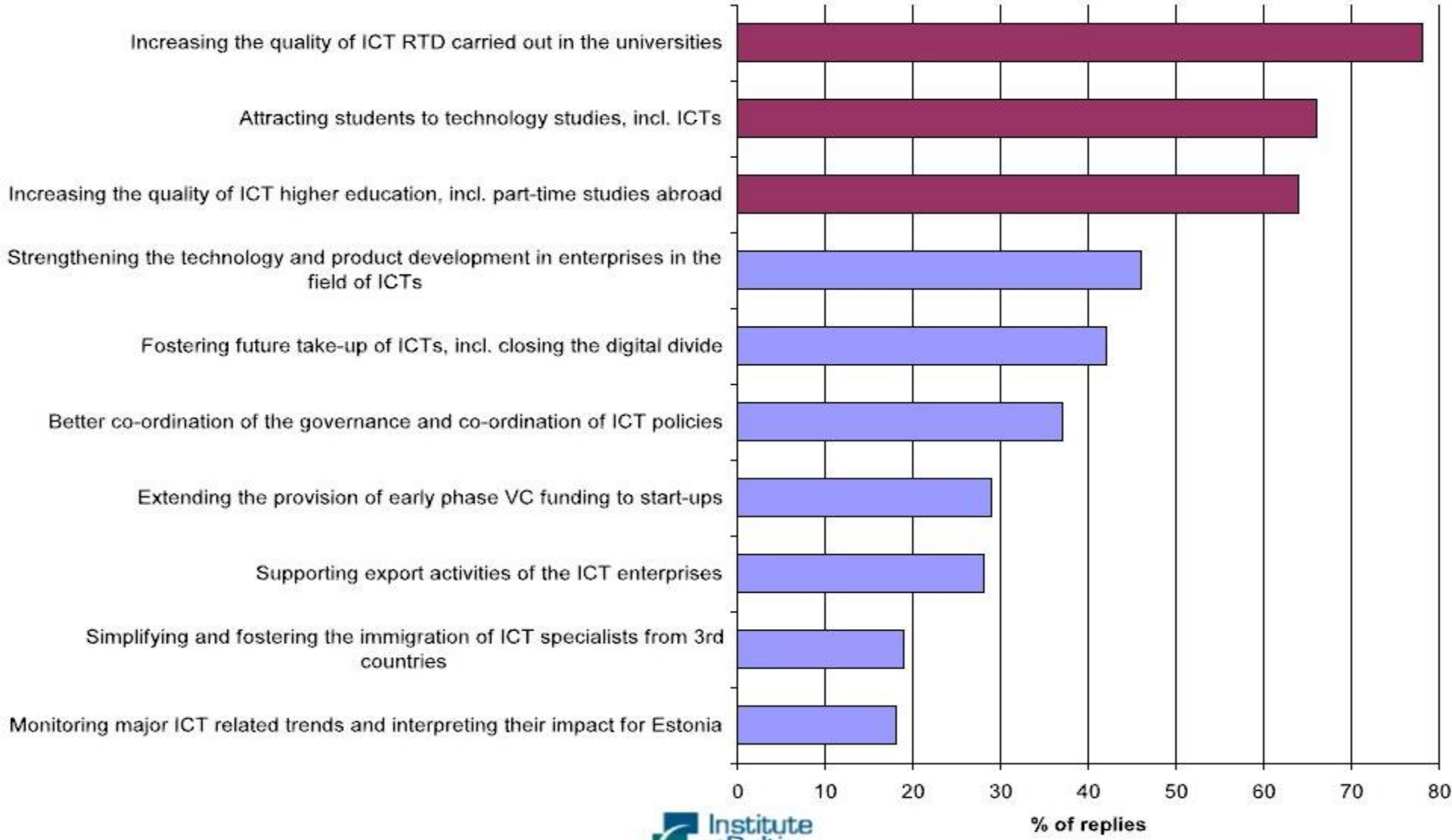
4. Estonian ICT competencies



Estonian ICT challenges



Priorities for action in Estonia



