

Rostec

*ON THE CUTTING EDGE
OF THE DIGITAL ECONOMY*

Annual Report
of the Rostec State Corporation
for 2016



Rostec

*State
Corporation*

ANNUAL REPORT FOR 2016

APPROVED
by the Supervisory Board
of the Rostec State Corporation
(Minutes No. 8 dated 19 April 2017)

ON THE CUTTING EDGE OF DIGITAL ECONOMY

CEO
Rostec State Corporation

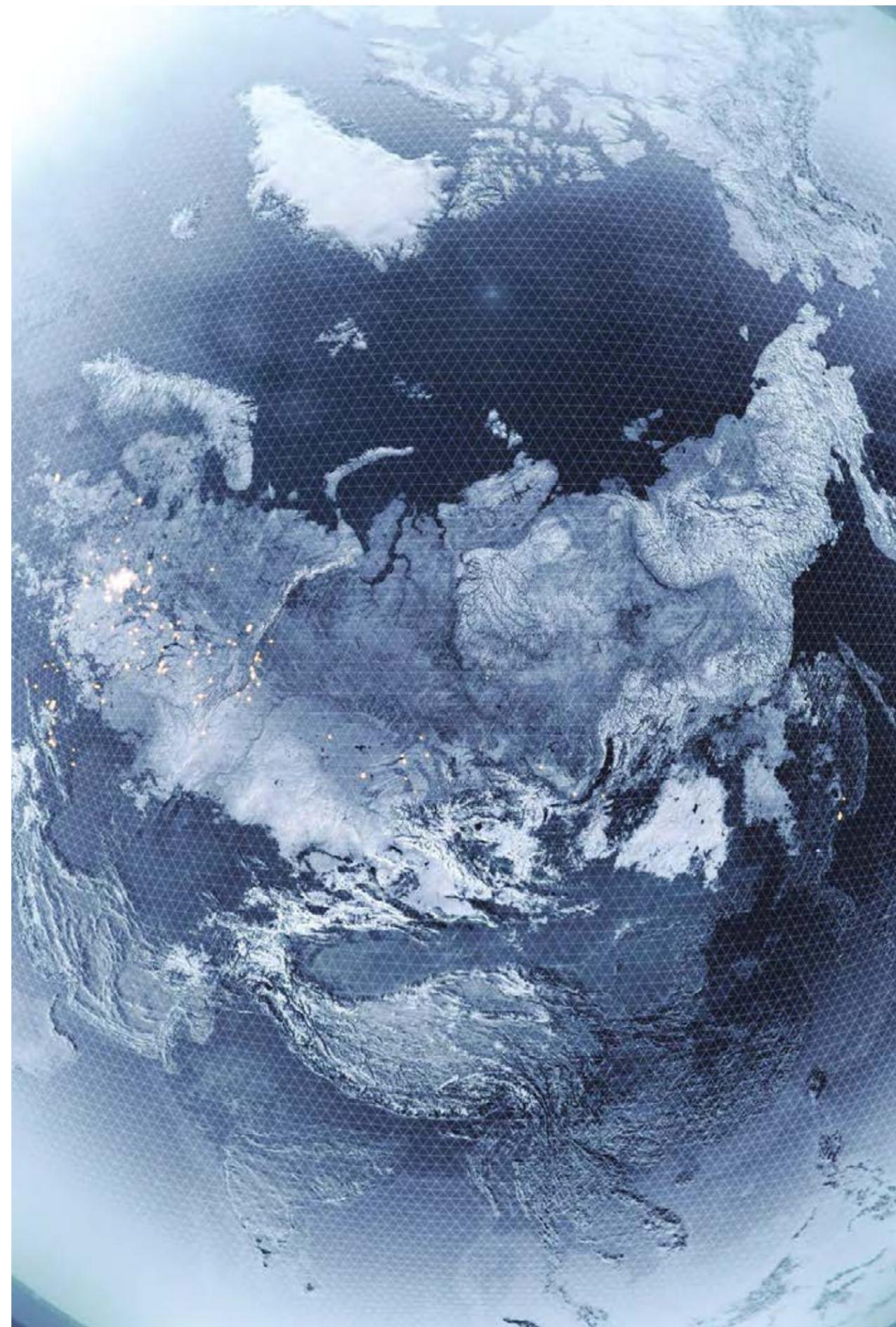
S.V. CHEMEZOV

2017

Chief Accountant
Rostec State Corporation

N.V. BORISOVA

2017



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Of paramount importance to the Rostec State Corporation's activities is the innovative vector of development clearly stated by the President of the Russian Federation

Address by the Rostec State Corporation's Supervisory Board chairman D.V. Manturov

Dear colleagues!

The global processes currently existing in the world continue to exert serious influence on the economies of countries, thus escalating the competition for new markets, technologies and funds. And it is needless to say that our country has to take into account such trends to develop its own economic strength.

It should be noted that a sustainable growth trend can be seen in the national industry as we speak: by the end of the previous year the industrial production increased by 1.1% and, equally important, the share of advanced technology product also increased.

Largely, such results were guaranteed by the activities of the Rostec State Corporation which is involved in the development and modernization of production capacities. Despite the sanctions, the Corporation's holding companies continue to expand their presence on foreign markets.

Besides, the process of transferring and immediate integration of shares of key production assets into the Corporation's structured continued in 2016. Thus, shares of 100 joint-stock companies, including 19 organizations involved in the implementation of the state defence order for a series of critical technologies, were transferred into the ownership of the Corporation. At the end of the year a decision was made to transfer the shares of OJSC Research and Production Corporation Uralvagonzavod to the Corporation.

Of paramount importance to the Rostec State Corporation's activities is the innovative vector of development clearly stated by the President of the Russian Federation. It is obvious today that the role of information technologies will only grow, and this entails the formation of a global digital economy. And we do need to rely on the domestic technologies, develop them, and this is not only a matter of information security, but also national security.

Today, it is important to continue the work aimed at ensuring the competitive capacity and growth of the Russian industry, increasing the quality and output of products, development of export markets, creation and promotion of unique domestic technologies and inventions. In light of this I would like to emphasize that the Corporation remains an important mechanism in the promotion of the state policy in the sphere of development and digitalization of the Russian industry.

I am confident that the Rostec State Corporation will continue to strengthen its role of an absolute technological leader and will become a flagship of the Russian digital economy!

D.V. Manturov

Rostec State Corporation's Supervisory Board Chairman



Consolidated proceeds

/ in 2015-2016, trillion rubles /

1.266

trillion rubles



Address by the CEO of the Rostec State Corporation S.V. Chemezov

Dear colleagues and partners!

Despite the fact that the macroeconomic situation in 2016 remained quite difficult, and the geopolitical situation was characterized by new challenges, the Rostec State Corporation continued to demonstrate confident growth.

By observing the balance of interests of the state and the business, the Corporation and its enterprises improve the labour conditions for almost a half-a-million staff, while maintaining the dynamic growth of financial indicators, modernizing the production and reaching the new level of global competition. The

Corporation's proceeds in 2016 reached 1.266 trillion rubles, and the average salary of employees continues to grow every year – in 2016 it was 44,000 rubles. In the previous year 2 billion rubles were allocated to the housing programme and optional health insurance programme only, and 850 million rubles to the staff retirement plan.

In the reporting year the Corporation continued to reach the targets laid down in the Rostec State Corporation's Development Strategy until 2025 which was cascaded over our clusters. Thus, new industry strategies were formed for each of the key directions – armament, aviation, electronics.

An important mid-term task is attraction of technological and dedicated investors to the Corporation's assets, and increase of civil products production. In 2016, the output of such products grew by 11% and was 374 billion rubles.

In the reporting period an agreement was signed for the sale of 12% shareholding interest in the parent organization of the holding company JSC Russian Helicopters for 300 million USD. Consolidation of our electronics assets allowed to form finished product chains.

