

The Ministry of Communications and Informatization of the Republic of Belarus since 1994 together with the interested organizations is holding annually the International Forum on Telecommunications, Information and Banking Technologies “TIBO”, which includes specialized exhibition and an extensive business program.

Traditionally, among the organizers and participants of the Forum are the Ministry of Information, Ministry of Industry, Ministry of Trade, Ministry of Education, State Committee on Science and Technology, National Bank of the Republic of Belarus, National Academy of Sciences of Belarus, Operational and Analytical Centre under the auspices of the President of the Republic of Belarus.

Forum “TIBO” made a significant contribution to the development of information sphere in Belarus and

promotion of international cooperation. It has facilitated communication between experts, helped to implement the innovative development strategy for Belarus, introduced advanced technologies and encouraged transition to a knowledge-based, resource-saving and globally competitive economy. Throughout the years, the Forum has been the place for formulation and discussion of current issues related to the development of the Belarusian informational sphere, demonstration of technological innovations that later on gained widespread use in the Belarusian market.

The main purpose of “TIBO-2017”

Forum is to promote effective digital transformation of all spheres of social life in the Republic of Belarus in order to improve competitiveness of national economy and quality of life. This problem is a point of discussion during the plenary session and numerous thematic events.

**Minsk,
April 19, 2016**

I am very impressed by the wonderful Forum TIBO-2016!

I applaud the remarkable development of ICT in Belarus over the recent years! I sincerely invite Belarus to actively promote their successful stories of development in ICT at the regional and international platform such as ITU activities.

I wish Belarus all the best in this field!

**Secretary General of the International
Telecommunication Union (ITU)
Mr. Houlin Zhao**



TIBO-2016 FORUM FACTS AND FIGURES

EXHIBITION

100+	Exhibitors
30%	Foreign exhibitors
20%	New exhibitors
18	Countries
6	Sectoral, collective and national exhibition stands
6 200	Total square meters of exhibition area
6	Information partners of exhibition
30 000	Visitors

BUSINESS PROGRAM

25	Forums, conferences, round tables, seminars and firm presentations
6	Countries

INTERNET AWARD

12	Competition categories
275	Number of applications

THE LIST OF PARTICIPATING COUNTRIES:

- Belarus • Russia • Ukraine • Kazakhstan • Azerbaijan • Lithuania • Latvia •
- Poland • Czech Republic • Germany • USA • Sweden • Finland • Great Britain •
- Turkey • China • South Korea • Japan •



THEMATIC

Telecommunication and network infrastructure: technologies, equipment, solutions and services

Television, multimedia and gaming technologies

Software

Printing and publishing services

Internet technologies and services

Robotics

“Smart City” and “Smart House” technologies

Security systems (e-Security)

Automation, design and management systems

Modern technological trends:

- Internet of Things
- Big Data
- Advanced Analytic
- Cloud Computing
- Cyber-physical Systems
- Augmented Reality
- Artificial Intelligence
- Social Technologies

Solutions for Industry:

- Industrial manufacturing (Industry 4.0.)
- transport and logistics
- wholesale and retail trade, antimonopoly regulation (e-Trade)
- housing and utilities (Smart grid)
- energy, petrochemicals
- agriculture (e-Agriculture)
- architecture and construction
- science and education (Science 2.0, Smart Learning)
- health and social security (e-Health)
- monitoring and protection of the environment
- financial sector
- public administration (e-Governance)

OPENING CEREMONY OF THE FORUM

Plenary Session “STRATEGY OF DIGITAL TRANSFORMATION”

Date and time: 17 April 2017, 15.00 – 18.00

The following issues are proposed for analysis and discussion:

- the latest technological trends and prospects for their use;
- global experience in the digital transformation (with the participation of experts from main partner countries – Russia, Lithuania, Latvia, Ukraine, Poland, Estonia, Azerbaijan, Kazakhstan, etc.);
- key challenges and success factors of digital transformation in the Republic of Belarus.

