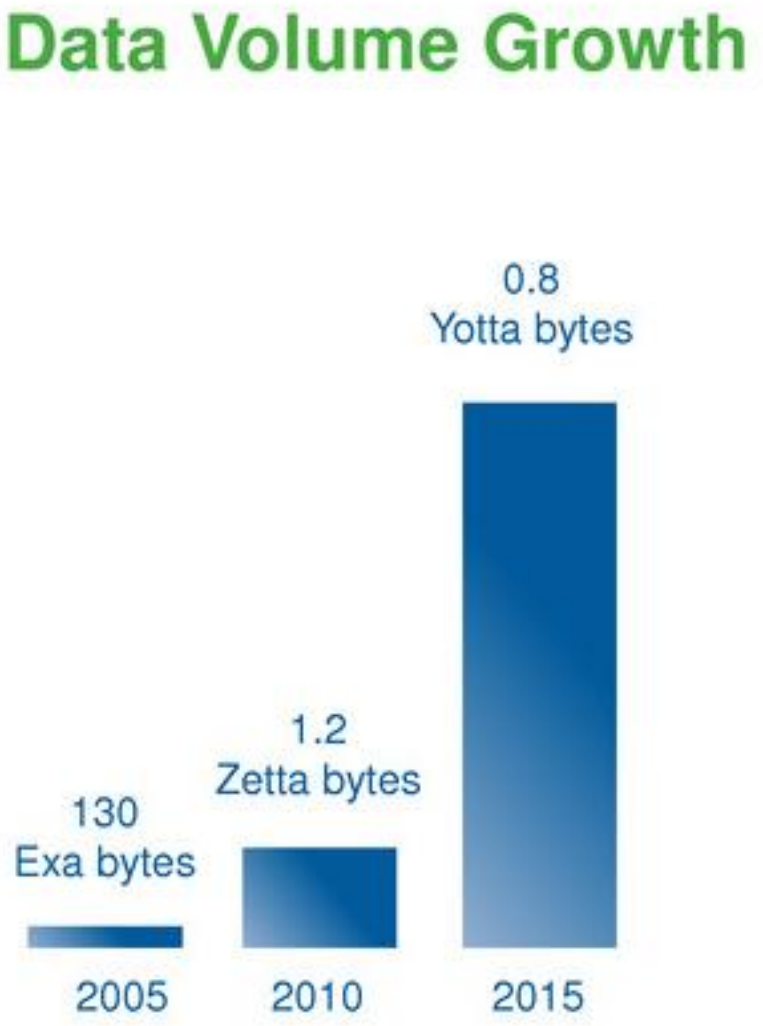
THE INFORMATION SOCIETY DEVELOPMENT IN THE REPUBLIC OF BELARUS WITHIN THE GLOBAL TRENDS

S. Ablameyko,

Rector of the Belarusian State University

The main causes of the Information Society

- The avalanche-type growth of produced information volume
- The active use of information in all areas of human activity
- Creation of a modern ICT infrastructure



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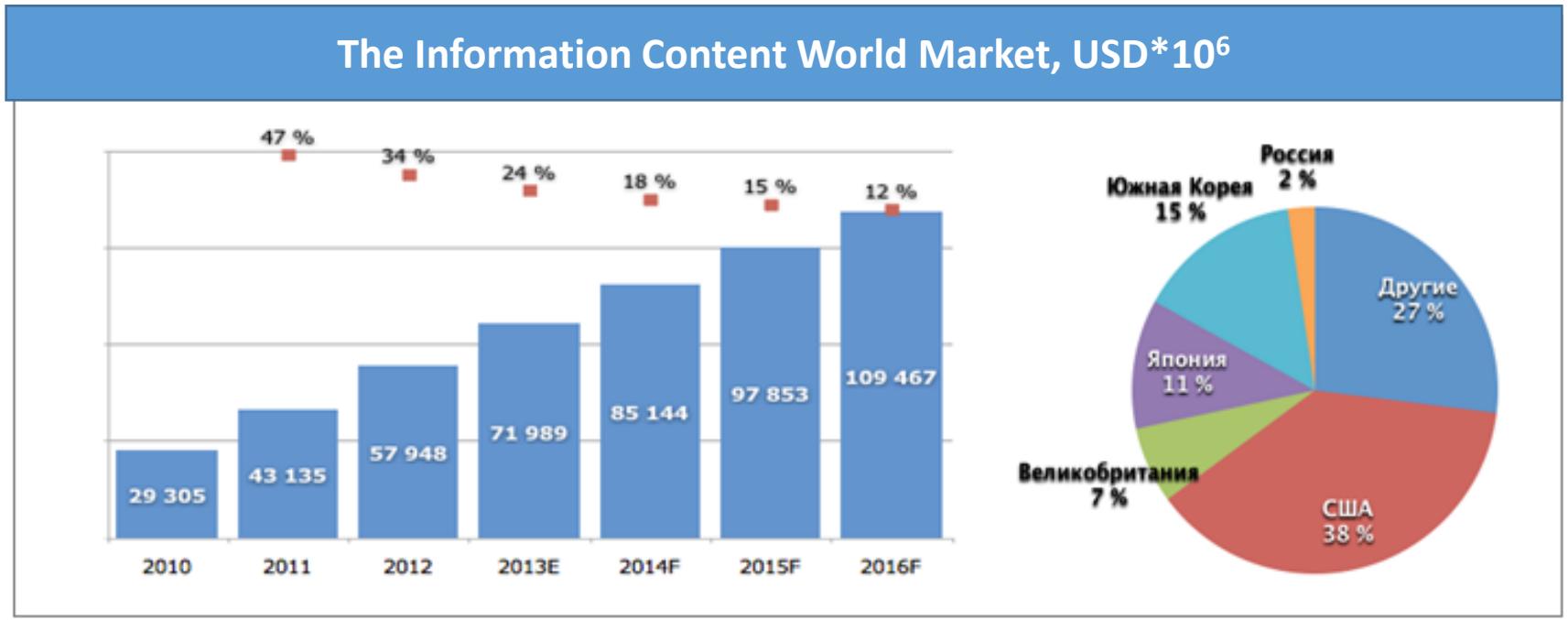