A huge breakthrough was made in the sales of medical equipment, 2 large projects were implemented for the supply of «smart» lighting to Nizhny Tagil and Ulan-Ude as part of the Bright City project. The Corporation became the only contractor for the IT infrastructure development for the 2018 FIFA World Cup. As part of the liabilities for construction and equipment of perinatal centres, 2 centres were commissioned in 2016 – in Ufa and Orenburg.

The Corporation actively develops international cooperation. In 2016 we completed the supply of S-300 to Iran, signed a firm contract for commissioning of joint building of Ka-226 helicopters in India. Besides, during the previous year the Corporation performed a goal-oriented activities for the improvement of the corporate management of holding companies through strategic, investment and operational models. New joint ventures were formed, and the existing production facilities were optimized.

A series of measures were taken to increase the financial efficiency aimed at an integrated financial and economic expert analysis of all expenses of the Corporation.

This is only a part of the results achieved in the reporting year due to the strong managerial team and professional production workers that ensured the efficient operation of more than 700 industrial enterprises of the Corporation.

Today, the Corporation confidently looks forward. Considering the fast rate of change of both the production nature and the process of product application, it is obvious that the fourth industrial revolution implies a large-scale informatization of not only the industry, but also all aspects of human life. In December 2016, the President of the Russian Federation V.V. Putin in his address to the Federal Assembly of the Russian Federation proposed to initiate a digital economy development programme in our country. I should note that as early as in 2015 the Corporation determined its main priority in its updated Strategy – a shift from «hardware» to «intelligence», and an emphasis on such most promising and fast growing markets as IT, telecommunications and management systems. Today, the Corporation's enterprises produce hundreds of products meeting the digital economy criteria, and their share in the production constantly grows.

Being a global player, the Corporation reacts to the technological challenges of the modern age. Thus, today our efforts are focused on the development and creation of «smart» systems which will lead to an improvement in production planning, resource management and analysis of efficient processes. We understand that the future belongs not to individual technologies, but to integrated products with high added value, such as Smart City, Industrial Internet, telehealth, e-learning.

These projects integrate hundreds of technological solutions and products manufactured by the Corporation's enterprises.

In conclusion I would like to emphasize that the Rostec State Corporation plans to achieve by 2025 the indicators laid down in the Strategy by implementing its main mission – to support the development, production and export of the national advanced technology industrial product. As a result, the Corporation will become an absolute leader in the Russian digital economy.

S.V. Chemezov

CEO of the Rostec State Corporation

Main Performance Indicators in 2016

Consolidated proceeds in 2016

/ in 2015-2016, trillion rubles /



EBITDA

/ in 2015-2016, billion rubles /



Consolidated net profit in 2016

/ in 2015-2016, billion rubles /



Total volume of investments*

/ in 2015-2016, billion rubles /



Consolidated proceeds in 2016

1.266

trillion rubles

Consolidated net profit in 2016

88

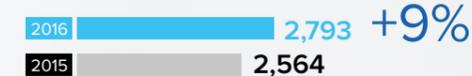
billion rubles

* Including funds for Federal Targeted Programmes
** Based on aggregate (non-consolidated) indicators

Key performance indicators

Work output per employee

/ in 2015-2016, thousand rubles per employee /



Net profit margin

/ in 2015-2016, % /



EBITDA margin

/ in 2015-2016, % /



Volume of supplied military products of JSC Rosoboronexport

/ in 2015-2016, billion USD /



Total number of employees within the budgeting structure

/ in 2015-2016, thousand employees /



Production output of civil products **

/ in 2015-2016, billion rubles /



Average monthly salary

/ in 2015-2016, thousand rubles per month /



EBITDA in 2016

268

billion rubles

Volume of supplied military products of JSC Rosoboronexport

13.1

billion USD



1. Overview of the Rostec State Corporation

JSC Technodinamika:

• Veliky Novgorod • Irkutsk • Kirov • Kotlas • Moscow • Orekhovo-Zuevo • Samara • Saint Petersburg

JSC United Engine Corporation:

• Aramil • Gatchina • Eysk • Moscow • Naro-Fominsk • Perm • Rybinsk • Samara • Saint Petersburg

Saint Petersburg

Gatchina

Veliky Novgorod

Tver

Torzhok

• Ulyanovsk • Ufa

Pskov

• Ufa • Chelyabinsk

Moscow

Naro-Fominsk

Safonovo

Obninsk

Kaluga

Smolensk

Bryansk

Lublino

Kaliningrad



1. Overview of the Rostec State Corporation



The Corporation was established and exists under the Federal Law No. 270-FZ dated 23 November 2007 «On the State Corporation for Assistance to Development, Production and Export of Advanced Technology Industrial Product «Rostec»» (hereinafter referred to as the Federal Law No. 270-FZ). It is a legal entity formed in the Russian Federation as a state corporation.

Full name of the Corporation in the Russian language – [Государственная корпорация по содействию разработке, производству и экспорту высокотехнологичной промышленной продукции «Ростех»](#);

abbreviated name in the Russian language – [Государственная корпорация «Ростех»](#);

full name of the Corporation in the English language – [State Corporation for Assistance to Development, Production and Export of Advanced Technology Industrial Product «Rostec»](#);

abbreviated name in the English language – [Rostec State Corporation](#).

The Corporation's objective is assistance to development, production and export of advanced technology industrial product

The Corporation's objective is assistance to development, production and export of advanced technology industrial product by ensuring support on the domestic and foreign markets for the Russian organizations involved in the development and production of advanced technology industrial product, organizations whose decisions may be controlled by the Corporation due to the dominant participation in their authorized capitals, or under the agreements executed with such organizations (hereinafter referred to as the Corporation's organizations) by attracting the investments in the organizations of various industry sectors, including the defence industry, and participation in social and other projects of public interest acting in the best interests of the state and the society as per the Federal Law No. 270-FZ, other federal laws and resolutions of the President of the Russian Federation.

The main functions of the Corporation and its authorities in implementing such functions are determined by the Federal Law No. 270-FZ and resolutions of the President of the Russian Federation (Decree of the President of the Russian Federation No. 356 dated 22 July 2016 «On Certain Matters Regarding the State Corporation for Assistance to Development, Production and Export of Advanced Technology Industrial Product «Rostec»», order of the President of the Russian Federation No. 46-rp dated 4 March 2014 on assigning to the Corporation the customer functions to ensure the engineering surveys and preparation of project documentation for construction of regional perinatal centres in the federal subjects of the Russian Federation and other functions).

>700

number of organizations included in the management structure of the Corporation

Information on the state registration:

Certificate of state registration: series 77, number 011483840, issued by the Moscow Federal Tax Service Directorate dated 3 December 2007

Primary State Registration Number (OGRN): 1077799030847, date of registration: 3 December 2007
Taxpayer Identification Number (INN)/ Tax Registration Reason Code (KPP): 7704274402/770401001

Information on the Corporation's auditor:

Limited Liability Company RSM RUS
OGRN: 1027700257540
INN/KPP: 7722020834/772901001
Address: 119285 Moscow, ul. Pudovkina, 4

Contact details:

ЮRegistered office of the Corporation: 119991 Moscow, Gogolevsky b-r, 21, building 1

Business address of the Corporation: 119991 Moscow, Gogolevsky b-r, 21, building 1

