



Coordination of IST research and national activities

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National priorities and RTD programmes

Marjo Uotila & Kari Tilli

Tekes, National Technology Agency of Finland



TEKES

Background

- Publicly funded R&D in Europe is currently mainly conducted at national level
- CISTRANA aims at facilitating coordination of national ICT programmes with each other and with European RTD programmes
- thus contributing to improving the impact of the RTD efforts in Europe and to reinforce European ICT competitiveness
- To accomplish these aims, the first step is to increase understanding of the national approaches of organising public R&D funding



Introduction

- **Survey-based information collected between 10/2004 – 3/2005**
- **Source of information: national delegates of the EU IST Programme Committee and National Support Organisations representing 32 EU Member and Associated States**
- **Interim Report**
- **Final Report: Spring 2006**



Actors 1(2)

- **Organisations responsible for the national strategy coordination, policy formulation and R&D funding of ICT**
- **Science Council**
 - **Governmental advisory body responsible for strategic science and technology issues**
 - **Often chaired by or operating under the prime minister; other members ministers, academics, industry representatives**
- **Ministry level**
 - **Ministries responsible for coordination/policy making in the field of ICT or R&D policy**



Actors 2(2)

- **Financing and implementation agency**
 - **Provide funding for applied research**
 - **Executive organisation for government strategic policies and programmes**
 - **Support industry-research collaboration**
- **Basic research funding organisations**
 - **Provide funding for basic research**
 - **Expert organisation in science and scientific research**
- **Other organisations, such as 'mission units', 'committees', 'authorities'**



RTD programmes

- **Definition of a 'programme':**
 - **"National public funding given to companies, public research institutes or universities etc. through calls or similar procedures to be used for research and technological development (RTD) in the field of information and communications technology (ICT)"**
- **To lay a common ground and enable comparisons between national programmes**



Procedures of programmes

National R&D programme procedures:

Programme initiation:

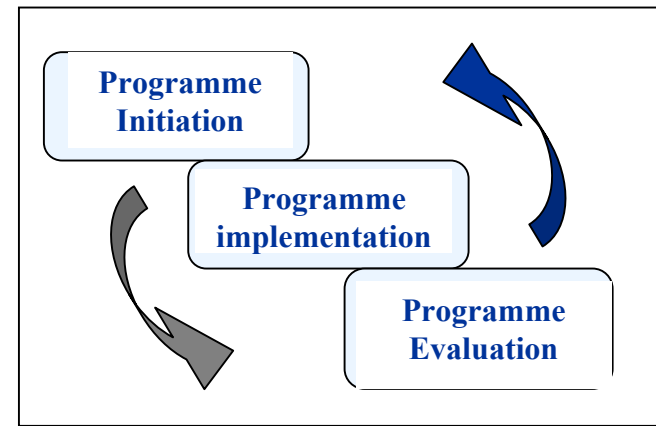
- Idea generation
- Programme preparation
- Decision making regarding the launch of a programme

Programme implementation:

- Committee-type implementation
- Outsourced implementation
- In-house implementation
- Joint management

Programme evaluation:

- Ex-ante evaluation
- Interim evaluation
- Ex-post evaluation



National policies

- **Is ICT a priority field of RTD in the country in comparison to other fields of RTD**
- **What are the strategic focus areas of the national public RTD policies within the ICT sector, in terms of technology and application areas**



National RTD policy priorities and ICT programmes



ICT as national RTD policy priority

Officially high priority (23 out of 30 countries)		Important but no priority over other technologies	No specific policy importance
Austria Bulgaria Cyprus Czech Republic Denmark Estonia Finland Germany Greece Hungary Ireland Italy	Latvia Malta Netherlands Norway Poland Portugal Romania Slovakia Sweden Switzerland Turkey	Iceland United Kingdom France	Israel Slovenia Spain



National ICT technology priorities

➤ Priority ICT technology areas in at least 9 surveyed countries

NATIONAL PRIORITIES	EU FP7 ICT PRIORITIES
<ul style="list-style-type: none">• Communications infrastructure (16 countries)• Telecommunications (13)	Ubiquitous and unlimited capacity communication networks
Optoelectronics (9)	
Micro- and nanotechnology (11)	Nano-electronics, photonics and integrated micro/nano-systems
	Embedded systems, computing and control
Software technologies (10)	<ul style="list-style-type: none">• Software, Grids, security and dependability• Knowledge, cognitive and learning systems• Simulation, visualization, interaction and mixed realities