Источник: J'son & Partners Consulting

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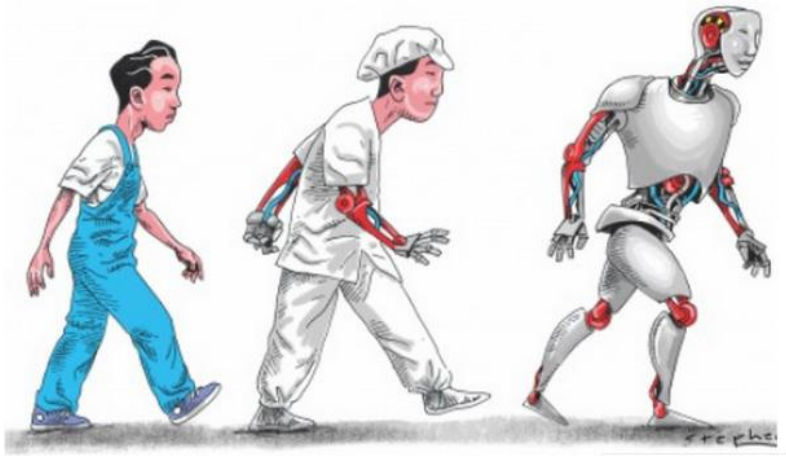
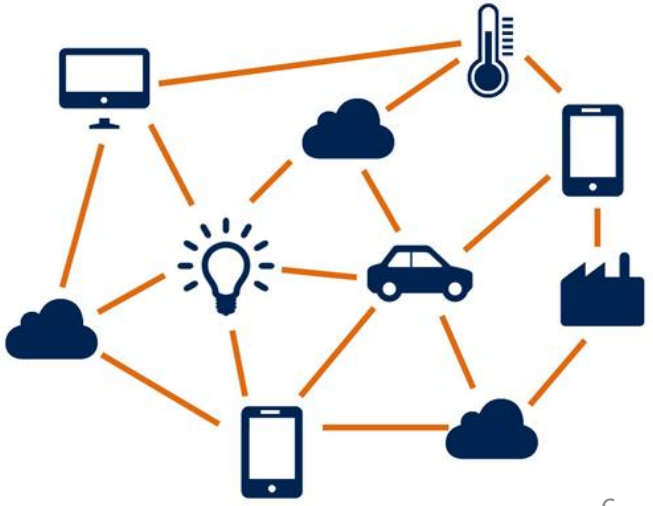
1. THE GLOBAL TRENDS OF THE INFORMATION SOCIETY DEVELOPMENT

Main objectives.

A) Creation and development of modern information and telecommunication infrastructure

