



Ministry of Economic Development of the Russian Federation



Russian Foundation for Technological Development

RUSSIAN TECHNOLOGY PLATFORMS

Moscow International Forum for Innovative Development

Open Innovations

Moscow, 2012

MEDICINE OF THE FUTURE BIOINDUSTRY AND BIORESOURCES - BIOTECH2030 BIOENERGY
NATIONAL SOFTWARE PLATFORM NATIONAL SUPERCOMPUTER TECHNOLOGY PLATFORM
INNOVATIVE LASER, OPTICAL AND OPTOELECTRONIC TECHNOLOGIES - PHOTONICS
RUSSIAN LED TECHNOLOGIES DEVELOPMENT AIR MOBILITY AND AVIATION TECHNOLOGIES
NATIONAL SPACE TECHNOLOGY PLATFORM NATIONAL INFORMATION SATELLITE SYSTEM
CLOSED NUCLEAR FUEL CYCLE ON FAST NEUTRON REACTORS
CONTROLLED THERMONUCLEAR FUSION RADIATION TECHNOLOGIES INTELLECTUAL ENERGY SYSTEM OF RUSSIA
ECOLOGICALLY SAFE THERMAL ENERGETICS OF HIGH EFFICIENCY PROSPECTIVE TECHNOLOGIES OF RENEWABLE ENERGY SOURCES
SMALL-SCALE DISTRIBUTED ENERGY HIGH-SPEED INTELLECTUAL RAILWAY TRANSPORT
APPLICATION OF INNOVATIVE TECHNOLOGIES TO IMPROVE THE EFFICIENCY OF CONSTRUCTION, MAINTENANCE
AND SAFETY OF HIGHWAYS AND RAILWAYS
ADVANCED POLYMERIC AND COMPOSITE MATERIALS AND TECHNOLOGIES
MATERIALS AND TECHNOLOGIES OF METALLURGY TECHNOLOGY PLATFORM OF SOLID MINERALS
HYDROCARBON PRODUCTION AND USE TECHNOLOGIES DEEP CONVERSION OF HYDROCARBON RESOURCES
TECHNOLOGIES OF MECHATRONICS, EMBEDDED CONTROL SYSTEMS, RADIO FREQUENCY IDENTIFICATION AND ROBOT-BUILDING
UHF TECHNOLOGIES OCEAN DEVELOPMENT TECHNOLOGIES FOR SUSTAINABLE ECOLOGICAL DEVELOPMENT
SIMULATION AND OPERATION PRACTICE OF HIGH-TECH SYSTEMS
TEXTILE AND LIGHT INDUSTRY ENVIRONMENTALLY FRIENDLY VEHICLES "GREEN CAR"
TECHNOLOGIES OF FOOD AND PROCESSING INDUSTRY OF THE AGRO-INDUSTRIAL COMPLEX - HEALTHY FOOD



Ministry of Economic Development of the Russian Federation



Russian Foundation for Technological Development

Moscow International Forum for Innovative Development **Open Innovations**
Moscow, CEC «Expocenter» October 31 — November 03, 2012

RUSSIAN TECHNOLOGY PLATFORMS

Information materials

Moscow, 2012



Moscow, October 31, 2012

Dear participants and guests of the Moscow International Forum for Innovative Development!

Some years ago, pursuant to the Resolution of the Governmental Commission for High Technologies and Innovations the Ministry of Economic Development of the Russian Federation in cooperation with the Ministry of Education and Science of the Russian Federation, established 30 Technology Platforms on the priority spheres of developing science and technology seen as a new driver of innovation growth of the Russian economy. At this point in time, three more Technology Platforms are submitted for approval.

Currently, these self-organizing structures involve hundreds of industrial enterprises, organizations of applied and academic science, higher educational institutions, and initiative groups of developers. The Technology Platforms have achieved significant successes in forming and implementing the strategic research programmes and defining the long-term priorities of the economy with regard to their core business.

During the Forum, the members of all Technology Platforms will jointly present the key results of their activity and the programmes of their practical work for the next two years to the representatives of the Russian and International innovative industry; moreover, they will give an account of benefits from their practical work within the Platforms. In order to realize the above-mentioned work, the Russian Foundation for Technological Development has coordinated and provided the global exhibition platform of the Forum Open Innovations Expo with the dedicated exposition stand Russian Technology Platforms – RFTR and has scheduled a number of meetings and presentations.

The main objective of representing on the Forum the Technology Platforms and the events carried-out with the participation of the TP members provides for involving the Regional and Federal Agencies of State Administration, Russian and International companies and organizations to their activity; establishing direct contacts with the potential partners as well as sharing experience in the priority branches of the Russian economy.

We are certain that joint participation of the Russian Technology Platforms within the Forum framework will provide practical results in terms of the advanced innovative technologies and products and their implementation into the production sector; it will also associate in strengthening and developing the national industry and science.

State Secretary—
Deputy Minister of Economic Development of the
Russian Federation

O. V. Fomichev

To The Leaders and Members of the Russian Technology Platforms

The Russian Technology Platforms established by the Resolution of the Government Commission for the High Technologies and Innovations on the Priority Spheres are one of the key instruments for combining the efforts of the State bodies, business community, and scientific & educational institutions aimed at constructing the basic infrastructure of the innovations as well as developing the breakthrough researches. Within the framework of the Moscow International Forum «Open Innovations», all Technology Platforms assisted and coordinated by the Russian Foundation for Technological Development, for the first time will present to the wide public attention the developed spheres of the strategic researches, the key results of their activity and the programmes of their practical work for the next two years.

The Foundation takes an active part in establishing and developing the innovative economy, organizes the scientific & technological, legal, and financial & economic expert analyses of the innovation projects and experimental developments; also, on the basis of the concessional loans the Foundation finances the prospective research-and-development activity.

Ministry of Education and Science of the Russian Federation expressed its interest in participation of the Russian Technology Platforms in developing and establishing the subjects of the Federal Target Programme Researches and Developments on the Priority Spheres of Developing Scientific and Technologic Complex of Russia for 2007-2013.

I believe that the joint participation of the Technology Platforms and the Russian Foundation for Technological Development in the Moscow International Forum for Innovative Development will definitely assist in consolidating the positions of Russia in the global innovating industry market.

Deputy Minister,
Ministry of Education and Science
of the Russian Federation

A. B. Povalko



Dear participants and guests of the Moscow International Forum for Innovative Development «Open Innovations»!

The summary informative booklet, which you are holding in your hands, has been prepared by the Russian Foundation for Technological Development and the Ministry of Economic Development. The Foundation was among the first State Institutions to begin cooperation with the Technology Platforms established under the Resolution of the Government of the Russian Federation in the year 2011, and to provide financial contribution to the projects developed by the Technology Platform member-organizations. The Foundation organizes and conducts the competitive selection of the innovative projects, included into the Road Maps and Strategic Research Programmes; 10 projects presented by seven Technology Platforms have been already financed for a total amount of 1,134 millions rubles (one billion one hundred thirty-four million).

The cooperation and interaction with the Technology Platform Coordinators have demonstrated availability of the individual achievements and common problems that forced us to the joint presentation of all 32 Platforms on the Moscow International Forum «Open Innovations». Our objective is to assist in further development of the Technology Platforms as a working instrument for construction of the extensive infrastructure of innovations and planned transfer of the scientific and technological developments to the industry to ensure growth of the National welfare.

The information you will find in this book, of course, does not reflect the complete activity of the Platforms. Therefore we invite all the Parties concerned to attend the presentation event at the Forum venue and on the exposition stand Russian Technology Platforms – RFTR; the Consulting Center of the Foundation will work at the above-mentioned sites.

The Foundation was among the first to begin the intensive use of the expert potential of the Technology Platforms. From our point of view, the work with the expert society consolidated due to the preparation of the Platform programme documents will make it possible to transit to another level of the long-term technological forecast and to exercise the required governmental support of the best projects really necessary for the accelerated growth.

I believe the joint participation of the Technology Platforms and the Russian Foundation for Technological Development within the Forum framework will make it possible to expand number of participants, partners, clients and customers; it will ensure establishing new direct contacts with Russian and International companies and will assist in developing rules of the game for the private and state investment into the Russian Projects for establishing the innovation industry.

I wish all the participants and guests of the Forum fruitful work for the benefit of the National economy!

Director,
Russian Foundation for Technological Development
M.B. Rogachev



MEDICINE OF THE FUTURE



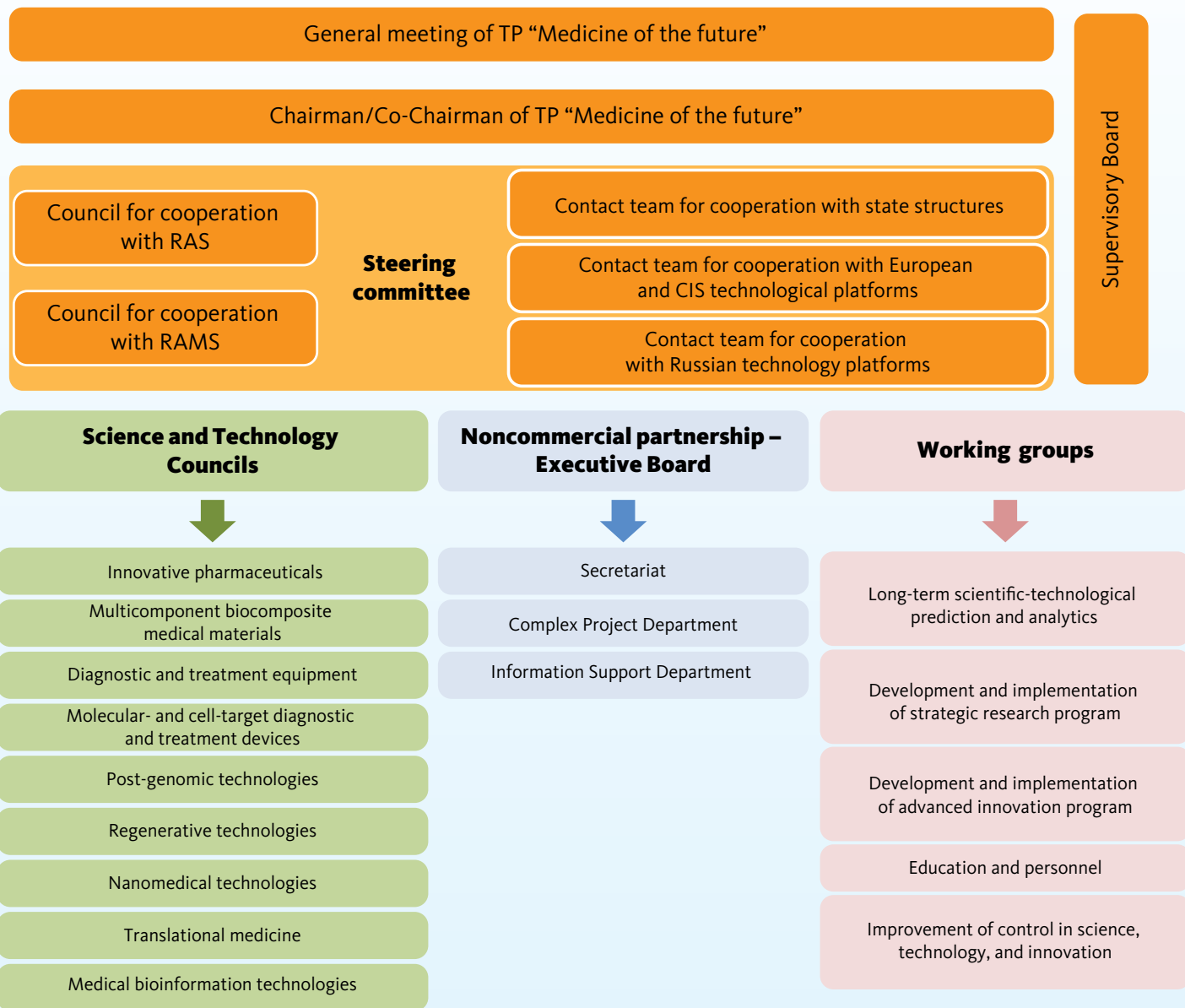
Lyudmila M. OGORODOVA
Chairman
TP “Medicine of the future”
 M.D, Professor,
 Corresponding member of
 RAMS,
 RF State Duma deputy

Vsevolod A. TKACHUK
Co-Chairman
TP “Medicine of the future”
 M.D., Professor, Academician
 of RAS and RAMS, Dean
 of Fundamental Medicine
 Department at Lomonosov MSU

October 7, 2010 – Initiative to establish the Technology Platform “Medicine of the future”.

May 26, 2011 – Establishment of TP “Medicine of the future” and Consortium of its participants by participants’ general meeting.

July 4, 2012 – Establishment of Noncommercial partnership “Technology Platform: Medicine of the future”.



TP Coordinator:

Siberian State Medical University (Tomsk).

Key Institutions:

SRI of Pharmacology SB RAMS, ISPMS SB RAS, Lomonosov MSU, Bauman MSTU, MIPT, Kant BFU, Puschino SC RAS, FSUE SPA Microgen, R-Pharm CJSC, ChemRar CJSC, and etc.

TP Participants:

In total 286 institutions including business representatives – 113; scientific institutions – 83; higher educational institutions – 60; and other institutions – 30.

Foreign partners:

27 organizations.

Main technological spheres

- Bioinformation
- Biomedicine and veterinary technologies
- Biocatalytic, biosynthetic, and biosensor technologies
- Genomic, proteomic, and post-genomic technologies
- Cell technologies
- Nano-, bio-, information, and cognitive technologies
- Bioengineering
- Biocompatible materials
- Reduction of losses from socially significant diseases
- Creation and treatment of functional nanomaterials

Key results

- Proposals were included into state programmes for accumulated results in science and technology based on formulated biomedicine development priorities till 2020.
- Prepared: sectoral and coordination interdepartmental programs.
- Developed: a strategic research program of TP “Medicine of the future” that includes full-cycle complex projects.
- Analyzed: scientific and technological potential of the Russian Federation within the competence of TP “Medicine of the future”, structure of diseases that produce the most significant social and economic impact, market in the area related to TP “Medicine of the future”.
- Submitted to involve in innovative development programs: proposals for leading state-aided scientific production associations (FSUE SPA Microgen, OJSC RSC Energia, OJSC FSPA Altai).
- Supported: life cycle of projects to launch innovative competitive pilot production and technologies (27 projects, including launching of series production of pure glyoxal, wound healing dressings and coatings, etc.).
- Established: a national network of industry prediction centers for scientific and technological development in the priority direction of “Life Science”.
- Elaborated: mechanisms for communication with international professional community around the SkolTech.
- Formed: a working team for scientific and educational support of engineering activity in biomedicine and pharmacy.
- Established: cooperation with the State Duma of the Russian Federation to generate a series of bill proposals on engineering activity.
- Underway: international cooperation with countries of EU, BRIC, and APEC on the main technological lines of TP “Medicine of the Future”.

Announcement of events

- **November, 2012** – presentation of TP “MoF” at the Moscow International Forum for Innovative Development “Open Innovations”
- **April, 2013** – presentation and promotion of innovative developments at IPhEB International Forum in St. Petersburg
- **May, 2013** – Round table at the III International Conference on Models of Innovation Development of Pharmaceutical and Medical Industry based on the University as an Integrator of Science and Industry” (Dolgoprudny)
- **July, 2013** – participation of TP in Ural International Exhibition and Forum of Industry and Innovations “INNOPROM-2013” (Ekaterinburg)
- **September, 2013** – participation of TP “MoF» in International Innovation Forum “Interra-2013” (Novosibirsk)
- **October, 2013** – reports by TP “MoF» Science and Technology Council at VII Baltic Educational Forum (Kaliningrad)

Contact information

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Noncommercial Partnership TP “Medicine of the future”

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[http://: www.tp-medfuture.ru](http://www.tp-medfuture.ru)



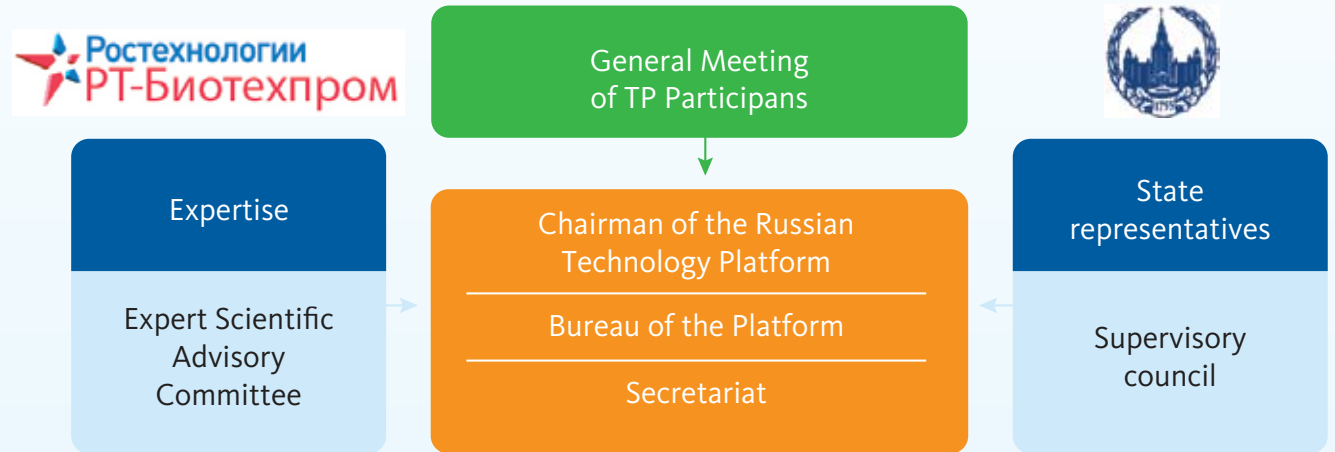
Mikhail P. Kirpichnikov
Co-Chairman of the Technology Platform “BioTech2030”
 Dean of the Faculty of Biology of MSU, Academician of RAS

Pyotr S. Kanygin
Co-Chairman of the Technology Platform “BioTech2030”
 Director-General of RT-Biotechprom OJSC (Russian Technologies State Corporation), Dr. Sci. (Economics)

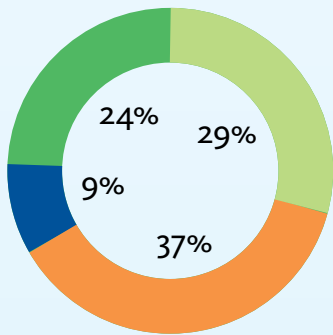
Expected date of establishment of Non-commercial partnership: October 2012

Legal form: Non-commercial partnership

Organizational structure



Participants of Technology Platform – more than 150 organizations





Key results

- Design of the “State Coordination Programme for the Development of Biotechnology in the RF until 2020 - BIO-2020” jointly with the Technology Platform “Medicine of the Future” and the Technology Platform «Bioenergy» (Programme has been approved by the Chairman of the Government of the Russian Federation on April 24, 2012)
- Establishment of high performance expert teams within the Technology Platform “BioTech2030”
- Development of the mechanism for professional scientific and technical expertise of projects within the Technology Platform “BioTech2030”
- The signing of the Protocol on strategic partnership and cooperation with the Russian Foundation for technological development, establishment of cooperation with Russian Foundation for technological development in the field of project appraisal
- Participation in the development of Government programmes
- Monitoring and selection of innovative projects within the competence
- Effective international cooperation

Main technological spheres

- Industrial biotechnology
- Agricultural biotechnology
- Forest biotechnology
- Food biotechnology
- Aquaculture biotechnology
- Waste recycling/Ecobiotechnology

Announcement of events

March 2013 BIOECONOMY IN ACTION, Copenhagen. Denmark

April 2013 International Congress “Biomass: Fuel & Power -2012”, Moscow, Russia

April 2013 “IndustrialGreenTec” Hannover, Germany

May 2013 International Symposium Russian-EU, Moscow, Russia

June 2013 International Trade Show “Achema-2012”, Frankfurt am Main, Germany

June 2013 Bio International Convention 2012, Boston, USA

October-November 2013 Reporting Conference of the Technology Platform «BioTech2030»

November 2013 IV conference «Grain Tech-2013», Moscow, Russia

Contact information

Executive secretariat of the Technology Platform “BioTech2030”

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www.biotech2030.ru



BIOENERGY



Date of establishing the Technology Platform: November 19, 2011

Coordinator – National Research Center Kurchatov Institute

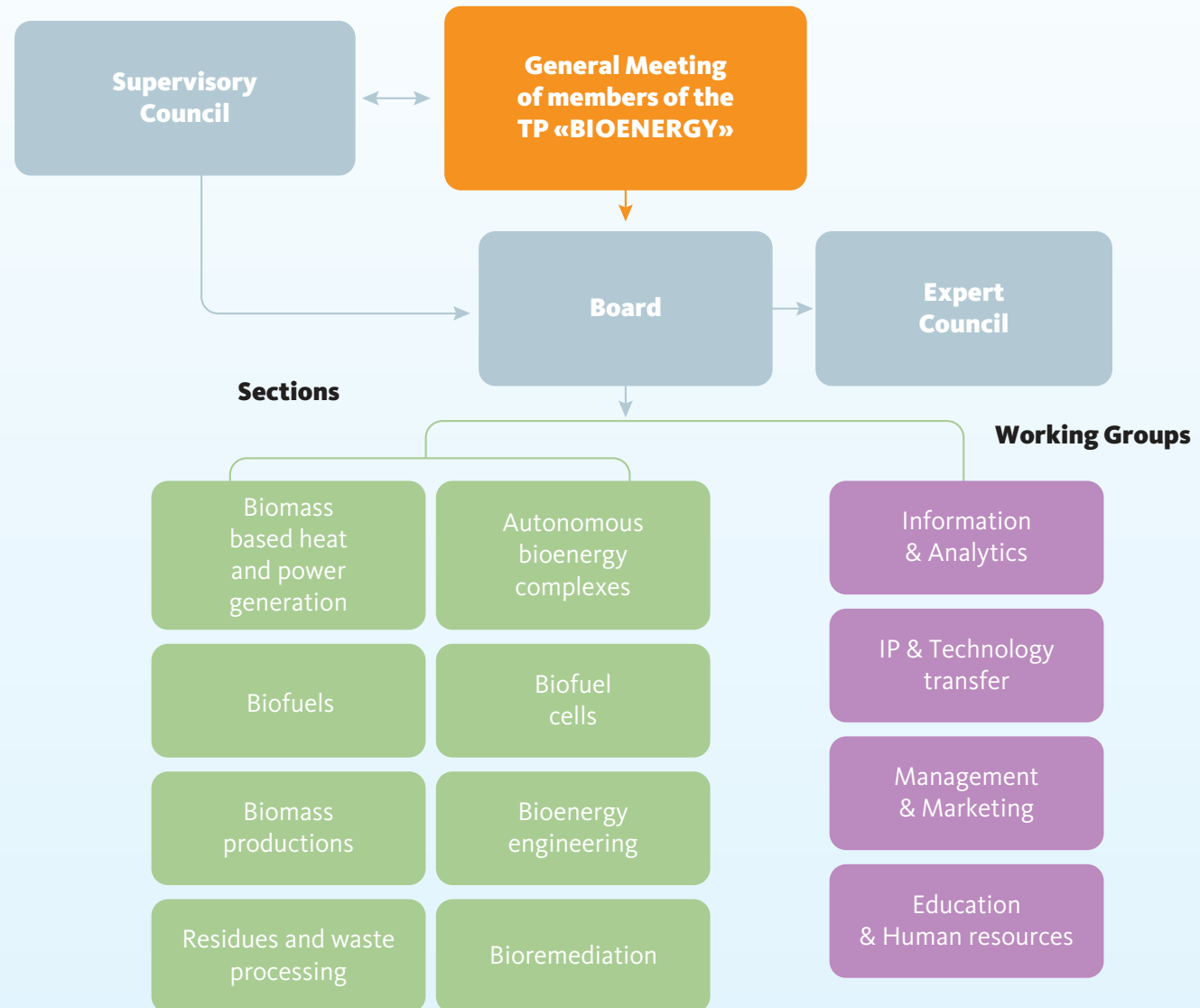
Number of the Technology Platform members – 139 (as of 2012)

Contact information

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Coordinator of the Technology Platform:
Boris F. Reutov

STRUCTURE OF THE RUSSIAN TECHNOLOGY PLATFORM «BIOENERGY»





BIOENERGY

Main Technological Spheres

- Generation of heat and electricity from biomass.
- Production of biofuel (biodiesel, bioethanol, biogas, pellets, etc.) and its components.
- Bioremediation of soils, ground and surface waters.
- Energetic utilization of agricultural and forest residues, municipal and industrial organic wastes, etc. with power and biofuel production.
- Production of biomass as bioenergy raw materials.
- Bioenergy mechanical engineering.
- Autonomous bioenergy complexes, biofuel cells.

Key results

- Research and design & development activities by the Technology Platform members to the amount of 1085,25 mln. rubles; establishment of the research and design & development activities areas for the period 2013-2017.
- Elaboration of the Road Map for Bioenergy Development in RF; the Vision of the Technology Platform Bioenergy; the Strategic Research Agenda of the Technology Platform Bioenergy.
- Signing the Memorandum of Strategic Partnership with the Russian Foundation for Technological Development, implementation of the bioenergy project on wood residues processing in Kirov region for 73 mln. rubles.
- Signing the Cooperation Agreements with the IEA (France) and the RWE Konzern (Germany).
- Organization of the International Conference on Bioenergy (June 5-6, 2012, Moscow, Russia) in cooperation with the Ministry of Agriculture of the Russian Federation and the IEA (France).