National ICT application priorities

➤ Priority ICT application areas in at least 8 surveyed countries

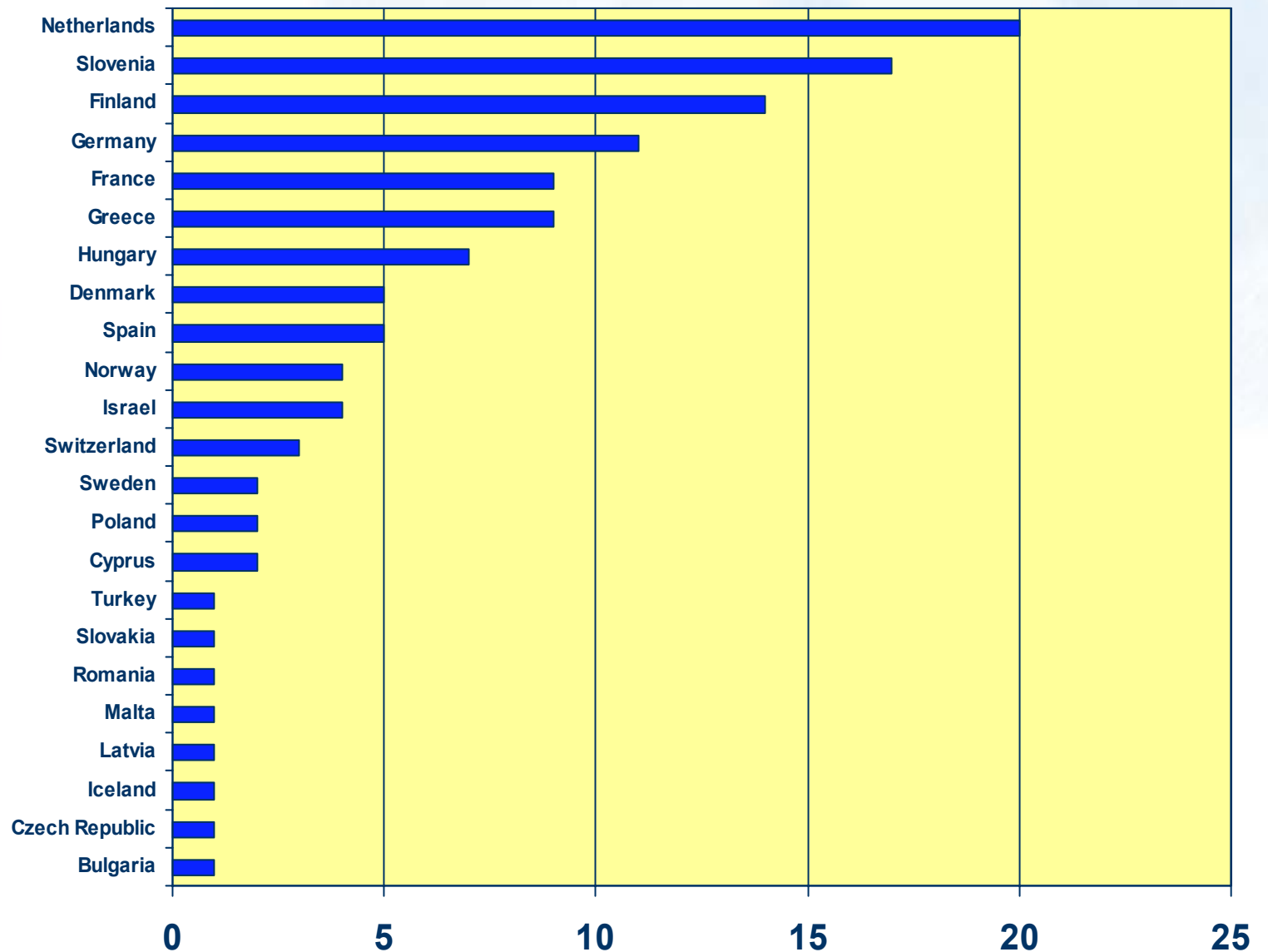
NATIONAL PRIORITIES	EU FP7 PRIORITIES
eBusiness and eCommerce (13)	ICT supporting businesses and industry
<ul style="list-style-type: none">• eHealth (14)• Security and Safety (8)• eGovernment (15)	ICT meeting societal challenges
eEducation and eLearning (8)	ICT for content, creativity and personal development