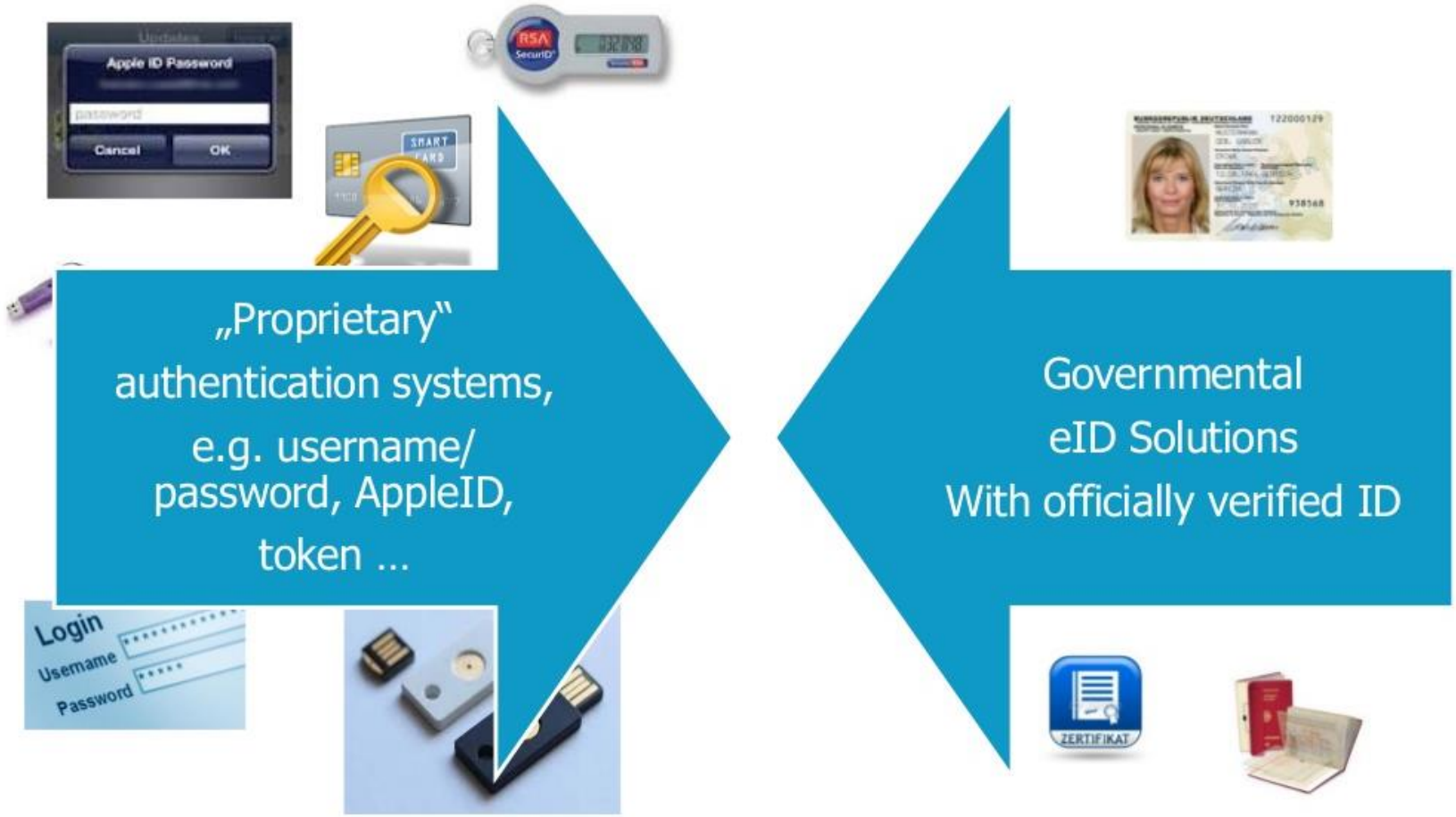
- Cloud computing
- Broadband Internet Access
- Mobile access
- "Big data"
- "Internet of Things"
- Smart manufacturing
- Digital broadcasting.





