Research and Development in Estonia

overview and statistics

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GENERAL DATA

Population	1,34 million
Gross domestic product (GDP) in 2011	16,0 BEUR
GDP per capita	10674 EUR
Gross domestic expenditure on R&D (GERD) in 2010	232, 7 MEUR
R&D intensity (percentage of GDP) in 2010	1,62%
Average annual growth of GERD (2000-2009)	20,4%
Average annual growth of business enterprise R&D (BERD, 2000-2009)	30,0%
Total number of researchers full-time equivalent (FTE) in 2010	4069
Researchers (FTE) per1000 total employment in 2010	7,4

Legislation

- The Organisation of Research and Development Act

- Research and Development and Innovation Strategy

· **KNOWLEDGE-BASED ESTONIA**
Estonian Research and Development and Innovation Strategy 2007-2013

· **Estonian Research Infrastructures Roadmap 2010**
https://www.etis.ee/Portaal/includes/dokumendid/Teekaart.pdf

The strategy sets out three main objectives:

- Competitive quality and increased intensity of research and development;
- Innovative enterprises creating new value in the global economy;
- Innovation friendly society aimed at a long-term development.

These objectives will be achieved through:

- Development of human capital;
- Organising the public sector RD&I more efficiently;
- Increasing enterprises' innovation capacity;
- Policy-making aimed at long-term development of Estonia.

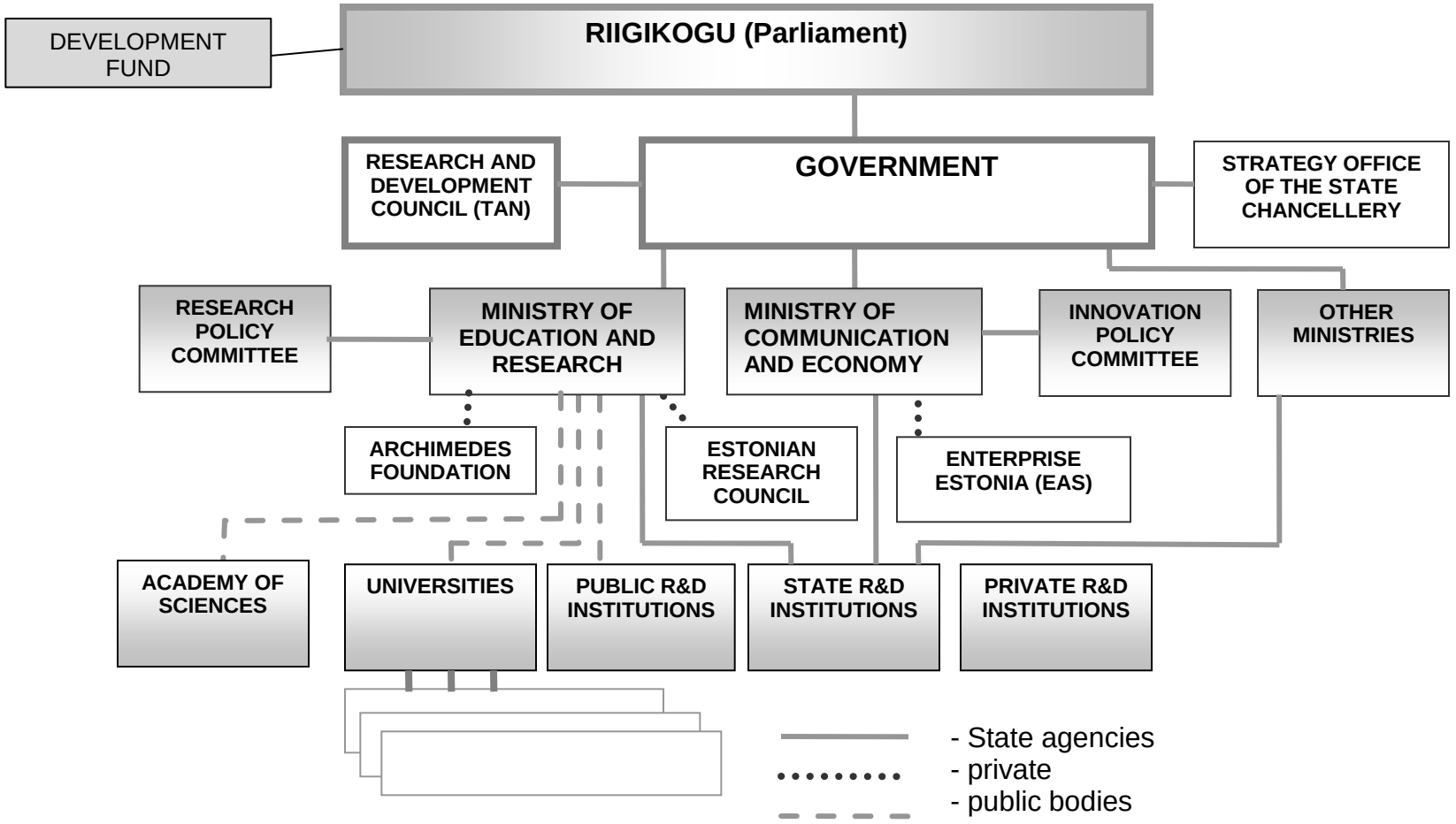
The **key technologies** that will be prioritised by initiating and implementing national research and development programmes in supporting R&D and innovation include:

Information and communication technologies (ICT);

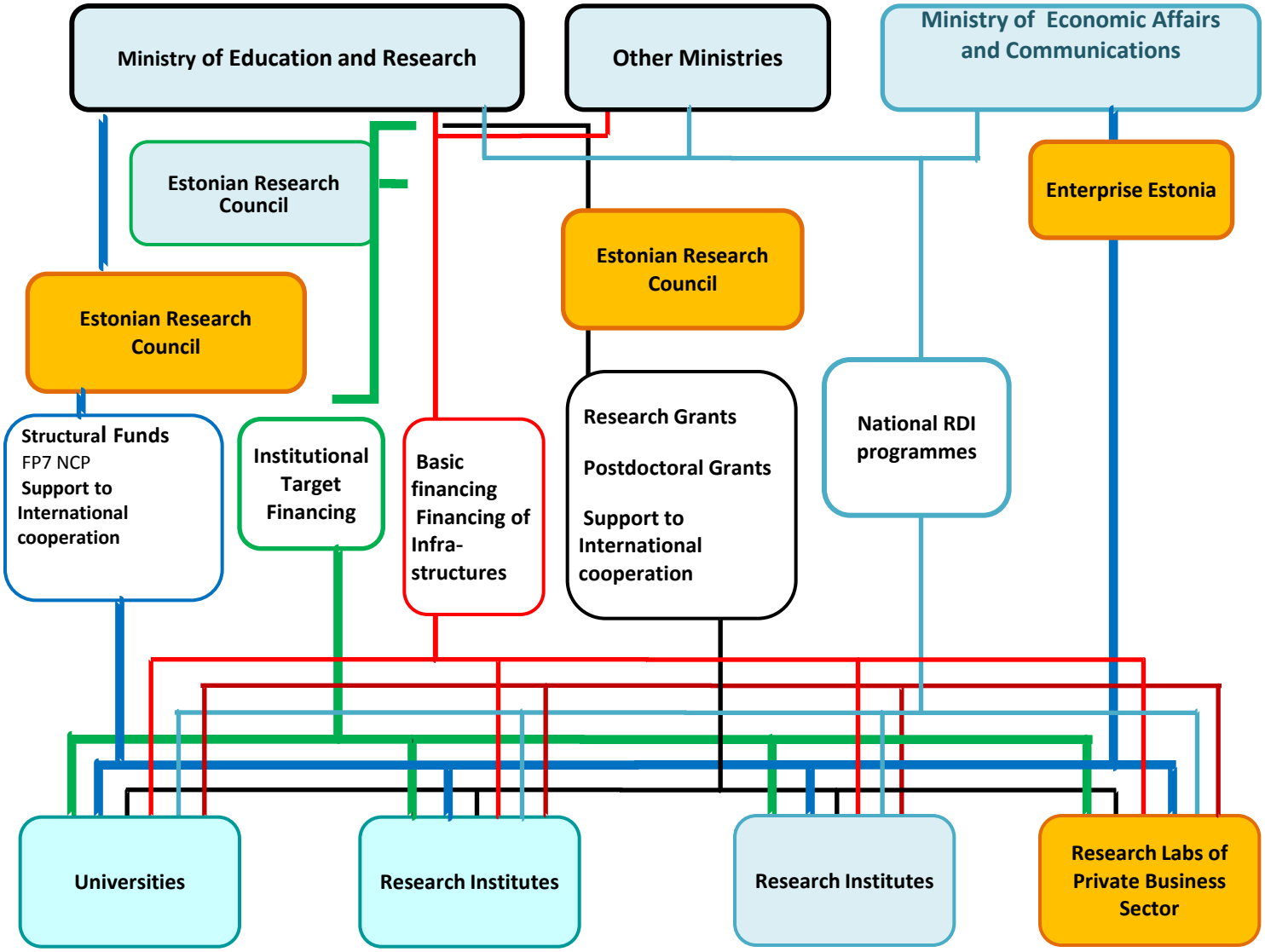
Biotechnology;

Materials technology.