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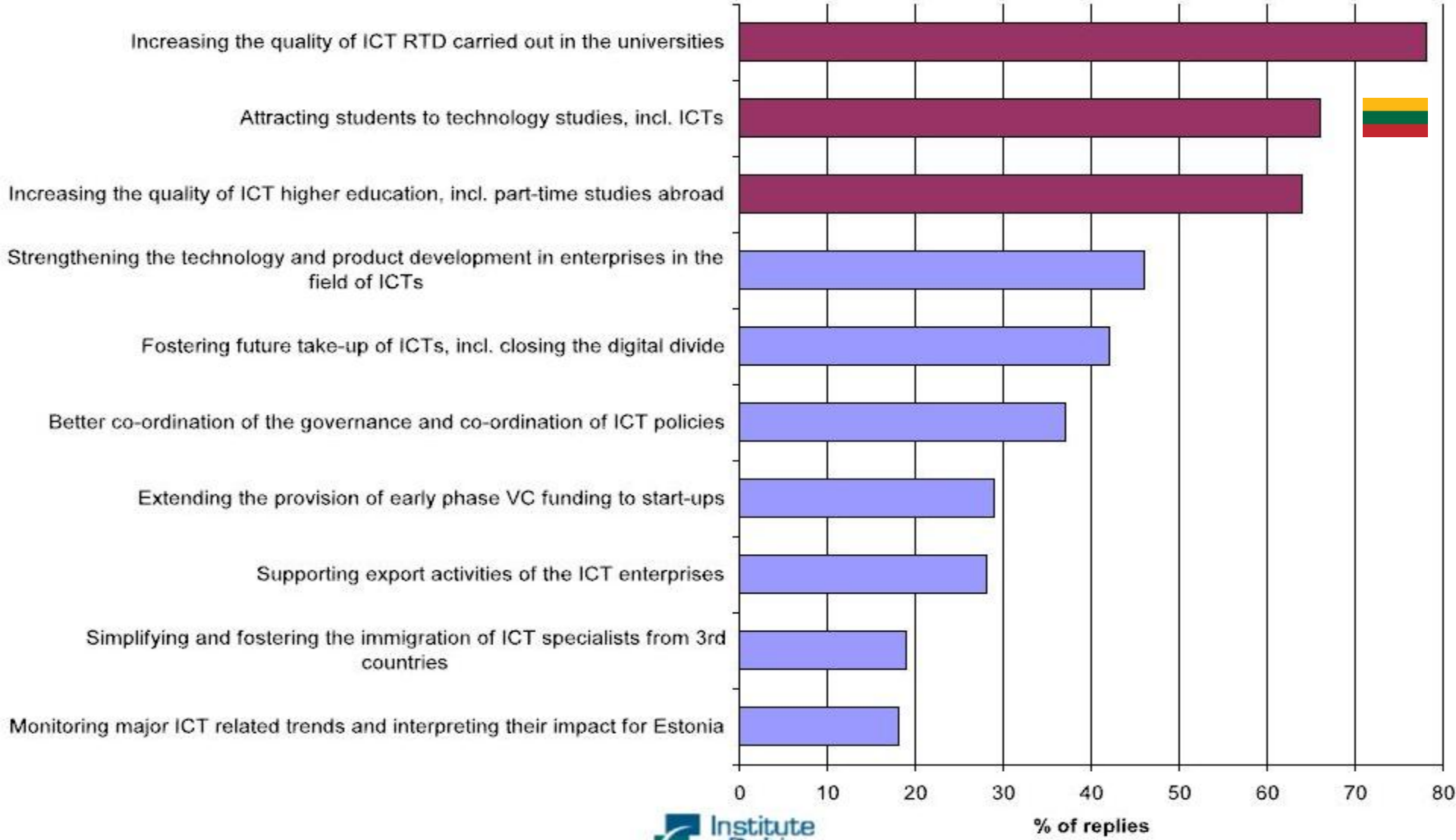
Priorities for action in Estonia



