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**Support to Information Society Policies**

An Overview (with some Estonian perspective)  
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v 0.4

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**IPTS**

**Mission**

The mission of IPTS is to provide **customer-driven support** to the **EU policy-making process** by **researching science-based responses to policy challenges** that have both a **socio-economic** and a **scientific or technological dimension**.

IPTS main competences consist in providing **policy option analysis** and **policy impact assessment**, analysing the **socio-economics of new technologies**, delivering techno-economic tools and platforms to our customers, and managing information exchange and consensus-building among policy-makers and stakeholder on highly complex techno-economic issues



The Institute's work programme, based on "Actions" (or macro-projects), cover the fields of **research policy and techno-economic foresight, sustainable development, industrial and clean technologies, energy, transport, agriculture and rural development, life sciences** and the **information society**.

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**The IS unit: some facts**

- ✓ 5 years **fully operational**
- ✓ Start up budget till 2004 (full budget now)
- ✓ **Multidisciplinary**
- ✓ **Research on Information Society** part of the JRC's Priority Area 6 (Lisbon Agenda, Information Society, Rural Development), led by IPTS.
- ✓ **Multi-annual agreements (MoU)** with INFOS Dir C (Lisbon Strat. & Policies) and Dir H (ICT addressing societal challenges)
- ✓ > 70% of our work for INFOS via Admin Arrangement
- ✓ Topical **collaboration** with several units of Dir B (EComm policy), F (Digital content – cognitive tech) and G (Components – systems)
- ✓ **Contributing** to the key High Level Advisory Groups of INFOS (HLSEG, ISTAG I and II, e-Europe, etc.)

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**Research agenda & type of support**

**3 central research questions and our approach to it**

- How to maximise the take-up of a secure European Information Society?**
  - *Macro and micro-economic desk research on the key factors of a competitive and innovative IS*
  - *Modelling the impact of ICT on growth and competitiveness*
- What are promising ICT-enabled application areas for Europe?**
  - *Scenarios on e-gov, e-health, e-inclusion and e-identity*
  - *Road mapping and impact assessment of the contribution of ICT to a socially inclusive society*
  - *Road mapping and demand analysis of emerging trends - up to a 15-year time horizon - in ICT (Web 2.0, RFID, Alternative Wireless Technologies, Creative and Mobile Content, etc...)*
- How effective is the European innovation strategy towards the Information Society?**
  - *Measuring and mapping the R&D effort in ICT in Europe (Scoreboard)*
  - *Benchmarking and monitoring best practices in ICT take up (in relation to i2010 policy goals)*

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**Maximising IS take-up**

**Some examples**

- **Uptake of the Information Society in the New Member States**
  - "Factors and impacts in the information society: a prospective analysis in the acceding and candidate countries"
  - (on-going) "Next steps in developing information society services in the new member states: the cases of eGov and eHealth"
  - "Information Society Developments and Policies Towards 2010 in an Enlarged Europe: Ten Lessons from the Past and Three Challenges for the Future" [http://www.jrc.es/publications/pub\\_cfm?id=1227](http://www.jrc.es/publications/pub_cfm?id=1227)
- (On-going) **Economic transformations and ICT**
  - "The knowledge economy, economic transformations and ICT in the EU+25: regional dynamics in the deployment phase".
- (To probe further) **Impact of ICT on growth and competitiveness**
  - "Accounting for the Impact of Information and Communication Technologies on Total Factor Productivity: Towards an Endogenous Growth Approach". [http://www.jrc.es/publications/pub\\_cfm?id=1502](http://www.jrc.es/publications/pub_cfm?id=1502)

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**Uptake in the NMS**

NMS&C		Current State of IS take up	Application Level (eServices)
i2010	I-SPACE	Supportive legal background Ongoing analysis of regulatory framework	eServices could be model for single I-Space Tool to support regulatory reforms Security issues critical
INNOVATION and RESEARCH		Low level of R&D spending (EE 0.77 vs EU-25: 1.93, but growing +1%); D& Research 2005 data) Lower share of business sector R&D expenditure	Innovation in public eServices could support growth in ICT R&D (EE e-gov online exploitation 90%, n3 in EU-26, and fully available 79%, n2 in EU-26, 2006 Cap Gemini data for i2010)
INCLUSION		Social and Digital Divide Use-Access Difference, lack of skills	ICT-enabled tools for an inclusive information society need to be developed
NMS&C		General Policy Options	
i2010	I-SPACE	Coordinate regulations in different area Coherent strategy and coordination of different policies	
INNOVATION and RESEARCH		Targeted strategies and research Adapting investments to the local context Broadening and improving public e-Service FP7 and CIP (Competitiveness and Innovation FP) important tools to increase ICT R&D	
INCLUSION		Policies targeting societal challenges, reduction of digital/regional/social divide Participation of all actors	

**JRC** **Uptake in Estonia** *ipts*

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### A summary of conditions and issues for Estonia