Announcement of events

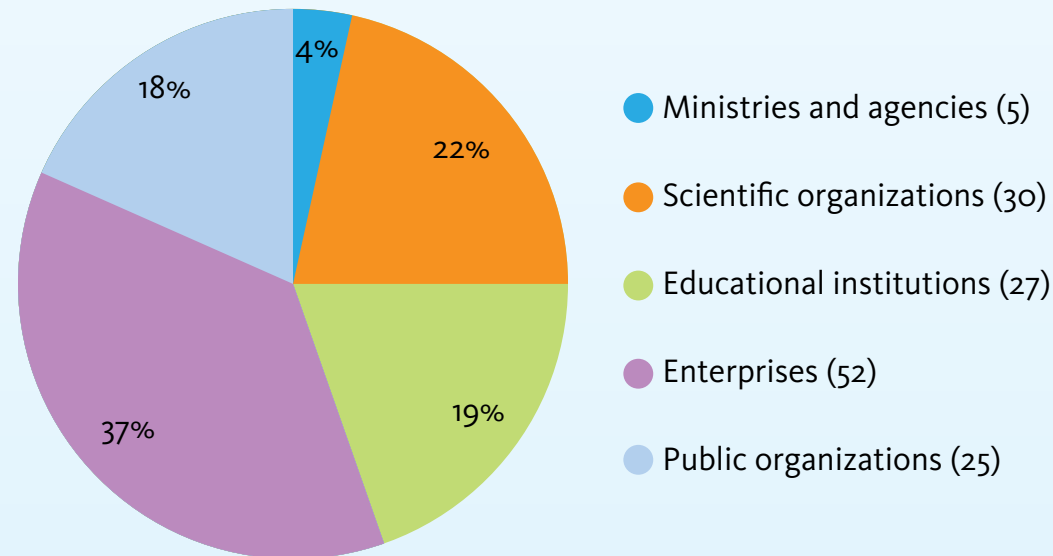
April, 2013 Seminar Bioenergy for Power Engineers – Efficiency Upgrading of Traditional Energetics

April, 2013 International Exhibition BIO Convention 2013 (Chicago, USA)

May, 2013 2nd International Conference on Bioenergy, (Moscow)

October, 2013 International Partnering Congress and Exhibition EurasiaBIO 2013 (Moscow)

MEMBERS OF THE RUSSIAN TECHNOLOGY PLATFORM «BIOENERGY»

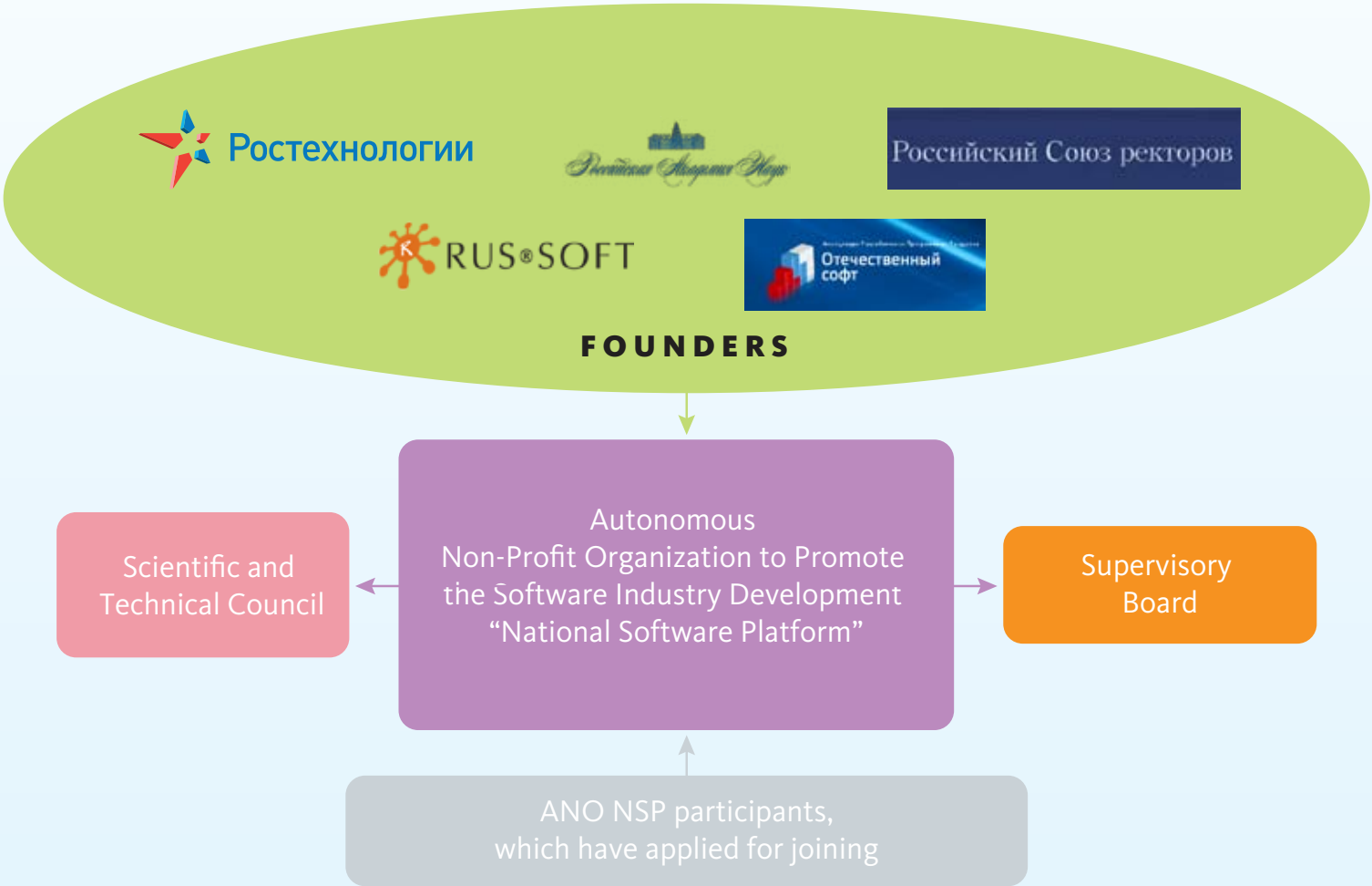


NATIONAL SOFTWARE PLATFORM

In December 2011, the institutionalization of the technology platform by means of establishing the Autonomous Non-Profit Organization to Promote the Software Industry Development “National Software Platform” (ANO NSP) was completed. The organizational structure of ANO NSP is as follows:



Leonid M. Ukhlinov
General Director of
Sirius Concern OJSC – TP Coordinator



NATIONAL SOFTWARE PLATFORM

More than 170 organizations are included in the Technology Platform

Among them are 7 RAS institutes, 35 higher education institutions, 17 industrial enterprises, 15 research institutes.

The majority of participants (more than 100 companies) are represented by business, i.e. software developers and integrators.

Among the participants of the technology platform there are such respected organizations as the Russian Technologies State Corporation, the Russian Rectors' Union, the Russian Academy of Sciences, RUSSOFT Non-Profit Partnership, the Association of Software Developers "Domestic Software", companies: Kaspersky Lab, 1C, Prognoz, ALT Linux, ABBYY, Rostelecom, Spirit, Crypto-Pro, Informzaschita and others

The competence of the Technology Platform is the creation of a unified technology package of domestic solutions and technologies based on open-source and domestic proprietary software, including:

Main technological spheres

- Basic system software
- Software and system engineering
- Application software
- Information security systems
- Cloud computing technologies
- Intelligent search engines, cognitive systems and semantic technologies;
- Telecommunications systems (including mobile ones)
- Electronic services, etc.

Contact information

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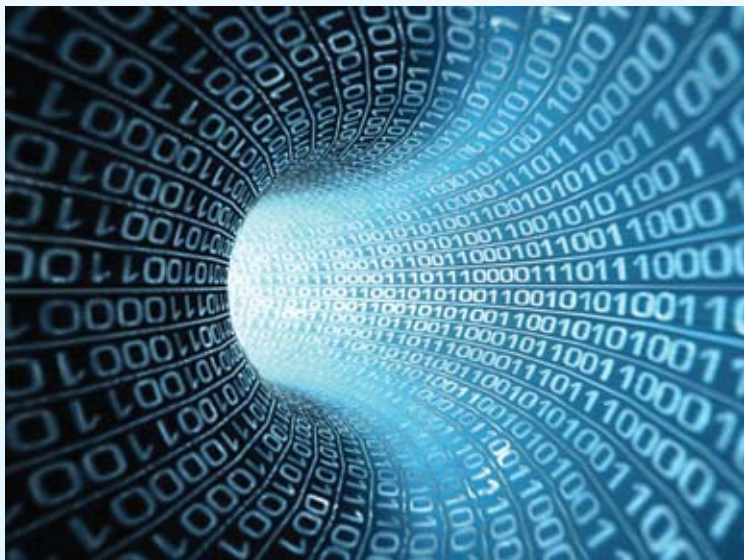
Key results

- 5 competence centers were opened and operate in Irkutsk, Samara, Novosibirsk, Kirov and St. Petersburg.
- The technical standardization committee "Operating environments and compatibility" was established. The national software development standard and guidelines were adopted.
- The agreement for opening of the representative office of the Technology Platform based on the information technology cluster of the Novosibirsk region was signed. Negotiations with other innovative clusters are underway.

Announcement of events

H1 2013 – Development of the strategic program on technology platform research and the concept for development of domestic software industry.

2013-2014 – Development of the infrastructure for support of the technology platform in other regions of the Russian Federation: opening of competence centers and offices



NATIONAL SUPERCOMPUTER TECHNOLOGY PLATFORM

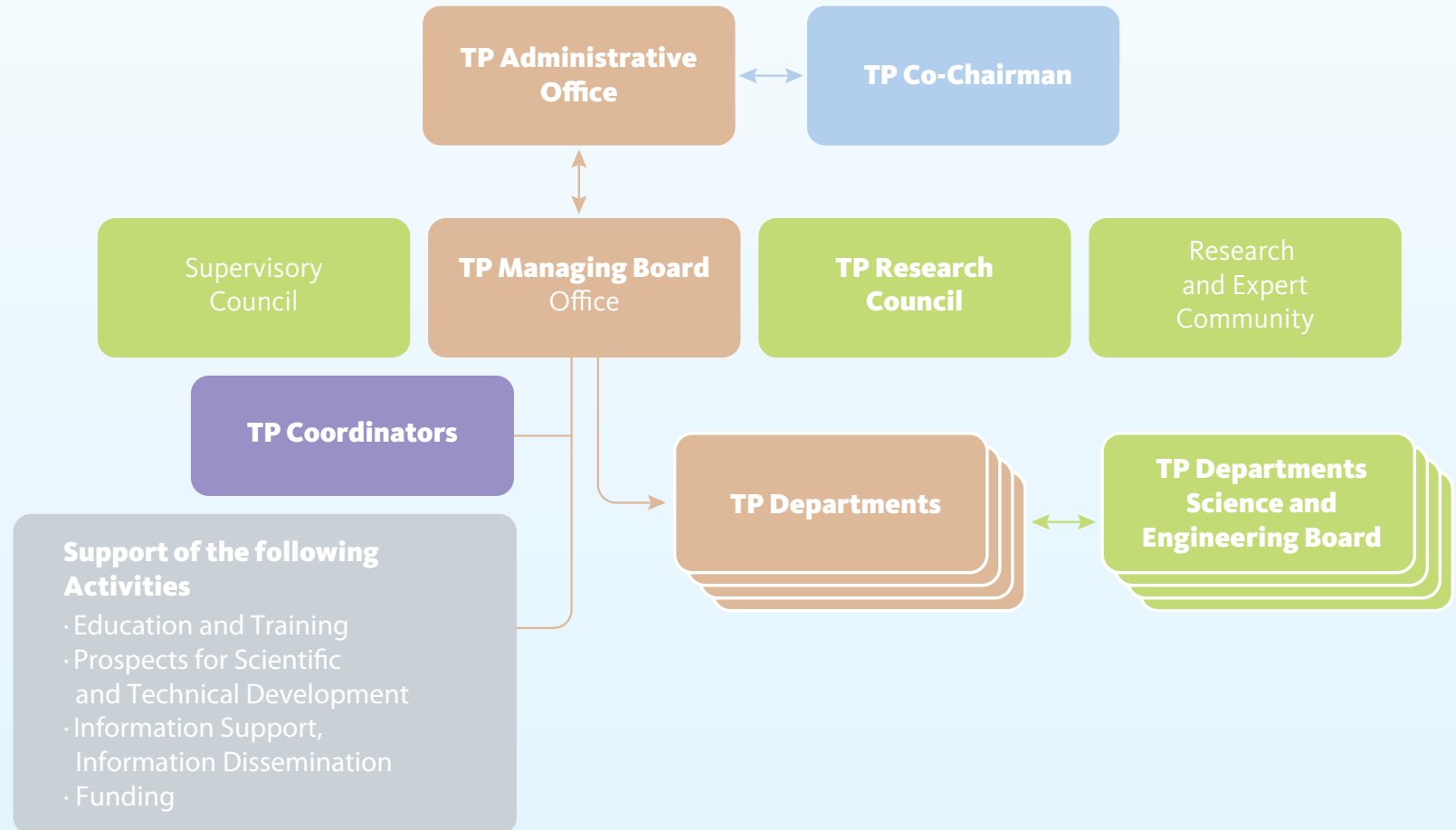


Evgeniy P. Velikhov
Supervisory Board Chairman



Vladimir B. Betelin
Co-Chairman from the Research Community

The NSTP non-commercial partnership was established on March 14, 2011; creation of a consortium is now discussed



Main technological spheres

- Supercomputer Equipment;
- System Software;
- System Engineering;
- Application Software;
- Communication Networks, Grid and Cloud Computing;
- Related Technologies.

Announcement of events

November 2012 «National Supercomputer Forum 2012»

Key results

- The platform was established;
- A general meeting was held;
- The www.hpc-platform.ru portal was designed;
- Development of a Strategic Programme for Research got started.

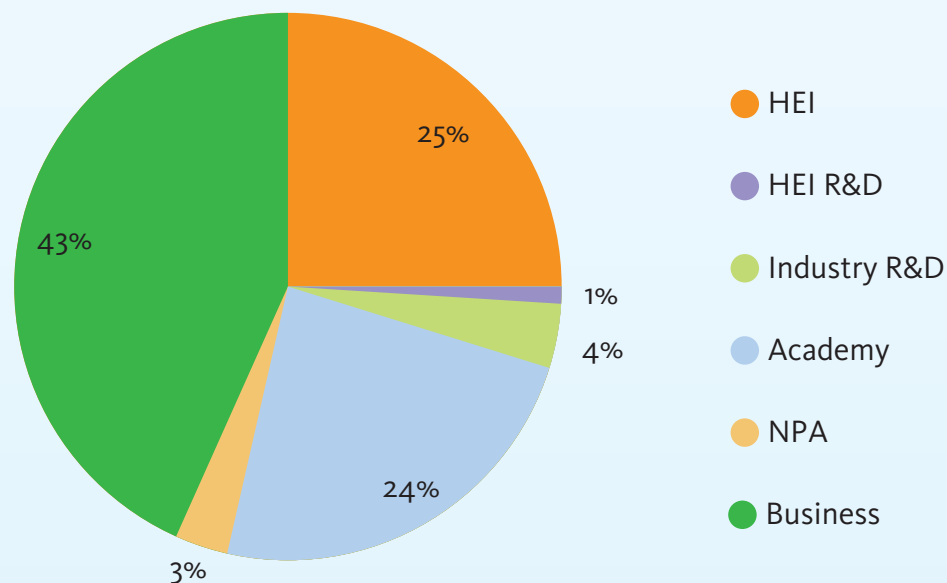
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The Platform brings together
over 220 full-fledged members — almost all Russian supercomputer domain





INNOVATIVE LASER, OPTICAL AND OPTOELECTRONIC TECHNOLOGIES – PHOTONICS

The Laser Association (a non-commercial partnership, international scientific-technical organization, established in April 1990) is a coordinator of the Technology Platform Photonics.

The Secretariat of the Association that is located in Moscow performs functions of the Secretariat of the Technology Platform Photonics. The Coordinating Committee and the Expert Council were established within the Technology Platform.

As of September 2012, about 140 companies from 32 regions of Russia as well as 8 foreign companies are the members of the Technology Platform Photonics.

Among them:

- 19 industry research institutes and technical research centers;
- 14 academic institutes;
- 38 universities;
- 44 production companies (i.e. industrial associations, scientific-production associations, factories, and design bureaus);
- 31 small enterprises.

The representatives of ROSCOSMOS (Federal Space Agency of the Russian Federation), ROSATOM (Russian State Atomic Energy Corporation), RAN (Russian Academy of Sciences), Russian Technologies State Corporation, OJSC Rostelecom, OJSC United Aircraft Corporation, OJSC United Shipbuilding Corporation, and OJSC Russian Railways are the participants of the Technology Platform Photonics.





Main technological spheres

Main technological spheres in which the Technology Platform Photonics is working are presented by 11 working groups (WG), specifically:

- WG1. Element Base of Photonics (The Federal State Unitary Enterprise “Scientific and Industrial Corporation “Vavilov State Optical Institute”, Saint Petersburg, is a base organization), 26 member-organizations.
- WG2. Education and Advance Training in Photonics and its Application (The National Research University for Information Technologies, Mechanics and Optics, Saint-Petersburg, is a base organization), 28 member-organizations.
- WG3. Laser Technologies and Methods Used in Industry (OJSC “Shipbuilding and Ship Repair Technology Center”, Saint-Petersburg is a base organization), 43 member-organizations.
- WG4. Photonics in Medicine and Life Sciences (A. M. Prokhorov General Physics Institute, Russian Academy of Sciences, Moscow, is a base organization), 18 member-organizations.
- WG5. Photonics in Agriculture and Natural Resource Management (the Research Institute of Genetics and Selection of Fruit Plants, Michurinsk, is a base organization), 14 member-organizations.
- WG6. Laser Information Systems for Special Applications (M.F. Stelmakh Research Institute «Polus», Moscow, is a base organization), 6 member-organizations.
- WG7. Laser Information and Communication Technologies (OJSC “Rostelecom”, Moscow, is a base organization), 14 member-organizations.
- WG8. Optoelectronic Modules and Systems (OJSC “Alpha”, Moscow, is a base organization) 8 member-organizations.
- WG9. Application of Optoelectronic Technologies (Moscow State University of Geodesy and Cartography is a base organization), 20 member-organizations.
- WG10. Photonics in Geodesy and Navigation (OJSC “Research and Production Corporation “Systems for Precise Instrument-Making”, Roscosmos, Moscow), 5 member-organizations.
- WG11. Nanotechnology in Photonics (A.F. Ioffe Physical-Technical Institute of the Russian Academy of Sciences, Saint-Petersburg is a base organization), 9 member-organizations.

Key results

Key results of activity upon approval of the first 27 technology platforms in Russian Federation

- Establishment of the Platform structure and composition, formation of the management bodies, approval of procedures and regulations, and organization of activity.
- Creation of topic “Photonics Technology Platform” on the Laser Association’s web site and in the information circular Laser-Inform
- Presentation of the Technology Platform in the special-purpose forums Photonics. World of Lasers and Optics, Moscow, Innoprom, Ekaterinburg, and annual meeting of the European Technology Platform Photonics 21, Brussels
- Holding the 1st Congress on Technology Platform - Photonics (April 2012, Moscow)
- Preparation of the strategic research programme (about 200 projects)
- Submission of applications to the Russian Foundation for Technological Development (6 applications; 3 projects are already financed) and Federal Targeted Programme Investigations and Researches on the Priority Concepts of Science and Technology (more than 30 proposals)
- Entering into agreements on cooperation with the Russian Foundation for Technological Development, European Technology Platform Photonics21, Optical Systems and Technologies Research and Production Corporation (Russian Technologies State Corporation)

Contact information

Secretariat of the Technology Platform Photonics

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Tel.: 495/333-0022

Fax.: 495/334-47-80

Email address: tp@cislaser.com

Site: www.photonica.cislaser.com

Announcement of events

January – submission of the updated version of the Strategic Research Programme for 2013 – 2016 to the Ministry of Economic Development and Trade

March – exhibition Photonics. World of Lasers and Optics 2013 and 2nd Congress of the Technology Platform Photonics, Moscow, Central Exhibition Complex Expocentre

May – collective exposition of the Laser Association and Technology Platform Photonics at the XXI exhibition LASER. World of Photonics, Munich, Germany

August – completion of the work on monitoring demands for the photonics technologies in Russia and preparation of the proposals on development of the completed researches

November – exposition of the Laser Association and Technology Platform Photonics at the IX exhibition OVC EXPO, Wuhan, People's Republic of China

IV quarter – initiation of the joint (Russian and European) Technology Platforms Photonics Project under the Russian Federation and European Union Programme Partnership for Modernization

RUSSIAN LED TECHNOLOGIES DEVELOPMENT



Sergey S. Polikarpov
Technology Platform Coordinator

Managing Director of JSC Rusnano
Business Unit

22 entities are registered for the technology platform, including:

- Scientific research and educational entities (HEI and SRI) – Saint Petersburg Electrotechnical University «LETI», Ioffe Physical Technical Institute, Saint-Petersburg NRU “ITMO”, Far Eastern Federal University – 11 participants
- LED and LED lighting manufacturers Optogan CJSC; Svetlana Optoelectronics CJSC; Ruselectronics JSC; Philips – 7 participants





Technology platform aims and work area

- Development of the LED production branch and a number of allied sectors in the Russian Federation;
- Ensuring the competitive world level of the R&D in the area of LED lighting;
- Pooling of efforts of government authorities, scientific institutions and manufacturers for technological, legal, financial, administrative and informational base for the LED industry development;
- Development of the demand for LED technologies and competitive market formation;
- LED products export increase.

Key results

- Proposals have been made to eliminate LED products from the «green list» of APEC products with the reduced customs duties until 2015;
- Suggestions have been formed on the research matters within the Federal Program «Research and development»;
- Opening of the Led Technologies Department at NRU ITMO (Saint-Petersburg). Masters education is underway;
- RF regulatory and legal framework has been amended to allow LED lighting use in different areas (Construction Standards and Rules, Sanitary Regulations and Standards, All Union State Standards);
- Technology platform participants became members of the high-tech regional innovation clusters, approved by the Ministry of Economic Development (Saint-Petersburg and Republic of Mordovia);
- LED Russia booth was organized on the international exhibition Light+Building (Frankfurt, Germany, April 2012);
- Conference “LEDs: Chips, Products, Materials and Equipment” LedTechExpo forum (Moscow, April 2012).

Announce of events

April 2013 Conference: “LEDs: Chips, Products, Materials and Equipment” LedTechExpo forum (Moscow)

13-15 June 2013 Scientific Conference “Gallium, Indium and Aluminum Nitrides: Structures and Equipment “ (Moscow)

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<http://nprpss.ru>

Technology Platform’s portal
http://www.hse.ru/org/hse/tp/fotonic_diod

AIR MOBILITY AND AVIATION TECHNOLOGIES



Boris S. Alyoshin

**Chairman of the Supervisory Board,
General Director of FSUE TsAGI**

The Technology Platform «Air Mobility and Aviation Technologies»

was founded on November 29, 2010. It is included in the catalogue of technology platforms approved by the resolution of the Government Commission for High Technology and Innovation (protocol No.2 of April 1, 2011). The Technology Platform “Air Mobility and Aviation Technologies” is evolving as a voluntary association of full-fledged organizations and enterprises of any business form and pattern of ownership. Organizations of different departmental subordination are involved in the work: educational institutions, research institutions, manufacturing enterprises and design offices, airlines, common carriers, professional associations, small innovation and implementation companies, governmental bodies, experts.

At present, there are 53 organizations (enterprises) among the participants of TP, including:

- higher educational institutions – 12
- research institutes – 14
- development institutions – 3
- management (holding) companies – 9
- manufacturing enterprises – 8
- airlines, common carriers – 3
- governmental bodies – 1
- other organizations – 3



Management structure

Coordinating agency of the Technology Platform –The Central Aerohydrodynamic Institute named after Prof. N.E. Zhukovsky.

The management structure of the Technology Platform involves:

- Supervisory Board (16 persons),
- Executive Board (26 persons);
- Secretariat (3 persons).

Inside the Technology Platform, the community of experts was composed of 160 experts, including 82 industry experts, 78 science experts (the list is open for amendments and additions).

At present, it is decided to initiate a Non-Commercial Partnership on the basis of the Technology Platform.

AIR MOBILITY AND AVIATION TECHNOLOGIES

Main technological spheres

- developing and updating the forecasts (foresights) in the field of aviation science and technology;
- examining offers on research and development activities in the field of aviation;
- drafting recommendations to federal executive authorities, development institutions, private investors on project financing in the sphere of Technology platform activity;
- developing local and regional air traffic market in the Russian Federation;
- performing research in the field of system integration of technologies under development and assurance of inter-branch cooperation and coordination of R&D being carried out;
- involving small innovative enterprises into the development of advanced aviation technologies and preparation for industrial production including the existing and developing territorial and innovative clusters as well;
- establishing interaction between the participants of the Technology Platform and the foreign leading aviation clusters and companies for the purpose of international cooperation when carrying out research and implementing the advanced aviation technologies.