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Latvian ICT sector indicators

Number of ICT companies those with >50 employees	~3000 73
Number of employees in ICT sector	~25000
ICT sector turnover (M EUR) ICT manufacturing (incl. Software development) ICT services Electronic communications ICT wholesale trade	3800 3.4% 9.3% 21.9% 65.4%
ICT sector profit (M EUR)	383
ICT sector added value as part of national GDP	4.2%
Latvian IT Cluster: products and services for export Turnover MEUR (2009) Export MEUR Employees	 76.6 30.4 1900

Latvia: ICT RTD Centres of Excellence

Type of organization	Centres of excellence	Potential centres of excellence	Total number of organizations selected
Higher education and research institutions	12	5	17
Commercial organizations, including SMEs	5	11	16
Other organizations		2	2
Total number of organizations that completed Who is Who live interviews	17	18	**35**

The main ICT research areas in Latvia

- **1. Digital content**
  - Technology-enhanced learning and access to cultural heritage
  - Semantic-based Knowledge and Content Systems
  - Access to and preservation of cultural and scientific resources
  - Digital libraries and technology-enhanced learning

    Intelligent content & semantics
- **2. Networked Business**

  Networked business and governments

  ICT for Networked Businesses

  Networked enterprise

  Applications and Services for the Mobile User and worker
- **3. Health**

  eHealth

  Integrated biomedical information for better health

The main ICT research areas in Latvia

- **4. Robotics**

  Embedded systems
  Advanced Robotics
  Cognitive systems, interaction, robotics

- **5. Networks**

  Broadband for all
  Secure networks
  Internet of the future

LT: Main Centres of Excellence

- Kaunas University of Technology
  Faculty of Informatics
- Vilnius University
  Faculty of Mathematics and Informatics
- Vilnius Gediminas Technical University
  Faculty of Fundamental Sciences
- Vilnius University
  Institute of Mathematics and Informatics
- Vilnius University
  Institute of Applied Research

LT: Potential Centres of Excellence

- Centre of Physical Sciences and Technology
  Semiconductor Physics Institute
- Lithuanian University of Health Sciences
  Telemedicine Centre
- Kaunas University of Technology
  Faculty of Mechanical Engineering
  and Mechatronics
- Klaipėda University
  Faculty of Natural Science and Mathematics
- Vytautas Magnus University
  Faculty of Informatics
- Lithuanian Energy Institute

LT: top ICT R&D companies

- **VTEX**, http://www.vtex.lt - a LaTeX-based technical typesetter and data supplier for science publishers, including Elsevier Science.
- **Neurotechnology**, http://www.neurotechnology.com – SDK developer for fingerprint, face, iris and object recognition implemented, among others, in Lenovo computer access systems.
- **GetJar Baltic**, http://www.getjar.com – a mobile phone application store platform with offices in San Mateo, California and Vilnius.
- **No Magic Europe**, http://www.bpi.lt – together with the US company No Magic develops UML product **MagicDraw**.

LT: ICT R&D main private companies

- **Aukštieji algoritmai**, http://pharma-algorithms.com – develops suite of physicochemical predictors for the North American chemistry software company ACD/Labs with whom its offshoot merged in 2006.
- **Rubedo sistemos**, http://www.rubedo.lt – develops software for Elekta's (Sweden) radiation oncology and neurosurgery systems.
- **ImpressPages**, http://www.impresspages.org – develops open source Web CMS: ***ImpressPages CMS*** since 09.2009, translated into 16 languages, already; 07.11.2011: **Winner** of **2011 Open Source Awards** in the category **Most promising open source project**

!

http://www.packtpub.com/open-source-awards-home

Supply and demand gap of ICT specialists in Lithuania

Prepared ICT specialists (from Collages and bachelors from Universities)