RD system in Estonia



R&D public funding system



Most important R&D funding instruments in MEAC

R&D Financing Programme (2001-2008 total 29,8 MEUR; 2008-2013 total 89,58 MEUR)

- The SPINNO Programme (2004-2006 total 3,8 MEUR; 2008-20013 7,7 MEUR)
- International Co-operation Networks (mediation of the information on the international cooperation projects on innovation)
- Technology Competence Centre Programme (2004-2007 total 16,1 MEUR; 2008-2013 total 63,1 MEUR+cofinancing 29,8 MEUR)
- Innovation Awareness Programme (2004-2006 total 0,88 MEUR)
- Support to Science and Technology Parks (2004-2008 total 2,12 MEUR)
- Innovation vouchers (2009-2010 total 0,96 MEUR)
- Support for hiring a development specialist

Research output

Estonian publication output by scientific fields 2005-2009

Source: ISI Reuters InCites

Scientific field	Papers	Citations	Citations per Paper	% of Papers Cited
Agricultural Sciences	292	911	3.12 (EU27 3.09)	62.7%
Humanities	181	53	0.29 (EU27 0.48)	15.5%
Medical and Health Sciences	1 043	7 103	6.81 (EU27 6.56)	70.2%
Natural Sciences	3 023	14 732	4.87 (EU27 4.99)	67.3%
Social Sciences	435	946	2.17 (EU27 2.13)	44.8%

