Extending ICT Research Co-operation between the European Union, Eastern Europe and the Southern Caucasus

Presentation of the initial findings from consultations with the stakeholders and top researchers in Belarus

Consultation Workshop,
Minsk, 11 March 2010

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The Consultations' Objectives

- The key objective of the consultations is to obtain feedback from ICT stakeholders in order to identify research priorities that:
  - reflect the actual Belarus research capacities and potential,
  - meet the technological / industrial trends, and
  - and address real socio-economic needs.
- The research priorities are the main element for:
  - for the development of recommendations for shaping ICT research co-operation between the EU, Eastern Europe and the Southern Caucasus for the period 2010-2015.

The recommendations will provide valuable input for the shaping of future annual FP7 ICT work programmes and calls for proposals.

The Consultation Process

1. Identification of ICT Stakeholders
2. Selection of ICT Panel Experts
3. Preparation of Consultation Document
4. Distribution of CD to and invitation of panel experts
5. Collection and Initial Synthesis of contributions

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Recommendations

Consultation

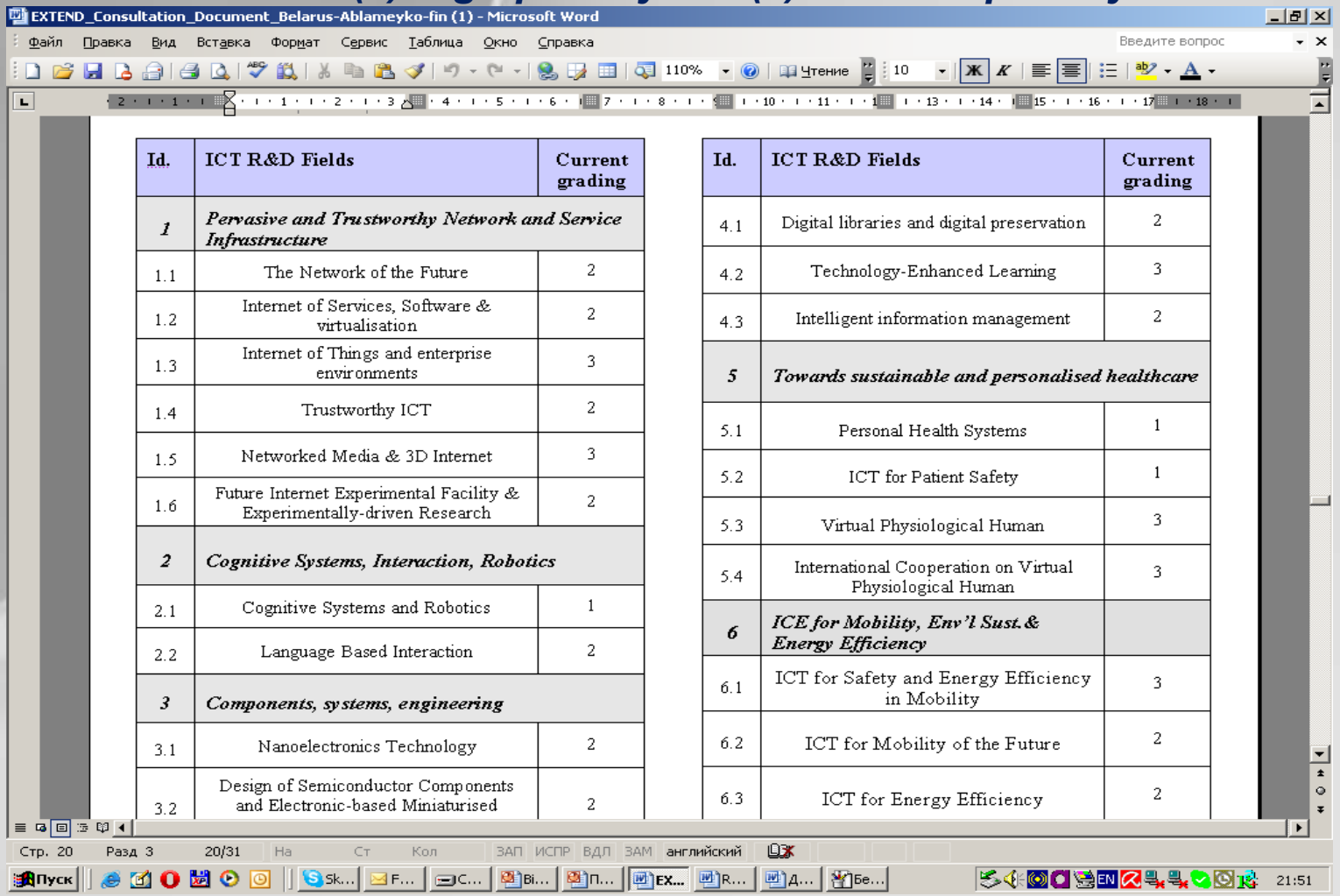
Workshop

Who are the respondents?

- 29 stakeholders filled in the questionnaire, of which
  - 1 from public bodies,
  - 10 from universities,
  - 11 from R&D institutions, including 9 from the National Academy of Sciences,
  - 5 from technological parks and associations (NGOs),
  - 2 from SMEs.

Prioritizing the current R&D fields in Belarus

NOTE: (1) high priority ….. (2) medium priority



Id.	ICT R&D Fields	Current grading
1	***Pervasive and Trustworthy Network and Service Infrastructure***	
1.1	The Network of the Future	2
1.2	Internet of Services, Software & virtualisation	2
1.3	Internet of Things and enterprise environments	3
1.4	Trustworthy ICT	2
1.5	Networked Media & 3D Internet	3
1.6	Future Internet Experimental Facility & Experimentally-driven Research	2
2	***Cognitive Systems, Interaction, Robotics***	