INTERNATIONAL ACTIVITIES OF THE FORUM

Joint Session of the 52nd Board of Heads of Communications Administrations of the Regional Commonwealth in the Field of Communications

Date and time: 18 April 2017, 09.00 – 12.00

23rd Coordination Council for Informatization of CIS member-states

Date and time: 18 April 2017, 14.00 – 18.00

INTERNATIONAL SPECIALIZED EXHIBITION “TIBO-2017”

Date and time: 18 – 20 April 2017, 10.00 – 19.00

21 April 2017, 10.00 – 17.00

Location: Football Arena (Pobediteley Ave., 20/2)

Opening Ceremony of the Exhibition: 18 April 2017, 12.00 – 13.00

THEMATIC EVENTS OF THE FORUM

Date and Time: 18 – 21 April 2017 (according to a separate schedule)

The Forum includes:

- eight thematic events related to the digital transformation of the main sectors of economy and public administration;
- three specialized seminars on the main factors determining the success of digital transformation (legislative and technical standards regulation, innovation, education).

The participants of thematic events will discuss the global trends in the respective areas development, current situation in the country and priority measures for effective digital transformation.

The participants will represent:

- public and private companies (in accordance with the event’s topic);
- public administration (regional, sectoral and national levels);
- scientific and educational institutions (in accordance with the event’s topic);
- non-profit organizations;
- mass media.



INTERNATIONAL EXHIBITION AND CONFERENCE “eGOVERNANCE – INNOVATIVE TECHNOLOGIES IN GOVERNANCE”

TOPICS

New management technologies (change and risk management, Agile methodology, Lean Management, Evidence Based Policy, Government by Design etc.)

Decision-making technology

Lifelong learning

Shaping readiness for constant change

Analysis of e-government effectiveness evaluation methods (efficiency of e-services for people based on the methodology of "life events"; reduction of administrative barriers; service integration on the base of "Business events")

Use of information technologies in order to improve efficiency of public services provision in areas such as:

- health care (e-Health)
- educational services (e-Learning)
- social services (e-SocialServices)
- Legal services (e-Justice)
- Integration of services for businesses
- reduction of administrative barriers

Social technologies in public administration (Back Office, Front Office)

Mobile technologies for provision of governmental services (m-Government)

Governmental data: effective management and use of governmental information. Open data

Electronic document flow, electronic archives, electronic signature

User authentication and identification system

Current use and analysis of information technologies in public administration of Belarus

Analysis of existing state information resources, their development, quality assurance and access management

OBJECTIVES

- Study of global experience related to the digital transformation in public administration
- information technologies currently used in public administration of the Republic of Belarus and analysis of their efficiency
- Drafting of analytical note on the strategy of digital transformation in public administration of the Republic of Belarus for 2018-2020



SCIENTIFIC CONFERENCE “INNOVATION – A DRIVING FORCE FOR DIGITAL TRANSFORMATION”

TOPICS

International practices of effective innovation policy and formation of innovation ecosystem

Analysis of state innovation policy and efficiency of national innovation ecosystem in the Republic of Belarus

Analysis of state support for IT development, export and use in the domestic market

Development of proposals to improve the national innovation ecosystem

OBJECTIVES

Creation of a favorable and effective innovation ecosystem, providing synergy of various factors:

- high-quality education system, comprising all levels of education (secondary and higher education, corporate and professional training, long life learning);
- innovation infrastructure (technology parks, technopolises, technology transfer centers, business incubators, including the training of startupers);
- development of IT industry and its stimulation (tax and customs privileges);
- effective system of intellectual property rights management;
- financial support system (development of stock market and venture capital funds, business angels, etc.);
- state support for innovation ecosystem (development of information industry, public-private partnership, support of innovations for small and medium enterprises, etc.);
- system of technological and market expertise of innovative projects;
- digital literacy improvement (eSkills).

The conference agenda includes “ICT-based Innovation Forum” for Eastern Partnership countries in order to implement HDM initiatives on the harmonization of digital markets in EU and Eastern Partnership countries.

The stand of the State Committee on Science and Technologies at “TIBO-2017” will include a section for start-ups presenting the winners of the Republican contest for innovative projects, carried out by the SCCT.