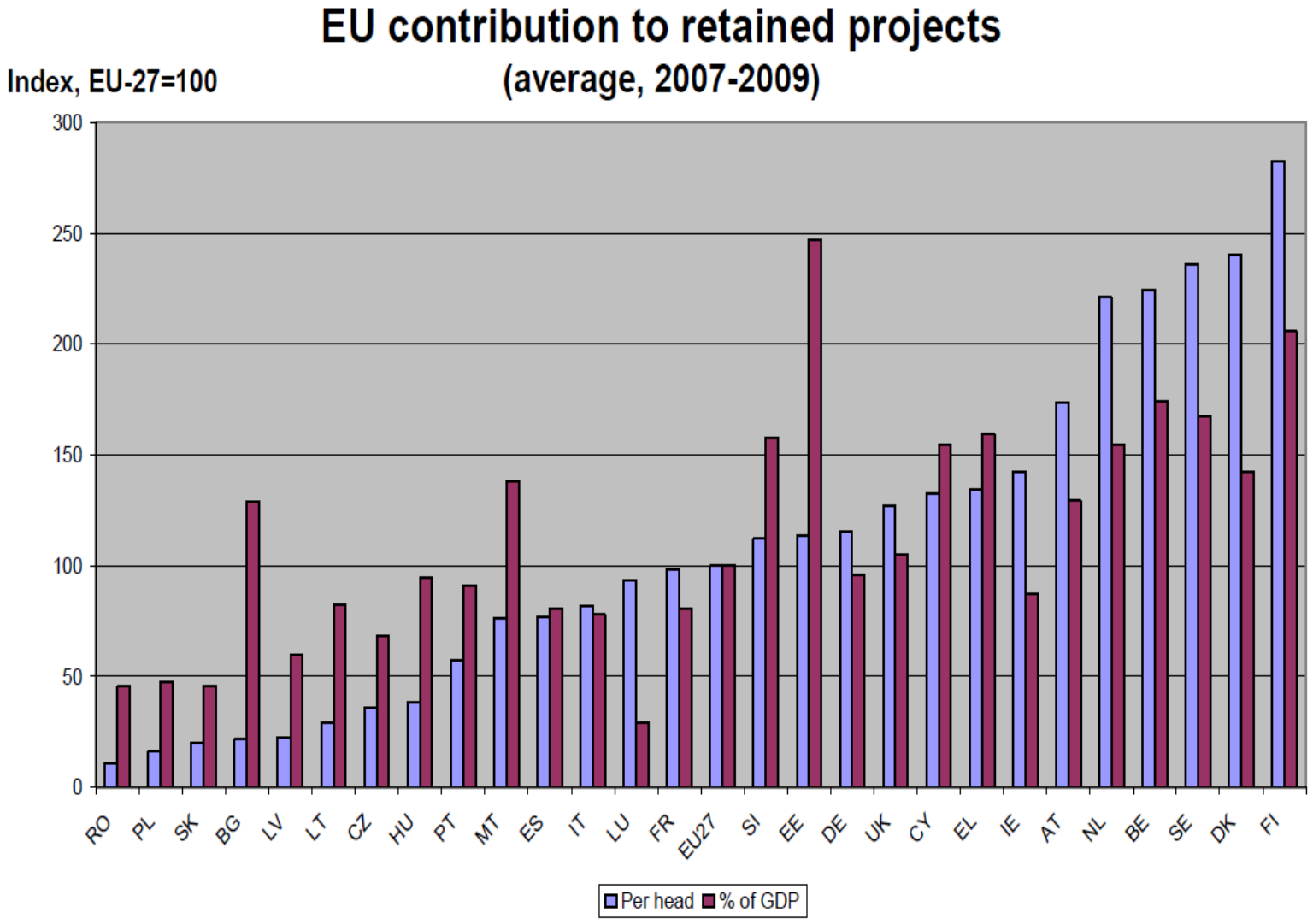
International Co-operation

Estonian performance in the EU Framework Programmes

FP	Contracts	Applications	Success rate	MEUR
FP4 (1994-1998)	86	316	27%	3.9
FP5 (1998-2002)	216	809	26.8%	19.1
FP6 (2002-2006)	332	1509	22.0% (EU25=20.4%)	33.8
FP7 (2007-02.2012)	342	1567	21.8%	54.9

Estonian performance in the EU Framework Programmes
Source: European Commission

International Co-operation



Source: Interim Evaluation of the Seventh Framework Programme. Report of the Expert Group, November 2010

INNOVATION PERFORMANCE

EU MEMBER STATES' INNOVATION PERFORMANCE

Based on their average innovation performance, the Member States fall into **four performance groups :**

1.Innovation leaders - performance well above that of the EU27 average;
2.Innovation followers' (incl Estonia) - performance close to that of the EU27 average;
3.Moderate innovators' - performance below that of the EU27 average;
4.Modest innovators' – performance is well below that of the EU27 average.

Source: http://ec.europa.eu/enterprise/policies/innovation/files/ius-2011_en.pdf

Peer – Review

Backround

- The Innovation Union Flagship Initiative of EU 2020 Strategy invites Member States to conduct peer-reviews of their research and innovation systems
- 2011 Estonia asked European Research Area Committee to conduct an external peer-review of its research and innovation policy as part of preparation for new Estonian RDI strategy
- Using the EU Innovation Union Self-Assessment Tool as the overarching methodology
- Four international experts from benchmark countries (DK, ISL, SLO, FI) were invited as peers
- Process was overseen and supported by the Ministry of Economic Affairs and Communications and by the Ministry of Education and Research of Estonia

Peer – Review

KEY MESSAGE

- Estonia has been one of the fastest progressing RDI countries in the EU
- In order to stay at the forefront of development and competitiveness, and to gain maximum societal benefit from RDI, there are a number of issues yet to be addressed

Key areas tackled here are:

- Scoping of RDI policy
- RDI governance
- PPP collaboration & public sector innovation

Peer – Review

RECOMMENDATIONS I

1. Perceive RDI as a means to achieve economic and societal goals

• Priorities directly responding to the needs of Estonian society and the economy

2. More clear focus for Estonian RDI programmes

• linked to the implementation of the new national strategy

• Fewer programmes of key importance

3. Ensure coherent and systemic RDI policy

• Attention on coordination and implementation of policies

• Stronger horizontal coordination by RDC

4. Ensure the availability of competent human capital

• Responding to the expressed and latent needs of growth sectors

5. Harness RDI measures to drive structural change in the economy

• Absorptive capacity at the industry

• Endogenous growth companies

• Extend the base of small innovative companies

Peer – Review

RECOMMENDATIONS I I

6. Lessen RDI dependency on EU Structural funds

- To improve flexibility and continuity
- Long-term commitment to growth and change

7. Increase the connectivity of the innovation system

- Objectives and measures for bridging within the country and internationally
- Expanding the internationally active scientific community
- Strengthening collaboration between universities and domestic enterprises. Engaging more companies into RDI collaboration.

8. Extend the reach and variety of innovation measures

- Engaging those that are not yet involved in RDI
- Service innovation, knowledge transfer & IPR, joint TT office
- Public sector innovation, innovative procurement,..

Peer-Review Report:
http://www.mkm.ee/public/ERAC_EE_Peer-Review_Report_2012.pdf

Thank you!