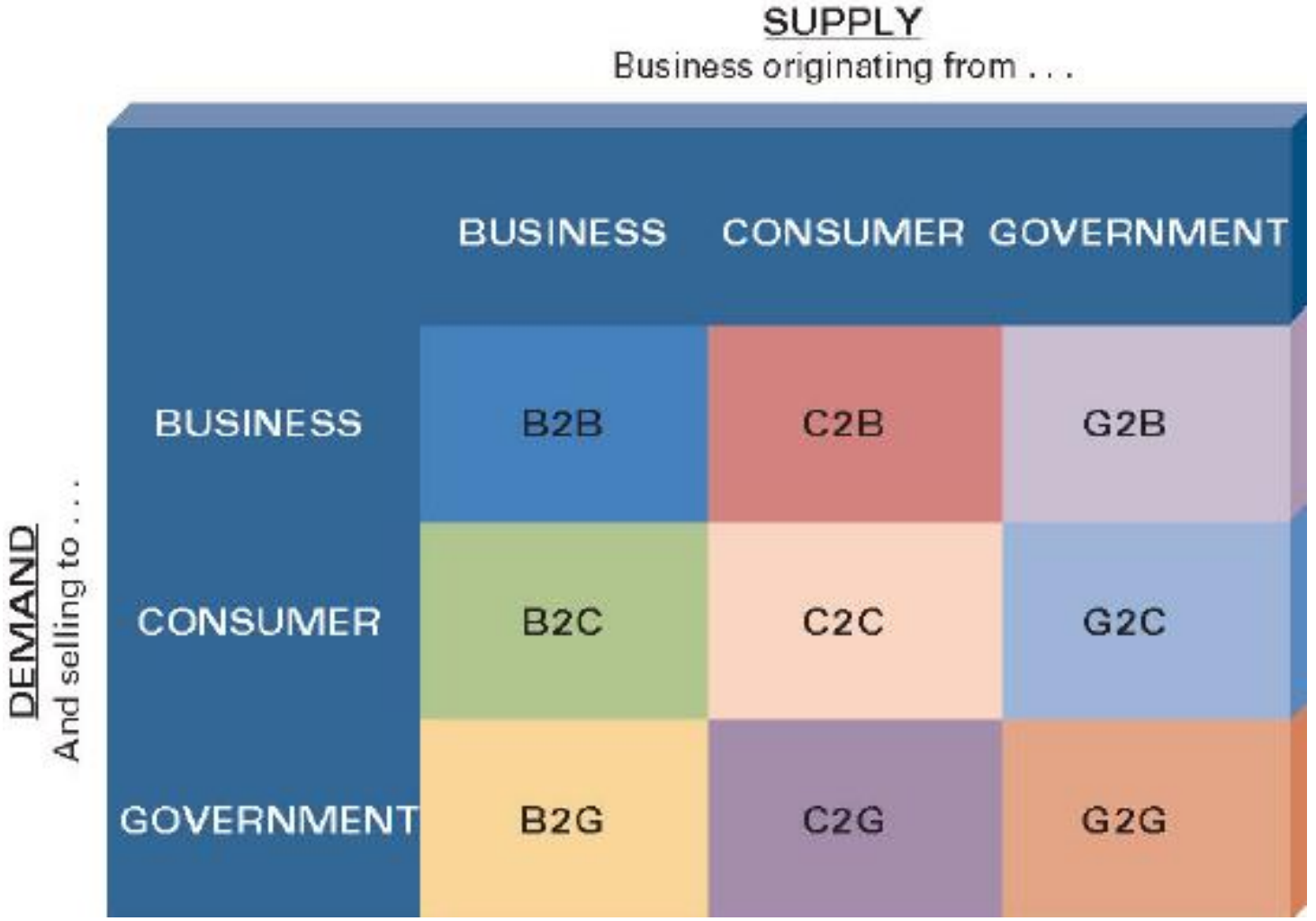
Main objectives.

B) Full implementation of reliable systems of identification and authentication of individuals and legal entities

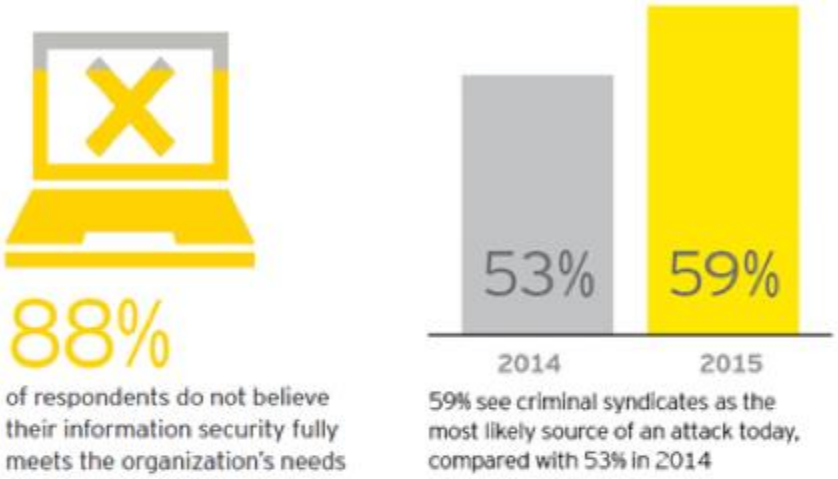


Main objectives.

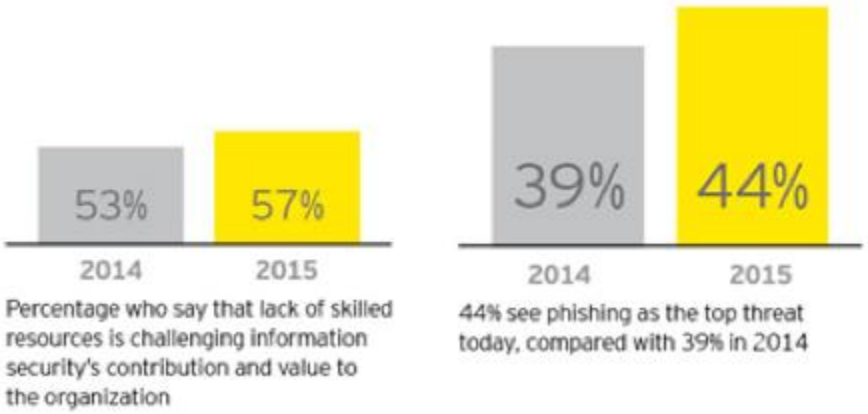
C) The ubiquitous use of electronic communication between people, business and government



Main objectives.
D) Information security and digital trust



Global Information Security Survey 2015
By Ernst & Young



- Modern national cybersecurity strategies development
- Organization of research, development and production of information and communication infrastructure key elements and information security hardware and software tools
- Improvement of standardization, certification and attestation systems in order to ensure information security and digital sovereignty of the state.