2.1	Cognitive Systems and Robotics	1
2.2	Language Based Interaction	2
3	***Components, systems, engineering***	
3.1	Nanoelectronics Technology	2
3.2	Design of Semiconductor Components and Electronic-based Miniaturised	2

Id.	ICT R&D Fields	Current grading
4.1	Digital libraries and digital preservation	2
4.2	Technology-Enhanced Learning	3
4.3	Intelligent information management	2
5	***Towards sustainable and personalised healthcare***	
5.1	Personal Health Systems	1
5.2	ICT for Patient Safety	1
5.3	Virtual Physiological Human	3
5.4	International Cooperation on Virtual Physiological Human	3
6	***ICE for Mobility, Env'l Sust.& Energy Efficiency***	
6.1	ICT for Safety and Energy Efficiency in Mobility	3
6.2	ICT for Mobility of the Future	2
6.3	ICT for Energy Efficiency	2

The current ICT R&D fields in Belarus (1)

	FP7 Challenges	Number of Experts	Average Score
1	***Pervasive and Trustworthy Network and Service Infrastructure***		
1.1	**The Network of the Future**	**20**	**2,43**
1.2	**Internet of Services, Software & Virtualization**	**25**	**1,64**
1.3	**Internet of Things and enterprise environments**	**25**	**2,17**
1.4	**Trustworthy ICT**	**25**	**1,88**
1.5	**Networked Media & 3D Internet**	**24**	**2,54**
1.6	**Future Internet Experimental Facility & Experimentally-driven Research**	**23**	**2,48**
2	***Cognitive Systems, Interaction, Robotics***		
2.1	**Cognitive Systems and Robotics**	**22**	**2,00**
2.2	**Language Based Interaction**	**25**	**2,16**

The current ICT R&D fields in Belarus (2)

	FP7 Challenges	Number of Experts	Average Score
3	***Components, systems, engineering***		
3.1	**Nanoelectronics Technology**	**23**	**1,83**
3.2	**Design of Semiconductor Components and Electronic-based Miniaturised Systems**	**24**	**1,82**
3.3	**Flexible, Organic and Large Area Electronics**	**18**	**2,22**
3.4	**Embedded Systems Design**	**22**	**2,23**
3.5	**Engineering of Networked Monitoring and Control Systems**	**24**	**2,17**
3.6	**Computing Systems**	**26**	**1,62**
3.7	**Photonics**	**17**	**2,06**
3.8	**Organic Photonics and other Disruptive Photonics Technologies**	**13**	**2,38**
3.9	**Microsystems and Smart Miniaturised Systems**	**23**	**2,04**