119048 Moscow, ul. Usacheva, 24

Telephone: (495) 287-25-25 Fax: (495) 987-65-74, 987-65-73

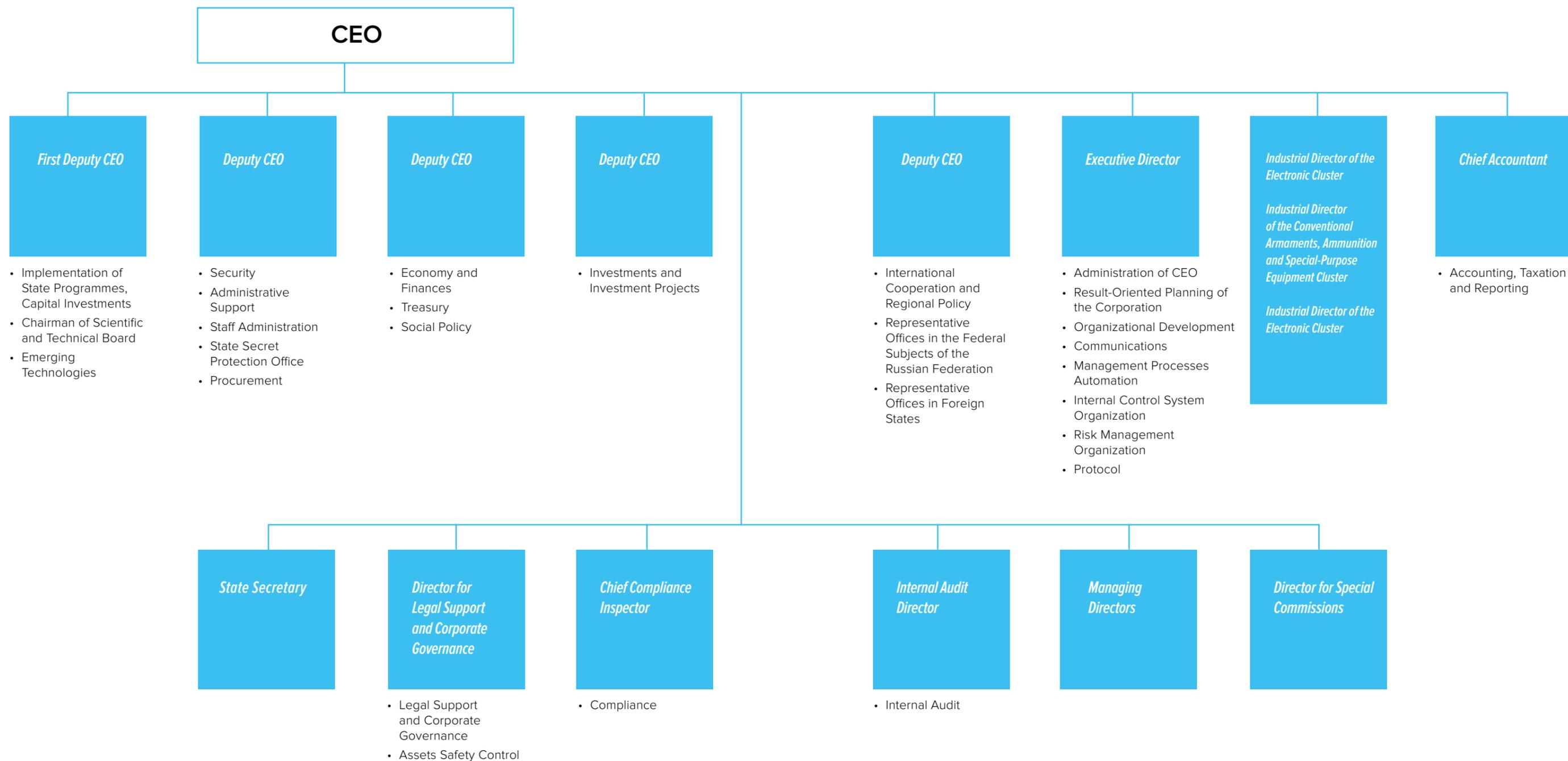
Web-site: www.rostec.ru

1.1 Organizational structure of the Rostec State Corporation

The organizational structure of the Corporation's Headquarters has been approved by the resolution of the Corporation's Supervisory Board (minutes No. 9 dated 15 August 2016).

Total number of organizations included in the management structure of the Corporation: more than 700.

The Corporation's Organizations are consolidated into holding companies (integrated structures) formed by various defence and civil industry sectors (including aviation industry, ammunition and special chemistry industry, conventional armament industry, electronic industry), or are under direct control of the Corporation.



1.2 Composition of the Supervisory Board*

IN 2016, THERE WERE 15 MEETINGS OF THE SUPERVISORY BOARD (11 OF WHICH TOOK PLACE IN ABSENTIA).

The Supervisory Board is the supreme management body of the Corporation accountable for strategic development. By the Decrees of the President of the Russian Federation the following persons were appointed as members of the Supervisory Board:



Denis Valentinovich Manturov

MINISTER OF TRADE AND INDUSTRY OF THE RUSSIAN FEDERATION, CHAIRMAN OF THE SUPERVISORY BOARD

2003–2007 — CEO of United Industrial Corporation Oboronprom.

2007–2008 — Deputy Minister of Industry and Energy of the Russian Federation.

2008–2012 — Deputy Minister of Trade and Industry of the Russian Federation.

2012–present — Minister of Trade and Industry of the Russian Federation.



Yuriy Ivanovich Borisov

DEPUTY MINISTER OF DEFENCE OF THE RUSSIAN FEDERATION

1998–2004 — CEO of Module Scientific and Technical Centre.

2004–2007 — Head of the Electronic Industry and Management Systems Department of the Federal Industry Agency.

2007–2008 — Deputy Director of the Federal Industry Agency.

2008–2011 — Deputy Minister of Trade and Industry of the Russian Federation.

2011–2012 — First Deputy Chairman of the Military and Industrial Commission of the Government of the Russian Federation.

2012–present — Deputy Minister of Defence of the Russian Federation.



Larisa Igorevna Brycheva

AIDE TO THE PRESIDENT OF THE RUSSIAN FEDERATION – HEAD OF THE STATE LEGAL ADMINISTRATION OF THE PRESIDENT OF THE RUSSIAN FEDERATION

1993–1999 — Head of the Department of the Administration of the President of the Russian Federation, Head of the Executive Office of the Plenipotentiary Representative of the President of the Russian Federation in the Federal Assembly, Deputy Director of the Main State Legal Administration of the President of the Russian Federation. 1999 — Head of the Main State Legal Administration of the President of the Russian Federation.

1999 — Head of the Main State Legal Administration of the President of the Russian Federation.

2004 — Aide to the President of the Russian Federation and Head of the State Legal Administration of the President of the Russian Federation (reassigned to these posts in 2012).

2006 — Member of the Council and the Presidium of the Council of the President of the Russian Federation for implementation of high-priority national projects and demographic policy (reassigned to these posts in 2008).

2008–present — Member of the Council and the Presidium of the Council of the President of the Russian Federation for corruption control, Deputy Chairman of the Russian Presidential Commission for reformation and development of the state service.



Anton Germanovich Siluanov

MINISTER OF FINANCE OF THE RUSSIAN FEDERATION

2005–2011 — Deputy Minister of Finance of the Russian Federation.

2011–present — Acting Minister of Defence of the Russian Federation.

2011–present — Minister of Finance of the Russian Federation.



Vladimir Evgenievich Ostrovenko

DEPUTY DIRECTOR OF THE PRESIDENTIAL ADMINISTRATION OF THE RUSSIAN FEDERATION

2011–present — Head of the Protocol of the Chairman of the Russian Government – Deputy Director of the Central Office of the Russian Government.

2012–present — Head of the Presidential Protocol of the Russian Federation.

2016–present — Deputy Director of the Presidential Administration of the Russian Federation.



Igor Evgenievich Levitin

AIDE TO THE PRESIDENT
OF THE RUSSIAN FEDERATION

2004–2012 — Minister of Transport of the Russian Federation.
2012–2013 — Adviser to the President of the Russian Federation.
2013–present — Aide to the President of the Russian Federation.



Yury Viktorovich Ushakov

AIDE TO THE PRESIDENT
OF THE RUSSIAN FEDERATION

1998 — Deputy Minister of Foreign Affairs of the Russian Federation (supervised the cooperation with the UN, legal and humanitarian issues).
1998–2008 — Russian Ambassador to the USA and Permanent Observer of the Russian Federation in the Organization of American States in Washington (on a part-time basis).
2008–2012 — Deputy Director of the Presidential Administration of the Russian Federation.
2012–present — Aide to the President of the Russian Federation.