Key results

- The community of experts has been formed, 160 in number.
- Foresight of aviation science and technology advancement has been worked out for the period to the year 2030 and for further perspective.
- 12 open hearings on priority areas of the Technology Platform activity have been conducted, including:
 - Strategy to form the National Plan for Development of Science and Technology in Aircraft Building;
 - Foresight (forecast) of aviation science and technology advancement for the period to the year 2030 and for further perspective;
 - Advanced aircraft technologies for small and regional aviation (14 projects were considered);
 - Perspective trends to create scientific and technical advance in the field of civil aircraft building of the leading research institutes of aviation industry (FSUE TsAGI, FSUE Central Institute for Aviation Motor Development named after P.I. Baranov, FSUE Siberian Aeronautical Research Institute named after S.A. Chaplygin, FSUE VIAM, FSUE GosNIIAS);
 - Advanced technologies in the field of airship building (12 projects and proposals to carry out R&D works were considered);
 - Priority trends of R&D works of Russian Helicopters JSC.
- Proposals on carrying out research were prepared for the year 2013 in the framework of the Federal Target Programme “R&D in priority areas of scientific-technological complex of Russia for the years 2007-2013” (44 applications in all).
- Proposals on the participation of Technology Platform “Air Mobility and Aviation Technologies” in the implementation of the State Programme “Development of Aviation industry for the years 2013-2025” were prepared.

Announcement of events

November, 2012 registration of a Non-Commercial Partnership Technology Platform “Air Mobility and Aviation Technologies”

December, 2012 concluding agreements with development institutions

2012-2013 selection and maintenance of projects which underwent examination by experts of the Technology Platform

2012-2013 participation as an independent expert platform in defining the subject areas and evaluating the progress of works being implemented in the framework of the state and federal target programmes in the scope of Technology Platform activity

2013 carrying out research in the field of system integration of technologies and assurance of inter-branch coordination when developing and implementing the advanced aviation technologies

2013 updating of foresight (forecast) of aviation science and technologies advancement for the period to the year 2030 and for further perspective

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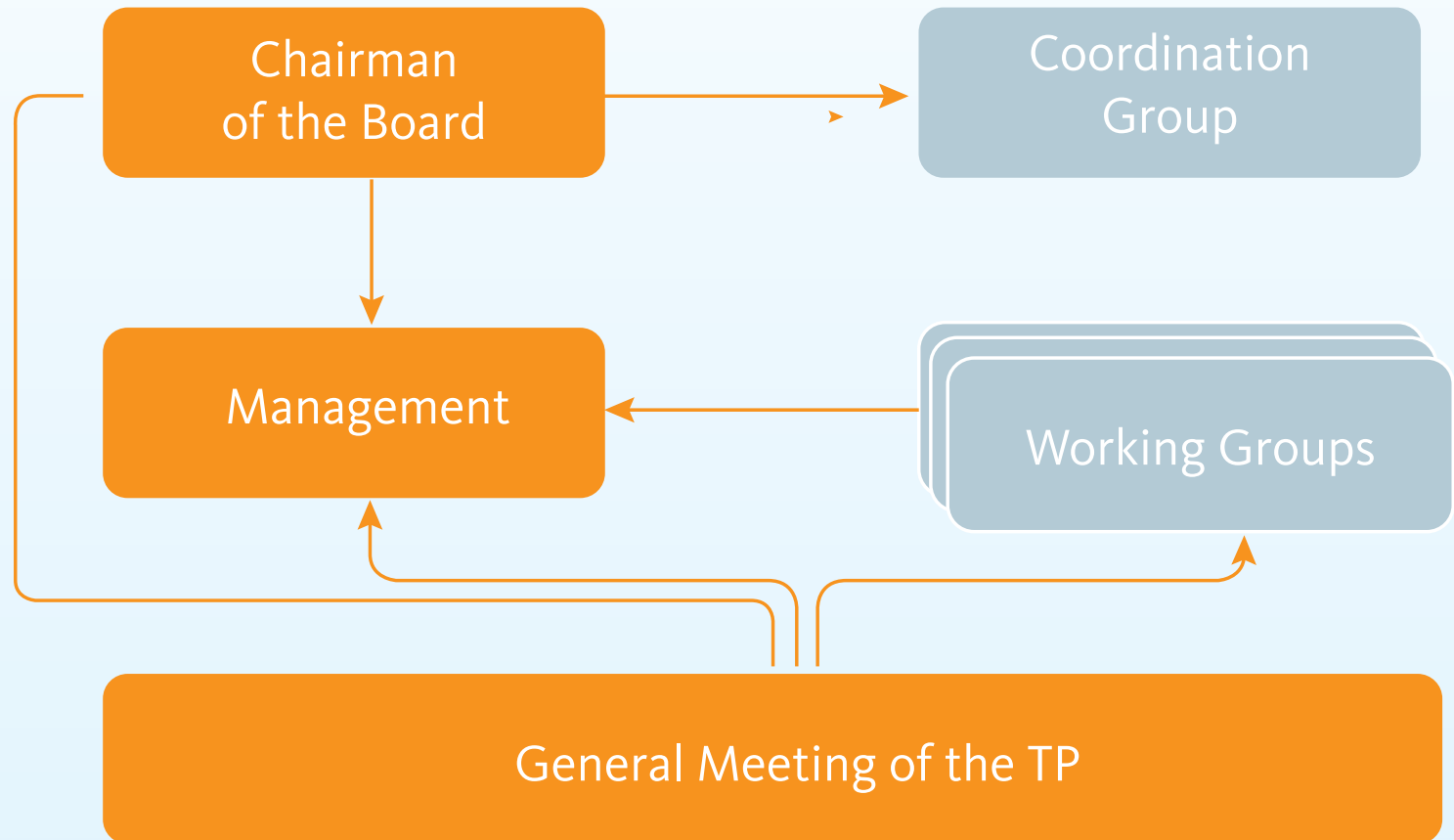


Gennadiy G. Raykunov
The Chairman of the Board
of NP NSTP

The Doctor of the Technical Sciences, Professor, the Winner of the Award of the Russian Federation Government in the field of science and technique, the Honored Worker of Science of the Russian Federation, Distinguished Engineer of the Russian Federation, the Honored tester of space technique, the academician of the Russian Astronautics Academy named after K.E. Tsiolkovsky, the chairman of the Coordinating Scientific and Technical Council of the Federal Space Agency according to programs of scientific applied researches and experiments on manned space complexes.

Non-profit Partnership National Space Technological Platform

(date of establishment: March 21, 2012)





The coordinators of the technology platform

- FGUP Central Research Institute of Machine Building
- Moscow Aviation Institute (National research university)

Initiators of NSTP

- FGUP «State Research and Production Space Center named after M.Khrunichev»
- FGUP Enterprise «Scientific-Production Association named after S.Lavochkin »
- FGUP “Central Aero-Hydrodynamical Institute named after Professor Zhukovsky»
- Rocket-space Corporation «Energy»
- Kazan State Technological University
- Rybinsk State Aviation Technological Academy named after P. Solovyov
- Samara State Aerospace University named after Academician Korolev
- Siberian State Aerospace University named after Academician M. Reshetnev
- Ufa State Aviation Technical University

35 organizations have joined

As part NSTP - 4 companies with state participation, implementing innovative development program.

Main technological spheres

- Creation (including designing, manufacturing and testing), use, maintenance of space technique, space materials and space technologies;
- Scientific space research;
- Usage of space technique for communication and broadcasting;
- Remote sensing of the Earth from space, including ecological monitoring and meteorology;
- Usage of satellite navigation and surveying systems;
- The manned space flights;
- Usage of space technique, space materials and space technologies for defense and security of the Russian Federation;
- Monitoring of objects and phenomena in outer space;
- Testing of technique in space condition;
- Production of materials and other products in space;
- Other activities carried out by means of space technique and rendering of other space-related services.

Key results

- Coordination of research work in field of space activities in accordance with its usage in other sectors of the economy;
- Support of private and state partnership in the field of innovation concerning to space industry;
- Information support and intensification of usage of space technologies and space activities results in various economy sectors;
- Creation of innovative educational infrastructure in interests of educational institutions of various levels concerning to the technology platform profile.



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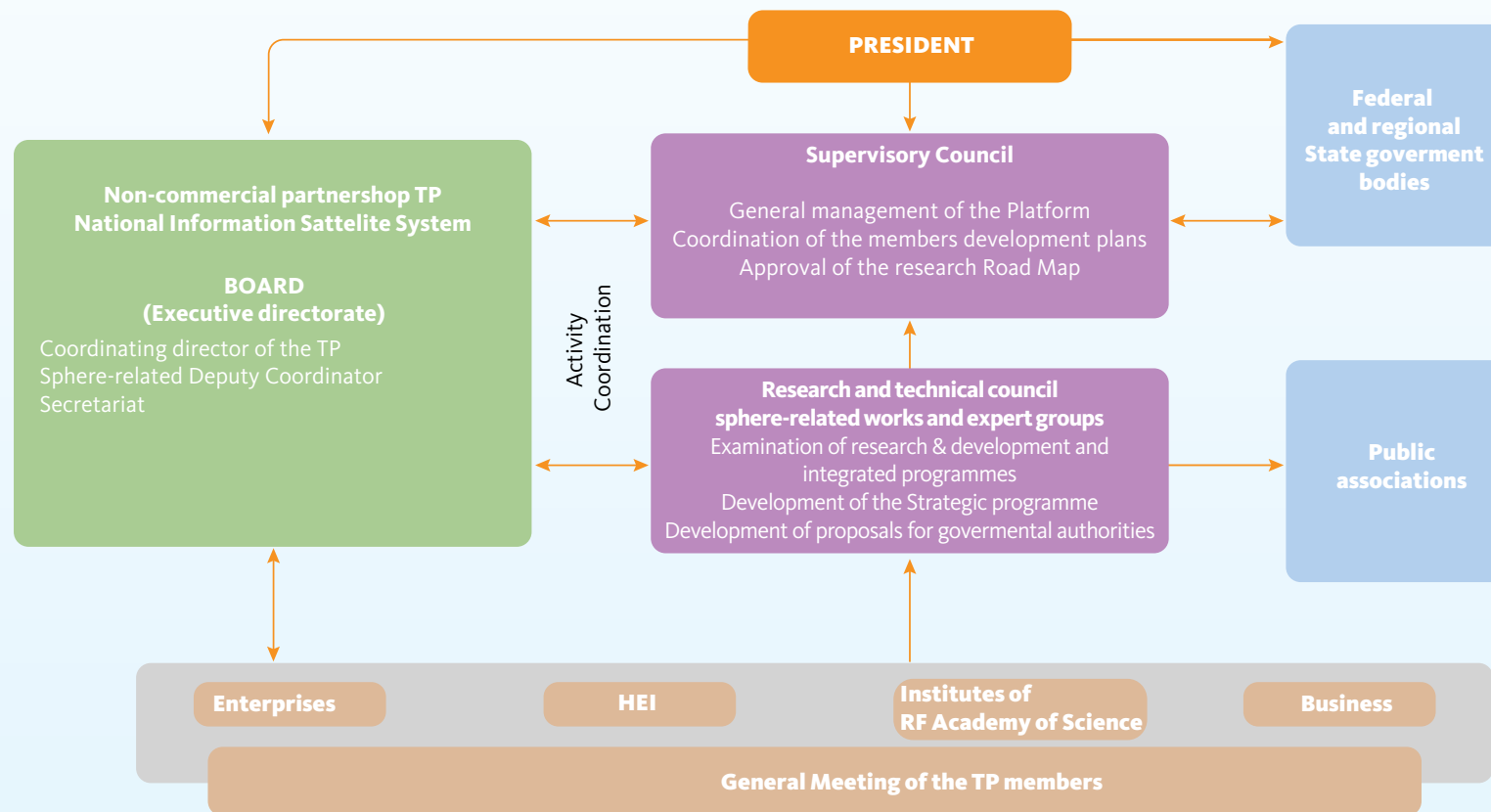


Nikolai A. Testoyedov
President of the TP
 General Designer and General Director of JSC ISS
 Associate Member of RAS



Vladimir I. Khalimanovich
Coordinator of the TP
 Director of the Branch Center
 KTMS JSC ISS

Organizational structure



Network of small and medium enterprises, Research and Technical centres, Research and Production centres, Research and Education centres.
 Recognition of interest of all parties concerned, i.e. State, Industry, Scientific Society, and Consumers

Main organization—members of the TP

National information satellite systems

Coordinator and initiator - JSC Information Satellite Systems named after academician M.F. Reshetnev

Leading enterprises:

- Federal State Unitary Enterprise Lavochkin Science and Production Association
- JSC Rocket and Space Corporation Energia named after S.P. Korolev.
- Federal State Unitary Enterprise M.V. Khrunichev State Space Scientific Production Center

Leading scientific and educational enterprises:

- Siberian branch of the Russian Academy of Science
 - Krasnoyarsk Scientific Center, Siberian branch of the Russian Academy of Science
 - Academician M.F. Reshetnev Siberian State Aerospace University
 - Siberian Federal University
 - National Research Tomsk Polytechnical University
 - National Research Tomsk State University
- Total number of the Platform members includes 51 organizations.

Main technological spheres

- Automated space vehicles
- Advanced materials and technologies for space equipment
- Nano- & microelectronics and instrument engineering for space equipment
- Antenna feeder systems
- Space information services i. e. navigation, communication, telecommunication, geodesy, space monitoring, etc.
- Scientific researches and experiments in space
- Development of the ground infrastructure of the space activity

Key results

- Draft of the Strategic Research Programme of the Technology Platform has been developed
- Works on constructing the automated space vehicles GLONASS, EXPRESS, LUCH, Gonets, AMOS-5, etc have been completed
- A number of projects related to development of new technologies, manufacturing and testing space vehicles and their elements have been implemented
- A system of basic Higher Educational Institutions for ensuring personnel and scientific support of the space industry enterprises has been established.
- Development of the innovative infrastructure of the basic Higher Educational Institutions, which are the members of the TP has been carried-out within the framework of PPRF No. 219 dated April 9, 2010

Announcement of events

October 11, 2012 2nd International Scientific-Technical Conference Navigation Satellite Systems, their role and importance in contemporary life

November 10, 2012 XVI International Scientific Conference Reshetnikov Conference, Krasnoyarsk
reshetnev.sibsau.ru

November 13, 2012 II Innovation Forum ZATO Zheleznogorsk

December, 2012 General Meeting of the Technology Platform

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CLOSED NUCLEAR FUEL CYCLE ON FAST NEUTRON REACTORS



Vyacheslav A. Pershukov
Deputy General Director of ROSATOM

Objective

development of the scientific and technological base of the large-scale nuclear power engineering of natural safety.

Coordinating organization:

Unit for Innovation Management of ROSATOM.

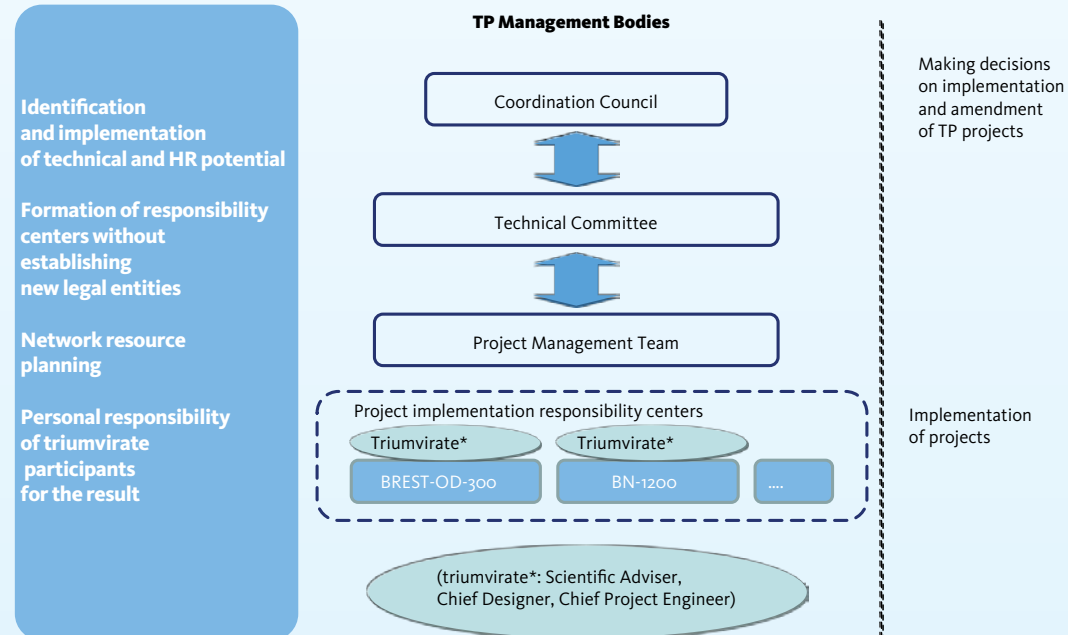
Leading Scientific and Educational Institutions:

A.I. Leipunsky Institute of Physics and Power Engineering, State Scientific Center of the Russian Federation (IPPE), N.A. Dollezhal Research and Development Institute of Power Engineering (JSC «NIKIET»), State Scientific Center Research Institute of Atomic Reactors (JSC «SSC RIAR»), A.A.Bochvar HighTechnology Research Institute of Inorganic Materials (JSC«VNIINM»), Afrikantov Experimental Design Bureau for Mechanical Engineering (JSC«Afrikantov OKBM»), National Research Nuclear University MEPhI, etc.

Leading companies:

Siberian Chemical Combine, OJSC, FSUE Mining-Chemical Combine, FSUE PA Mayak, MSZ OJSC, and etc.

Technology Platform (TP) Management system



triumvirate is formed for each project



Main technological spheres

- Development of advanced fast-neutron reactor technologies;
- Development of the technologies for the production of advanced types of fuel and materials for fast-neutron reactors; Development of closed fuel cycle technologies for fast-neutron and thermal neutron reactors;
- Development of new test beds and specific equipment, modernization and development of test bed base for substantiation of physical principles, design and engineering solutions, analysis and substantiation of safety in implementing the key scientific and technical decisions of the innovative nuclear power industry

Announcement of events

- putting into operation of fuel complex for the fabrication of uranium-plutonium mixed oxide fuel based on the vibrocompaction technology (JSC «SSC RIAR», Dimitrovgrad, Ulyanovsk region);
- Reconstruction and technical refurbishment of laboratory complex for the development and experimental validation of innovation pyrochemical technologies for the closed fuel cycle. (FSUE All-Russian Scientific Research Institute of Technical Physics, Restricted Administrative and Territorial Entity Snezhinsk, Chelyabinsk region);
- The conference “Analysis of the results of activity for 2012, the main activities for 2013. FSUE IPPE, Obninsk, Kaluga region, 1Q 2013.

Key results

- CC and TC were formed;
- key enterprises and responsibility centers for the projects were defined;
- terms of references for power unit and reactor installation with lead coolant were developed;
- the materials of technical project for the multipurpose MBIR research reactor were developed;
- pyrochemical installation was launched in the mode of regular SNF processing for the purpose of substantiating process solutions.

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CONTROLLED THERMONUCLEAR FUSION



Evgeniy P. Velikhov

TP Chairman

Academician of RAS,
President of NRC Kurchatov
Institute



Vyacheslav A.

Pershukov

TP Co-Chairman

Deputy General Director
– Director of Innovation
Management Block of SC
Rosatom, Doctor of Physics and
Mathematics, Professor

Key organizations - technology platform participants

- National Research Center Kurchatov Institute
- SRC RF TRINITI
- Efremov Institute (NII-EFA)
- N.A. Dollezhal Research and Development Institute of Power Engineering (NIKIET)
- VNIINM A.A. Bochvar All-Russia Research Institute of Inorganic Materials, State Scientific Center of Russian Federation
- Krasnaya Zvezda OJSC
- National Research Nuclear University MEPhI
- Bauman Moscow State Technical University,
- The Faculty of Computational Mathematics and Cybernetics of Lomonosov Moscow State University
- SEI Saint Petersburg State Polytechnical University
- Physical-Technical Institute of RAS
- Keldysh Institute of Applied Mathematics of RAS
- Budker Institute of Nuclear Physics, SB RAS
- Institute of Applied Physics of RAS
- Institute of Control Sciences of RAS

FTP «New generation nuclear technologies for the period of 2010-2015 and for the long term till 2020»

1. Research and development in the field of controlled thermonuclear fusion
2. Construction of Thermonuclear Baykal Complex
3. Construction, reconstruction and modernization of the modern thermonuclear R&D experimental test bed base

Scientific and Technical Council Section of SC Rosatom

Controlled thermonuclear fusion and new energy technologies

Chairman Ye.P Velikhov, Academician of RAS

Order No.1/961-П dd 14.11.2011

Expert Panel “The problems of CTF with magnetic plasma confinement”, Chairman Doctor of Physics and Mathematics, E.A. Azizov

Expert Panel “The problems of CTF with inertial plasma confinement”, Chairman M.P. Smirnov, Academician of RAS

Expert Panel “Engineering and technical issues of CTF”, Chairman V.A.Glukhikh, Academician of RAS

CONTROLLED THERMONUCLEAR FUSION

Main technological spheres

- Development and upgrading of the experimental and test bed base of tokamaks
- Development and testing of new plasma diagnostic systems
- Development of theory of fusion facility processes
- Development of thermonuclear reactor blanket technologies
- Development of IT technologies, models and codes, plasma control technologies
- Development of demonstration neutron fusion source
- Development of fusion-fission hybrid systems
- Development of the first wall and divertor technologies, new materials
- HF and UHF heating and neutral injection physics research
- Development of technologies for electron-cyclotron systems
- Training of specialists in the field of plasma and CTF

Announcement of events

2013 completion of Thermonuclear Baykal Complex project development.

Key results

- The experiment with lithium ring diaphragm in the wolfram limiter shadow at T-11M tokamak of the SRC RF TRINITI has demonstrated high performance when used as a header
- The experiments at Angara 5-1 facility for the purpose of developing the Thermonuclear Baykal Complex were carried out and the global-level results on 3D matter compression of quazi-spherical wire liners were obtained by SRC RF TRINITI
- The models of protective coatings for ITER first wall of TGP-56PS grade Russian beryllium were made by SRC RF TRINITI jointly with A.A. Bochvar High-technology Research Institute of Inorganic Materials

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RADIATION TECHNOLOGIES



DENIS KOVALEVICH

Coordinator of the Technology Platform, Executive Director of Nuclear Technology Cluster of Skolkovo Foundation



ALEXANDER MOLIN

Chairman of the Council of Society of Professionals in Radiation Technologies, Advisor of United Corporation for Innovations



WERNER BURKART

Advisor of the Technology Platform, IAEA ex-Deputy Director General

PARTICIPANTS OF THE TECHNOLOGY PLATFORM

The platform comprises over 80 organizations:

Research institutes

28 research institutes, including:

- NRC Kurchatov Institute
- Budker Institute of Nuclear Physics, SB RAS
- Institute of Applied Physics, RAS
- Joint Institute for Nuclear Research,
- Institute of High Current Electronics, SB RAS, etc.

Universities

12 universities, including:

- MSU,
- MEPhI,
- SPBU,
- SPBSTU,
- TPU, etc.

Manufacturing companies

15 companies, including:

- STC RATEK,
- Electron Ltd,
- Corad LLC,
- Diagnostika-M LLC,
- POSITOM-PRO LLC,
- VedaProekt LLC, etc.

Small and medium companies

36 residents of Skolkovo Foundation, including:

- SuperOx Innovations LLC,
- Plasma Sources LLC,
- Siemens Science and Research Center LLC etc.

ORGANIZATIONAL MECHANISMS OF THE TECHNOLOGY PLATFORM

PLATFORM COORDINATOR-SKOLKOVO FOUNDATION

- Coordination of corporate participants' activities.
- Communication with the customers, regulation authorities, and global engineering companies.
- Reconciliation of the long-term vision of the radiation technologies development between industrial players.
- Commercialization of the accumulated R&D results.
- Integration into global networks.

SOCIETY OF PROFESSIONALS*

- Coordination and consolidation of the public opinion of the professional community.
- Determination of long-term priorities and future market trends; development of a strategic research program.
- Scientific and technical evaluation of projects.
- Promoting the spheres of radiation technologies application.
- Database creation.

**The non-profit partnership "Society of Professionals in Radiation Technologies"(NP SoPRT) was registered in October 2012.*



MAIN TECHNOLOGICAL SPHERES

- Particle accelerators and components.
- Medical isotopes and radiopharmaceuticals.
- Radiation therapy and radionuclide therapy.
- Diagnostic systems using radiation and magnetic fields.
- Electron beam, radiation-chemical technologies and industry electromagnetic field technologies.
- Technologies and equipment for non-destructive testing, including inspection systems and logging.
- Radiation technologies for sterilization and disinfection.
- Radiation methods of territories' decontamination, flue gas and liquid effluents treatment.
- Radiation technologies for material processing and generation of new properties.
- Radiation technologies for processing of minerals.

KEY RESULTS

- **21 projects** of the Technology Platform participants were funded for **\$41 mln (RUR 1,239 million)**.
- **Publication of the first analytical report** "Radiation technologies: changing the nature of industries and the quality of life", based on the global foresight.
- **The first scientific conference** «Particle Accelerators and Radiation Technologies for the Future of Russia" was held in St. Petersburg, September 28-29, 2012.
- Technology Platform **specialists' training** was held in the Republic of Korea in May 2012.