Main objectives.

E) Digital literacy and ICT competencies of people

Aspects of Digital Literacy by Harvey S. Taylor

The main directions of the information society development

- E-government and e-governance
- E-commerce
- E-health
- E-learning
- Science 2.0

Common problems

- Insufficient investment in the information society infrastructure
- Lack of efforts in the field of research and innovation;
- The insufficient interoperability of digital technologies and devices
- Fragmented digital market based on a national basis
- Cybercrime growth and low digital trust
- Poor digital literacy and skills of the people
- Insufficient attention given to the solution of social problems in the information society

Key conditions for success

- Centralized management and government support
- Financing based on public-private partnership.

2. THE INFORMATION SOCIETY DEVELOPMENT IN THE REPUBLIC OF BELARUS

Republic of Belarus in the Digital World

UN E-Government Survey 2014
(totally 193 countries):

1- Republic of Korea
2- Australia
3 - Singapore
4 - France
…
7 – USA
…
55 - Republic of Belarus
…
70 - China

Republic of Belarus in the Digital World

ICT Development Index
(totally 167 countries):

1- Republic of Korea
2- Denmark
…
15 – USA
…
36 - Republic of Belarus
…
45 – Russian Federation
…
82 - China

The Belarusian Informatization Strategy. Objectives.

- The development of an efficient and transparent public administration;
- Improvement of the management system and the legal regulation of information processes;
- Further improvement of the national information and communication infrastructure;
- Ensure transparency and ease of communications between citizens, businesses and the state;
- Creation and implementation of the state identification system of information relations subjects;
- Creation of conditions for the use of electronic services, stimulating their demand;
- Increased production and safe consumption of high-tech and knowledge-intensive ICT goods and services;
- Modernization of traditional industries through the introduction of international standards of quality, digital marketing technology and production;
- Security and digital trust.

The Belarusian Informatization Strategy. Principles.

- The main role of the state in the formation of information policy and fostering the use of ICT in all spheres of modern society
- Transparency of government. Free access to information and knowledge
- Public-private partnership in the sphere of informatization
- A new level of digital literacy providing;
- All social groups involvement in the process of informatization. Elimination of the digital divide
- National sovereignty in the field of information and national security
- Harmonization of informatization areas with EAEC partner countries, other countries in Europe and Asia.

Main Directions of informatization in Belarus for 2016-2022.

- **Effective and transparent public administration development:**
  - Cloud technologies
  - Public open data
  - Electronic documents management
  - E-government services for businesses and the public,
  - informational support for e-commerce
  - geographic information systems, including those based on crowdsourcing

Main Directions of informatization in Belarus for 2016-2022.

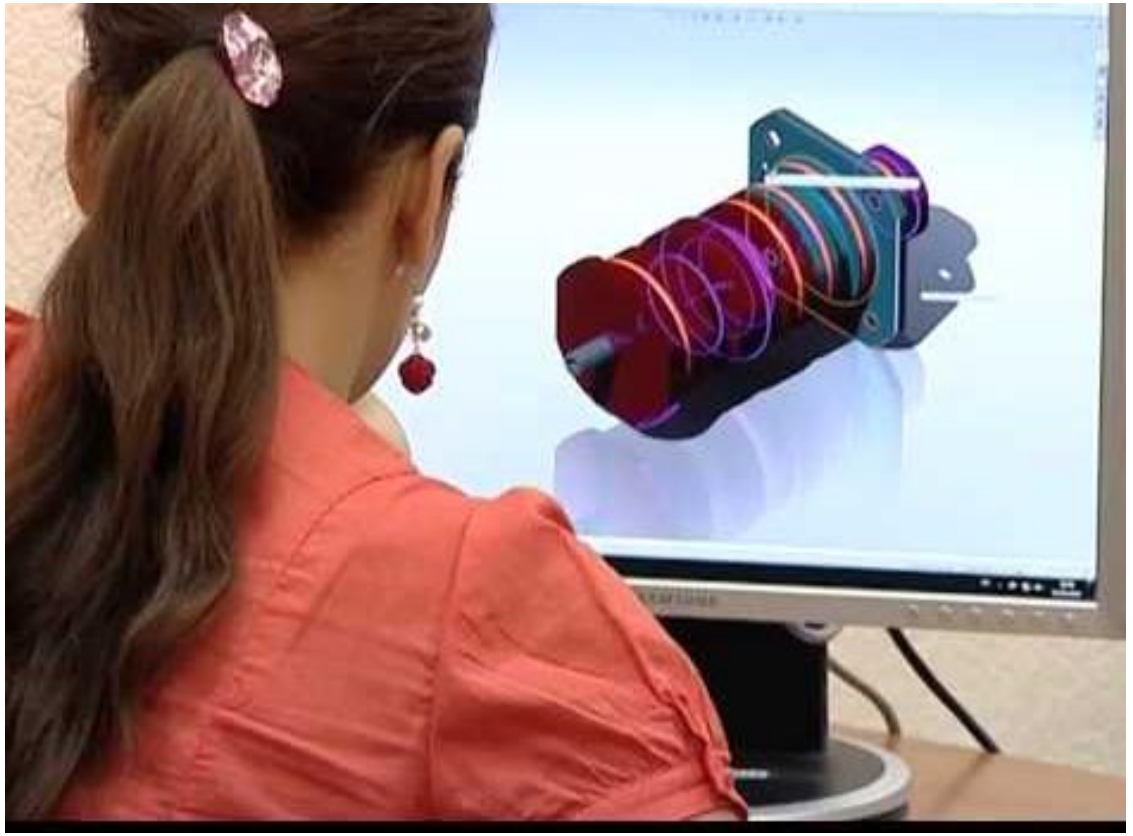
- **National information and communication infrastructure development:**
  - Broadband access based on the GPON
  - Mobile broadband based on LTE technology (4G)
  - Digital TV broadcasting further development
  - Cloud resources and services implementation