Aleksander Vasilievich Fomin

DIRECTOR OF THE FEDERAL SERVICE
OF MILITARY-TECHNICAL COOPERATION

2001–2005 — Deputy Director of the Department; Director of the Department of the Federal State Unitary Enterprise Rosoboronexport.
2005–2007 — Deputy Director of the Federal Service of Military-Technical Cooperation. **2007–2012** — First Deputy Director of the Federal Service of Military-Technical Cooperation.
2007–2012 — First Deputy Director of the Federal Service of Military-Technical Cooperation.
2012–present — Director of the Federal Service of Military-Technical Cooperation.



Sergey Viktorovich Chemezov

CEO OF THE ROSTEC STATE CORPORATION

1988–1996 — Deputy CEO of the Foreign Trade Association Sovintersport. **1996–1999** — Director of the Foreign Economic Administration of the Administrative Department of the President of the Russian Federation.
1996–1999 — Director of the Foreign Economic Administration of the Administrative Department of the President of the Russian Federation.
1999–2001 — CEO of the Federal State Unitary Enterprise Promexport.
2001–2007 — First Deputy CEO, CEO of the Federal State Unitary Enterprise Rosoboronexport.
2007–present — CEO of the Rostec State Corporation.

1.3 Composition of the Board*

IN 2016, THERE WERE 98 MEETINGS OF THE BOARD (62 OF WHICH TOOK PLACE IN ABSENTIA).

The Board is a collegial executive body of the Corporation accountable for the key management decisions which directly affect the strategic objectives of the Corporation. The Corporation's Board includes the following members (as approved by the Supervisory Board):



Sergey Viktorovich Chemezov

CEO OF THE ROSTEC STATE CORPORATION

1988–1996 — Deputy CEO of the Foreign Trade Association Sovintersport. 1996–1999 — Director of the Foreign Economic Administration of the Administrative Department of the President of the Russian Federation.

1996–1999 — Director of the Foreign Economic Administration of the Administrative Department of the President of the Russian Federation.

1999–2001 — CEO of the Federal State Unitary Enterprise Promexport.

2001–2007 — First Deputy CEO, CEO of the Federal State Unitary Enterprise Rosoboronexport.

2007–present — CEO of the Rostec State Corporation.

He is a member of the boards of directors (supervisory boards) of the following large companies:

- VSMPO-AVISMA CORPORATION, PJSC
- KAMAZ, PJSC
- Rosoboronexport, JSC
- Uralkali, PJSC
- United Rocket and Space Corporation, OJSC
- Joint-Stock Commercial Bank International Financial Club, OJSC
- Aeroflot – Russian Airlines, PJSC
- ROSCOSMOS State Corporation for Space Activities
- Alliance Rostec AUTO BV Joint Venture



Vladimir Vladimirovich Artyakov

FIRST DEPUTY CEO OF THE ROSTEC STATE CORPORATION

2000–2006 — Deputy CEO of the Federal State Unitary Enterprise Rosoboronexport.

2005–2007 — Chairman of the Board of Directors of AVTOVAZ, CEO of the AVTOVAZ Group.

2007–2012 — Governor and Chairman of the Government of the Samara Region.

2012–2014 — Deputy CEO of the Rostec State Corporation.

2014–present — First Deputy CEO of the Rostec State Corporation.



Nikolay Anatolievich Volobuev

DEPUTY CEO OF THE ROSTEC STATE CORPORATION

2004–2006 — Deputy Director of the Federal Customs Service of Russia.

2006–2007 — Director for Special Commissions of the Federal State Unitary Enterprise Rosoboronexport.

2007–present — Deputy CEO of the Rostec State Corporation.



Igor Nikolaevich Zavyalov

DEPUTY CEO OF THE ROSTEC STATE CORPORATION

1999–2002 — Deputy Chairman of Vnesheconombank, Member of the Board of Directors.

2002–2007 — Deputy Chairman of the Board of Vnesheconombank.

2007–present — Deputy CEO of the Rostec State Corporation.



Dmitry Evgenyevich Shugaev

DEPUTY CEO OF THE ROSTEC STATE CORPORATION

2001–2008 — Assistant of the First Deputy CEO, Head of the Central Office of CEO of the Federal State Unitary Enterprise Rosoboronexport.
2008–2009 — Head of the Central Office of CEO of the Rostec State Corporation.
2009–present — Deputy CEO of the Rostec State Corporation.



Dmitry Yurievich Lelikov

DEPUTY CEO OF THE ROSTEC STATE CORPORATION

2004–2012 — First Deputy CEO of JSC United Industrial Corporation Oboronprom.
2012–2016 — CEO of JSC United Industrial Corporation Oboronprom.
2016–present — Chairman of the Board of Directors of LLC Rostec-Business Development.
2016–present — Deputy CEO of the Rostec State Corporation.



Oleg Nikolaevich Evtushenko

EXECUTIVE DIRECTOR OF THE ROSTEC STATE CORPORATION

2011–2012 — Director for Development of LLC VTS-Service.
2012–2013 — Undersecretary, Deputy Director of the Foreign Economic Relations Department. Ministry of Industry and Trade of the Russian Federation.
2013–2016 — Head of the Central Office of CEO of the Rostec State Corporation.
2016–present — Executive Director of the Rostec State Corporation.



Natalya Vladimirovna Borisova

CHIEF ACCOUNTANT OF THE ROSTEC STATE CORPORATION

2007–present — Chief Accountant of the Rostec State Corporation.



Alla Sergeevna Laletina

ДИРЕКТОР ПО ПРАВОВОМУ ОБЕСПЕЧЕНИЮ И КОРПОРАТИВНОМУ УПРАВЛЕНИЮ ГОСУДАРСТВЕННОЙ КОРПОРАЦИИ «РОСТЕХ»

2007–2010 — Director of the Corporate Legal Department of JSC SiburTyumenGaz (JSC SIBUR-Holding),
2009–2013 — Deputy CEO for Corporate and Legal Matters of LLC Tobolsk-Polymer (JSC SIBUR-Holding),
2013–2015 — Head of the Legal Administration, Head of the Legal and Corporate Department of the Rostec State Corporation.
October 2015–present — Director for Legal Support and Corporate Governance of the Rostec State Corporation.



Aleksandr Yurievich Nazarov

MANAGING DIRECTOR FOR NON-CORE AND DISTRESSED ASSETS OF THE ROSTEC STATE CORPORATION

2010–2011 — Deputy Director of the Economic Security Department of the Ministry of Internal Affairs of the Russian Federation.
2011–2014 — Adviser to CEO of the Rostec State Corporation.
2014–2015 — Managing Director for Distressed Assets of the Rostec State Corporation.
2015–present — Managing Director for Non-Core and Distressed Assets of the Rostec State Corporation.



Maksim Vladimirovich Vybornykh

STATE SECRETARY OF THE ROSTEC STATE CORPORATION

2002–present — Deputy Director of the Inspectorate of the Moscow Chamber of Control and Accounts.
2004–present — Head of Economic Department of the Central Administrative District of Moscow.
2006–present — Head of the Presidential Experts Directorate of Russia.
2014–present — State Secretary of the Rostec State Corporation.



Sergey Aleksandrovich Kulikov

INDUSTRIAL DIRECTOR OF THE ELECTRONIC CLUSTER OF THE ROSTEC STATE CORPORATION

2009–2013 — Head of the Central Office of CEO of the Rostec State Corporation.

2013–2016 — Executive Director of the Rostec State Corporation.

2016–present — Industrial Director of the Electronic Cluster of the Rostec State Corporation.



Sergey Borisovich Abramov

INDUSTRIAL DIRECTOR OF THE CONVENTIONAL ARMAMENTS, AMMUNITION AND SPECIAL CHEMISTRY CLUSTER OF THE ROSTEC STATE CORPORATION

2006–2007 — Auditor of the Accounts Chamber of the Russian Federation.

2007–2014 — Head of the Railway Stations Directorate of OJSC Russian Railways.

2015 — Adviser to the President of OJSC Russian Railways.

2015–present — Industrial Director of the Conventional Armaments, Ammunition and Special Chemistry Cluster of the Rostec State Corporation.