ANNOUNCEMENTS OF EVENTS

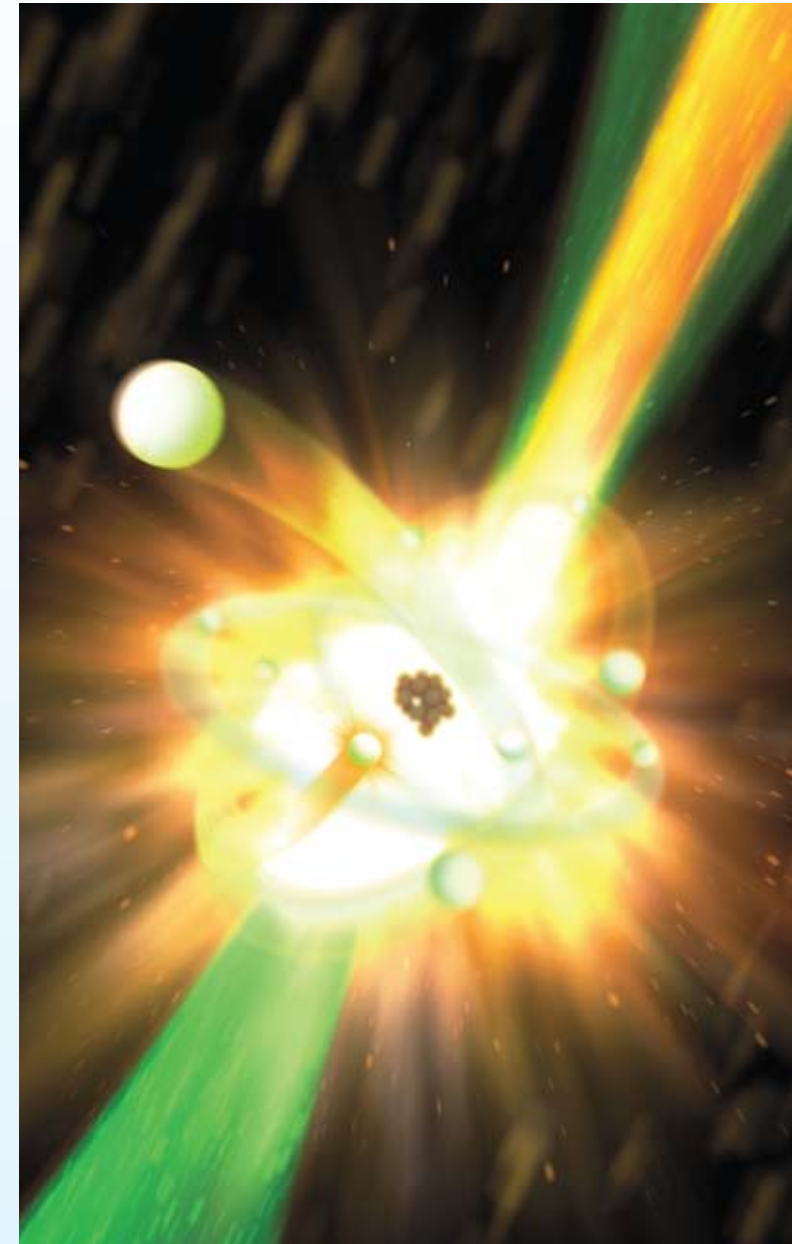
1st half of 2013 contest of innovative projects in the sphere of radiation technologies

2nd half of 2013 the second scientific conference on radiation technologies.

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INTELLECTUAL ENERGY SYSTEM OF RUSSIA



Alexei V. Konev

Coordinator TP

Director for Innovation and Management Systems,

**FSBO “Russian Energy Agency”
Ministry of Energy of the Russian Federation**

Co-initiators of the Technology Platform establishment

- Federal State Budgetary Organisation Russian Energy Agency
- OJSC Federal Network Company

Coordinating organization

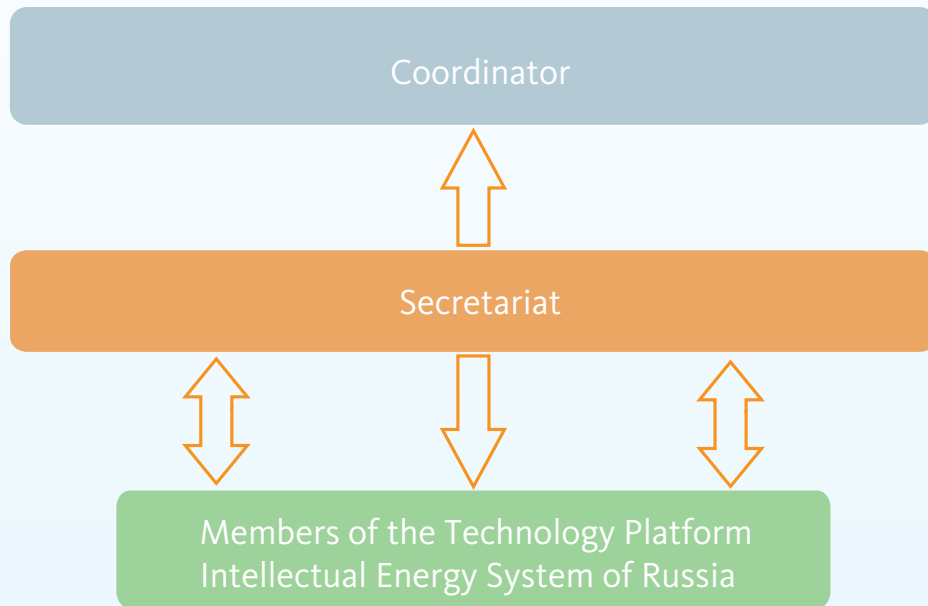
- Federal State Budgetary Organisation Russian Energy Agency

Total number of members

164 companies, including:

- Main transmission and distribution lines
- Energy generation
- Renewable energy
- Distributed and small energy
- Federal and regional executive authorities
- Scientific organizations and Higher Educational Institutions
- Industrial enterprises and equipment manufactures
- Marketing organisation
- Energy consumers

Organizational structure





Main technological spheres

- Measuring instruments and devices, including smart-meters and smart-transmitters
- Energy storage systems of different type and purpose
- Devices based on the high-temperature superconductivity
- Advanced technologies and components of electric network: FACTS, superconducting cables, semiconductor power electronics, short-circuit current limiters
- Controlled devices with variable characteristics based on the advanced semiconductor devices
- DC and AC power transmission systems
- Advanced management methods
- Equipment for on-line self-diagnostic systems

Contact information

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Secretariat of the TP Intellectual Energy System of Russia

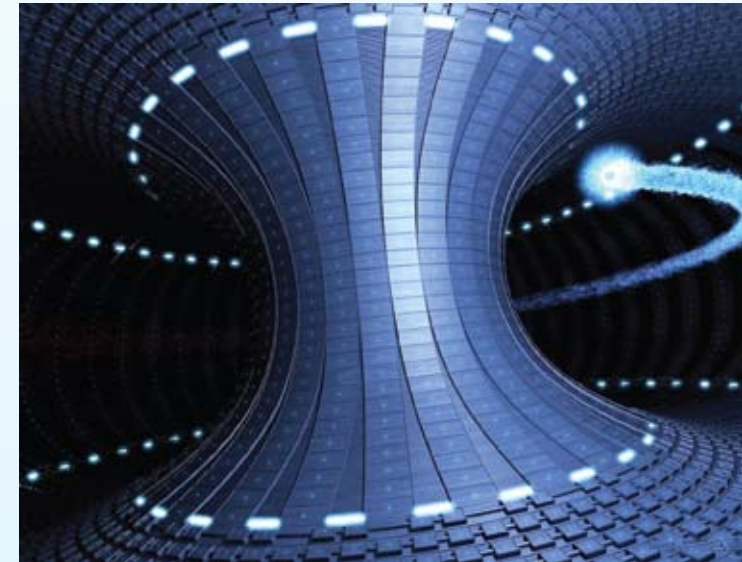
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Key results

- Concept of constructing the intellectual energy system provided with the active-adaptive grid has been initiated and developed by Federal Grid Company of the Unified Energy System of Russia
- The Russian Energy Agency has developed the Concept of Establishing the Intellectual Energy Metering System in MOESK
- The Program On Developing the Electric Power Fiscal Metering System on the Ground of Intellectual Metering Technologies for the Period Through to the Year 2020 has been developed. The Program has been approved by the Resolution of the RF Ministry of Energy No. 173 dd. May 10, 2011
- Russia represented by the Coordinator of the Technology Platform Intellectual Energy System of Russia participated in the Work Agreement of the International Smart Grid Action Network (ISGAN)
- Russian-American research project (with the participation of USEA) Factors Effecting Development of Smart Grid Technologies in Russia and USA: Legislative Control, Market Structure, Orientation on Consumer Demands is developing.
- The pilot project on constructing the infrastructure for electric transport in the territory served by MOESK has been launched as an element of realization of the integrated strategy of implementing smart grids in Russia
- In the city of Belgorod, MRSK Holding and MRSK Central began to implement the project related to the construction of “the smart city” within the framework of the homonymic international consortium
- MRSK Holding and MRSK Urala are implementing the pilot project on Smart Metering in Perm
- The test site Digital Sub-station has been put into operation in the Scientific-Technical Center of Federal Grid Company of the Unified Energy System of Russia

Key results

- The following pilot projects are in progress:
 - Construction of smart grid in the external power supply facilities of Elginsky Coal Complex (Smart Grid of Elgaugol cluster)
 - Development of the network storage systems for the Unified National Power Grid (capacity is up to 50MW)
 - Life-cycle test and adaptation of the high-temperature superconductive cable line for pilot operation in the substation 100 kV Dynamo

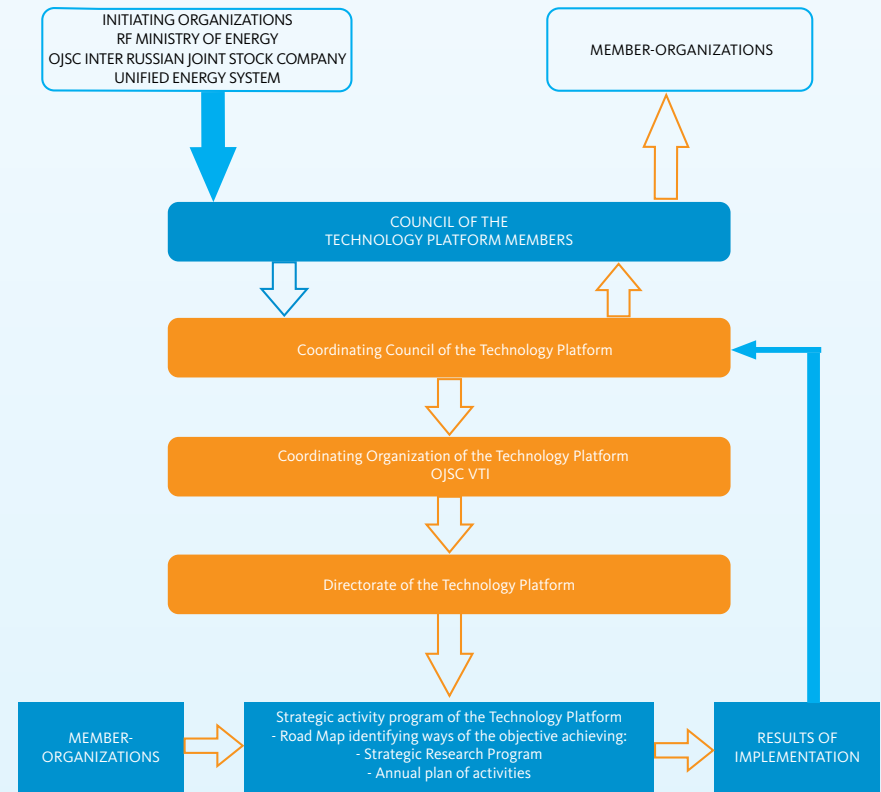
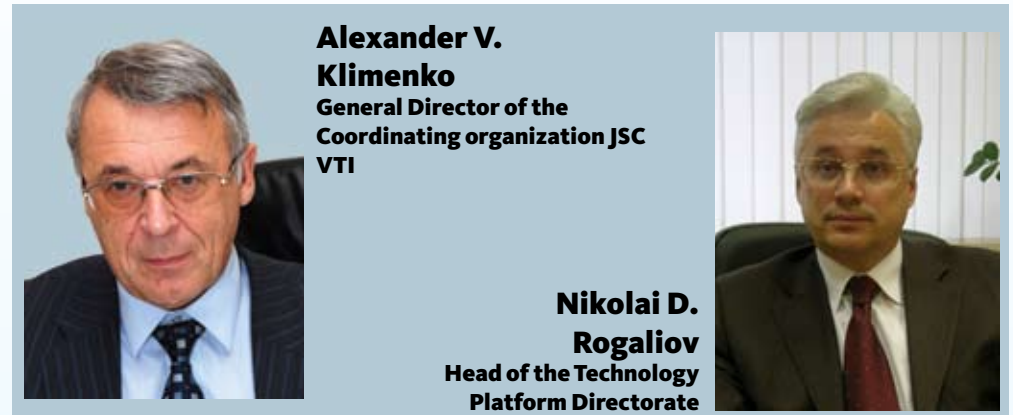




ECOLOGICALLY SAFE THERMAL ENERGETICS OF HIGH EFFICIENCY

MEMBERS OF THE TECHNOLOGY PLATFORM

No.	Type of organization	Description of organization
1	Federal body of the executive power	RF Ministry of Energy
2	Power generating companies	JSC INTER RAO UES
3		LLC Gazprom energoholding
4		JSC RAO Energy System of East
5		Research institutes and companies
6		JSC All-Russian Thermal engineering institute (JSC VTI)
7		Federal State Unitary Enterprise All-Russian Electrotechnical Institute named after V.I.Lenin (FGUP VEI)
8		National research centre Kurchatov Institute
9		Joint Institute for High Temperatures of the Russian Academy of Sciences (JIHT RAS)
10		Thermophysics institute of S. S. Kutateladze of the Siberian Branch of the Russian Academy of Science (TI SB RAS)
11		JSC Power institute of G.M.Krzhizhanovskiy
12		JSC I.I. Polzunov Scientific and Development Association on Research and Design of Power Equipment
13		JSC Research Institute For Heat Power Engineering Instruments
14		PJSC RPA CNIITMASH
15		Melentiev Energy Systems Institute of Siberian Branch of the Russian Academy of Sciences (ESI SB RAS)
16		JSC Unikhimtek
17	Design organization	JSC Institute Teploelectroproject
18	Production organizations of power-plant industry	PJSC EMAlliance
19		OJSC Power Machines
20		OJSC Aviadvigatel
21		OJSC Atomenergomash
22	Higher Educational Institutions	Scientific & Industrial Valve Manufacturers Association
23		National Research University «Moscow Power Engineering Institute» (MPEI)
24		Federal State Budgetary Educational Institution of Higher Professional Education - St.Petersburg State Polytechnical University
25	Engineering companies	Federal State Autonomous Educational Institution of Higher Professional Education Siberian Federal University
26		CJSC Interavtomatika
27		Autonomous Non-Commercial Organization ICEM
28	Marketing organizations	Non-Commercial Partnership National Hydrocarbon Agreement
29	Banks	CJSC Energy Forecasting Agency
30		Moscow Industrial Bank
		Gazprombank



ECOLOGICALLY SAFE THERMAL ENERGETICS OF HIGH EFFICIENCY



MAIN TECHNOLOGICAL SPHERES

- Domestic gas-turbine plants and combined-cycle plants based on the gas-turbine plants, of unit capacity up to 1000 MW with an efficiency coefficient of up to 60%; advanced technologies involving use of fuel elements providing an efficiency coefficient of up to 70%.
- Coal-fired energy units designed for ultra supercritical steam parameters of unit capacity up to 330–660–800 MW with an efficiency coefficient of 44–46%; advanced technologies involving ultra supercritical steam parameters (35 MPa, 700/720°C) providing an efficiency coefficient of 51–53%, and coal-fired combined heat and power stations of new generation having unit capacity 100–200–300 MW and using different technologies of fuel combustion.
- Solid fuel gasification combined-cycle plants of unit capacity 200–400 MW having an efficiency coefficient of up to 50% and advanced technologies involving fuel elements, which provide an efficiency coefficient of up to 60%.
- Technologies involving use of ecologically safe solid fuel and gas purification, which provide minimum emission of SO₂, NO₂, ash particles, and other ingredients, including CO₂ capture from the cycle, compression and disposal.
- High performance modular combined-cycle cogeneration plants with unit capacity of 100 and 170 MW for constructing new and upgrading the existing combined heat and power stations; advanced technological complexes (based on the above-mentioned stations and using the heat pump plants) providing a coefficient of fuel heat utilization close to 95–98% taking into account the use of the low-temperature heat sources.
- 60–1000 MW turbo-generators based on the state-of-the-art electric insulating materials and technologies making it possible to increase service life of the turbo-generators up to 50 years and to ensure the intermaintenance period of up to 7 years.

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KEY RESULTS

Organizational and technical actions:

- Directorate of the Technology Platform, Coordinating Council have been established; Head of the Technology Platform Directorate has been appointed;
- Meetings of the TP Members Council and TP Coordinating Council are held regularly;
- Regulation on the Technology Platform, Procedure for Accession to the TP of Other Organizations have been approved; Plan of Activity for 2011, Report on Fulfilling the Implementation Plan for 2011, Plan of Activity for 2012 have been approved;
- New Members have been admitted to the Technology Platform;
- Representation of the Technology Platform in the meetings held by the RF Ministry of Energy, Ministry of Economic Development and Trade, Ministry of Education and Science, State Corporation 'Russian Corporation of Nanotechnologies', etc. has been provided;
- Agreement on Cooperation with the Technology Platform «The Intellectual Energy System of Russia» has been signed;
- A special section related to the Platform has been created on the official web-site of JSC VTI, which is the coordinating organization of the TP as well as on the Internet portal of the Technology Platforms.

Activities on implementing and financing the Technology Platform:

- Road Map for achieving the objectives has been developed;
- The draft of the Strategic Research Program has been developed;
- Projects carried-out by the TP Members have been implemented (total financing in 2011 amounted to 60 mln. rubles);
- We have won a number of tenders organized by the Ministry of Education and Science under the Federal Targeted Program Research & Development Works on Priority Spheres of Developing the Scientific & Technology Complex of Russia for the Period of 2007 – 2013 (total financing in 2011 amounted to 226 mln. rubles);
- Contracts for work execution under the Investment Programs of JSC INTER RAO UES and LLC Gasprom Energoholding are signed. Total financing in 2011 amounted to 200 mln. rubles;
- Memorandum on Strategic Partnership and Cooperation with Federal State Autonomous Institution Russian Foundation for Technological Development;

Scientific and technical activities:

- Five scientific and technical conferences and seminars have been held; meetings of the Research and Technical Council discussing key technologies developed under the TP are held on regular basis;
- Meeting of the experts with the representatives of the International Energy Agency (IEA) has been held;
- Members of the TP took an active part in a number of major sector-related Russian and international exhibitions and conferences.
- Personnel qualification upgrading and developing courses are organized and established on the base of the established Research and Education Centers.

ANNOUNCEMENT OF EVENTS

Organizational and technical actions:

- Examination of applications from the organizations for accession to the TP;
- Participation in the meetings held by the RF Ministry of Energy, Ministry of Economic Development and Trade, Ministry of Education and Science and other organizations;
- Improvement of the TP management mechanism;
- Information updating on the official web-site of JSC VTI, which is the coordinating organization of the TP as well as on the Internet portal of the Technology Platforms;

Projects implementing and financing activities:

- Implementation of the TP key technology projects according to the developed Road Map and Strategic Research Programme for 2013-2014;
- Continuation of work execution on the Contracts with the Ministry of Education and Science under the Federal Targeted Programme Research & Development Works on Priority Spheres of Developing the Scientific & Technology Complex of Russia for the Period of 2007 – 2013 with total financing of 156.38 mln. rubles (deadline – 2013);
- Entering into new contracts and continuation of work execution under the Contracts with JSC INTER RAO UES and LLC Gasprom Energoholding and other power generating companies as well as design, production, and engineering organizations (during 2013-2014);
- Cooperation with the Russian Foundation for Technological Development on financing the TP member-organizations.

Research and technology activities:

- Holding the traditional research and technology conferences and seminars organized by the TP members, meetings of the Research and Technical Council discussing key technologies developed under the TP;
- Further cooperation with the representatives of the International Energy Agency (IEA);
- Participation in a number of major sector-related Russian and international exhibitions and conferences.
- Development of cooperation with the Higher Educational Institutions; organization on the regular basis of the personnel qualification upgrading and developing courses on the base of the established joint Research and Education Centers of the TP member-organizations, namely: MPEI – JIHT RAS; MPEI – VTI; TI SB RAS – Novosibirsk State University; TI SB RAS – Siberian Federal University, TI SB RAS – Tomsk Polytechnical University, etc.



PROSPECTIVE TECHNOLOGIES OF RENEWABLE ENERGY SOURCES



Viktor V. Elistratov
Co-Chairman of the Platform
Head of Department attached to SPbGPUAN

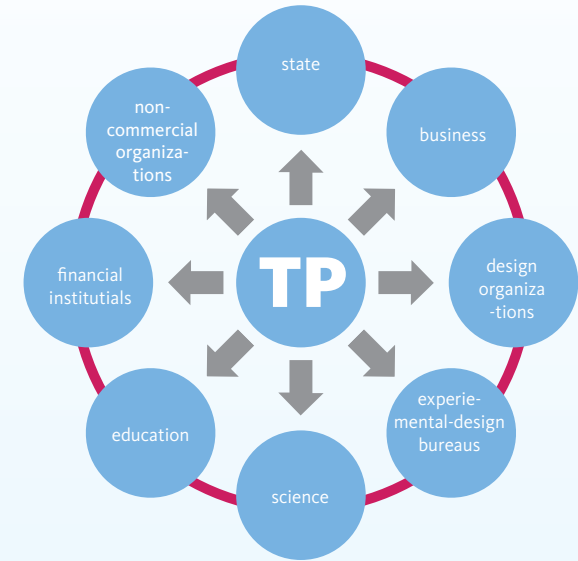


Mikhail V. Kozlov
Co-Chairman of the Platform
Director of Innovations and Renewables, JSC RusHydro

Objective

The purpose of this Platform is to join the efforts of the state, business, financial and development institutions, research and design organizations in creating favorable conditions to develop renewable energy engineering, implement highly efficient generating technologies based on renewable energy sources (RES) and enhance competitive capacity of services and products by the renewable energy sector on the Russian and global markets.