II SCIENTIFIC CONFERENCE “SMART LEARNING — INNOVATIVE TECHNOLOGY IN EDUCATION”

TOPICS

Implementation of Smart Learning in Belarus:

- Scope of Smart Learning applications
- Implementation of new educational business-model
- Improvement of regulatory base
- Enhancement of digital literacy among management
- Accreditation of online courses
- Foreign experience

Software products for Smart Learning:

- Learning management systems
- Cloud solutions for distant learning
- Tools for prompt content design and development
- Talent management systems, competence-based approach
- Programs of training results assessment and analysis of economic effect for the company
- Educational mobile applications for smart devices and gadgets
- Blended learning
- E-Learning Software standards

Educational content of Smart Learning:

- E-Library and knowledge databases
- E-Publishing
- Creation of smart learning environment
- “Internet of things” technologies application
- Gamification
- Instructional methods, integration of “flipped class” model
- Interaction of teachers and students
- Usability

Use of open resources in Smart Learning:

- Educational web portals
- Social networks, blogs, wiki
- MOOC, COOC

OBJECTIVES

- Improvement of quality and accessibility of education in the Republic of Belarus
- Introduction of distance learning and lifelong learning technologies in the educational process of the Republic of Belarus (Long Life Learning)
- Development of proposals to improve the regulatory framework and to amend current legislation in order to facilitate the expansion of e-learning and to create IT- development sector in education
- Rational use of budget financing for education
- Development strategy for on-job online learning system in the Republic of Belarus
- Development and implementation of lifelong learning, training and retraining of managers including public administration managers

- Study of opportunities for creation of the Council (expert group) including representatives of the Ministry of Education, the educational institutions and large employers in order to implement online education in the Republic of Belarus
- Discussion of opportunities for establishment of the national education platform for open education to implement open online courses, arrange and monitor training of students and trainees.

RELEVANCE

Digital transformation has affected all spheres of our life, including education and training. eLearning technologies based on widespread use of information and communication technologies in education are becoming increasingly popular all over the world and in the Republic of Belarus as well.

Common usage of e-learning is one of the key tasks defined in the Program of Socio-Economic Development of the Republic of Belarus till 2020. Our country sees significant development of IT companies that offer special software and products for online training. Rapidly growing corporate education sector helps to solve the problem of on-job training and retraining. The introduction of ICT-based innovative technologies into the education system allows to make learning process more individual, adapt it to each student and raise the level of their training and competence in order to meet current requirements of labor market.

The implementation of online learning and lifelong learning in the educational system is a must for improving the quality and availability of education in the Republic of Belarus and to ensure competitiveness of national education system in the world.

In 2016 more than 50 highly qualified professionals in the field of education attended the conference “Smart Learning - Innovative technologies in education”. Experts from leading universities of the Republic of Belarus (Belarusian State University of Informatics and Radioelectronics, Belarusian National Technical University, Belarusian State University, Academy of Public Administration, School of Business and Management of Technology of BSU) spoke and made their presentations. The representatives of the above mentioned universities were included in the working group. All the conference participants noted, that distant learning is an innovative and most promising form of education today.



II INTERNATIONAL EXHIBITION AND CONFERENCE “INDUSTRY 4.0. – INNOVATION IN MANUFACTURING”

TOPICS

Modern industrial standards	Advanced sensors
New business processes	Remote production management
Advanced materials	“Smart equipment”
Additive manufacturing	Advanced analytics and visualization
Modular manufacturing	Artificial intelligence technologies
Smart grids and distributed power supply	Virtualization of production technologies
Robotics	Digital infrastructure
Social networks for business	Cloud computing

OBJECTIVES

- Study of international practices related to industrial sector development, including for the purposes of the most rapid digital transformation of industry
- Analysis of Belarusian industrial sector and its main development strategies, identification of problems and their solutions
- Promotion of technological, organizational and administrative innovations, new standards and business models in Belarusian industrial sector
- Support for effective intersectoral cooperation and public-private partnerships
- Development of scientific and technical cooperation between the Belarusian and foreign production and engineering companies, research and educational institutions
- Implementation of international standards
- Creation of a modern system for training and re-training of highly qualified personnel in accordance with current market demands

RELEVANCE

The manufacturing sector is one of the leading sectors of Belarusian economy by GDP share and the number of employees. Its competitiveness is largely determined by the speed of transition to new production technologies, business processes and entry into the international chain of added value generation.