Vladimir Zalmanovich Litvin

MANAGING DIRECTOR FOR DIRECTLY CONTROLLED ORGANIZATIONS OF THE ROSTEC STATE CORPORATION

2006–2008 — Auditor of the Accounts Chamber of the Russian Federation. 2006–2008 — Senior Vice-President for Commercial Activities of OJSC AVTOVAZ.

2008–2009 — Adviser to CEO of the Russian Technologies State Corporation.

2009–2015 — Head of the Corporate Procedures and Property Portfolio Department, Asset Management and Corporate Procedures Department of the Corporation, Planning and Industrial Policy Department of the Rostec State Corporation, Industrial Director of Directly Controlled Organizations Complex.

2016–present — Managing Director for Directly Controlled Organizations of the Rostec State Corporation.



Viktor Nikolaevich Kiryanov

MANAGING DIRECTOR FOR INFRASTRUCTURE PROJECTS OF THE ROSTEC STATE CORPORATION

2003–2005 — Head of the Main Directorate for Road Traffic Safety of the Ministry of Internal Affairs of Russia.

2005–2011 — Chief Road Traffic Safety Inspector of the Ministry of Internal Affairs of Russia, authorized as Minister.

2011–2015 — Deputy Minister of Internal Affairs of the Russian Federation.

2016–present — Managing Director for Infrastructure Projects of the Rostec State Corporation.



Anatoly Eduardovich Serdyukov

INDUSTRIAL DIRECTOR OF THE AVIATION CLUSTER OF THE ROSTEC STATE CORPORATION

2007–2012 — Minister of Defence of the Russian Federation.

2007–2012 — Chairman of the Supervisory Board of the Russian Technologies State Corporation.

2012–2015 — CEO of the Federal Research and Testing Centre of Machine Engineering.

2015–present — Industrial Director of the Aviation Cluster of the Rostec State Corporation.



Yuri Nikolaevich Koptev

CHAIRMAN OF THE SCIENTIFIC AND TECHNICAL COUNCIL OF THE ROSTEC STATE CORPORATION

1992–2004 — CEO of the Russian Space Agency; CEO of the Russian Aviation and Space Agency.

2004–2008 — Director of the Military-Industrial Complex Department of the Russian Federation's Ministry of Industry and Energy.

2008–2009 — Head of the group of advisers for the Rostec State Corporation.

2009–present — Chairman of the Scientific and Technical Council of the Rostec State Corporation.

1.4 Key events of the year

January

19 new Organizations Included in the Corporation

19 new organizations were included in the Rostec State Corporation. All of them implement the state defence order for a series of critical technologies. The Corporation is entrusted with supervision over the implementation of the state defence order.

Additional Capitalization of JSC Joint-Stock Commercial Bank Novikombank Initiated

The Corporation initiated additional capitalization of JSC Joint-Stock Commercial Bank Novikombank, the base bank of the Russian industry. This resulted in the Corporation's increasing its share in JSC Joint-Stock Commercial Bank Novikombank to 100%. The total volume of additional capitalization was 45 billion rubles.



February

Supply of 151 Helicopters to India Completed

The Rostec State Corporation has made the final supply of three helicopters to India under the contract for supply of 151 military transport helicopters Mi-17V-5 through JSC Rosoboronexport.



March

New Director of PJSC AVTOVAZ Appointed

The Russian auto giant has been headed by Nicolas Maure, former CEO of Renault in Romania. Sergey Skvortsov, former Deputy CEO of the Rostec State Corporation has been appointed as the Chairman of the Board of Directors of PJSC AVTOVAZ.



Memorandum Signed Between JSC Rosoboronexport and Bharat Electronics Limited (BEL)

JSC Rosoboronexport and one of the largest defence enterprises of India, Bharat Electronics Limited (BEL), have signed a memorandum of agreement, under which the parties intend to develop the industrial cooperation between the two countries.



April

Concern Kalashnikov Has Opened Five Renovated Production Facilities

Concern Kalashnikov has opened five renovated production facilities with a total area of more than 49 thousand sq. m. Investments to construction and technical re-equipment amounted to 2.3 billion rubles. The grand opening of the new facilities was attended by the CEO of the Rostec State Corporation S.V. Chemezov.



May

Zhukovsky International Airport Opened

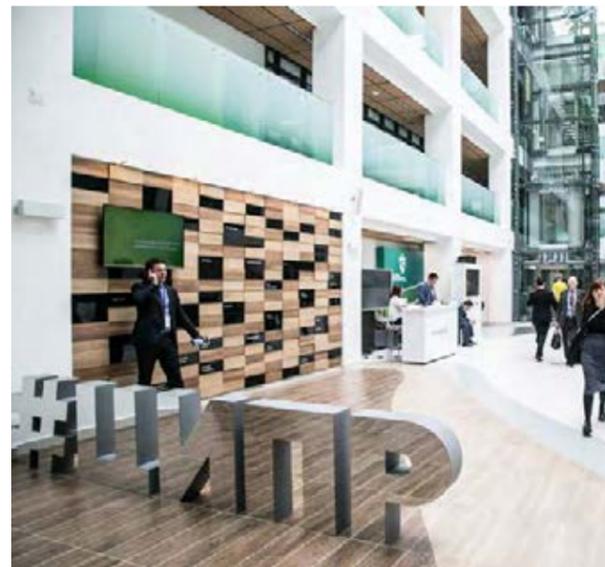
The Corporation has opened a new international airport Zhukovsky located on the Ramenskoe Airfield, with the longest (5,500 m) runway in Europe that allows to operate passenger-carrying and cargo aircraft of any type. The airport is intended to become a powerful tool for the development of the national aircraft engineering centre and the science town – Zhukov.



June

First Russian IT Conference “Digital Industry of Industrial Russia”

«Digital Industry of Industrial Russia», the first Russian IT conference, the largest in Eastern Europe, was held in Innopolis with the support from the Rostec State Corporation for the purpose of consolidating the efforts of the industry members related to the new global challenges.



A Series of Agreements Amounting to Above 2 Billion USD Signed by the Corporation at SPIEF

At the St. Petersburg International Economic Forum (SPIEF) the Corporation has signed various agreements to the total amount of above 2 billion USD, has signed more than 15 agreements with large companies and government authorities, including VTB Bank (PJSC), Rosneft Oil and Gas Company (PJSC), Government of the Zabaykalsky Krai, Worldskills. The Corporation has signed an agreement with the Government of the Tula Region for implementation of a unique investment project implying the creation of a creative industrial cluster based on PJSC Oktava. Besides, the Corporation has reached an agreement regarding the conditions for sale of a shareholding interest in the holding company JSC Russian Helicopters.



July

Rostec State Corporation Became the Only Contractor for the IT Infrastructure Development for 2018 FIFA World Cup

The Government of the Russian Federation has appointed the Rostec State Corporation as the only contractor for the development of the IT infrastructure for the FIFA World Cup to be held in Russia in 2018, and the 2017 FIFA Confederations Cup.



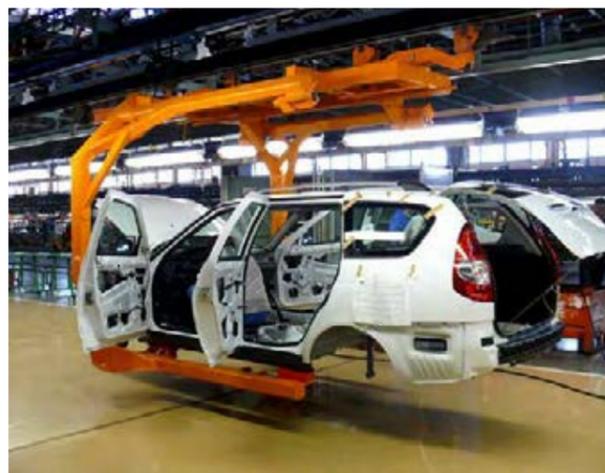
Corporation's Legal Status Improvement

The President of the Russian Federation has signed the Decree «On Certain Matters Regarding the State Corporation for Assistance to Development, Production and Export of Advanced Technology Industrial Product «Rostec»» aimed at improving the legal status of the Corporation.