Platform founder and coordinator
JSC RusHydro



Boris F. Reutov
Co-Chairman of the Platform
Director of Innovative Energy Department attached to NRC Kurchatov Institute



Rasim M. Khaziakhmetov
Co-Chairman of the Platform
Executive Director, NP Hydropower Engineering of Russia, Director of Technical Policy and Development, JSC RusHydro

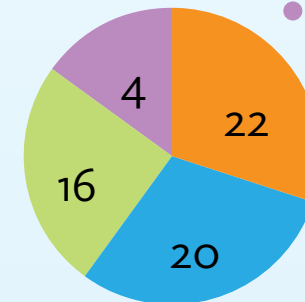
Organizational structure of the Platform:



PARTICIPANTS OF THE PLATFORM

62 participants take part in the Platform activities, including:

- Business structures
- Scientific research and design organizations
- Educational institutions
- Associations (Partnerships)



As of 20.09.2012



Main technological spheres

Solar energy



Hydropower engineering (including large-scale electricity generation)



Energy supply systems (based on RES use)



Energy accumulators



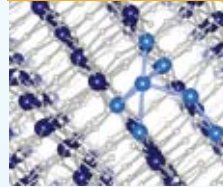
Wind power engineering



Sea power engineering



Hydrogen power engineering



Other RES types



Geothermal power engineering



Tidal, wave and stream flow power engineering

Key results

- A strategic research programme was developed within the framework of the Platform
- The strategic partnership and cooperation memorandum was signed between the Platform and Russian Technological Development Foundation
- Borrowed funds (a contest organized by The Russian Foundation for Technological Development) to implement the project «Development of 100 kW closed wind turbine power unit» were obtained.
- Propositions made by the Platform participants are registered in the database of the Federal target programme «Research and development in priority areas of Russian scientific and technological complex development for 2007-2013»

Announcement of events

- Approval of the Strategic Research Programme of the Platform
- Establishment of the Platform as a non-commercial organization
- Conclusion of cooperation agreements with development institutes
- Attraction of financial resources to implement the Platform projects

Contact information:

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Danil Sorokovik
Platform Coordinator Assistant
SorokovikDV@gidroogk.ru
+7 (495) 225-32-32, 1170

SMALL-SCALE DISTRIBUTED ENERGY



Igor S. Kozhukhovskiy

Platform Co-Chairman
CJSC Energy Forecasting Agency (EFA)



Valeriy V. Korneev

Platform Co-Chairman
Advisor of Chairman of the Board



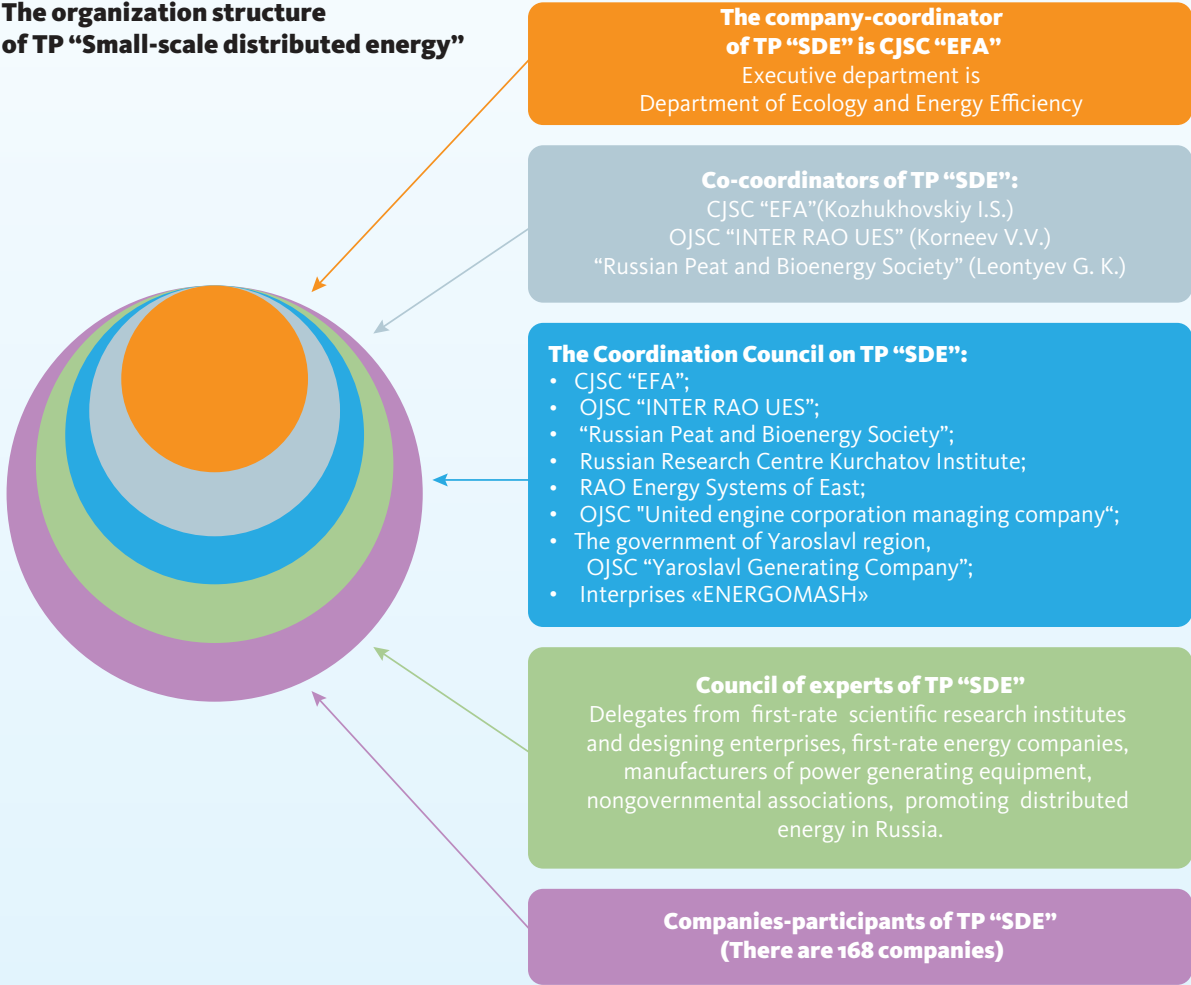
Olga A. Novosyelova

SDE Platform Coordinator
Director for Ecology and Energy Efficiency, CJSC EFA

Purposes of TP «SDE» activity

The structural reorganization of Russian energy generation system, transition from large centralized facilities to a plurality of energy generation patterns that better meets individual consumer demand, corresponds to local environment and fulfils requirements of the federal policy for higher energy efficiency.

The organization structure of TP “Small-scale distributed energy”



The company-coordinator of TP “SDE” is CJSC “EFA”
Executive department is Department of Ecology and Energy Efficiency

Co-coordinators of TP “SDE”:
CJSC “EFA”(Kozhukhovskiy I.S.)
OJSC “INTER RAO UES” (Korneev V.V.)
“Russian Peat and Bioenergy Society” (Leontyev G. K.)

The Coordination Council on TP “SDE”:

- CJSC “EFA”;
- OJSC “INTER RAO UES”;
- “Russian Peat and Bioenergy Society”;
- Russian Research Centre Kurchatov Institute;
- RAO Energy Systems of East;
- OJSC “United engine corporation managing company”;
- The government of Yaroslavl region, OJSC “Yaroslavl Generating Company”;
- Interprises «ENERGOMASH»

Council of experts of TP “SDE”
Delegates from first-rate scientific research institutes and designing enterprises, first-rate energy companies, manufacturers of power generating equipment, nongovernmental associations, promoting distributed energy in Russia.

Companies-participants of TP “SDE” (There are 168 companies)

SMALL-SCALE DISTRIBUTED ENERGY

Currently 168 participants have joined the TP «Small-scale distributed energy»

They include:

Famous scientific research institutes and designing enterprises (National Research Centre Kurchatov Institute, United Institute of High Temperatures of RAS, Ioffe PTI RAS, Institute of Electrophysics of the Ural Division of RAS, etc.),

First-rate energy companies

(INTER RAO UES, RAO Energy Systems of East, SC ROSATOM, OJSC Yaroslavl Generating Company, etc.),

Manufacturers of power generating equipment

(OJSC United Engine Corporation Managing Company; Russian Technologies State Corporation, OJSC SPA Saturn, CJSC CARBONICA-F, OJSC Heat Pump Systems, etc.),

Nongovernmental associations

promoting distributed energy in Russia (NP Russian Peat and Bioenergy Society, the National Association for Small-Scale Power Generation),

First-rate suppliers of foreign equipment

(BPC –Engineering, SC Bristol)

Main technological spheres

- Efficient engines for power units: GTP, Microturbines, Gas reciprocating components, New types of engines (FPE, with external heat application, rotary-vane engines);
- Gasification of local fossil fuel resources;
- Hydrogen power industry and combustion cells;
- Energy accumulators (chemical, inertial, gravitational, etc.);
- Development of energotechnological systems of a wide power range for obtaining energy resources, fuels and secondary products from solid fuels (including coals), RES;
- Heat pump units, etc.

Key results

- The Coordination Council and the Council of experts of TP “SDE” have been established.
- Coordination have been organized with the following institutions: Profile Ministries and agencies, State institutions for development, Companies with the collaboration of the Government, that deal with plans of technological development of TP “SDE” activity etc.
- Coordination with profile Government programs and FTP have been organized.
- The structure of “Strategic research program (SRP) and The Road Map Concept have been developed. Pilot versions of documents have been developed.
- Pilot projects of TP “SDE” (including cooperation with regional innovative clusters) preparation was carried out.
- Coordination with foreign profile companies (“Metso”, “Wartsila” etc.) have been organized, foreign partners are being sought for realization of “pilot” projects.
- 24.09.12 the Round Table (in conference with the Energy Committee) took place.

Announcement of events

29.11.2012 Execution of the second annual All-Russian National Conference “The development of Small-Scale distributed energy in Russia”.

December 2012 Holding of general meeting of TP “SDE” stakeholders; selection of organizational form of activity; approval of general strategic documents of TP “SDE”.

2013-2014 Implementation of 3-5 key pilot projects with bringing to the commercialization stage (including engaging state institutes for development and building up the innovation escalator).

Contact information

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N. M. Ushakova
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For further information on TP “SDE” activity, please, visit the Coordinator’s webpage:
http://www.e-apbe.ru/distributed_energy/

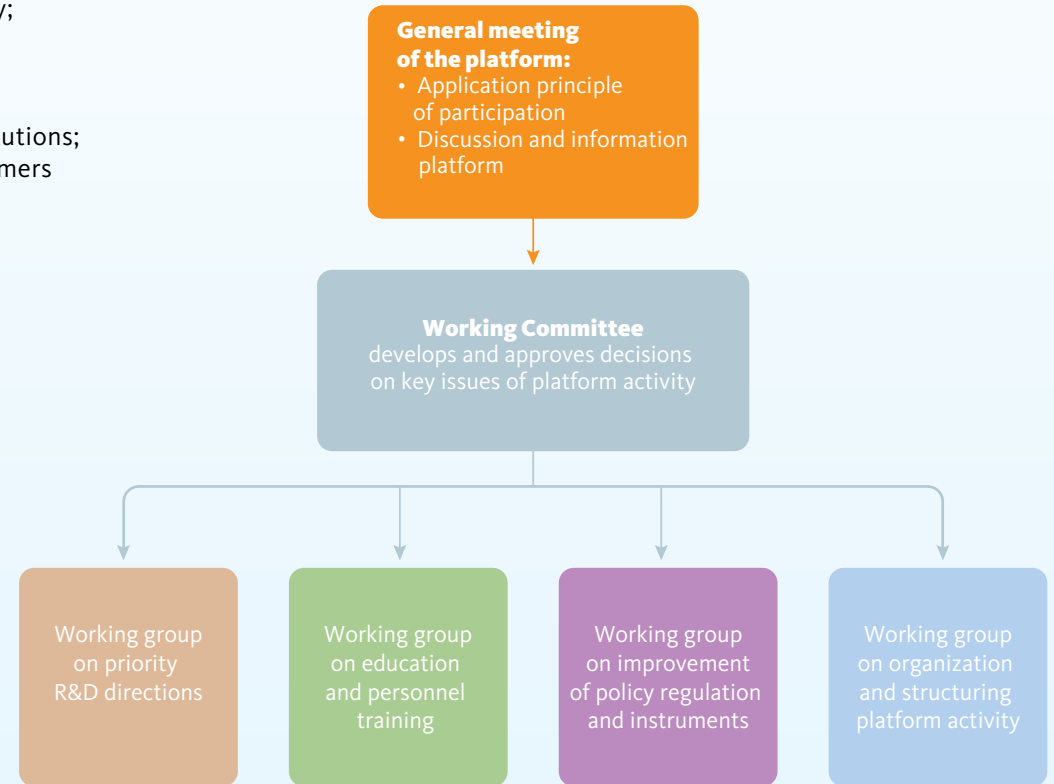
APPLICATION OF INNOVATIVE TECHNOLOGIES TO IMPROVE THE EFFICIENCY OF CONSTRUCTION, MAINTENANCE AND SAFETY OF HIGHWAYS AND RAILWAYS



Alexander N. Morozov
Coordinator
of the Technology Platform,
Department Director
of the Fund for infrastructure and
educational programs

Working Committee composition:

- Committee Chairman (representative of platform Coordinator);
- Representative of «Russian Railways»;
- Representative of Federal Highway Agency;
- Representative of SC «Avtodor»;
- Representative of development institutes;
- Representative of scientific community;
- Representative of nonprofit industry institutions;
- Representative of foreign industrial consumers



Contact information

**Director of Demand Promotion Programs
Department
of the Fund for Infrastructure
and Educational Programmes**

Alexander N. Morozov
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APPLICATION OF INNOVATIVE TECHNOLOGIES TO IMPROVE THE EFFICIENCY OF CONSTRUCTION, MAINTENANCE AND SAFETY OF HIGHWAYS AND RAILWAYS

62 enterprises and organizations are the participants of the Technology Platform:

- Companies - consumers of innovative solutions (Russian Railways, SC Avtodor, Deutsche Bahn AG, OJSC State Transport Leasing Company, OJSC Chuvashavtodor, etc.);
- Companies - producers of innovative solutions (CJSC SIBUR Holding, OJSC Gazprom Neft, CJSC Optogan, LLC RST-Invent, Plackart CJSC, Unikom LLC, etc.);
- Scientific-Research Institutes (Railway Research Institute, FSUE Russian Road Research Institute (RosdorNII), CJSC Research & Design Institute for Information Technology, Signalling and Telecommunications on Railway Transport (NIIAS), etc.);
- Institutes of higher education (Moscow State Automobile and Road Technical University, Moscow State University of Railway Engineering, Moscow State Technological University Stankin etc.);
- Engineering companies (OCV CJSC, AECOM, etc.);
- State structures (The Ministry of Transport of the Russian Federation, Federal Highway Agency, the Ministry of Transport and Railways of Ryazan Oblast, etc.);
- Development institutes, public associations and organizations (Fund for infrastructure and educational programs, RUSNANO, NP of LED and LED-based System Manufacturers, Union of Composites Manufacturers, etc.).

Key results

- **Federal innovative pilot project «Innovative highway».** The list of innovative technologies and regions-participants of the project are defined (Moscow, the Republic of Tatarstan, Ryazan Oblast); Requirements specification for the development of design estimates was elaborated.
- **Federal innovative pilot project «Electric transport» (in part of infrastructure).** regions-participants of the project were defined (the Republic of Tatarstan, Novosibirsk Oblast, Moscow Oblast); Requirements specification for the development of design estimates were elaborated.
- **Project “Implementation of composite elements in overhead contact system”.** Composite pylons and elements of catenary suspension were developed and put under test (“High-speed traffic infrastructure”).
- **Project “Development of composite rolling stock”.** The rolling stock type, project participants – producers of composite materials, engineering plants and customers were defined; the Schedule was elaborated and approved (“Intermodal transport infrastructure”).
- **SC Avtodor Programme of innovative development.** 9 proposals to the program on energy efficiency and improved lifetime of infrastructure facilities to the program were developed; Consumption targets for innovative goods were defined (“Construction and maintenance of highways and railways”).
- **“Implementation of RFID-technologies in cargo transportation”.** Pilot batch of RFID-tagged locking and sealing devices was tested (“Traffic safety”).
- **Federal Target Program “Research and development in priority areas of scientific and technological complex of Russia for the years 2007-2013”.** 69 proposals on financing R&D and technological works within the FTP were formed.

Main technological spheres

- Construction and maintenance of highways and railways;
- Traffic safety technologies;
- Production of road construction materials with enhanced properties;
- Intelligent transport systems;
- High-speed traffic infrastructure;
- Intermodal transport infrastructure.

Announcement of events

November 2, 2012 at 12:00 pm

“Open Innovations” Forum -

Panel discussion “Federal innovative pilot project «Innovative highway”

For information about other events, please refer to the website of the Technology Platform

solutions.rusnano.com

HIGH-SPEED INTELLECTUAL RAILWAY TRANSPORT

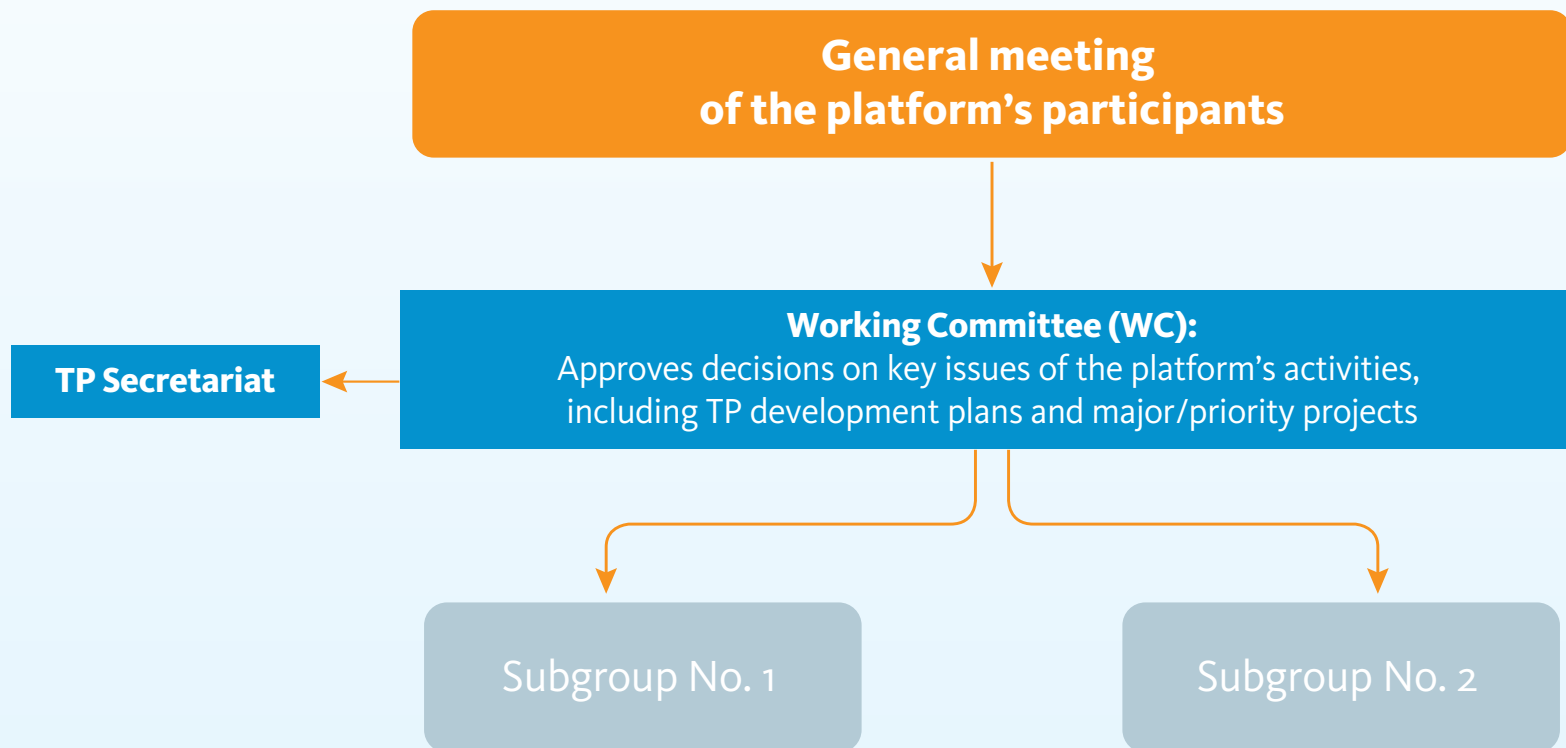


Valentin A. Gapanovich
Senior Vice-President of
Russian Railways JSC



Alexander D. Korchagin
Head of the Innovative
Development Center – the
Branch of Russian Railways JSC

Organizational Structure of the Technology Platform.



- subgroup No. 1 for the creation and development of the implementation project and mechanisms of the technology platform in the medium term in order to increase the railway communication speed up to 400 km/h;

- subgroup No. 2 for the creation and development of the implementation project and mechanisms of the technology platform in the long term in order to allow increasing the railway communication up to 1000 km/h;

HIGH-SPEED INTELLECTUAL RAILWAY TRANSPORT

According to the application for inclusion, the potential participants of the Technology Platform “High-Speed Intellectual Railway Transport” comprise 64 organizations and enterprises in various branches with different organizational and legal forms, including:

higher educational institutions	16
scientific and research organizations	23
experimental design bureaus	3
design, engineering and service companies	3
manufacturing enterprises	4
public authorities	10
foreign organizations	2
other organizations	3

Main technological spheres

- Development of magnetic systems and materials for the magnetic levitation system and line driver using new materials, including high-temperature superconductors.
- Development of high-speed cargo container systems based on magnetic levitation.
- Development of electric power systems to control the line driver and magnetic levitation, high-capacity energy storage units, a high speed non-contact power transmission system.
- Development of intelligent safety and control systems for high-speed running in various types of disturbances.
- Development of spans for trestle systems with an increased length using new materials based on new technologies.
- Development of integrated systems for diagnosis and monitoring of high-speed rolling stock for passenger and freight transport systems.
- High-precision positioning and determination of motion parameters of the rolling stock on the basis of integrated processing of GLONASS / GPS data.
- Creation of intelligent station complexes.

Key Results

- The Strategic Directions for Research and Development have been approved.
- The tender for target fundamental researches (including the TP’s subject matter) has been conducted together with the Russian Foundation for Basic Research (RFBR). Russian Railways JSC, in equal proportion with the RFBR, has funded the works selected in the tender.
- Proposals for the integration of the TP with the RF State Programme “Development of Science and Technologies” for 2013-2017 have been formulated.
- R&Ds related to subject matter of the Technology Platform for 2013 have been included in the Scientific and Technical Development Plan of Russian Railways JSC.

Announcement of events

26.09.2013 Conference of the TP’s participants concerning the results of implementation of the Strategic Directions for Research and Development (Moscow).

26-29.03.2013 the Third International Scientific and Practical Conference “Intelligent Systems on Transport (IntellectTrans-2013)” (Saint Petersburg)



Contact information

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ADVANCED POLYMERIC AND COMPOSITE MATERIALS AND TECHNOLOGIES



Evgeny N. Kablov
Co-Chairman of the Expert Council

Director General of "VIAM" FSUE, RF SRC, Doctor of Engineering, Professor, Academician of RAS



Ivan M. Kamenskikh
First Deputy Director General, Rosatom State Corporation.



Sergey M. Sokol
Director General, RT-Chemcomposit OJSC



Andrey G. Svinarenko
Co-Chairman of the Expert Council

Deputy Chairman of the Executive Board, Rusnano OJSC



Sergey M. Aldoshin
Vice-President of RAS, Academician



Leonid B. Melamed
Director General of "Composite" Holding Company, CJSC

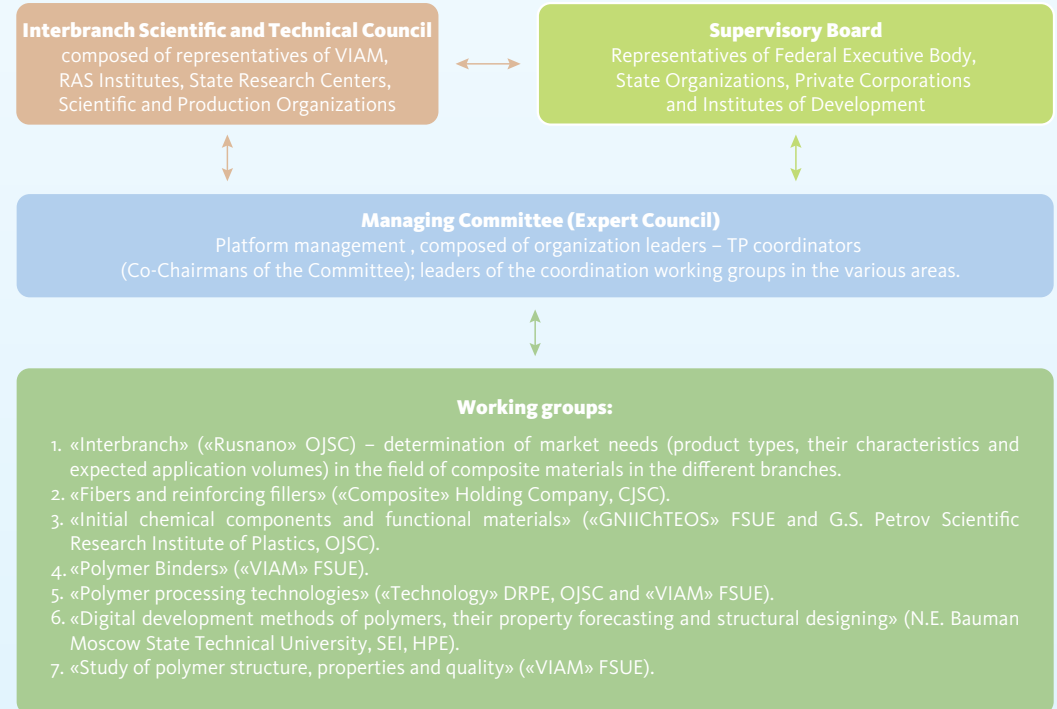
Initiators of Technology Platform

VIAM FSUE RF SRC; Rusnano OJSC; Rosatom State Corporation; Russian Technologies State Corporation; Russian Academy of Sciences; "Composite" Holding Company CJSC

Participants of Technology Platform

- 28 Higher Educational Institutions
- 21 Research Institutions
- 1 Experimental Design Bureau
- 4 Design Organizations, Engineering and Service Companies
- 43 Production Enterprises
- 4 State Structures
- 6 foreign organizations
- 16 other organizations.

Organizational Structure of Technology platform





Main Technological Spheres

- PAN-precursors and CFM (carbon fiber materials) of wide textile nomenclature and assortment;
- monomers, oligomers, elastomers and the new generations of highly-deformative binders with high physical and mechanical characteristics.
- precision-calibrated prepregs, preforms and other polymer semifinished products;
- autoclave-free molding technologies, including PCM large-size structures with the use of the present-day highly automated processes (RTM, RFI, VARTM, RIM, Quick Step, ATL, AFP, and etc.);
- polymer composites of smart types of the second and third generations;
- economical and power-efficient technologies of the commercial production for polymer products, including the application in the construction industry and other civil economic sectors;
- PCM composition simulation and their property forecasting with the use of IT methods;
- PCM qualification and the evaluation of their climatic resistance.

Contact information

Co-Chairman of the Expert Council

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Co-Chairman of the Expert Council

Andrey G. Svinarenko

Deputy Chairman of the Executive Board, Rusnano Open Joint-Stock Company

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Website of Technology Platform:

www.тпкм.виам.рф

Key Results

- Agreements:
 - With 5 regions (Republic of Tatarstan, Republic of Mordovia, Ulyanovsk oblast, Perm Krai, Saratov oblast) on PCM technology development.
 - on PCM development within the framework of the state and private partnership including Russian Technologies State Corporation; United Aircraft Corporation OJSC; Porcher Ind. (France), and etc. (more than 10);
 - with 11 Higher Educational Institutions on the development of researchers and educational programmes in the field of PCM.
- Appraisal of more than 60 projects, proposed by the Ministry of Education and Science of the Russian Federation.
- R&D works with the cost of more than 4.5 billion roubles were performed;
- 5 complex programmes on the organization of experimental and technological works in the field of new types of PCM.
- Optic-fiber, LLC, was established, which was granted the status of Skolkovo resident in the field of smart PCM
- 29 GOST project, 160 sets of branch scientific and technological documentation and more than 400 branch standards were developed and / or expertized.
- The participants of Platform took part in more than 70 international, branch and interbranch conferences, seminars and symposiums.
- The sections of "Strategic areas of material developments and their production technologies up to 2030" approved by the Scientific and Technical Council of MIC (Military Industrial Commission).
- Strategic Research Programme of Technology Platform – "Novel PCM and Technologies"
- Report on the activity of Technological Platform – "Novel PCM and Technologies for the year 2011"
- 72 applications on Federal Targeted Programme "R&D in Priority Fields of the S&T Complex of Russia (2007-2013)"
- The competence centers on PCM development and qualification were established; the project on developing the production facilities for polymer binders of new generation was carried out; the research laboratory of PAN-precursor with the experimentally-production unit, the laboratory for oxidation, carbonization and CF graphitization were put into operation within the framework of the engineering centers being established, and other measurements on the development of scientific and production infrastructures were also implemented.