The current ICT R&D fields in Belarus (3)

	FP7 Challenges	Number of Experts	Average Score
4	***Digital Libraries and Content***		
4.1	**Digital libraries and digital preservation**	**28**	**1,71**
4.2	**Technology-Enhanced Learning**	**26**	**2,08**
4.3	**Intelligent information management**	**27**	**2,11**
5	***Towards sustainable and personalised healthcare***		
5.1	**Personal Health Systems**	**24**	**1,83**
5.2	**ICT for Patient Safety**	**22**	**2,00**
5.3	**Virtual Physiological Human**	**21**	**2,33**
5.4	**International Cooperation on Virtual Physiological Human**	**21**	**2,52**

The current ICT R&D fields in Belarus (4)

	FP7 Challenges	Number of Experts	Average Score
6	***ICT for Mobility, Env'l Sust.& Energy Efficiency***		
6.1	ICT for Safety and Energy Efficiency in Mobility	**21**	**2,81**
6.2	ICT for Mobility of the Future	**19**	**2,16**
6.3	ICT for Energy Efficiency	**21**	**2,10**
6.4	ICT for Environmental Services & Climate Change Adaptation	**18**	**2,06**
6.5	Novel ICT solutions for Smart Electricity Distribution Networks (Joint Call ICT-Energy)	**19**	**2,47**
7	***ICT for independent living, Inclusion & Participatory governance***		
7.1	ICT and Ageing	**17**	**2,53**
7.2	Accessible and Assistive ICT	**18**	**2,56**
7.3	ICT for Governance and Policy Modeling	**20**	**2,05**

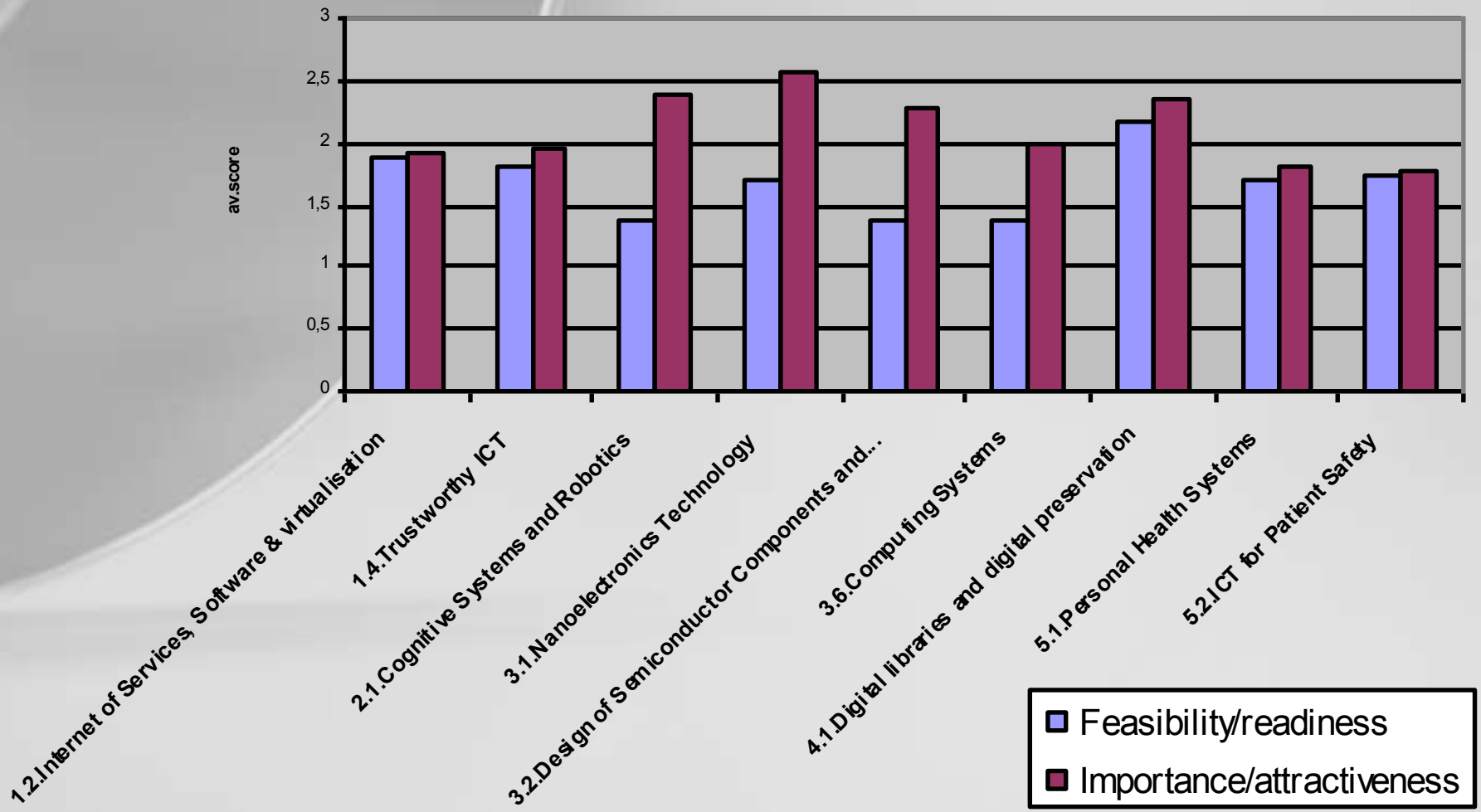
TOP-9 current ICT priority R&D fields in Belarus: general estimation (1>av.score<2)