In this respect, digital transformation of the industrial sector was one of the key thematic areas of “TIBO” forum in 2016. This topic is one of the global priorities and the priorities of social and economic development of the Republic of Belarus for 2016-2020.

In 2017 within the framework of the II International exhibition and conference «Industry 4.0. – innovation in manufacturing sector» we plan to review the problem of digital transformation for all industries in the Republic of Belarus and form the relevant section of “TIBO-2017” exposition involving leading local and foreign suppliers of Industry 4.0 solutions.



II INTERNATIONAL CONFERENCE “SCIENCE 2.0 – DIGITAL TRANSFORMATION IN SCIENTIFIC RESEARCH AND DEVELOPMENT”

TOPICS

Free access to scientific researches results
Intellectual properties management and copyright protection
Improvement of science and technology examination and review
Evaluation of organizations' and scientists' scientific work (altmetrics)
Implementation of identification standards (DOI) and descriptions (Dublin Core) of digital resources
New approaches to the arrangement and financing of scientific researches (crowdsourcing, crowdfunding)
Scientific social networks
Transition to electronic publishing (periodicals, grey literature, books)
Publication of primary experimental data
Reference management
Scientific data repository
Social consequences of the forth industrial revolution: changes in labor market and education

OBJECTIVES

- Analysis of international experience and evaluation of digital transformation in the Research and Development sector of the Republic of Belarus
- Preparation of analytical report and updated plan of actions required for digital transformation

RELEVANCE

Information and communication technologies have had a dramatic impact on all spheres human activities: public administration, economy, social sphere. Communication through Internet has significantly enhances due to WEB 2.0 and social networking.

In the research and development sphere ICT had affected the process of studies, the use of innovative researches results, management of science and the interaction of science and society. Therefore, digital transformation in science and technologies is a challenging task, and its solution will contribute to the formation of modern “knowledge economy” in Belarus, improve the quality of science management, increase efficient use of budgetary funds allocated to research and development and accelerate integration of the Republic of Belarus into the international scientific and research community.



SCIENTIFIC CONFERENCE “eSECURITY – INNOVATIVE TECHNOLOGIES FOR SECURITY”

TOPICS

Cybersecurity

- Information security technology (electronic signature, electronic verification of documents, encryption, user authentication, identification)
- Protection of national cyberspace
- International cooperation in combatting the cybercrime
- E-commerce, E-delivery, E-interaction (simplification of electronic documentation exchange, uniform standards)
- Internet safety: IoT, mobile Internet, fight against fraud
- Ensuring the confidentiality and protection of personal data on the Internet
- Trust services

Digital transformation of the security system

- video monitoring (video surveillance of traffic, license plate recognition systems and software, video surveillance management software, TV and video monitoring equipment, monitors, etc.)
- technologies for notification of violations
- access control (access control systems and identification technologies: RFID, biometrics, etc.)
- authentication technologies, checkpoints, terminals, readout devices, software, etc.)
- country of origin tracking systems
- systems for food security provision
- environment monitoring system and notification of emergency situations
- perimeter protection (engineering and technical means of protection, alarms, active and passive optical and electronic sensors, etc.)
- alarm and alert (equipment and communication systems, personal safety equipment, technical means of information protection, anti-terrorist and inspection equipment, etc.)

OBJECTIVES

- Study of international practices related to information security provision in different areas
- Analysis of the current state of security in the Republic of Belarus, revealing the main problems and their solutions
- Promotion of technological, organizational, management innovation, as well as new standards in the security sector of the Republic of Belarus
- Establishment of public-private partnership in the field of security
- Creation of a modern system of training and retraining of skilled staff in security sector



CONFERENCE “eAGRICULTURE – INNOVATIVE TECHNOLOGIES IN AGRICULTURE”

TOPICS

Precision agriculture
Systems for information exchange between agro-industrial enterprises and state authorities
Identification and traceability systems
Information registration systems
Geoinformational and navigation technologies and systems
Monitoring and quality assurance of agricultural products
Information systems for agricultural products production and sale management
Industry 4.0: digital transformation of agro-industrial complex
Systems of education and training of staff for agro-industrial sector

OBJECTIVES

- Analysis of international experience in the digital transformation of the agricultural sector
- Assessment of agro-industrial complex informatization in the Republic of Belarus
- Definition of main directions and proposals for effective digital transformation of the Belarusian agro-industrial complex in order to reduce the cost and to increase the profitability of agricultural production

RELEVANCE

Agriculture is one of the major export-oriented sectors of the Belarusian economy, its share in the GDP is 6.7% and in the structure of employment – 8%.