Planned new ICT specialists in ICT enterprises

Source: Infobalt review, 2011
ftp://ftp.science.mii.lt/pub/KoDi2011/09.23_Plenariniai_pranesimai/11.INFOBALT_ko%20tiketis%202020_neformalus_2011.09.23.pdf

Actions to prepare more ICT specialists

- The task to increase the proportional part of ICT professionals in Lithuania is included into Information Society Development program 2011-2019, approved by the Government:
  - 2011: 1.8 %
  - 2015: 2.3 %
  - 2019: 3.2 %

Source: Infobalt review, 2011
ftp://ftp.science.mii.lt/pub/KoDi2011/09.23_Plenariniai_pranesimai/11.INFOBALT_ko%20tiketis%202020_neformalus_2011.09.23.pdf

5. SWOT: Strengths - Estonia

- The most significant strengths characterising the internal environment for ICT RTD in Estonia derive from the prioritisation of the adoption of ICTs by the government and end users. Also a variety of instruments are in place that support excellence in ICT RTD. This includes both the national Centres of Excellence and Competence Centres programme, but also the generally competitive RTD funding system in Estonia, which prioritises high quality research.

SWOT: Weaknesses - Estonia

- The primary weaknesses derive from the existing low number of RTD personnel and the weakness of the supply of additional qualified ICT specialists. The unfavourable competitive position of promising newcomers and new fields of RTD is another important factor, which leads to suboptimal supply of new knowledge. Also, the available technology and business management skills remain insufficient for management of international RTD initiatives and global new technology based ventures. Major ICT RTD actors have also brought out the high and increasing barriers to entry in the FP7 as significant constraint to more active participation in the Community RTD efforts.

SWOT: Opportunities - Estonia

- The global economic crisis is an important trigger for change and development, the power of which should not be underestimated. Also, the continued globalisation and the emergence of new fields of ICT RTD continue to exhibit major opportunities. The rapidly evolving globalisation of higher education is another driver that will have a major impact also on Estonia. The aspirations of the European Union for establishment of a well functioning ERA and the very existence of the FP7 itself continue to present, despite the current difficulties, for economies like Estonia major opportunities.

SWOT: Threats - Estonia

- The identified most significant threats are likely to derive from lack of timely and sufficient action in meeting the challenges posed by the continued Great Recession, and the overly complacency of the policy makers with immediate stabilisation achieved in recent months. The demographic challenges and projected decline in the supply of labour force in Estonia continue to demand immediate action. The coming decade(s) is likely to lead to further concentration of ICT industry, and to the increase of the barriers to entry in the global RTD and innovation networks. The possible continued dominance of the bigger players in the FP7 (and possible also in FP8) continues also to be a for smaller actors significant threat.

SWOT: Strengths - Latvia

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

SWOT: Weaknesses - Latvia

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

SWOT: Opportunities - Latvia

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

SWOT: Threats - Latvia

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

LT: Strengths

- There are success stories of participation in FP6
- There is a potential of motivated and competent people
- Participation in COST and Eureka programmes is high
- High current competence levels relative to the overall compound competence found in some areas
- High interest expressed among researchers of building competences in some areas

LT: Weaknesses

- Risk for participation in FP projects is too high
- Closed consortiums and networks
- Lack of motivation, skills and competences at the individual level
- Lack of financial, political and professional support for participation
- The lack of cross-field competences that link up industry/technology needs with wider socio economic fields
- The untapped existing research infrastructure

LT: Opportunities

- Active participation in setting up FP priorities.
- Institutional reform and performance based funding
- Additional support for strengthening networking activities
- Development of grid-based service infrastruc-ture develop the projects on the basis of the planned research infrastructures
- Planned infrastructure in SF2007-2013 projects will increase computing power capacity in grid infrastructures and is more aligned with FP7 priorities in some areas