- Most significant factor in Estonia's success so far: **foreign direct investment** by adjacent Nordic countries fuelled by **favourable economic climate**, stable macro-economic framework and market-economy reforms, specifically in electronic communications
- **Growth** of foreign trade in goods and services, outsourcing from abroad and an expansion of the services sector at home
- Economic and sectorial **issues to be addressed**: R&D investment, long-term employment creation, regional disparities
- Rapid implementation of **policies** for encouraging the use of ICTs
- The success of **eGov** (i.e., first country in the world to enable nationwide Internet vote) and very well positioned in e-readiness!!! (Global Information Technology 20<sup>th</sup> / 122 countries, Economist Intelligence Unit 27<sup>th</sup> / 68 countries and leader in Central and Eastern Europe, UN eGov readiness top 22)
- **Still adjusting** to the new techno-economic paradigm of widespread implementation of ICT in life areas and economic growth based on technological innovation
- **Ageing, social disparities and digital divide**

Summary extracted from on-going research at IPTS (2005-2007) and from Turko, G., Bogdanowicz M. (eds) (2007), "EU enlargement, Economic development and the Information Society", VUB Press, Brussels. Chapter on Estonia by Puss T., Rajasalo T., Venesarr U., Vies M. A result of the IPTS project "Factors and impacts in the information society: a prospective analysis in the acceding and candidate countries" (2005 - 2009)

**JRC** **Knowledge economy and regional dynamics** *ipts*

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### Northern and Southern Estonia as case studies

- Southern Estonia greater growth (initially small level and great foreign investments in engineering, food, glass and biotechnology)
- High level of e-readiness (rank 38 / world, rank 1 Eastern and Central Europe)
- Strength in ICT production
  - Northern EE: Telecomm network services. Nordic ICT manufacturing cluster (radio and mobiles). Domestic software closer clustering with local economy, influence by public and banking sectors. Leading in e-gov and IT banking
  - Southern EE: Telecomm network services. IT-services. Software development in information systems, accounting, engineering and geospatial.
- Regional innovation systems: Universities (6), Technology parks (4) and ICT companies (from Top 500 EE companies, 26 from ICTs)

G. Fainstein, Tallinn University of Technology

**JRC** **Promising application areas** *ipts*

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### Some examples

- (On-going) **Web 2.0 driven innovations**. Its impact on existing **public service** domains
- (On-going) **Future of e-services**: eHealth, eLearning and eGov
  - "The future of eGovernment: an exploration of ICT-driven models for the EU in 2020" <http://www.jrc.es/publications/pub.cfm?id=1481>
- (To probe further) Road mapping and **impact assessment**
  - "What can social capital and ICT do for Inclusion". <http://www.jrc.es/publications/pub.cfm?id=1466>
  - "Digital Territories – Towards the protection of public and private space in a digital ambient intelligence environment" <http://www.jrc.es/publications/pub.cfm?id=1474>
  - "RFID Technologies: emerging issues, challenges and policy options" <http://www.jrc.es/publications/pub.cfm?id=1476>

**JRC** **Re-engineering the public sector** *ipts*

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### Research to help policy makers from the public sector to implement web 2.0 based applications in:

- **Government**: enabling **networked and user-centered governance** (vision) via personalized public services delivered by a network of public, private institutions as well as involving civil society and end-users.
  - Estonia's examples: ID card, eGov architecture, PeaTee (EEBone), KulaTee, EENet, mobile value-added services (positioning, emergencies)
- **Health**: supporting the shift from a symptom-based to **preventive healthcare** (vision) via person-centered health systems
- **Learning**: supporting the shifting emphasis from **teaching to learning** (vision) via collaborative working models in learning, sharing and openness of educational materials, rise of informal learning, lifelong learning and the importance of tacit knowledge

Need to convince the policy maker (not the end user!)

**JRC** **A summary of policy implications** *ipts*

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To maximise the potential of emerging ICT & applications so as to accelerate the take up & deployment of the European IS, our innovation system needs:

- **Increased** but also well (sector and country?) **targeted** levels of R&D needed, but **embedded** in
- A **holistic** approach, based on:
 

<ul style="list-style-type: none"> <li>✓ Sharing ("open") knowledge</li> <li>✓ Networking people, labs and R&amp;D centres</li> <li>✓ Exploiting social capital</li> <li>✓ New business models</li> <li>✓ Institutional re-engineering</li> <li>✓ Start ups//SME (venture capital)</li> <li>✓ Adapted learning system</li> </ul>	}	End-user led innovation
<ul style="list-style-type: none"> <li>✓ Start ups//SME (venture capital)</li> <li>✓ Adapted learning system</li> </ul>	}	Enabling Factors/ Environment

**JRC** **Already collaborating** *ipts*

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### The persons ...

- G. Fainstein, Tallinn University of Technology
- T. Kalvets, Praxis Centre for Policy Studies
- T. Puss, Centre for Economic Research
- T. Rajasalo (late), Estonian Institute of Economics
- M. Tiits, Institute of Baltic Studies
- U. Venesarr, Centre for Economic Research
- M. Viies, Centre for Economic Research
- ... (sorry to those not mentioned)

### ... and the institutions

- ERAWATCH Network: Technopolis (offices at Tallinn), Institute of Baltic Studies (Tartu), Praxis (Tallinn)
- European Techno-Economic Policy Support Network (ETEPS): Praxis Centre for Policy Studies (Tallinn), Regional Environmental Center (Country Office at Tallinn)
- (Open to contribute) Calls for Interest procedure: <http://www.jrc.es/callsfortender/>

[Thank you](#)

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