Highlights of the survey: ICT R&D programmes

- **122 R&D programmes identified:**
 - Programmes ended in 2004, on-going or for which the decision to launch was made at the time of the survey (10/2004-3/2005).
- **Classification into three categories according to the nature of the R&D programmes**

Number of programmes by country



Three ICT programme categories

Programmes for defined ICT sub-areas:

Bulgaria, Cyprus, Czech Republic, Finland, France, Germany, Greece, Iceland, Latvia, Netherlands, Norway, Poland, Romania, Slovakia, Spain, Sweden,

All ICT programmes covering all ICT related R&D topics:

Hungary, Malta, Norway, Switzerland,

Other programme type policy instruments (councils, institutes, foundations, centres of excellence, infrastructure programmes etc):

Denmark, Germany, Greece, Hungary, Israel, Netherlands, Poland, Slovenia, Switzerland, Turkey,



Implementation of national RTD policy priorities by means of programmes



PROGRAMME CATEGORIES

Officially high priority (23 out of 30 countries)		Important but no priority over other technologies	No specific policy importance
Other ALL ICT Defined	Bulgaria (1) Cyprus (2) Czech Republic(1) Finland (14) Germany (9) Greece (8) Latvia (1)	Netherlands(17) Norway (3) Poland (1) Romania (1) Slovakia (1) Sweden (2)	France (9) Iceland (1)
	Hungary (5) Malta (1)	Norway (1) Switzerland (1)	Spain (5)
	Denmark (5) Germany (2) Greece (1) Hungary (2)	Netherlands (3) Poland (1) Switzerland (2) Turkey (1)	Israel (4) Slovenia (17)

20 largest national ICT programmes are focusing on four technology areas

Micro-Nano technology:

Germany 4 programmes,
Finland 2 programmes
France 1 programme

Total budget 1 130 M€

Communications:

Finland 2 programmes
France 1 programme
Germany 1 programme
Spain 1 programme

Total budget 900 M€

Software engineering:

Germany 2 programmes,
France 1 programme

Total budget 480 M€

Information technology:

Finland 2 programmes
France 1 programme
Germany 1 programme
Spain 1 programme

Total budget 280 M€

Germany (8 programmes), Finland (7), France (3) and Spain (2) are countries that are channelling major flows of public RT&D funding through programmes.



Preliminary results from ongoing analysis

- **Communications technology:**
 - 45 programmes
- **Embedded systems:**
 - 17 programmes dedicated to or containing significant development and research in embedded systems.
- **Nanoelectronics**
 - 7 programmes
- **Software technologies and optoelectronics in preparation**
- **ICT for healthcare**
 - in 2 programmes main focus is in health care.
 - 44 other programmes include some health care related matters and technologies



International co-operation in R&D programmes

- Most R&D programmes allow project-level international collaboration although it is not necessarily actively promoted.
- No cross-border funding
- International programme level collaboration identified in 39 R&D programmes out of 122
- Already joint programmes:

PROGRAMME NAME	COUNTRIES INVOLVED	START-END
EXSITE	Finland, Sweden	2001-2003
NORDITE	Finland, Norway, Sweden	2005-2010
PROACT	Finland, France	2002-2005
STEVIN	Belgium, the Netherlands	2004-2009



In conclusion,

- **23 surveyed countries out of 30 explicitly consider ICT as one of the priorities in their national RTD policy.**
- **At the policy level, national RTD policies are focusing on areas similar to the European Commission's Framework programme.**
- **National RTD programmes are important instruments in implementing ICT policies, but Member States are also using other policy instruments.**
- **National programmes deal with European technology areas, and they offer one possible platform for increasing international co-operation. Other possibilities are co-operation in Framework programme, Eureka and JTIs.**