Main Directions of informatization in Belarus for 2016-2022.

- **E-business, e-commerce and e-banking:**
  - development of the National e-commerce system
  - small and medium enterprises assistance in the use of ICT and the Internet,
  - the security of digital infrastructure for business
  - "Internet of Things"
  - widespread use of remote banking channels

Main Directions of informatization in Belarus for 2016-2022.

- **ICT implementation in the real economy :**
  - CALS tecnologies
  - ERP systems
  - Digital marketing



Main Directions of informatization in Belarus for 2016-2022.

- **ICT-based improvement of social services:**
  - E-health
  - E-learning
  - ICT for public transport
  - E-ecology

e-ecology

Main Directions of informatization in Belarus for 2016-2022.

- **the national e-content development:**
  - digitization and securing of the cultural, historical and scientific heritage
  - creation of conditions for the national content production based on open data,
  - liberalization of legal regulations for digital publishing
  - electronic libraries and electronic periodicals development

Main Directions of informatization in Belarus for 2016-2022.

- **development of the national IT industry :**
  - the growth of the ICT producers and services stimulating by start-ups support
  - development of venture capital financing and business incubators,
  - Providing conditions for the creation of ICT products with high export potential
  - improving the ICT component in the production of traditional sectors of the Belarusian economy

Main Directions of informatization in Belarus for 2016-2022.

- **Digital trust and information security :**
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Main Directions of informatization in Belarus for 2016-2022.

- **Scientific support:**
  - processing of big data and knowledge extraction
  - intellectual information systems
  - bioinformatics
  - distributed high-performance computing and "cloud“ technologies
  - automation design and production technologies
  - identification systems
  - multimedia technologies and systems
  - machine learning and human-computer interaction
  - robotics
  - quantum and optical technologies
  - information security