Announcement of events

- International scientific and production conferences: Annual International Conference "Present-day state, the production development perspectives and the use of CM in Russia" within the framework of "Composite-Expo" exhibition, February of 2013 and 2014; "Composite materials in the civil and military aircraft building" International Conference within the framework of "MAKS-2013" salon, August, 2013; "Composite materials: production, application, market trends" Annual International Scientific and Production Conference, November 2013 and 2014 as well as other international, branch and interbranch conferences and seminars.
- Round tables on the basic technological areas, including the issues of safe disposal of PCM and structures made of them.
- The formation and adjustment of State Programme activities
- Accepting the applications for Federal Target Programmes according to the plans of the State Customer.
- The implementation of measurements on the development of scientific and production infrastructures, including the introduction of facilities for the carbon fiber production (Alabuga) with the capacity of 1,700 t/year, as well as the development of engineering centers, etc.
- The participation in creating the standard technical document system, developing the requirements for PCM products and their application as well as the verification of compliance in the civil branches of industry.



MATERIALS AND TECHNOLOGIES OF METALLURGY



Evgeny N. Kablov
Chairman of the Expert Council

Director General of "VIAM" FSUE, RF SRC, Doctor of Engineering, Professor, Academician of RAS



Mikhail R. Filonov
Deputy Chairman of Expert Council

Vice-Rector of Science and Innovations, "MISIS" National University of Science and Technology, Doctor of Engineering, Professor



Andrey V. Tarasov
Deputy Chairman of Expert Council

Deputy Director General of "RT – Metallurgiya" Open Joint Stock Company, Doctor of Engineering, Professor



Vladimir A. Uglov
Deputy Chairman of Expert Council

Deputy Director General of I.P. Bardin Central Research Institute of Ferrous Metals, FSUE, Candidate of Engineering Sciences

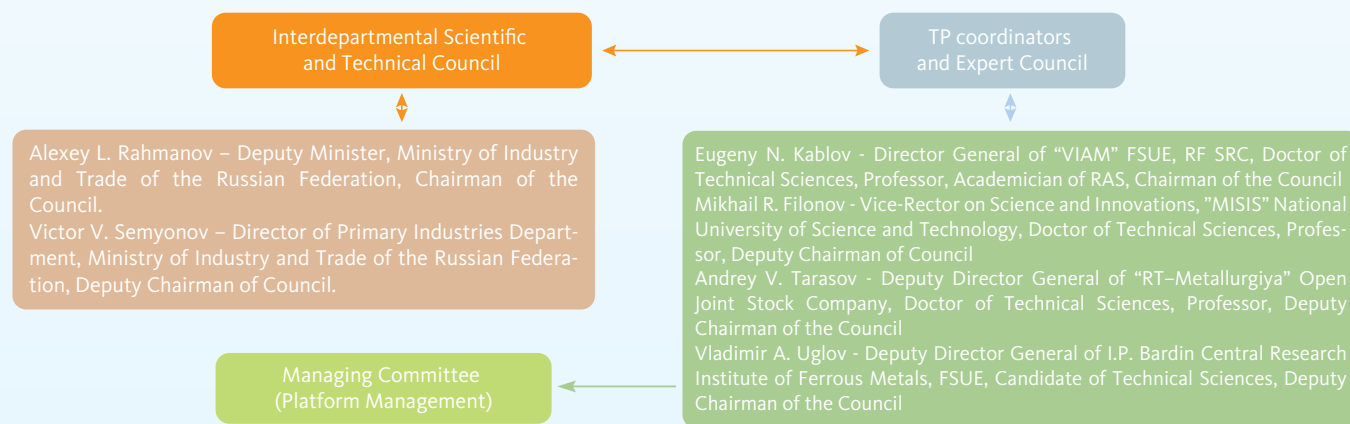
Initiators of Technology Platform

The Ministry of Industry and Trade of the Russian Federation; ROSATOM State Corporation; Russian Technologies State Corporation; Russian Academy of Sciences; VIAM Federal State Unitary Enterprise, State Research Center of the Russian Federation; RT – Metallurgiya Open Joint Stock Company; National University of Science and Technology "MISIS"; Managing Company "Aluminum Products"; I.P.Bardin Central Research Institute of Ferrous Metals, FSUE; "Prometey" Central Research Institute of Structural Materials, FSUE; United Shipbuilding Corporation, Open OJSC

Participants of Technology Platform

7 Higher Educational Institutions, 16 Research Institutes, 6 Experimental Design Bureaus, 17 Production Enterprises, 8 Other organizations

Technology Platform «Materials and Technologies of Metallurgy» Organizational structure of TP MTM



Working groups:

- Strategic planning (Chairman of the group – Mikhail R. Filonov – Vice-Rector of "MISIS" National University of Science and Technology, State Educational Institution, Doctor of Technical Sciences, Professor);
- Materials and technologies of the ferrous metallurgy (Chairman of the group – Vladimir A. Uglov, Deputy Director General of I.P. Bardin Central Research Institute of Ferrous Metals, FSUE, Candidate of Technical Sciences);
- Materials and Technologies of special metallurgy (Chairman of the group – Olga G. Ospennikova, Deputy Director General of "VIAM" FSUE, Candidate of Technical Sciences);
- Materials and technologies of nonferrous metallurgy (Chairman of the group – Andrey V. Tarasov, Deputy Director General of "RT-Metallurgiya" Joint Stock Company, Doctor of Technical Sciences, Professor);
- Effective ecology (Chairman of the working group – D.V. Kuznetsov – Head of a Chair, "MISIS" National University of Science and Technology, State Educational Institution, Candidate of Technical Sciences, Assistant Professor).

Main technological spheres

- Theoretical basis, methodologies for the development of materials and their production and processing technologies.
- New generations of materials with the higher level of performance characteristics.
- Resource-saving energy-efficient metallurgical technologies.
- Composites with metal- and intermetallic- matrices.
- Production technologies of the present-day equipment.
- Formation of scientific and technical experience in the field of metallurgical materials and technologies.

Key results

- “Materials and metallurgical technologies” Strategic Research Programme of the Technology Platform.
- Report on the activity of “Materials and Metallurgical technologies” Technology Platform for the year 2011.
- Accepting the applications for Federal Target Programme R&D in Priority Fields of the S&T Complex of Russia (2007 – 2013) – 66 applications.
- Consideration and discussion of the project “Development of materials and complex power – efficient resource – saving technologies for non-cooled structures of basic components and assemblies of the new-generation aircraft GTE with the advanced characteristics of specific capacity and fuel efficiency”

Announcement of events

- **International Scientific and practical conferences:**
 - **March 2013** “Rhenium Scientific researches, technological developments, commercial application”
 - **October 2013** “Sulfur and sulfuric acids”
 - **October 2013** “Recycling: waste processing and environmentally pure technologies”
 - **November 2013** “Present-day technologies in the field of nonferrous metal production and processing”
 - **October 2014** “Power-saving technologies in the metallurgical industry”
- **May 2013** Round table – “Strength of heterogeneous structures” within the framework of the annual conference – PROST-2013
- **November 2013** Round table – “Rational application of secondary resources”
- Preparation of the applications for Federal Targeted Programs according to the plans of the State Customer
- Consideration and discussion of projects with the cost more than 1 billion roubles according to the plans of the State Customer

Contact information

Chairman of the Expert Council

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Deputy Chairman of Expert Council

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Website of Technology Platform:
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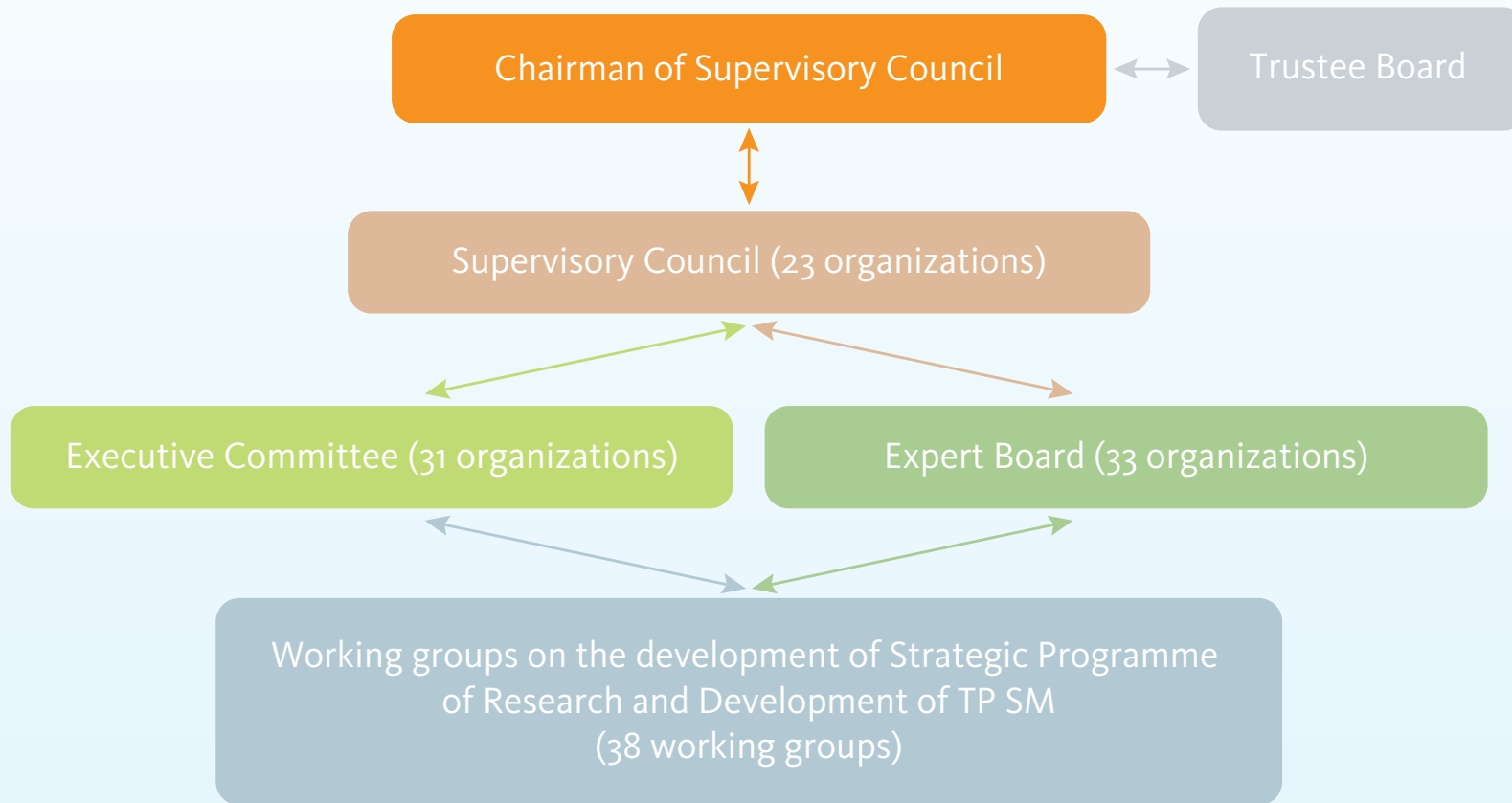
Anna G. Belova
Chairman of Supervisory Board,
Coordinator

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Andrey V. Butenko
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Organizational structure



Legal registration

During the Supervisory board of TP SM meeting on April 11, 2012 it was decided to organize a non-commercial partnership "Technological Platform of Solid Minerals". 25 April 2012 as the result of open voting of Supervisory Board members, the majority decided to trust National mineral and raw university «Gorny» with the registration process of a non-commercial partnership "Technological Platform of Solid Minerals" (including legal address provision, proposal of CEO and Chief Accountant candidates). At the moment, a non-commercial partnership is passing through the registration stage.

Main participants – 82 organizations

Universities: 15 participants (including National Mineral and Raw University «Gorny», Moscow State Mining University, Ural State Mining University, South-Russian State Technical University, Irkutsk State Technical University, Perm State National Research University, MISIS and others)

Scientific-research and project institutes: 27 participants (ICEMR RAS, Institute of Mining of Ural Branch of RAS, Institute of Mining of Siberian Branch of RAS, Geological Institute KSC RAS, Institute of Mining, Far Eastern Branch of RAS, All-Russian Scientific Research Institute of Chemical Technology, SC Rosatom, All-Russian Scientific Research and Design Institute for Industrial Technology Promtehnologii, Yakutniproalmaz Institute OJSC ALROSA, Skochinskiy Mining Institute, Geological Museum of RAS and others)

Project organizations, engineering and service organizations: 18 participants (including SPC Mechanobr-Technika, Uralmash-Engineering, Urginsky mashzavod, ZUMK-Engineering, TOMS-Engineering, VIST Group and others)

Mining organizations: 17 participants (OJSC ALROSA, OJSC SUEK, CJSC Polyus, SC Rosatom, MHC “Eurochem” and others)

Foreign organizations: 5 participants (including Freiberg Bergakademie (Germany), Newcastle University (Australia), CSIRO (Australia), Ukrainian State Research and Design Institute of Mining Geology, Rock Mechanics and Mine Surveying, NAS of Ukraine, Geotechnical Institute (Slovakia))

Partners: 5 partners (RFTD, the Ministry of Economic Development of the RF, the Ministry of Education and Science of the RF, the Ministry of Energy of the RF and others)

Main technological spheres

- Development Strategy of Russian mineral resources sector: energy efficiency improvement and ensuring of resource-saving, industrial and environmental safety in the mining industries;
- Technologies of comprehensive exploitation of solid mineral resources;
- Technologies for the efficient use of raw material potential of natural and anthropogenic placers and residual soil deposits;
- Technologies for formation and exploitation of anthropogenic structures in the comprehensive exploration of solid minerals resources;
- Technologies for formation and quality management of natural and anthropogenic mineral raw material flows, including technologies on the use of renewable energy sources;
- Technologies for deep processing of solid minerals;
- Modernization of solid mineral mining and processing enterprises;
- Geoinformative support of mining technologies;
- Technologies aimed at ensuring environmental and industrial safety, sustainability and reduction of operational risks of solid mineral extraction and processing facilities;
- Professional development of highly qualified staff, training and retraining of specialists implementing new technologies in the industrial production.

Announcement of events

- Finishing the development of Strategic Program for R&D and Technological Roadmap of TP SM
- The Development of TP SM Foresight
- Participation at conferences conducted by representatives of TP SM (Miner’s week at MSMU, Urals Mining Forum, Rare earth elements of All-Russian Research Institute of Chemical Technology, TehGorMet and others)
- Joint R&D implementation by TP SM participants
- State-private partnership implementation of TP SM in conducting some R&D projects together with institutes of development and state target programmes.

Key results

- Management bodies of TP SM were organized
- More than 80 participants are involved in the activities of TP SM
- The activities of expert bodies were organized, including carrying out of several expert examinations at the request of RFTD, FTP “Research and development on priority directions of scientific-technological complex of Russia”
- The collective development of Strategic Programme for R&D of TP SM and Technological Roadmap of TP SM
- The web-site of TP SM was launched (www.tptpi.ru)
- A number of conferences under the auspices of TP TPI were held
- The Memorandum of strategic partnership and collaboration was signed between TP SM and RFTD
- Several applications of TP SM participants to perform R&D projects have successfully completed the procedures of obtaining financing from FTP and RFTD.



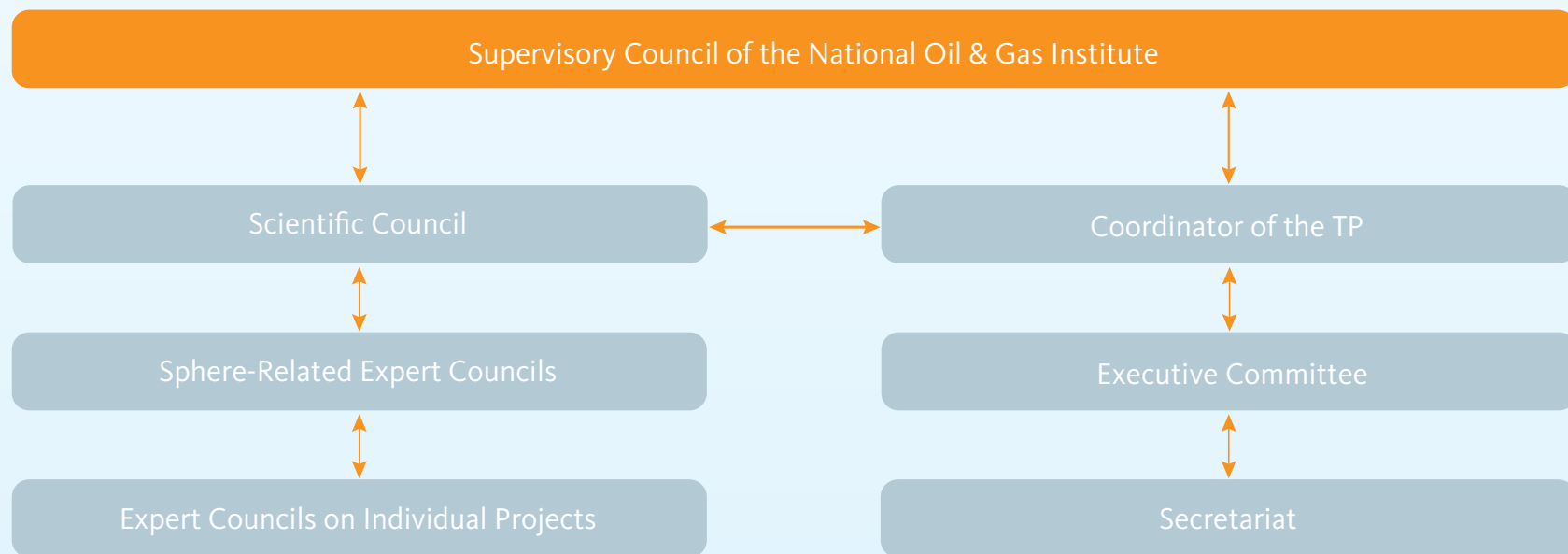
Viktor G. Martynov
Head of the Technology Platform

More than 76 member organizations of the Technology Platform

Oil and gas companies – 4;
Higher educational institutions – 24;
Institutes of the Russian Academy of Science – 11;
Design organizations – 9;
Research institutes – 3;
Production enterprises – 25.

Managing organization – Non-Commercial Partnership National Oil & Gas Institute, established in 2011

Organizational structure



Mikhail A. Silin
Deputy Head of the Technology Platform

Main technological spheres

- Hydrocarbon reserves increment.
- Enhanced oil recovery.
- Oil production stimulation.
- Technologies for using associated gas.
- Drilling and field facilities construction
- Technologies for offshore field development.
- Hydrocarbon production from unconventional sources.

Key results

- Non-Commercial Partnership Development of Innovations of the Fuel and Energy Complex. National Oil & Gas Institute has been registered.
- Supervisory, Scientific and Expert Councils have been established.
- Web-sites www.oilring.ru and www.tp-ring.ru have been created and run.
- Road map has been developed.
- Proposals for Skoltekh have been prepared.
- An agreement on implementing three technologies for oil recovery increase has been reached with the Oil Company Rosneft.
- We have coordinated activities of the RF Ministry of Education and Science and oil & gas companies.

Announcement of events

- Development and implementation of legal frameworks for financing of oil & gas science.
- Development of the programme on implementing the TP high technologies.
- Organization of the Internet-Log activity.
- Integration of electronic libraries of the TP members.
- Two conferences to be held.

Contact information

Deputy Head of the Technology Platform

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<http://tp-ring.ru>



DEEP CONVERSION OF HYDROCARBON RESOURCES



Sergey Aldoshin
Vice President,
Russian Academy of Sciences

107 participants including

- 32 higher educational institutions
- 26 research institutions
- 1 experimental design office
- 2 design offices
- 30 production enterprises
- 2 foreign organizations
- 14 other specialized organizations

Coordinator:
VNIPIneft JCS

A non-commercial partnership “The Center for Development of hydrocarbon resource deep conversion technologies” has been established to develop an organizational structure and a functioning mechanism of the technology platform.

- The Non-Commercial Partnership was registered by the RF Ministry of Justice on May 11, 2012.
- Initiators of the technology platform became founders of the Non-Commercial Partnership.

A supervisory board (strategic management) and an executive directorate (operating performance management) are managing bodies.

Technology Platform Board

Sergey M. Aldoshin, Chairman of the Technology Platform Scientific Council, RAS Vice President

Salambek N. Khadzhiev, Director, Topchiev Institute of Petrochemical Synthesis, RAS

Valentin N. Parmon, Director, Borskov Catalysis Institute, RAS Siberian Branch

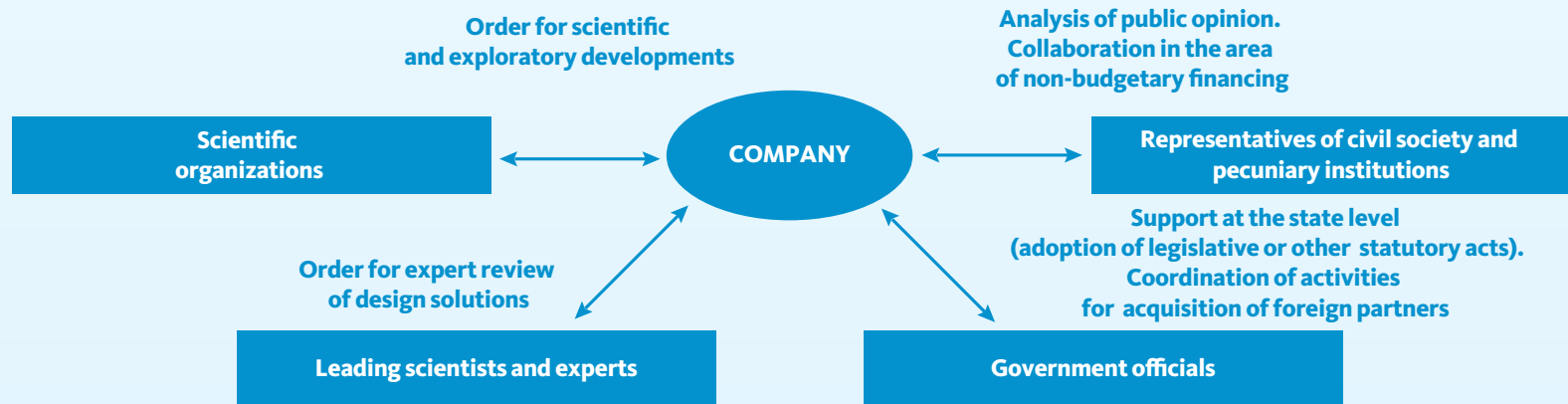
Vladimir M. Kapustin, General Director, VNIPIneft JCS

Leonid M. Gokhberg, First Pro-rector, National Research University Higher School of Economics



Vladimir Kapustin
General Director of the
coordinating body
VNIPIneft JCS

Role and place of companies in Technology Platform



DEEP CONVERSION OF HYDROCARBON RESOURCES

Main technological spheres

- Processes and catalysts for processing of heavy oils and residues
- Production of environmentally-friendly fuels, oils and additives
- Processes and catalysts for production of monomers, semi-products and feedstock for petrochemical industry
- Processes and catalysts for processing of natural and associated gas, producing of hydrogen, syngas and respective products on their basis
- Processes and catalysts for producing polymer materials, including those designed for extreme conditions
- Processes and catalysts for producing composite materials
- Catalyst manufacturing problems
- Engineering and database development for process design of oil refining, gas processing and petrochemical processes
- Methodological basis of Technology Platform functioning

Key Results

- Road Maps drafts for the main directions have been finalized and now are widely discussed.
- The Technology Platform became a coordinator for gathering requests from scientific organizations to convert them into umbrella projects within the framework of formation of subject matters of the RF Ministry of Education and Science under the Federal Target Programme “Research and development for priority directions of science and technology complex of Russia for 2007-2013”. In all, 185 requests have been acquired.
- A number of pilot projects have been launched together with Gazprom Neft JSC, Rosneft Oil Company, CJSC SIBUR Holding, and Gazprom, JSC.
- A programme of Technology Platform research and development has been formed. It includes more than 140 works and projects.
- A Memorandum of Cooperation with the Russian Foundation for Technological Development has been signed.