	FP7 areas	Av. Score
3.6	**Computing Systems**	**1,62**
1.2	**Internet of Services, Software & Virtualization**	**1,64**
4.1	**Digital libraries and digital preservation**	**1,71**
3.2	**Design of Semiconductor Components and Electronic-based Miniaturized Systems**	**1,82**
5.1	**Personal Health Systems**	**1,83**
3.1	**Nanoelectronics Technology**	**1,83**
1.4	**Trustworthy ICT**	**1,88**
2.1	**Cognitive Systems and Robotics**	**2,00**
5.2	**ICT for Patient Safety**	**2,00**

7 Under-priority ICT R&D fields in Belarus (2,0 < av. score < 2,1)

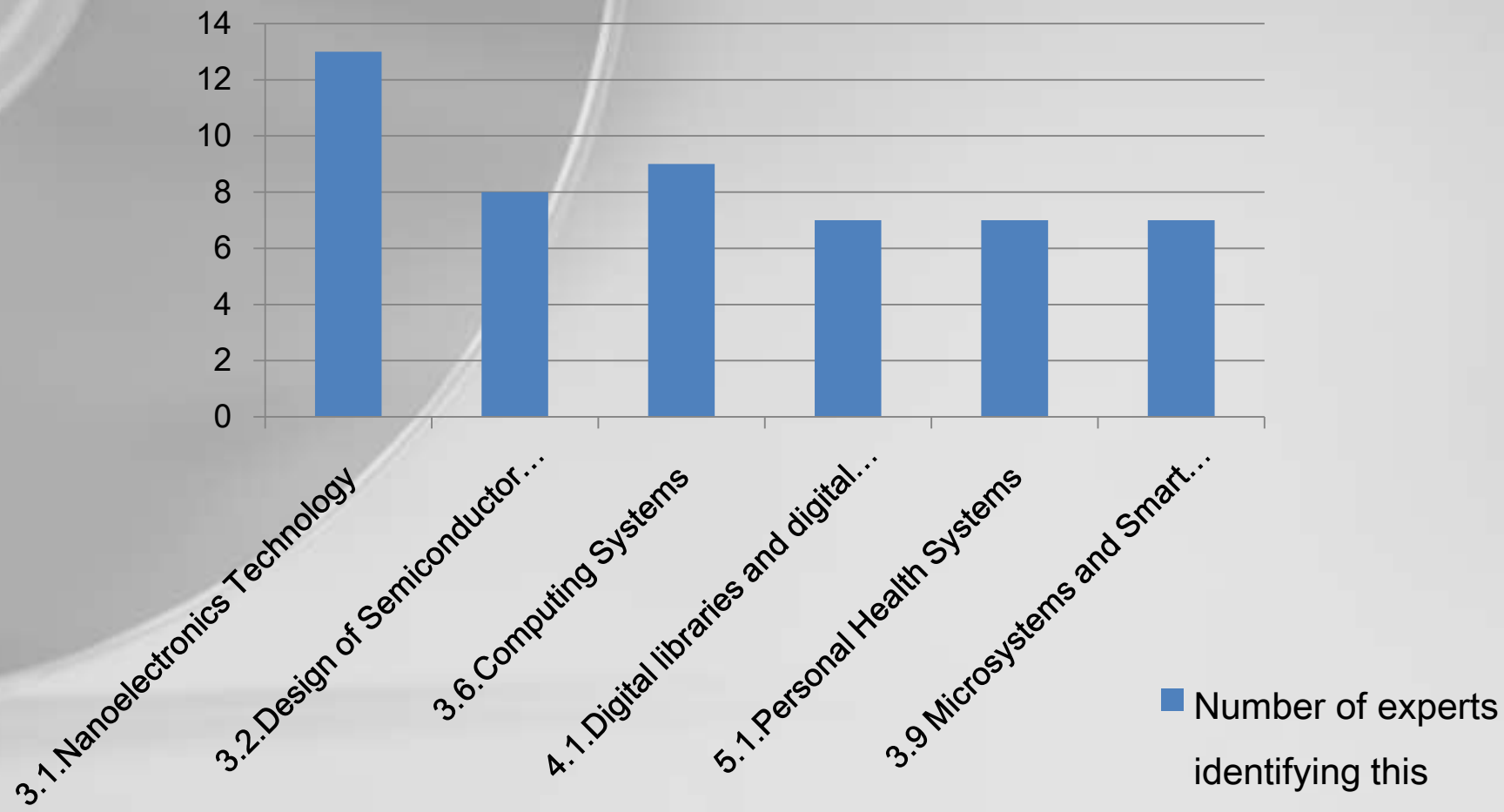
3.7	**Photonics**	**2,06**
3.9	**Microsystems and Smart Miniaturized Systems**	**2,04**
4.2	**Technology-Enhanced Learning**	**2,08**
6.2	**ICT for Mobility of the Future**	**2,10**
6.3	**ICT for Energy Efficiency**	**2,10**
6.4	**ICT for Environmental Services & Climate Change Adaptation**	**2,06**
7.3	**ICT for Governance and Policy Modeling**	**2,05**