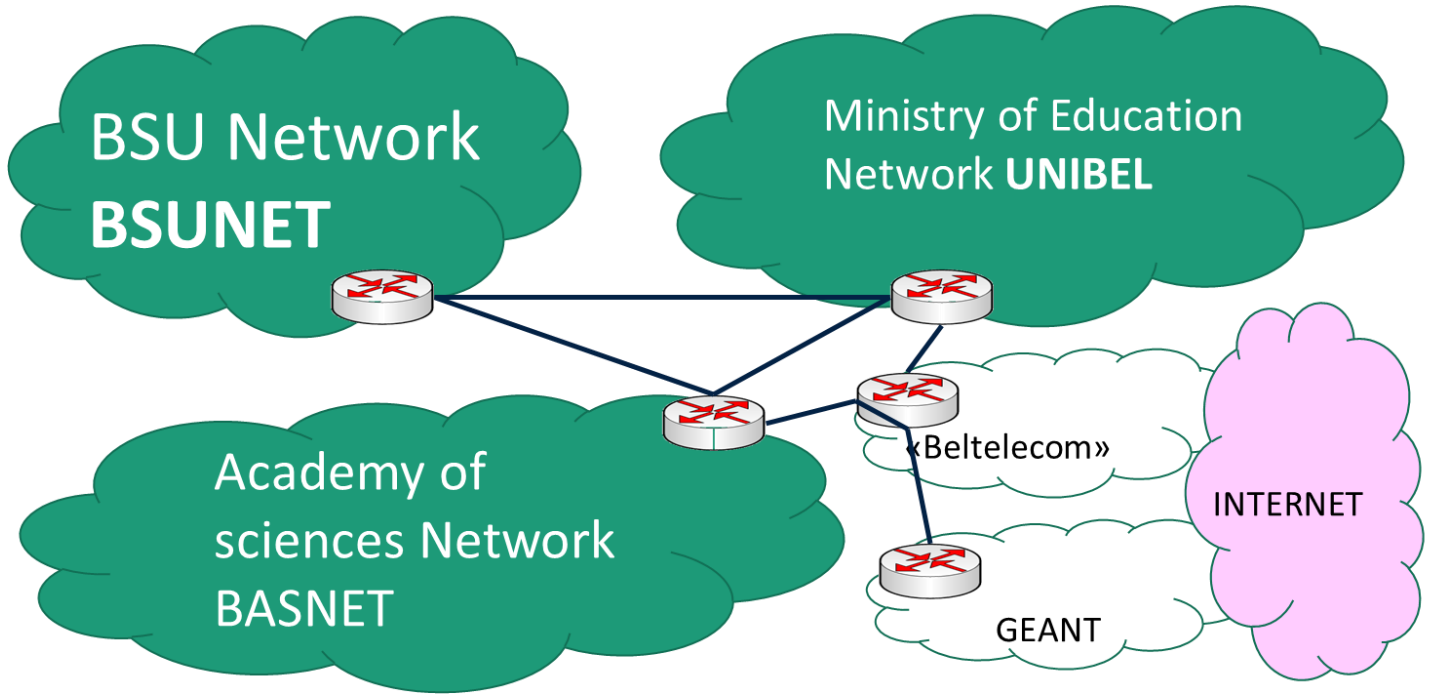
Expected results in 2022

- The number of subscribers and users of wireless broadband access to the Internet per 100 inhabitants - 85.0.
- The proportion of administrative procedures and public services provided in electronic form - at least 75%
- The proportion of electronic documents flow between government agencies in the total document management - 95%.
- The proportion of medical documentation submitted in electronic form - 100%;
- The proportion of health care organizations that are connected to a corporate network of health care organizations - 100%;
- Proportion of the population using secured electronic medical records - 100%
- The proportion of open electronic educational resources - 80%.

3. Belarusian State University is an innovative platform for information society technologies development and deployment

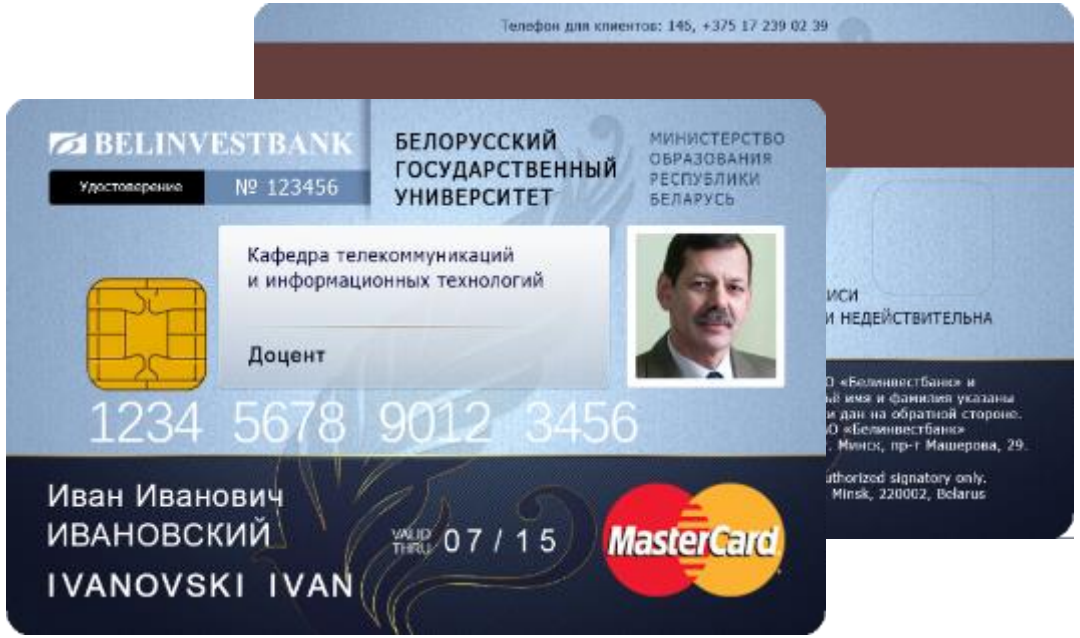
National Research and Educational Network Development

- NREN backbone development (1998-2000)
- IPv6 migration methods and tools (2004-2006)
- Algorithms and software for multimedia resources optimal allocation in computer networks (2008-2011)
- Methods and software tools for pupils and students secure access to Internet (2010-2014)



Identification and authentication systems

- BSU student cards and identity of employees based on smart cards with RFID (2003)
- New students ID cards for all universities in Belarus (2010)
- Universal ID card for the university employees (2015):
  - Visual identification+
  - International MasterCard +
  - Digital signature +
  - RFID