LT: Threats

- Decrease of motivation to participate in FP programmes
- Unsuccessful reforms
- Changes in EU science policy
- Lack of resources to support current and future infrastructure

6. EE: Recommendations - National level

- Improvement of international business and technology management skills
- Deepening specialisation and the development of more specialised knowledge
- Better integration into global open innovation networks

EE: Recommendations - EC level

- Lowing the barriers of entry in the FP7 ICT Theme
- Strengthening and integrating the existing Centres of Excellence in relatively weaker regions
- Extending the opportunities for strategic alliance building

LV: Recommendations - National level

- Set education and science as top priorities
- Set ICT as a top priority
- Provide targeted and relevant information to potential proposal submitters
- Provide consultations on IPR, patents and licences
- Provide support for EU partner search
- Provide financial support for project proposal preparation
- Raise the awareness of ICT RTD achievements and excellence areas in Latvia and abroad

LV: Recommendations - National level

- Focus research efforts on specific promising areas
  - Computing science, incl. quantum computing , system modelling
  - Development of sensor networks
  - Development of the semantic web and other research related to computer linguistics
- Support research in some specific areas closely related to ICT
  - solid state physics, including nano-level physics, and optical research

LV: Recommendations - National level

- Promote Latvian ICT RTD excellence centres to leading EU partnership networks in relevant research areas
- Establish support mechanisms to stimulate industry-academic cooperation (such as BONITA, or the ICT Competence centre)
- Create a specialised course for PhD students and young scientists

LV: Recommendations - EC level

- Introduce more possibilities for the organizations without previous experience
- Promote usage of completed FP project databases
- Provide targeted training
- Promote ICT RTD excellence centres from Latvia to leading EU partnership networks
- Include high competence areas of ICT RTD excellence centres of Latvia in FP7 future calls and in the next Framework programme

LT: Recommendations - National level

- *Developing skills in project planning and idea generation*
- *To establish national framework for proactive position of Lithuanian entities in project preparatory activities* through dedicated project assistance grant scheme
- *To reinforce existing science-industry partnerships and their linkages with EU counterparts in ICT RTD field* establishing framework for wider national participation in EU level RTD collaboration: COST, Eureka! Joint Technology Initiatives, ERANETs.
- *To initiate national programmes for valorisation of FP project results*

LT: Recommendations - EC level

- *To reinforce EU15 science-industry partnerships and their linkages with EU12 counterparts in ICT RTD field* through targeted measures (specific calls for supporting actions) for alignment of strategic research agendas of the EU technology platforms and national counterparts.
- *To use FET Objective* as most open to new topics not covered by ICT Work Programme scheme under FP7 ICT programme to provide funding for EU12 for decreasing the gap in the knowledge, use and adoption of the future emerging technologies generated through FET between EU12 and EU15.

LT: Recommendations - EC level

- *To involve a larger number of ICT RTD experts from Lithuania* in evaluation of FP7 ICT proposals (increasing pull of competence having good understanding of the evaluation criteria, acquainted with the FP decision making processes, building human potential for competent participation in FP7.
- *To increase the number of participants from science in FP ICT Theme through the scientific societies, professional associations in ICT, e.g. Lithuanian Computer Society, Lithuanian Mathematical Society, ect. which are part of larger international umbrella organisations and can act as a pool of researchers to be recruited into FP ICT consortia.*

LT: Recommendations – stakeholder lev.

Participation in:

- Social networks (Twitter, LinkedIn, etc.)
- Specialised professional associations (forums)
- National ICT associations
- Evaluation of project
- Info days, “fairs” of projects, etc.
- Industry exibitions, technology fairs with stands

7. Conclusions

- Demand for ICT skilled personnel in all three countries has outpaced the supply: need **to increase a number of graduates with specific skills** in the fields of national excellence
- Need **to increase the participation of ICT societies** in RTD efforts, acting as networks linking researchers and developers in different countries and fostering projects
- Need **to improve project planning and idea generation skills** of young researchers

Thank you!

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