TOP-9 current ICT priority R&D fields: by set of criteria

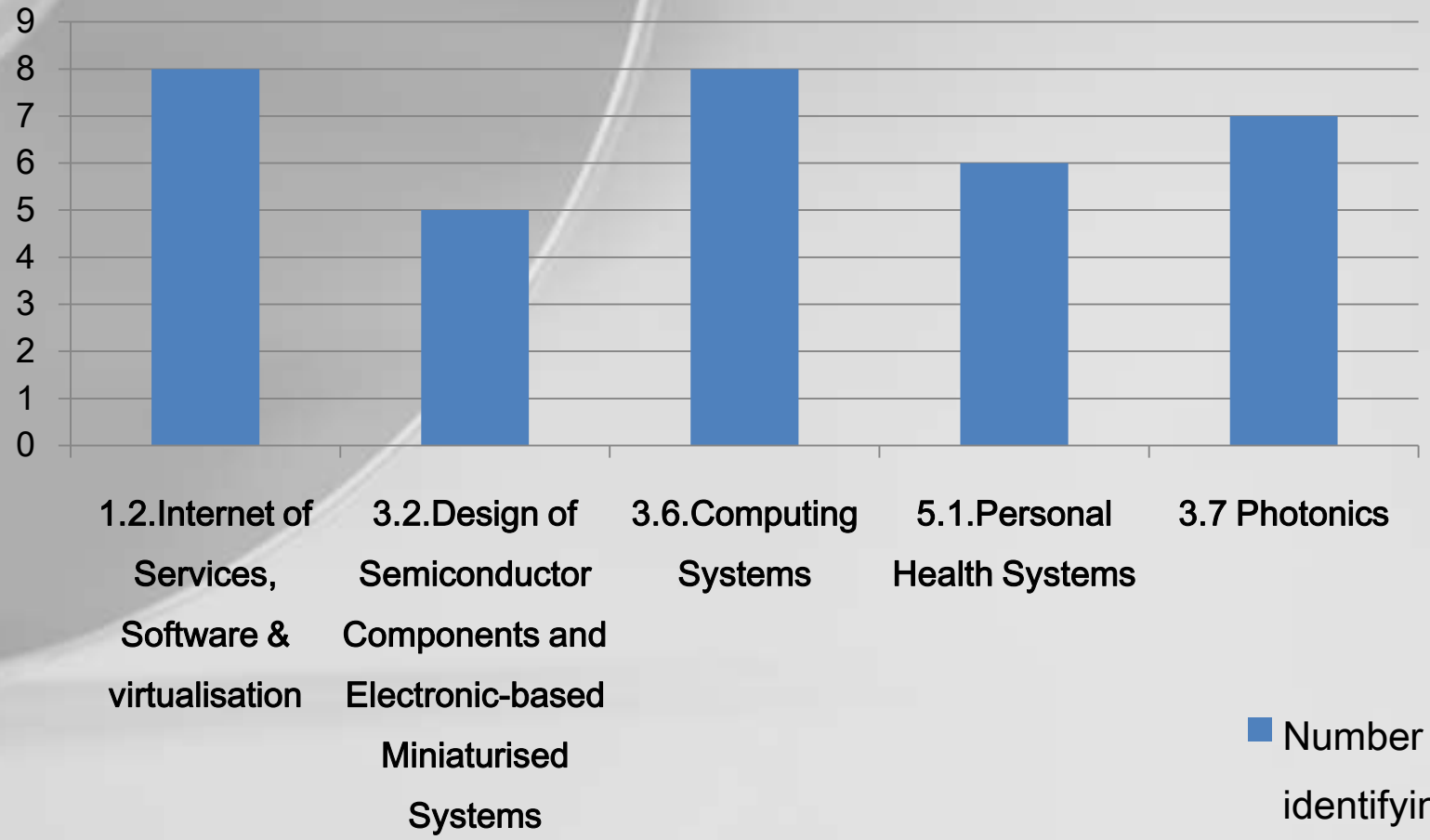


From the current state to the future