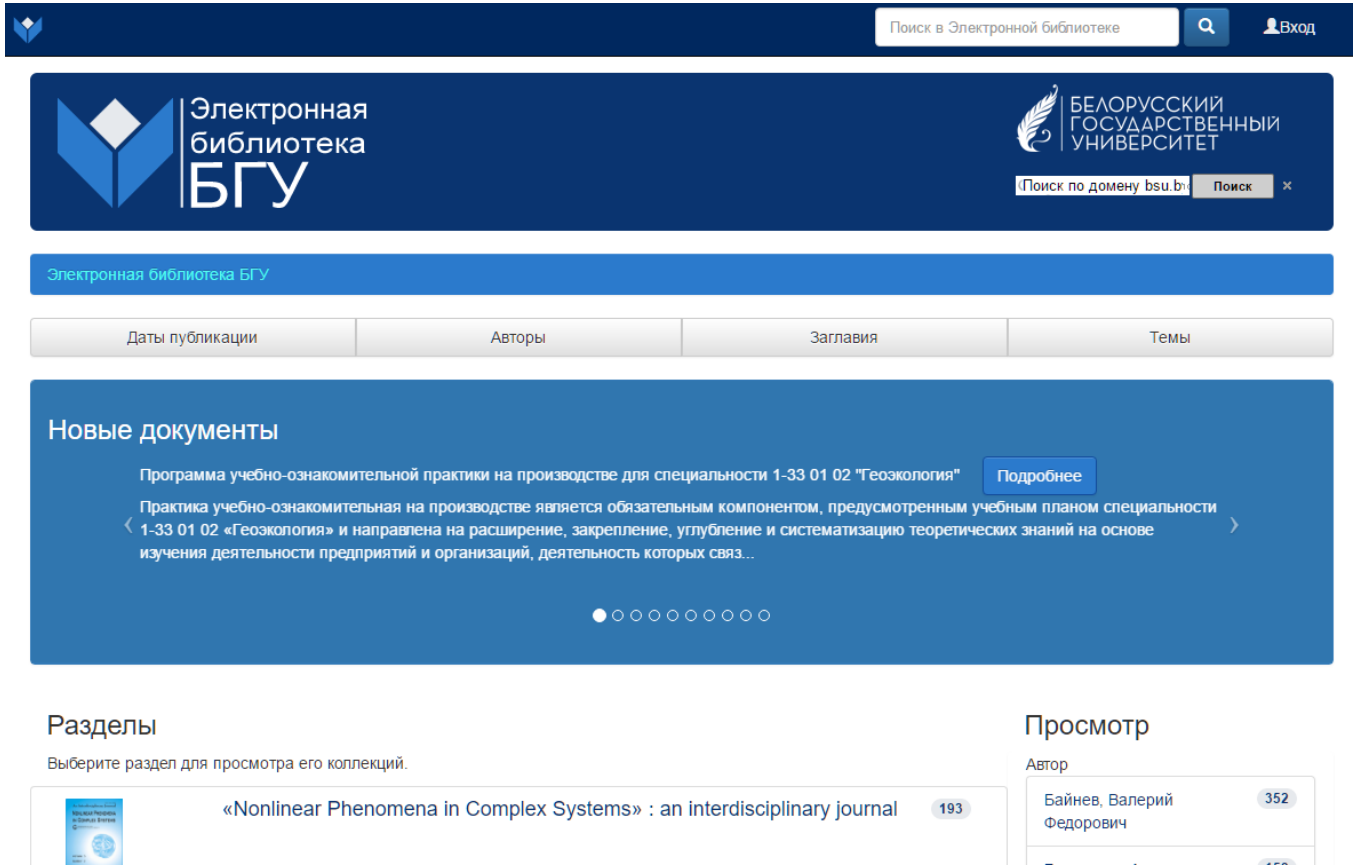


Online Resources

- Development of content management system (CMS) for the Presidential Administration and the Internet Portal of the President of the Republic of Belarus (2006-2008)
- System of web sites for the Education Committee of Minsk City Executive (more than 400 interactive sites)
- Development of National legal portal, sites of the Constitutional Court, the Ministry of Education of Belarus, Catalog of official Belarusian Internet resources, the Republican educational portal, the site of the Grodno City Executive Committee, etc.
- In the international Webometrics ranking of universities BSU ranked third among the CIS countries, second only to Moscow and St. Petersburg State University.

Open Education and Open Educational Resources

- Digital Library of BSU took 114 place in the world (according to Webometrics version) ahead of the libraries in Central and Eastern Europe as well as Chinese university libraries.



Wireless networking

- Development of the Wi-Fi network covered all buildings pf the university (2008-2011)
- Membership in the International Federation of roaming authentication in wireless networks eduroam (2011)
- Development of software tools for Wi-Fi networks optimal design (2015)