August

Decision on Additional Capitalization of PJSC AVTOVAZ

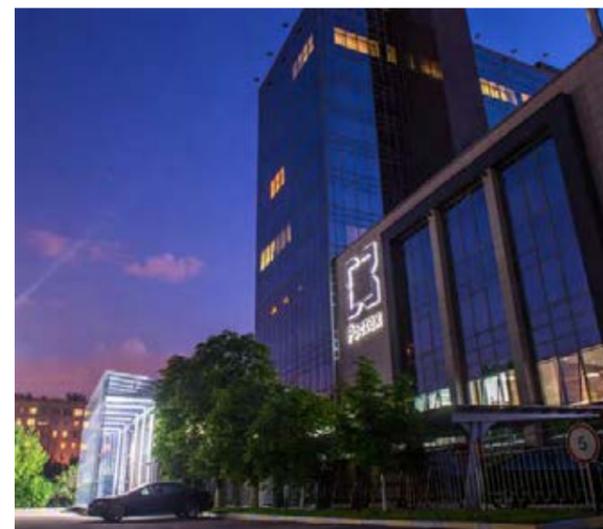
The Rostec State Corporation and the Renault-Nissan Alliance have made a decision regarding additional capitalization of PJSC AVTOVAZ to the total amount of 85 billion rubles. The Corporation will invest the entire debt of PJSC AVTOVAZ to the amount of 51 billion rubles, and the Renault-Nissan Alliance will convert the loan to the amount of 34 billion rubles. Thus, the Corporation will preserve the blocking shareholding interest in PJSC AVTOVAZ.



September

7th Position by Proceeds in the TOP 500 Companies of the Russian Federation

The Rostec State Corporation took 7th position by proceeds in the Top 500 largest companies of Russia. The first 100 companies of the RBC-500 Rating also included the following organizations of the Corporation: OJSC Russian Helicopters, PJSC AVTOVAZ, JSC KRET and JSC NPO High Precision Systems (Vysokotochnnye Komplekсы).



Industrial and Creative Cluster Project Presented to the President of the Russian Federation in Tula

The Corporation has presented to the President of the Russian Federation V.V. Putin a project of the industrial and creative cluster based on the famous factory PJSC Oktava being implemented by the Corporation together with the Government of the Tula Region and private investor M.E. Shelkov. The factory complex will include the Higher Technical School managed by the Corporation, a children's technology park «Quantorium», a machine tool industry museum, office spaces and recreational areas.



September

The Corporation as Strategic Partner for the Russian Largest Biotechnologies Conference “Biotechmed”

The Corporation became a strategic partner of the Russian largest biotechnologies conference «Biotechmed». During the event the Corporation presented the newest developments of its holdings: laser microscope MIM-340, non-invasive brain-computer interface, unrivalled bionic prostheses.



October

Concept and Scope of Supply of Su-35 Fighters Agreed by Russia and China

Russia and China have agreed upon the concept and the scope of supply of Su-35 fighter jets, systems and parts for which are produced by the Corporation's holdings. Air force of the People's Republic of China will receive 24 aircraft of almost the same modification as operated by the Russian Aerospace Forces.



First Auction for Large Amber Stones Held

JSC «Kaliningrad Amber Factory» has held the first auction for sale of large amber stones.



Changes in the Civil Code

Any state corporation can now be qualified as a non-profit organization as per the new changes in the Civil Code of the Russian Federation.

November

Perinatal Centre Opened in Ufa

The Corporation has opened a perinatal centre in Ufa. The centre is equipped with the modern medical equipment and is intended for nursing children with pathologies. The total cost of construction was almost 2 billion rubles.



Agreement Signed With India for Co-Manufacturing of Helicopters

Russia and India have signed an agreement for the formation of a joint venture for manufacturing of Ka-226T helicopters. The Russian-Indian enterprise to be created by JSC Russian Helicopters, JSC Rosoboronexport and the Indian aviation company Hindustan Aeronautic Limited (HAL) is intended to arrange the manufacturing and supply of 200 light multi-purpose Ka-226T helicopters.



Supply of S-300 to Iran Completed

Russia has fulfilled the contract for supply of S-300 surface-to-air missile systems to Iran that had been signed in 2007.



December

Shares of OJSC Research and Production Corporation Uralvagonzavod Transferred to the Corporation

The President of the Russian Federation V.V. Putin has signed the Decree on the transfer to the Corporation of 100% shares of OJSC Research and Production Corporation Uralvagonzavod. The necessity for changes was caused by a complicated financial and economic status of the enterprise and the threat of non-fulfilment of the state defence order.



Perinatal Centre Opened in Orenburg

The Corporation opened a perinatal centre in Orenburg for 170 patients. The total cost of construction was 2.5 billion rubles. More than 800 items of equipment were delivered to the centre, including equipment manufactured by the Corporation's holdings. The official opening ceremony was attended by the Chairman of the Government of the Russian Federation D.A. Medvedev and the Minister of Healthcare of the Russian Federation V.I. Skvortsov.



Capacity Addition Declared by PJSC VSMPO-AVISMA Corporation and Boeing

Boeing and PJSC VSMPO-AVISMA Corporation have declared addition of capacities of the joint factory Ural Boeing Manufacturing (UBM). The new site will accommodate facilities for processing of titanium blanks for Boeing civil aviation aircraft, including the 787 series and the new models – 737 MAX and 777X.



JSC Technodinamika Headed by I.G. Nasenkov

I.G. Nasenkov has been appointed as CEO of the Russian leading manufacturer of air modules, JSC Technodinamika, who had previously worked as the First Deputy CEO of JSC KRET.



2. Rostec: on the Cutting Edge of the Digital Economy

JSC Concern Radio-Electronic Technologies (KRET):

- Almet'yevsk • Akhtubinsk • Bryansk • Veliky Novgorod • Vladivostok • Yekaterinburg • Zhigulevsk
- Penza • Ramenskoe • Rostov-on-Don • Ryazan • Samara • Saratov • Smolensk • Saint Petersburg

OJSC Russian Helicopters:

- Arsenyev • Kazan • Lyublino • Kumertau • Moscow • Novosibirsk • Perm • Rostov-on-Don • Engels-1

- Zhukovsky • Kazan • Zhukov • Krasnodar • Kursk • Moscow • Mytishi • Nizhny Novgorod • Tomilino
- Starvopol • Taganrog • Tambov • Ulyanovsk • Ufa • Kasli

- Ulan-Ude • Chita • Toriki



2.1 Digitalization, a Key Trend in the Global Economy

Digital Economy: History and Prospects

The term «digital economy» was introduced in 1995 and was mainly related to the intense development of the information and communications technologies. Obviously, the development of the Internet and mobile communications are «the basic technologies of the digital economy».

The amalgamation of online and offline spheres that is happening today confirms the prospects of the digital economy

But eventually these processes have affected all sectors of economic and social activities, including the production, healthcare, education, financial services, transport, etc.

According to the World Bank, digital economy (in the broad sense) is a system of economic, social and cultural values based on the use of digital information and communications technologies.

Development of the technological infrastructure and the use of large databases have caused a large-scale digital transformation of our society. The previous digitalization phase was characterized by the expansion of access to the Internet for millions of consumers, but the new phase is distinguished by the integration of a wide range of digital services, products and systems into the cyber physical system.

CEO OF THE ROSTEC STATE CORPORATION S.V. CHEMEZOV

«THE GLOBAL SHIFT TO THE DIGITAL TECHNOLOGY WILL INEVITABLY LEAD TO IRRECOGNIZABILITY OF MANY ECONOMY SECTORS. IN FACT, WE ARE WITNESSING A PROCESS OF DIGITALIZATION OF EVERYTHING – THE TECHNOLOGICAL MODE AND THE PRODUCTION CHAINS ARE CHANGING, AS WELL AS THE MANAGEABILITY OF THE DEMAND AND THE PRODUCTION. IN THE NEAREST 5-7 YEARS OUR LIFE WILL BE UNRECOGNIZABLE, AND OUR TASK IS NOT TO MISS THIS TECHNOLOGICAL TURN AND BRING RUSSIA BACK TO THE LIST OF TECHNOLOGICALLY ADVANCED COUNTRIES. THE ROSTEC STATE CORPORATION VIEWS ITSELF ONLY ON THE CUTTING EDGE OF THE RUSSIAN DIGITAL ECONOMY AND HAS ALL THE REASONS TO BELIEVE IN THIS STRATEGIC PROSPECT.»