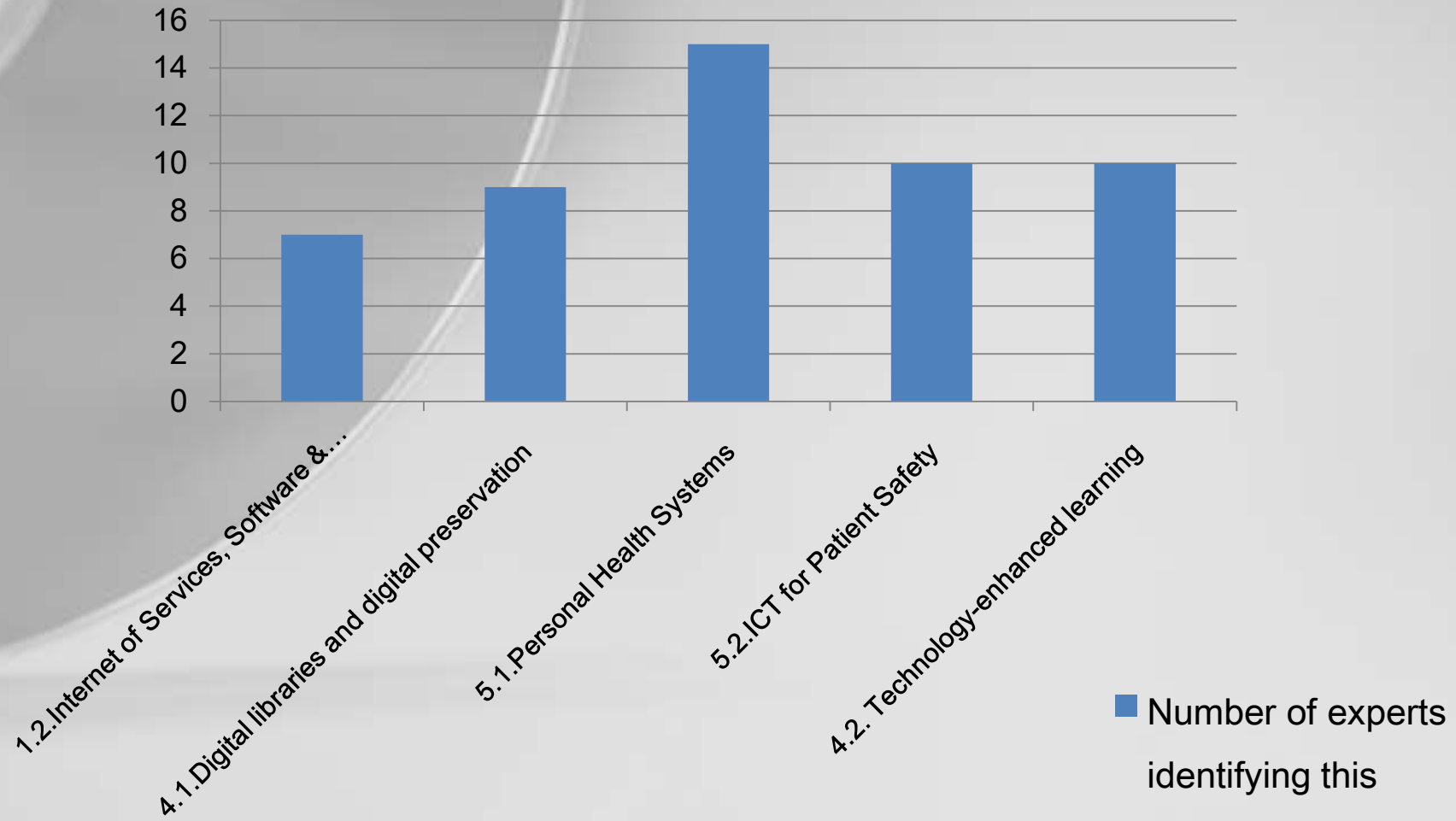
TOP-8 R&D fields with a highest future potential to support the ICT industry