Announcement of events

November 2012 Conference on the discussion of draft Road Maps for Technology Platform ‘Deep Conversion of Hydrocarbon Resources’

October 29-30, 2012 V International Industrial & Economic Forum “The Strategy for Integration”: “Solving Topical Problems of Petrochemicals Sector at the Present Stage”

General meeting of the Platform participants dedicated to approval of Road Maps, Platform Board Report for 2012 and Work Schedule for 2013

June 15-19, 2014 21st WORLD OIL CONGRESS

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TECHNOLOGIES OF MECHATRONICS, EMBEDDED CONTROL SYSTEMS, RADIO-FREQUENCY IDENTIFICATION AND ROBOT-BUILDING



Nikolay N. Kudryavtsev

Rector, Moscow Institute of Physics and Technology



Alexander V. Lopota

Director and Chief Designer, Russian State Scientific Center for Robotics and Technical Cybernetics



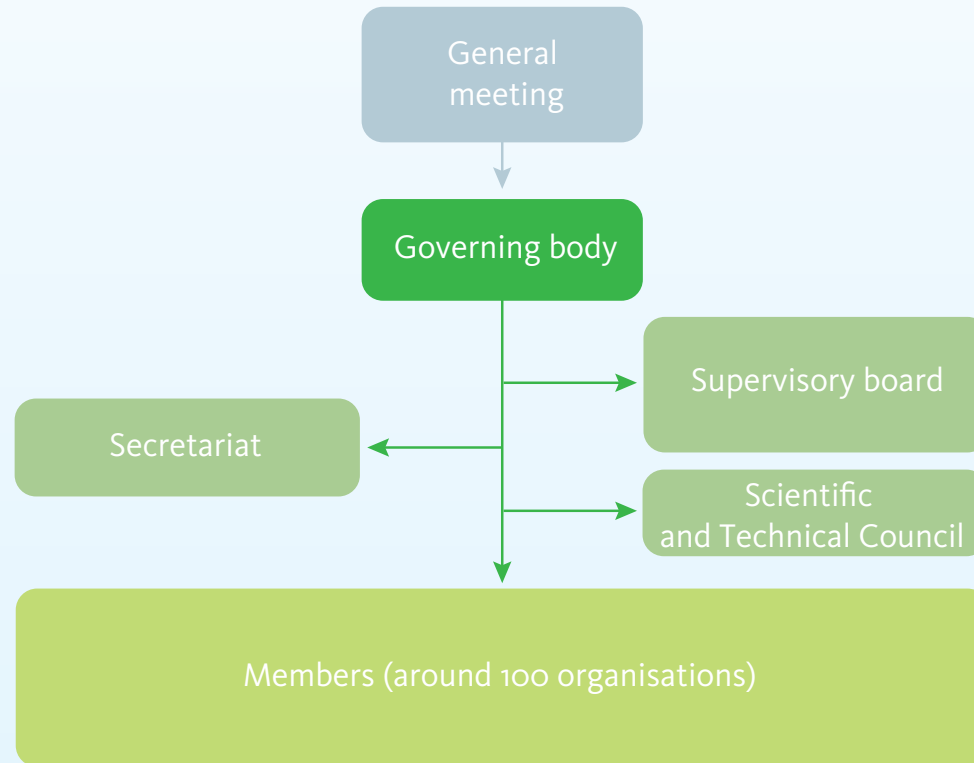
Georgiy N. Kolpachev

Managing Director, RUSNANO OJSC

PARTICIPANTS OF THE TECHNOLOGY PLATFORM

around 40 real sector of economy enterprises;
around 30 research organizations;
more than 30 higher educational institutions.
(99 organizations – as of September 2012)

Organizational structure



Before the end of 2012, establishment of a nonprofit partnership “Technology platform “Control systems, radio-frequency identification and robot-building“ is planned

TECHNOLOGIES OF MECHATRONICS, EMBEDDED CONTROL SYSTEMS, RADIO-FREQUENCY IDENTIFICATION AND ROBOT-BUILDING

MAIN TECHNOLOGICAL SPHERES

- Navigation, telematics and motion control.
- Robot-building, mechatronics and operational units.
- Radio-frequency identification (RFID) technologies.
- Communication technologies in a part of embedded control systems, RFID and robot-building.
- Microprocessor-based electronics and “systems-on-a-chip”.
- Sensors, machine vision systems, human-machine interfaces.
- Information processing technologies, software for embedded control systems, RFID and robot-building and its development technologies.

KEY RESULTS

- Key participants defined, decision-making and working bodies formed.
- Web site, Strategic Research Programme.
- Activities aimed at building scientific and technical cooperation in the areas: industrial robotics, machine vision systems, electromobile and others.
- Suggestions for government bodies on subjects worth financing within the framework of the Federal Target Programme “Research and development”

ANNOUNCEMENT OF EVENTS

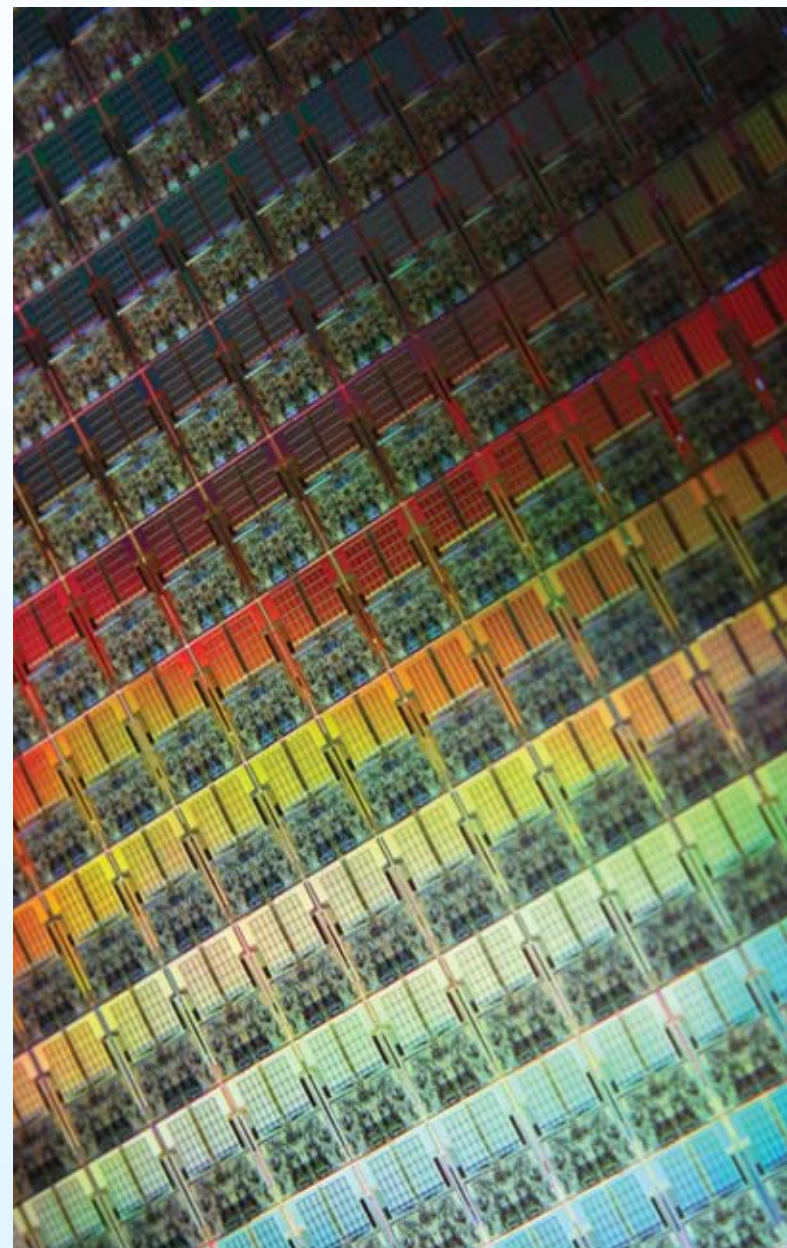
Round-table meetings on the issues R&D investors are interested in: AVTOVAZ JSC, RPC UralVagonZavod n.a. Dzerzhinskiy OJSC, S.P.Korolev RSC Energia, Concern SOZVEZDIE JSC etc.

CONTACT INFORMATION

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007 (495) 408-44-77

Web site:
www.tp25.ru





UHF TECHNOLOGIES

42 organizations

- 2 organizations – Institutions of the Russian Academy of Sciences;
- 6 organizations – higher educational institutions;
- 7 organizations – research institutions;
- 4 organizations – design bureaus;
- 14 organizations – scientific & production and production enterprises;
- 9 organizations – other companies.

Initiator and coordinator

OJSC Russian Electronics

Initiator

CJSC Kozitsky Factory.

Initiator

OJSC Concern Orion.

Initiator

Institution of the Russian Academy of Sciences Institute of UHF semiconductor electronics.

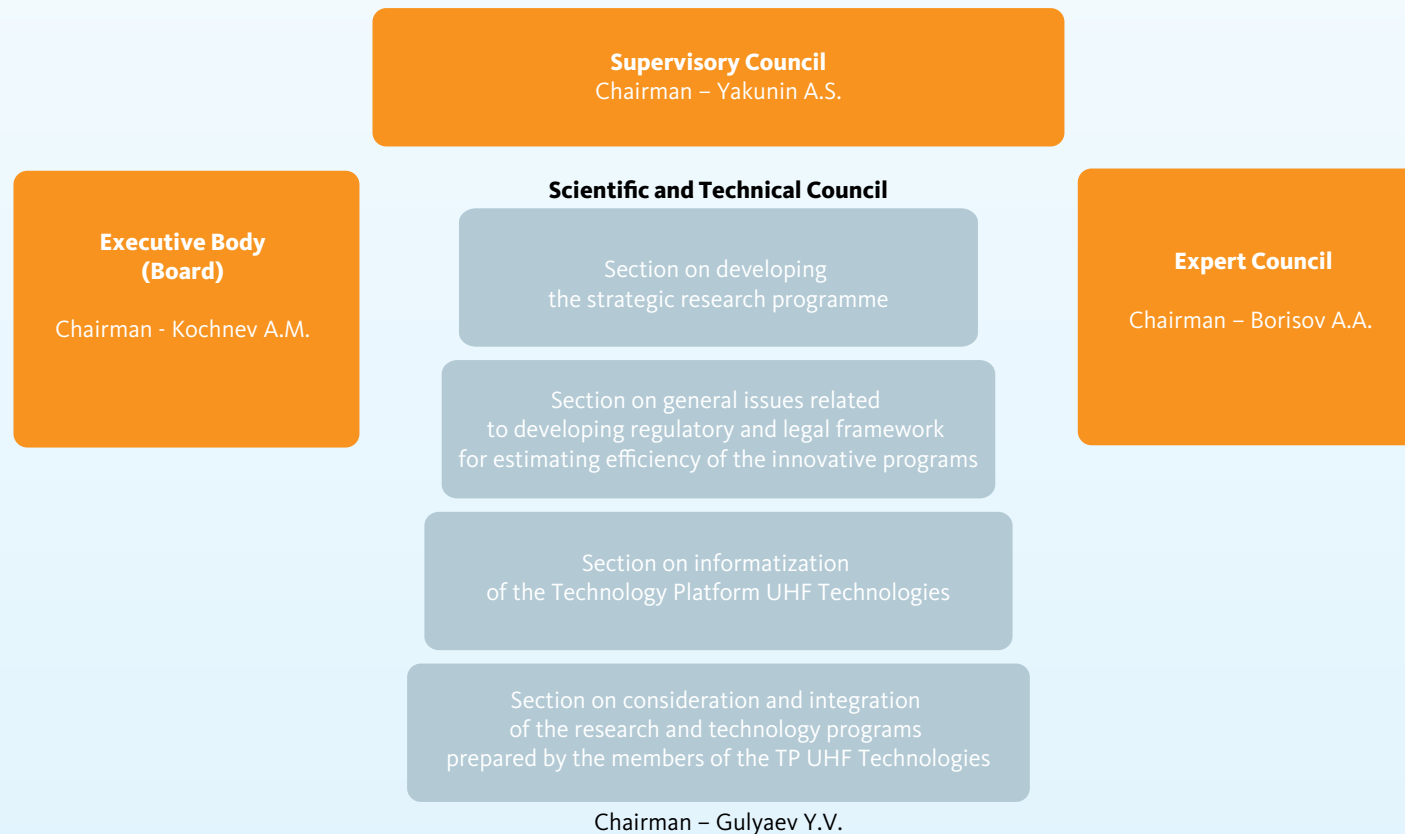


Alexander M. Kochnev
Chairman of the Board



Piotr P. Maltsev
Deputy Chairman of the Board

Management bodies of the Technology Platform UHF Technologies





Main technological spheres

Research and development spheres under the Technology Platform UHF Technologies:

- Technology for establishing the electronic component base.
- Technology for invention of communication equipment.
- Radio location technologies.
- Digital television technologies.
- Nanotechnologies and nanomaterials.
- Technology for high speed information processing.
- Navigation technologies.
- Biotechnologies and technologies in agriculture.

Key results

- **Establishment of the Technology Platform:** list of the Technology Platform members has been formed; Memorandum on accession of four TP projects to the Technology Platform UHF Technologies has been signed.
- **Establishment of the organizational structure:** the foundation conference of the members has been hold; an Agreement on establishing basic principles of activity of the Technology Platform UHF Technologies.
- **Establishment of the Strategic Research Programme:** composition of the working group has been approved; list of the projects to be included into the Strategic Research Programme has been prepared.
- **Preparation of the road map draft:** composition of the working group has been approved; preparation of the road map draft is in progress.
- **Development of the regulation and self-regulation mechanisms:** Expert examination of the projects under the Strategic Research Programme. Assistance to the implementation of the programmes included into the Strategic Research Programme.

Announcement of events

In the course of year 2013 Admitting new members of the Technology Platform UHF Technologies

In the course of year 2013 Preparation of proposals on the candidates to be included or replaced in the Supervisory Council, Board, Research and Technology Council, and Expert Council of the TP UHF Technologies

3-4 Quarters of 2013 Election of members of the Supervisory Council, Board, Research and Technology Council, and Expert Council of the TP UHF Technologies

1 Quarter of 2013 Updating of the Strategic Research Programme

March-April 2013 Discussion on the updated draft of the Strategic Research Programme at the joint meeting of the Board and Research and Technology Council

2 Quarter of 2013 Approval of the updated Strategic Research Programme at the Supervisory Council

2 Quarter of 2013 Approval of the Strategic Research Programme Implementation Plan

2 Quarter of 2013 Discussion on the Road Map Draft

2 Quarter of 2013 Approval of the Road Map of the TP UHF Technologies

In the course of year 2013 Training of the technical personnel in the specialized chairs, higher education institutions or in the enterprises

In the course of year 2013 Meetings and research-to-practice conferences

In the course of year 2013 Round-table conferences and presentations

In the course of year 2013 Organization of information support of the TP UHF Technologies

Contact information

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Secretary of the Board of the TP UHF Technologies

Sergey A. Startsev

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Valery V. Kobylyansky

JSC Concern Morinformsystem-Agat



Alexander F. Denisov

OJSC United Shipbuilding Corporation



Vladimir Y. Sokolov

OJSC Concern Marine Underwater Weapon - Gidropribor

Three coordinating organizations, which are the leaders of the relevant sector of economy, manage the Technology Platform, namely:

JSC Concern Morinformsystem-Agat

OJSC United Shipbuilding Corporation

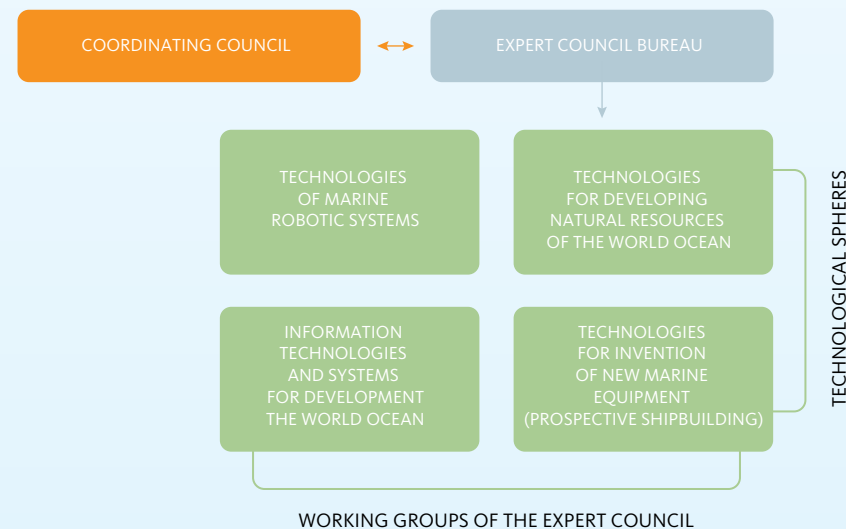
OJSC Concern Marine Underwater Weapon - Gidropribor

Organizations initiating establishment of the Technology Platform include:

8 major research and production holdings;
6 leading scientific organizations;
9 major universities

as well as small enterprises and public organizations

Organizational structure of the Technology Platform



Main technological spheres

Main purpose of the Technology Platform is to create the underwater technology sector in Russia to ensure activities performed in the World Ocean Shelf.

- Technologies of marine robotic systems.
- Technologies for developing natural resources of the World Ocean.
- Information technologies and systems for developing the World Ocean.
- Technologies for invention of new marine equipment (prospective shipbuilding).

Key results

- Management and expertise structures have been established; activity of the working groups has been organized and determined.
- Plan of the research and development activities under the Federal purpose-oriented programmes for implementing critical technologies has been drawn-up. Some part of the research and development activities is already in progress.
- Web-site of the Technology Platform has been developed and run.
- Promotion of the Technology Platform prospective projects has begun.
- 2nd All-Russia scientific and technical conference Scientific and Technical Support of Researching and Developing the Arctic Ocean Shelf (Novosibirsk) was organized and held

Announcement of events

- 2014** completion of a number of the research and development activities focused on creating prospective robotic complexes
- 2012-2014** Implementing the scientific research and development activities, which won the Skolkovo fund grants.
- 2013-2014** Start-up of the international projects in Norway, Spain and Greece
- 2013** Establishment of the Far-East Innovation Territorial Production Cluster on the marine instrumentation
- 2013** Participation in developing the state programme Development of the Shipbuilding Industry and establishment of individual sphere associated with the prospective shipbuilding.

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Sergey K. Shoigu
Chairman of the Supervising Board of the Platform
President of Russian Geographical Society



Nikolay S. Kasimov
Chairman of the Steering Committee of the Platform

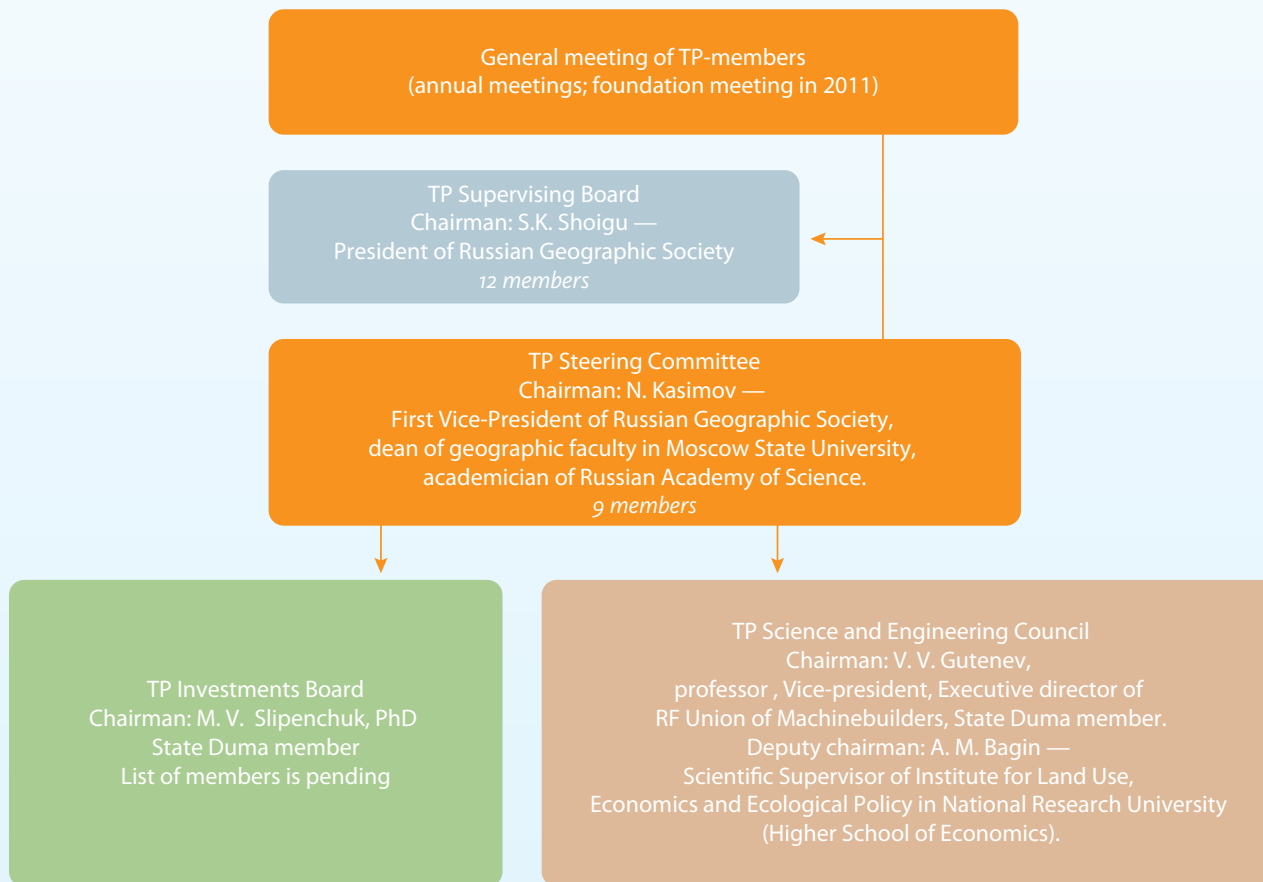
150 TP participants:

Federal executive bodies – 9 federal departments;
Business community – 48 companies;
R&D organizations and higher education institutions (HEI) – 59 entities;
Public organizations and associations, and other establishments – 34 organizations.

Coordinating organization

Russian Geographical Society

TECHNOLOGY PLATFORM (TP) – HOW IT IS ORGANIZED



Main technological spheres

- Environmentally friendly industrial technologies.
- Technologies of environmentally safe treatment of wastes, as well as elimination of accumulated environmental damage.
- Technologies and systems for monitoring, evaluating and predicting a possible state of environment, extreme natural or anthropogenic disasters, and Global Climate Change aftermath including innovative tools for the pollution control.
- Technologies of rational land use, providing environmental safety, and new environmental standards of human life.
- Environmental services market development.

Key results

- Development of a long-term research program.
- Formation of field-oriented research guidelines in the Federal purpose-oriented programme “Research and development Research and Development in priority development areas of scientific and technological complex of Russia in 2007–2013” and the state program “Development of science and technologies”.
- The signing of the Memorandum of Cooperation with the Russian Foundation for Technological Development.
- Development of cooperation with state-owned companies.
- Development of experts’ community.

Announcement of events

- Signing of cooperation agreements with the RF subjects.
- Meetings and workshop venues with state-owned companies on implementing the programs of innovative development.
- Annual meeting of TP participants.

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<http://ige.rshu.ru/content/techplatform>



SIMULATION AND OPERATION PRACTICE OF HIGH-TECH SYSTEMS (INDUSTRY OF THE FUTURE)



Sergey N. Khursevich

General Director of OBORON SERVICE JSC
General Director of the Non-Commercial Partnership

Members –34 institutions

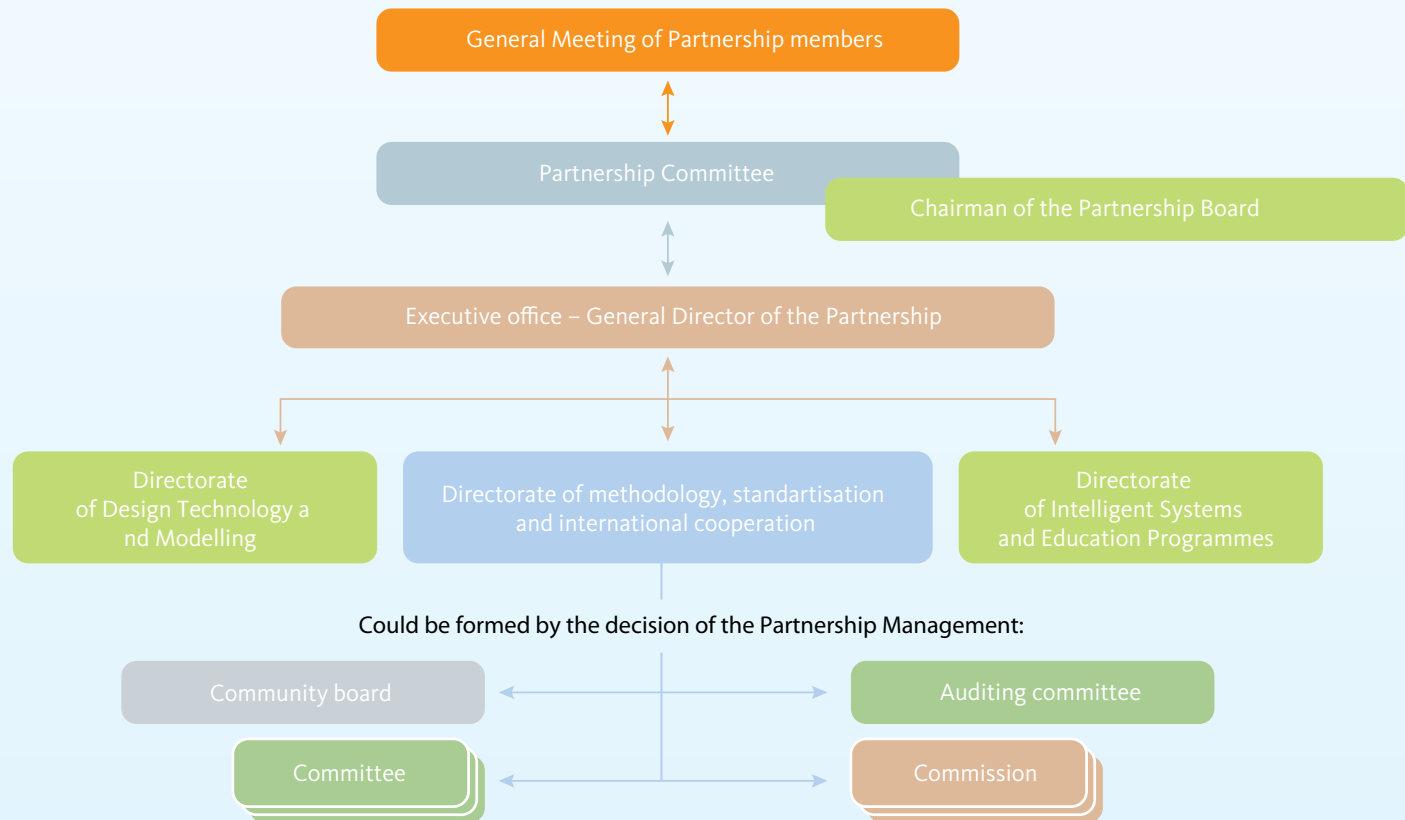
Coordinator: OBORONSERVICE JSC

Co-coordinator: SC ROSATOM

Science and Education: MGTU – Bauman Moscow State University, Institute of Informatics Problems of the Russian Academy of Sciences (IIP RAS), National Research Centre (NRC «Kurchatov Institute»), Research Institute “ETALON” JSC, Higher Military Education Establishments of the Russian Ministry of Defense.