In 2016, the World Bank prepared a report on the state of digital economy called «Digital Dividends» which underlined the benefits of its development, including:

- Labour productivity growth
- Increase in competitive capacity of companies
- Reduction of production costs
- Creation of new jobs
- More complete satisfaction of the people's needs
- Reduction of poverty and social inequality

Risks of the shift to the digital technology for the economies of various countries include:

- Risks related to cyber security
- Mass unemployment
- Growing «digital divide» (a gap in digital education under conditions of access to digital services and products, resulting in a gap in the standard of living) between citizens and businesses of countries, as well as between countries

The amalgamation of online and offline spheres that is happening today confirms the prospects of the digital economy. It became possible due to several fundamental factors – overall connectivity, rapid expansion of touch-input devices and large databases.

Apart from people, today the Internet is «used» by about 10 billion machines and mechanisms – devices, sensors and instruments, and by 2020 this number is expected to double. 99% of the global data have been digitized, and more than 50% have IP addresses. In the future the volume of data will double each two years.

Connectivity and data exchange allow to more efficiently use the resources, share the infrastructure, more efficient capacity utilization – the so-called «sharing economy», or «collaborative consumption economy» whose volume is estimated to be 150 billion USD today.

All these phenomena fundamentally change the structure of the global economic system – the capabilities of consumers, structure of sectors, role of states.

5.5%

share of digital economy in GDP of developed countries in 2016

4.9%

share of digital economy in GDP of developing countries in 2016

V.V. PUTIN'S ADDRESS TO THE FEDERAL ASSEMBLY OF THE RUSSIAN FEDERATION, 1 DECEMBER 2016

«I PROPOSE TO LAUNCH A LARGE-SCALE SYSTEM PROGRAM FOR DEVELOPMENT OF THE ECONOMY OF THE NEXT TECHNOLOGICAL GENERATION, THE SO-CALLED «DIGITAL ECONOMY». ITS IMPLEMENTATION WILL BE BASED ON THE RUSSIAN COMPANIES, AND SCIENTIFIC, RESEARCH AND ENGINEERING CENTRES OF RUSSIA. THIS IS A MATTER OF NATIONAL SECURITY AND TECHNOLOGICAL INDEPENDENCE OF RUSSIA, A MATTER OF OUR FUTURE IN THE TRUE SENSE OF THE WORD.»



Modern Concepts of Digital Economy Development

PLATFORM-BASED CONCEPT

Digital platform is a new business model peculiar only to the digital economy, which implies provision to businesses and the general public of a specific service of coordinating the activities of various market players.

The platform provides a series of conveniences to its participants, automatically forms ratings of credit between them, and, most importantly, it allows the sellers and buyers of goods/services to quickly find each other, quickly consummate a deal and make settlements. Platforms functioning results in a faster and cheaper production and exchange processes, eliminates the unnecessary intermediary elements, dramatically increase the efficiency of markets and labour productivity.

Many platforms could serve the parties to transactions without any geographic restrictions, almost in any place of the world. Examples of digital platforms include Uber, Airbnb, Amazon, Alibaba and many other.

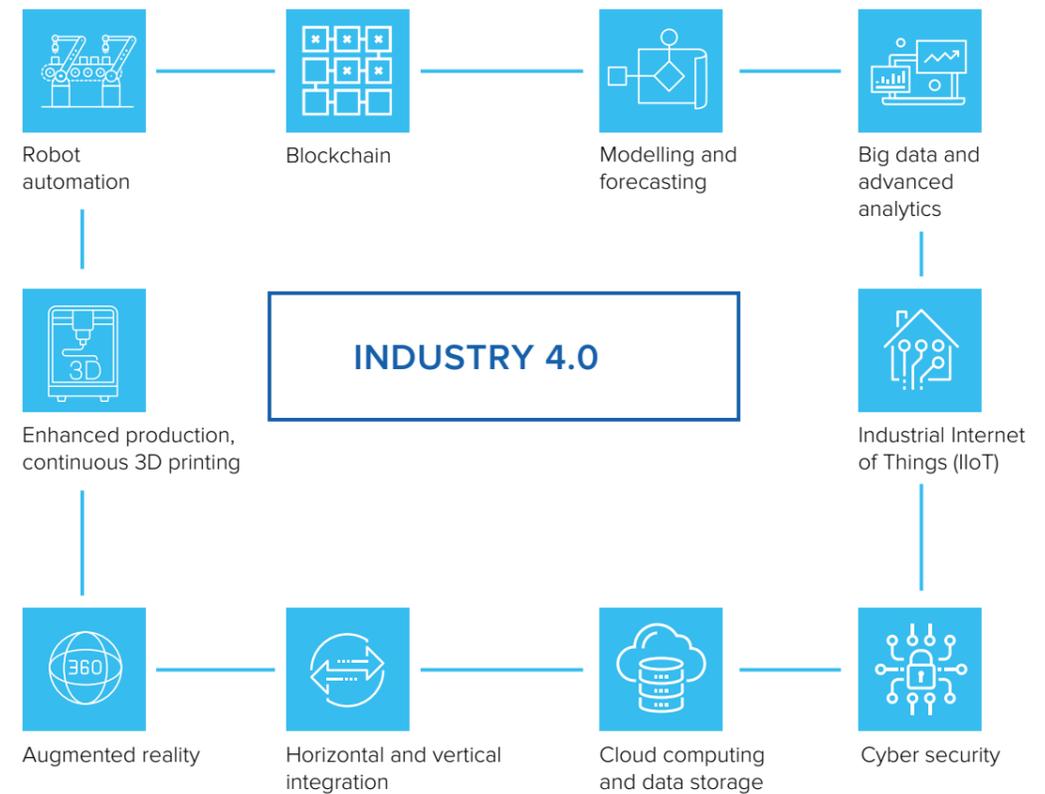
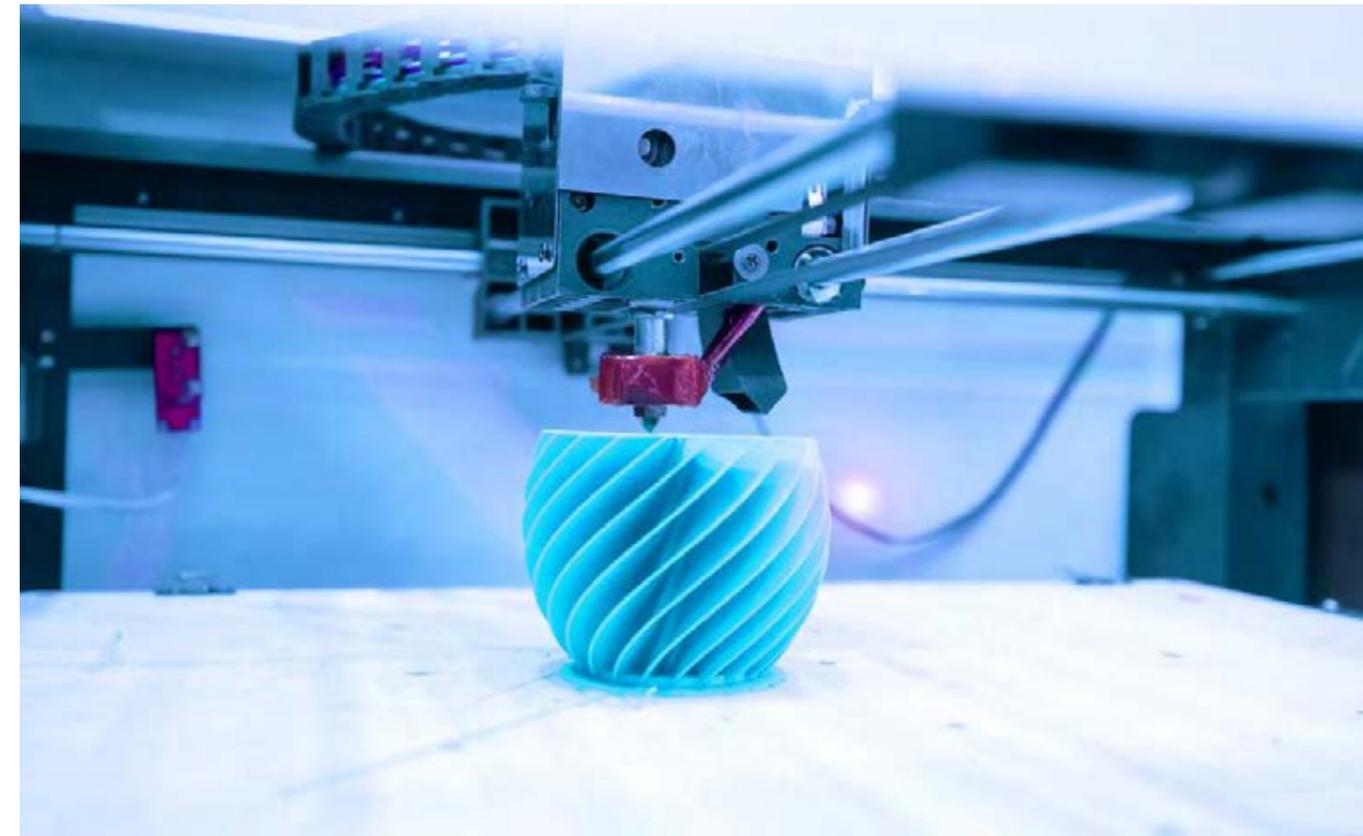
Today, various digital platforms are being combined into inter-related «eco-systems» based on data exchange. The agenda today includes the creation and launch of the next-generation digital platforms encompassing a huge number of various markets and enterprises.