Increased competition in sales markets require sustainable efforts to improve the quality and reduce the cost of agricultural production. This requires the adoption of regulatory measures and constant innovation renewal of production technology and marketing strategies of agricultural products.

Same as in other sectors of the economy, the main tool to improve efficiency of agricultural production is the digital transformation. All developed countries pay great attention to digital transformation of the agricultural sector. This issue is stated as one of the priorities in the Program for Socio-Economic Development of the Republic of Belarus for 2016-2020. The country is working on the development and introduction of modern geographical information technologies, land information system, state navigation map, precise positioning systems. Farms and enterprises for agricultural products processing are being equipped with automated systems for production management and sales.



II INTERNATIONAL EXHIBITION AND CONFERENCE “TRADE FORUM – INNOVATIVE TRADE TECHNOLOGIES”

TOPICS

Legal and technical regulations of trade
Antitrust regulation of the goods and services market
Monitoring of goods and services market for the aim of antitrust regulation
Technological equipment for wholesale and retail enterprises
Accounting and management solutions for enterprises
E-commerce
Management of delivery chains
Marketing, sales management and promotion of goods
Customer relationship management
Cooperation with banking sector
Security technologies for retail

OBJECTIVES

- Study of global experience related to the development of trade sector and antitrust regulations of goods and services markets, including for the purposes of strengthening economic ties within the EAEC and the EU
- Analysis of trade sector in the Republic of Belarus and main directions of its development, identification of problems and best solutions
- Promotion of technological, organizational and management innovations, as well as new standards and business models in the domestic and foreign trade of Belarus
- Establishment of effective interdepartmental interaction and public-private partnership
- Development of proposals to improve state regulation of goods and services market in the Republic of Belarus

RELEVANCE

Wholesale and retail trade has a unique position as one of top five major sectors in the economy of every state. Total share of the wholesale and retail trade in the Republic of Belarus in 2015 amounted to 13% of GDP. Furthermore, trade sector significantly affects social situation in the country, because it supplies the everyday needs of population in quality goods and services.

Both the economy and the trade sector have entered the era of digital transformation, yet this sector has its own priorities and instruments. The problem of digital transformation in trade sector is an intersectorial one, and its solution requires coordinated efforts of various departments.

Digital transformation of trade sector will improve the quality of services provided to population and reduce costs of goods through automation of trade enterprises and supply chains. It will facilitate monitoring of goods and services market in order to combat illegal entrepreneurship and trafficking of goods and accelerate the introduction of international standards for exchange of information and electronic documents in B2B, B2C, B2G sectors for the intensification of international trade within the EAEC and the EU.



SPECIALIZED SEMINAR “LEGAL REGULATIONS OF DIGITAL TRANSFORMATION”

TOPICS

Legal regulations that determine the order of formation, quality assurance and efficient use of state information resources

Analysis and optimization of legislation related to administrative regulations and order of their execution

Analysis of copyright legislation aimed to promote innovation and technology transfer and protect the authors' rights

Mechanisms of interaction between the state and society

Regulatory support stimulating development and use of information technologies in various fields.

OBJECTIVES

- Analysis of international experience in legislative support of digital transformation
- Formulation of basic directions and proposals of legislation changes in order to facilitate effective digital transformation in Belarus
- Preparation of analytical note

RELEVANCE

Digital transformation should ensure effective functioning of modern public administration in modern society. The state is obliged to bring services to all citizens regardless of their social status, gender, age and education level, ensure their security and regulate the economic and social spheres. In addition, “state – citizens” relations are more complex than the relations on “company – customers” level. Citizens are also taxpayers and voters, therefore they fund the state functioning and determine state political and economic course. Innovative governments simplify the access to government services and shift from services administration to involvement of citizens and businesses into the design and provision of services.