Businesses: RPK JSC, SPA RusBITech JSC, ALMAZ-ANTEY Air Defense Group, Federal State Unitary Enterprise “Khronichev State Research and Production Space Center”, VEGA Radio Engineering Corporation, Concern “SOZVEZDIE” JSC.

Non-Commercial Partnership Technology Platform SIMULATION AND OPERATION PRACTICE OF HIGH-TECH SYSTEMS was founded 26.12.2011



SIMULATION AND OPERATION PRACTICE OF HIGH-TECH SYSTEMS (INDUSTRY OF THE FUTURE)

Main technological spheres

- Continuous information support of product life cycle
- Development and application of joint virtual reality
- Situational management and information support systems for decision-making process based on the joint virtual reality
- Integration technologies for complex engineering systems

Key results

- Technical upgrading of development and servicing processes for high-tech systems based on their complete electronic analogs
- Development of joint electronic document management system
- Development of a set of breakthrough technologies
- Development of virtual reality based on joint simulation environment
- Engineering of dual purpose synthetic simulators using joint information-simulation environment

Announcement of events

4th quarter of 2013 Russian National Conference on simulation and operation practice of high-tech systems

4th quarter of 2014 International Conference on simulation and operation practice of high-tech

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<http://www.mtevs.ru>





TEXTILE AND LIGHT INDUSTRY

Non-Commercial Partnership Technology Platform Textile and Light Industry

Coordinating organization
FSBEI HPOE KNITU



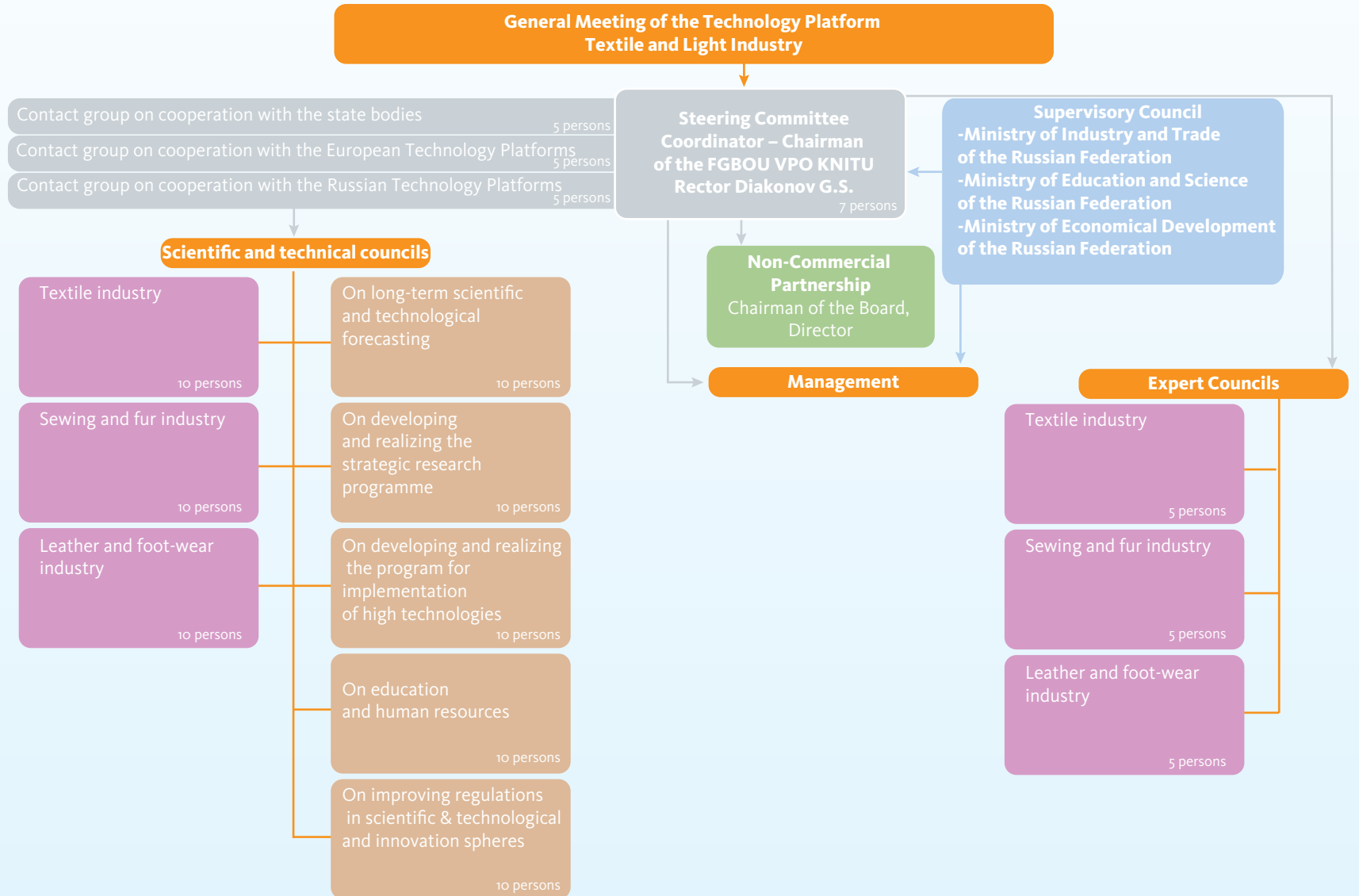
German S. Diyakonov
Chairman of the Technology Platform Textile and Light Industry

Rector of the FSBEI HPOE KNITU, associate member of ANRT, doctor of chemistry, professor



Ludmila N. Abutalipova
Co-chairman of the Technology Platform Textile and Light Industry

Pro-rector, director of the ITLMPMiD, doctor of engineering, professor





Members of the Technology Platform Textile and Light Industry

92 members, including:

- manufacturing enterprises - 67
- scientific-research institutes - 6
- educational institutions of higher vocational level - 10
- Russian associations and unions of textile and light industry - 8
- foreign organizations: Association NECES.A.R.L., Germany - 1.

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Tatyana A. Fyodorova
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Site: www.kstu.ru

Main technological spheres

Main spheres of activity of the Technology Platform Textile and Light Industry define necessity for developing several groups of the interrelated technologies and materials establishing prospects for further development of the textile and light industry and ensuring creation of smart textile as well as products of different categories and purposes.

Main technological spheres are as follows:

- Textile materials and products of the new generation designed for solving ecological and safety problems as well as for ensuring safety of the priority branches (i.e. space, power generation, defense complex, and public road system) of the national economy, including safety of human life and activities; technology of production of such materials and products.
- New technologies for modifying and finishing the natural and synthetic fiber materials using nanostructures for providing new unique properties to the products.
- New technologies, materials and resources directed for improving quality and competitiveness of textile and wearing apparel of mass consumption.

Key results

- Organizational structure of Non-Commercial Partnership - Technology Platform Textile and Light Industry has been established;
- The sector-related scientific-technical and expert councils have been established;
- The Non-Commercial Partnership - Technology Platform Textile and Light Industry has been registered;
- Topic - Technology Platform Textile and Light Industry has been created on the Web site of FGBOU VPO KNITU;
- The strategic research programme for 2013 has been developed according to the main spheres of the Technology Platform.

Announcement of events

March, 2013 Research and practice conference Modern Technologies and Equipment in Textile Industry (Textile 2013). General meeting of the Technology Platform Textile and Light Industry

October, 2013 International Research and Practice Conference Plasma Technologies & Researches and Creation of Materials of Different Physical Nature

November, 2014 International Youth School of Sciences Innovation Management. Expert councils meeting of the Technology Platform Textile and Light Industry

2014 Conference Modern High Innovation Technologies for Industry Developing in the Region. Extended meeting of the Board of the Non-Commercial Partnership - Technology Platform Textile and Light Industry

2014 All-Russia scientific conference Days of Science, 2014. Meeting of the scientific and technical councils of the Technology Platform Textile and Light Industry

2014 International research and practice conference «Fashion and Design. Historical experience – New Technologies». General meeting of the Technology Platform Textile and Light Industry.

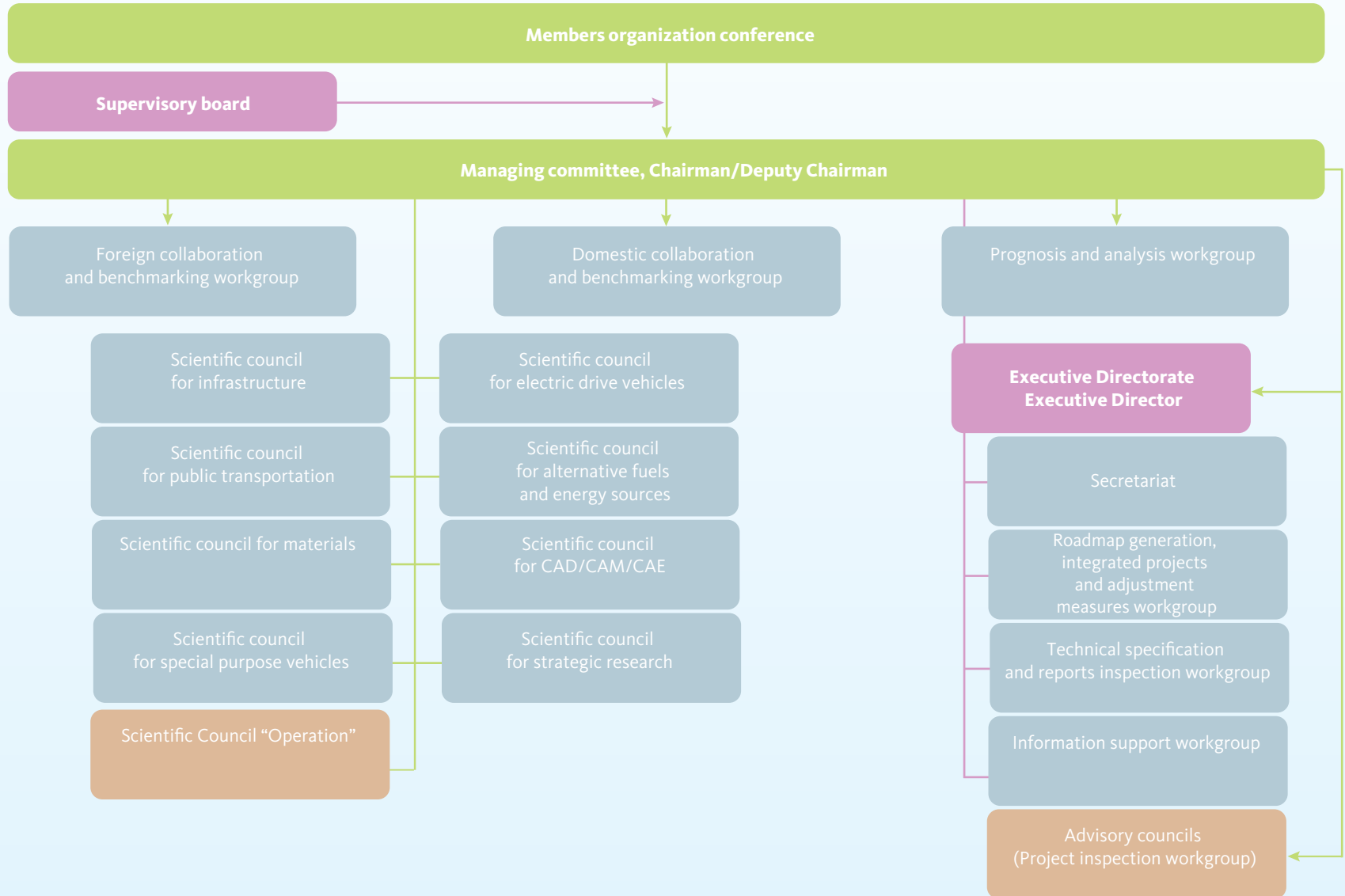


ENVIRONMENTALLY FRIENDLY VEHICLES “GREEN CAR”*

Organizational structure

Coordinating organization

FSUE “NAMI”



Maksim V. Nagaitsev
Technology Platform Chairman
FSUE “NAMI”, General Director



Ilya M. Minkin
Technology Platform Executive Director

ENVIRONMENTALLY FRIENDLY VEHICLES “GREEN CAR”*



The main organizations involved in the technology platform

- **Institutional and superorganizational structures**
 - 6 organizations: (Moscow City Department for Science, Industrial policy and Business, the Ministry of Industry and Trade of the RF, Rosstandart (Russian Certification Authority), etc.)
- **Research Institutes**
 - 11 organizations: (FSUE “NAMI”, Joint Institute for High Temperatures of the Russian Academy of Sciences (RAS), Institute for Technological Computer Science of the RAS, FSUE “Giproavtoprom”, FSUE “NIIAE”, FSUE “Vniinmash”, Volga Regional Branch of Russian Academy of Engineering, etc.)
- **HEI and educational centers**
 - 9 organizations: (Lomonosov State University, Moscow State University of Mechanical Engineering “MAMI”, Bauman Moscow State Technical University, The Moscow State Automobile and Road Technical University, etc.)
- **Manufacturing and Engineering companies**
 - 8 organizations: (Zavod AIT OJSC, ZIL AMS, AutoVAZ OJSC, KAMAZ OJSC, and etc.)
- **Other companies**
 - 11 organizations: (GAZ engineering center LLC, NamiBUS LLC, TEEMP LLC, Revolta LLC, VALTAR-Magnet LLC, Zavod AIT OJSC, RusNano OJSC Infrastructure and Education Projects Fund, Federal Grid Company OJSC, and etc.)
- **Foreign partners**
 - 5 companies: (Toyota Motor LLC, AVL LLC, Robert Bosch LLC, ARTC (Taiwan), JP Technoton (Belarus)).

Main technological spheres:

- Mathematical modeling and simulation (M&S) technologies
- High-efficiency traction and other types electric drive technologies
- High efficiency energy storage, fuel cell technologies (solar cells, thermoelectricity, storage batteries, supercondensers, fuel and semi-fuel cells).
- High efficiency power electronic components and other electronic components
- Core automotive components, composite materials, high efficiency polymer technologies and other modern materials
- Environmentally friendly vehicle manufacturing technologies
- Environmentally friendly vehicle operation technologies
- Environmentally friendly vehicle management systems based on Mechatronics and Biomechanics approaches (connected with EFV management structure change, particularly with respect to electromobile)
- Recycling and waste disposal technologies
- Generation and utilization of technological assets.
- Providing human resources and sufficient educational background
- Information technology and computer science
- Safe and receptive alternative energy storage
- Charging/fueling environmentally safe cars
- Smart Grid Technologies
- Automotive automation and robotics

Announce of Events

- Further development of TP strategic research and development programme
- Development of an original model for the efficient Technology Platform based on comprehensive matrix of innovative, fundamental, applied, technological, educational and other projects.
- Federal pilot innovation projects activity coordination and results assessment
- Development and launching of Technology Platform’s pilot projects

Key results

- Generated basic organizational structure and drafts of strategic documents
- Established interaction with leading Technology Platforms and RusNano Infrastructure and Education Projects Fund on implementation of Federal Pilot Projects “Innovative Road” and “Electric Vehicles”
- Established interaction with Technology Platforms on joint projects
- Work established on the formation of regulatory documents and draft resolutions for the Government’s support of environmentally friendly vehicles
- Roundtable meeting held on Electric vehicles within the Samara economics forum
- Developed proposals on subject matters for the Federal Target Programme «Research and development in priority areas ...»
- Generated TP suggestions on projects and activities feasible to be implemented within the Russian Federation State Programme: «Industrial development and competitiveness improvement»

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TECHNOLOGIES OF FOOD AND PROCESSING INDUSTRY OF AGRO-INDUSTRIAL COMPLEX – HEALTHY FOOD



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Head of the Administration of Tambov region

Contact information

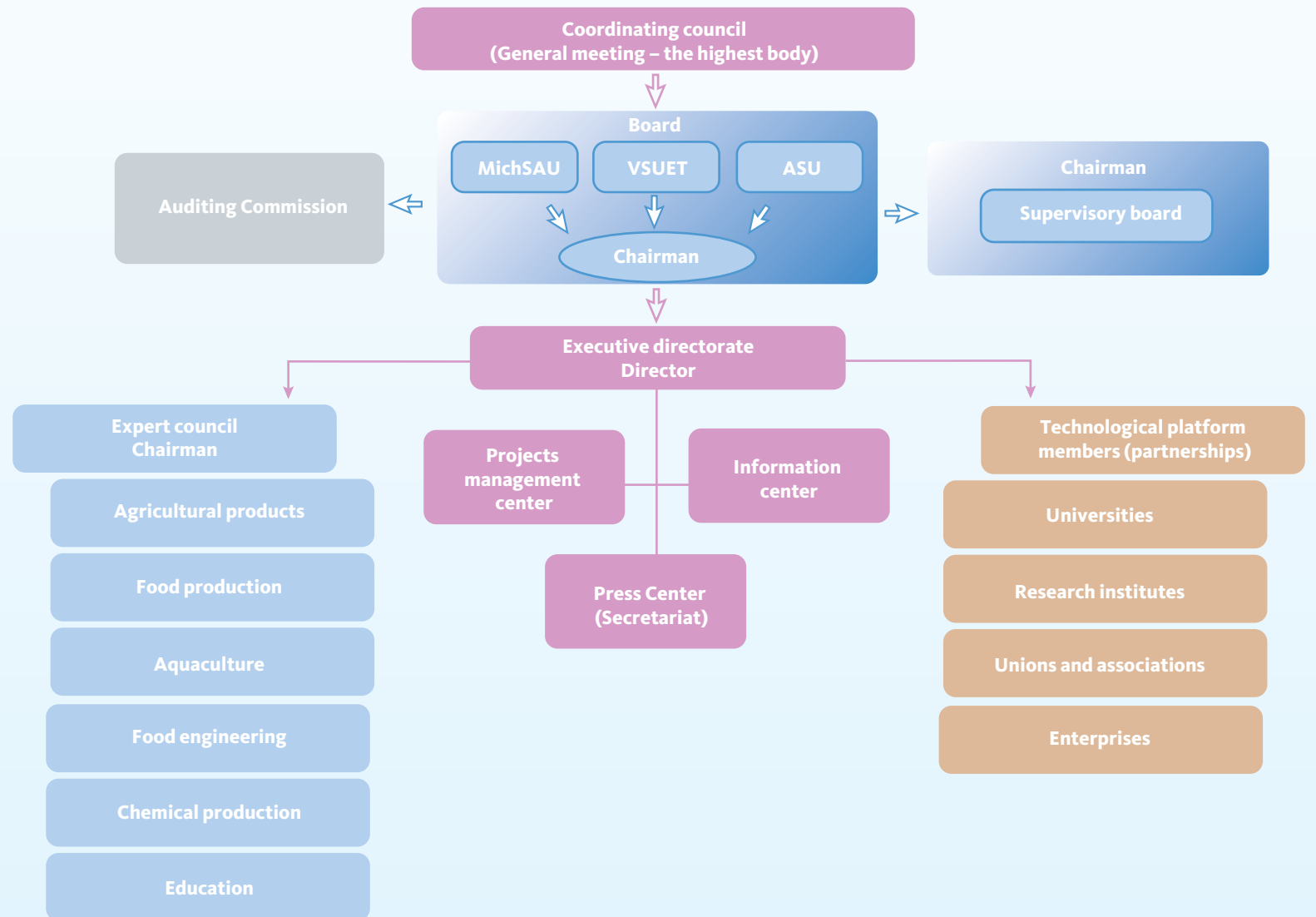
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Structure of non-profit partnership RTP «Technologies of food and processing industry of agro-industrial complex – healthy food»



TECHNOLOGIES OF FOOD AND PROCESSING INDUSTRY OF AGRO-INDUSTRIAL COMPLEX – HEALTHY FOOD



Main technological spheres

- Ecologically friendly resource production and technology of agricultural raw materials and food products.
- Technologies of biologically active substances from natural raw materials of plant and animal origin.
- Technologies for development of new breeds and hybrids of crops.
- Technologies of large-scale production of healthy foods from fruit and vegetable raw materials.
- Technologies of extended storage of agricultural products.
- Technologies of product quality management at the following stages: raw material production, processing, finished products and goods logistics.
- Processing and disposal of anthropogenic formations and wastes.
- Control and assessment technologies for the environmental objects and industrial safety.

Announcement of events

November 2012 non-profit partnership of the technology platform establishment

November 2012 designing of the Internet portal of technology platform and participation in the work of appropriate federal portal

November 2012 development of a strategic research agenda detailed in terms and performers, as well as plans for the commercialization of their results

March 2013 development of proposals to federal regulations to support Russian manufacturers in the Russian market of healthy food

May 2013 development of proposals for the organization of effective international cooperation in the implementation of joint projects with foreign states and private corporations in the field of agricultural and food biotechnology development

October 2013 programme pilot projects launching

November 2013 Agricultural- and industrial congress

Key results

- 1-2 November 2011. The 1st Agricultural congress with the members of technology platform was held. It was devoted to validation of TP memorandum, the structure and personal staff of coordination and expert council, as well as to the development and implementation of strategic priorities in the field of food safety.
- The programme for the development of technology platform, «Technologies of food processing industry AIC - healthy food» was worked out.
- The Council of Experts for each group of technologies implemented within the limits of technology platform permanent working teams were established and started functioning.
- June 2012. Detailed plan of the technology platform was prepared and submitted to the Ministry of Economic Development of Russia.
- Materials concerning cooperation of technology platform with large state companies requested by the Ministry of Economic Development of Russia were prepared and preliminary agreement on development of cooperation of platform with the state company «Russian Technologies» was reached.
- As part of the TP implementation, the concept of establishing the Voronezh Federal Research and Education Center «Strategy of Russia's food safety» as an effective tool for the public and private partnership was developed.
- 16 conferences, 7 meetings, 13 seminars were organized and held.
- June, 5. The meeting with the Interagency Coordinating Council of RAS on the health of a healthy person was held.
- September, 7. In the «Day of the gardener» the meeting of the platform members for strategic direction «Fruit, vegetables and food products for functional and recreational purposes» was held and the initiative of establishing non-profit platform-based organization was supported.
- Report in the VII International Symposium «Russia – EU: cooperation in the field of biotechnology, agriculture, forestry, fisheries and food» was made.
- Report on the Tambov bioeconomic cluster at a conference at the international exhibition «ACHEMA - 2012.»
- Participation in the conference on the implementation of the new EU Framework Programme «Horizon - 2020» in the direction of European Technology Platforms «Food for Life» and «Plants for the Future».
- Business meeting with representatives of the European Technology Platforms «Food for Life» and «Plants for the future», as well as with potential partners for the creation of consortia to participate in the 7th EU Framework Programme for bioeconomic direction.

Co-Coordinator of the technology platform: FSBEI HPE «Voronezh State University of Engineering Technologies»; FSBEI HPE «Michurin State Agrarian University»; FSBEI HPE «Astrakhan State University».

Enterprises and organizations involved to participate in the creation of a technology platform: more than 150.

Universities: total 20.

Research institutes: total 18, among them 11 Russian Academies of Sciences.

Russian strategic organizations (approved by the Government Commission on sustainable development of the Russian economy on 25.12.2008 and supplemented on 12.05. 2009): total 15

Unions and associations: total 14

- «Russian Grain Union»;
- «Agroindustrial Union of Russia»;
- «National Union of Grain Producers»;
- «Feed Manufacturers Union»;
- «Oil and Fat Industry Association of Enterprises of the Customs Union»;
- «International Business Association»;
- «Russian Union of Dairy Industry Enterprises»;
- Association «State-Cooperative Association of Fisheries (Rosrybkhoz)»;
- Association of Gardeners «ASP-RUS»;
- Association of Russian Gardeners «APPYAPM».



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