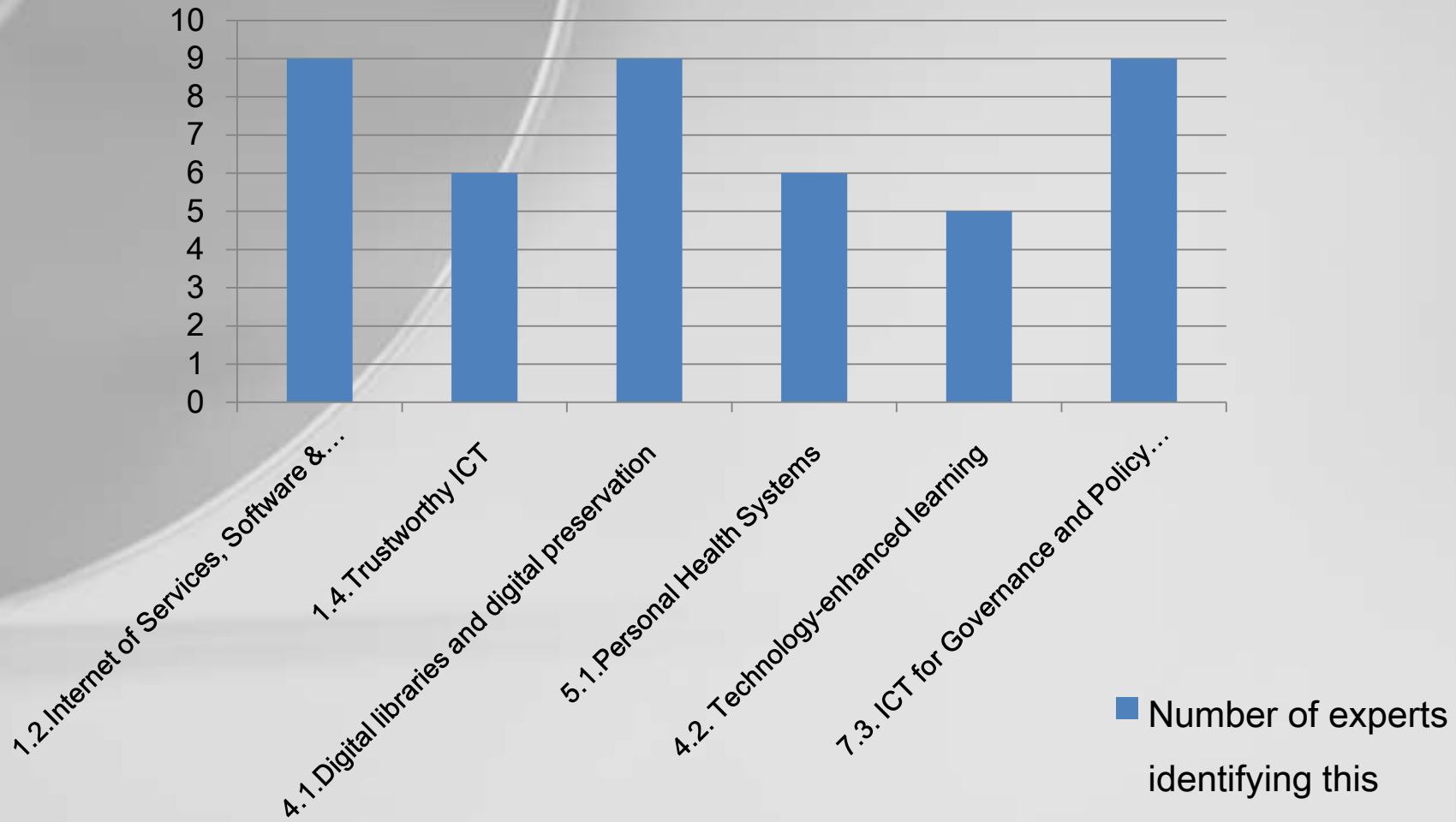
TOP-8 R&D fields with a highest future potential to support private sector including SMEs



TOP-5 R&D fields having a future potential in meeting key society needs



TOP-6 current R&D fields having a future potential in supporting the effectiveness of public administration and meeting the development needs of the public sector



Most frequently proposed future ICT R&D opportunities beyond the FP7 ICT fields

- **ICT for remote sensing of the Earth**
- **Digital cartography and GIS**
- **Real-time computing systems for technology processes control**
- **ICT for Space**
- **GRID technologies**
- **Medical information systems**

Top–8 R&D priorities for 2010-2015 in Belarus

	FP7 areas
3.6	**Computing Systems**
5.1	**Personal Health Systems**
1.2	**Internet of Services, Software & Virtualization**
3.1	**Nanoelectronics Technology**
7.3	**ICT for Governance and Policy Modeling**
2.1	**Cognitive Systems and Robotics**
4.1	**Digital libraries and digital preservation**
5.2	**ICT for Patient Safety**
Components, systems, engineering	
Towards sustainable and personalized healthcare	

Let's compare

Current priorities
Computing Systems
Internet of Services, Software & Virtualization
Digital libraries and digital preservation
Design of Semiconductor Components and Electronic-based Miniaturized Systems
Personal Health Systems
Nanoelectronics Technology
Trustworthy ICT
Cognitive Systems and Robotics
ICT for Patient Safety

2010-2015 priorities
Computing Systems
Personal Health Systems
Internet of Services, Software & Virtualization
Nanoelectronics Technology
ICT for Governance and Policy Modeling
Cognitive Systems and Robotics
Digital libraries and digital preservation
ICT for Patient Safety

The findings presented are just a basis for further discussions and improvements by the experts.

We do hope for your active participation in the process.

THANK YOU!