As soon as digital transformation of all spheres of modern society is accompanied by dramatic changes in the existing business processes, administrative regulations, legal framework and the rules of interaction between economic agents, its effective implementation requires an appropriate modernization of the existing legislation.

For the success of this modernization it is necessary to analyze the global experience of legislative base for digital transformation, evaluate the Belarusian regulatory legal framework and make recommendations for legislative support of digital transformation in our country.



SPECIALIZED SEMINAR “TECHNICAL STANDARDS BASE OF DIGITAL TRANSFORMATION”

TOPICS

Implementation of international management standards for development, testing and documentation of information systems, provision of IT services (ITIL, Cobit, ITSM), quality assurance, etc.

International standards that ensure interoperability of information and telecommunication systems.

International standards on electronic messages for data exchange in administration, commerce and transport

Creation of a technology-neutral and focused on the competition system of normative regulation in telecommunications and media market.

Standardization in the field of automated systems

Standardization in the subject areas (Smart Learning, e-Health, Industry 4.0, Science 2.0, e-Culture, etc.)

Organizational structures for the development and implementation of standards, international experience

OBJECTIVES

- Assessment of the scope of modern technological trends covered by international standards system
- Identification of promising standardization directions in various technological fields (Cloud, Big data, Internet of Things, CPPS) and problem areas (Smart Learning, e-Health, Industry 4.0, Science 2.0, etc.)
- Analysis of the scope of harmonization between national and international standards in various fields
- Formulation of key issues regarding the development of road map for ICT standardization in the Republic of Belarus

RELEVANCE

Digital transformation involves a huge variety of systems, tools, technologies and services provided by numerous vendors. Standards set the procedure for the development, use and life cycle management for tools and information.

The success of digital transformation in each country is determined by the harmonization of national and international standards and the rate of their implementation. The lack of modern standards in many sectors affects the quality of local products and services. Therefore, in the Republic of Belarus there is an urgent need to develop a roadmap for standardization in the field of digital transformation, following the example of industrialized countries and our major trade partners.



ROUND TABLE “FINTECH – THE PRESENT AND FUTURE OF FINANCIAL TECHNOLOGIES”

TOPICS

Digital transformation of the financial industry: global experience

Current state of digital transformation in the Belarusian financial sector

Scenario plan and road map for digital transformation of the Belarusian financial sector

OBJECTIVE

Discussion of the analytical report on the research project “Investigation of the prospects and opportunities for digital transformation in the financial sector of the Republic of Belarus”

RELEVANCE

Financial sector of the Republic of Belarus became one of the first to implement digital transformation, because it is a part of the global financial system and has to interact with it. Digital transformation of the financial sector means the transition from the use of information and communication technologies as a support tool for business to its transformation, creation of new business models and business processes in order to increase efficiency, productivity and business value.

Global financial industry employs numerous technical achievements of digital age: hyperconnectivity, data mining, smart devices, “Internet of things”, which are used to create new business services, perform reengineering of business processes, and to improve relations with clients.

Digital transformation in the financial sector is based on such innovations as geofencing, robo-advising, omnichannel approach, geolocation, Cloud Computing, Data Mining and Big Data.

Broad expansion of business services and universal type of access to them is provided by open communication strategy based on OpenSource technologies, API, accelerated design methodologies such as Agile, Scrum, Kanban, DevOps. Thanks to them, it requires significantly less time to bring each new service to market, compared with traditional practices.

Start-ups and fintechs play an important role in the recent innovation development. They set the tone in the digital transformation and in the financial sphere, generate new technologies and new market niches. Many of them have a breakthrough and sometimes even “subversive” nature compared to the traditional market players, causing overwhelming interest in the society and an understandable concern among the participants and regulators. Therefore, the National Bank of the Republic of Belarus holds key position in the issues related to digital transformation and development of the banking system. Digital banking actively penetrates into the life of our society: Internet banking and mobile banking, mobile payments, cryptocurrency, crowdservices and others.

The Board of the National Bank of Belarus in the Decree №108 dated March 2, 2016 approved the Strategy of digital banking development in the Republic of Belarus for 2016 - 2020. The priority of the Strategy is to increase the interaction between banks and their clients, republican governmental bodies and commercial organizations through electronic communication channels by the year 2021.