INDUSTRY 4.0 AND SMART FACTORY

The platform-based concept has been mainly developed and implemented in the trade and logistics segment, but in the industry the driver of the digital development is the concept of «Industry 4.0» and the «smart factory» as the technological core of «Industry 4.0».

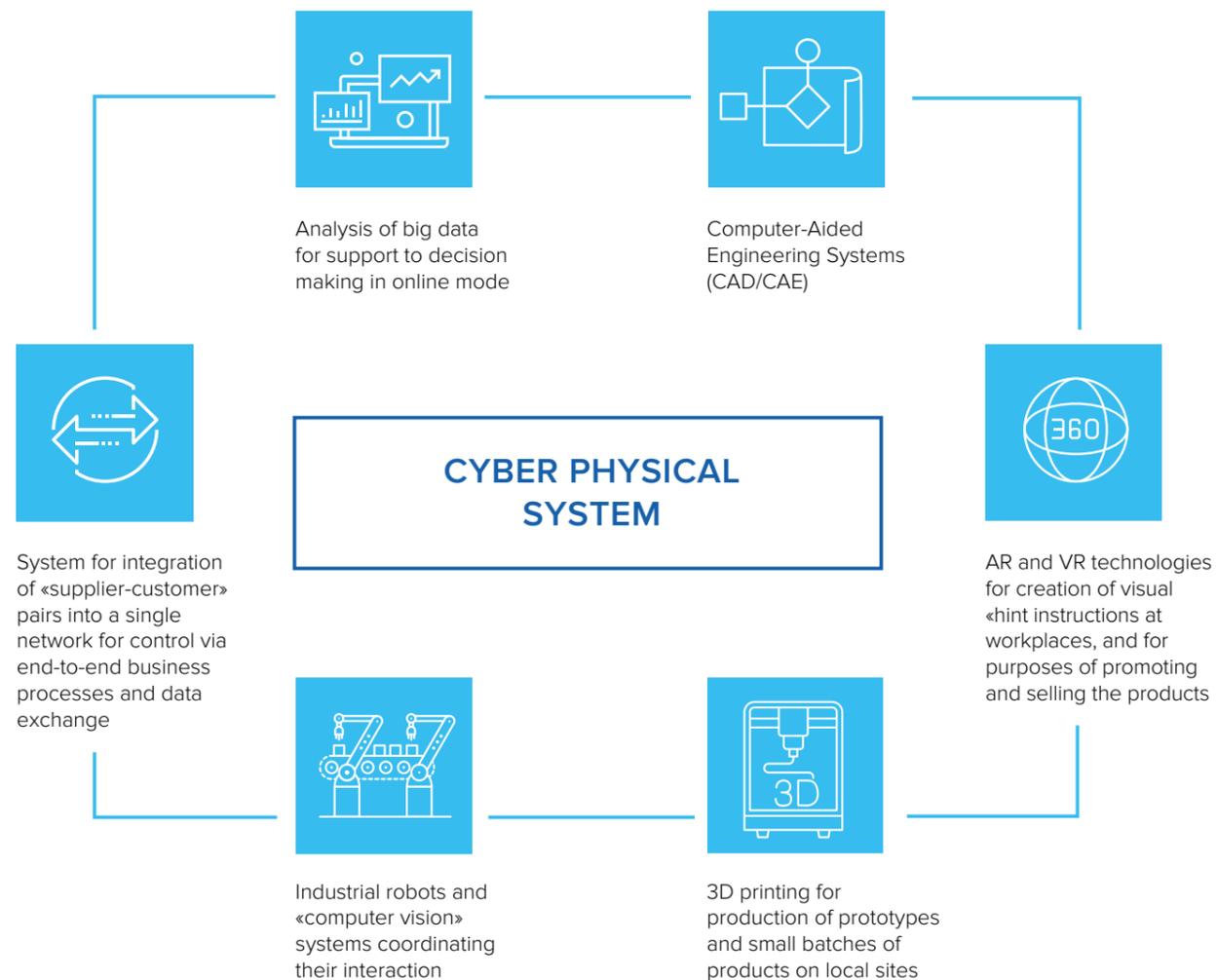
SMART FACTORY

- All elements of the «smart factory» are automated to the maximum
- Specific weight and importance of R&D for output of serial products approaches the importance of R&D for complex technical products under individual orders
- Transforming production with production lines capable of fast upgrade and rearrangement
- All elements and subsystems are controlled by an independent system due to the Industrial Internet of Things
- On all stages of the life-cycle of a product the functional elements of the «smart factory» operate as an integrated whole regulated online by the feedback flows
- The managed object is the entire life-cycle of a product (PLM), including integration with logistics, service centres and receipt of feedback



CONCEPT OF «CYBER PHYSICAL SYSTEM»

A concept that is similar in meaning to the «smart factory» is the technological concept of «cyber physical system» as an integrated complex of computing resources and physical processes. Cyber physical systems include sensors, equipment and information systems encompassing both individual enterprises and networks of enterprises, implementing the consistent limits in the value-creating chains.



Main digital economies of the world

Share of the digital economy in GDP of developed countries in 2010-2016 has increased from 4.3% to 5.5%, in GDP of developing countries – from 3.6% to 4.9%. In the G20 countries this indicator has grown from 4.1% to 5.3% in the last five years. The world leader by the share of the digital economy in GDP is the Great Britain – 12.4%.

According to the research of the analysts of International Data Corporation published in 2016, the total global costs on the digital transformation technologies will grow each year by 16.8%, and by 2019 will reach 2.1 trillion USD.

According to the forecasts by the Accenture consulting company, by 2020 the use of digital technologies will add 1.36 trillion USD, or 2.3% GDP of the total GDP of the ten leading global economies. GDP of developed countries will grow due to the «digital economy» by 1.8%, and GDP of developing countries – by 3.4%.

Forecasts of the Boston Consulting Group say that by 2035 the volume of the digital economy could reach 15 trillion USD.

16 trillion USD
forecast volume of the global digital economy by 2035

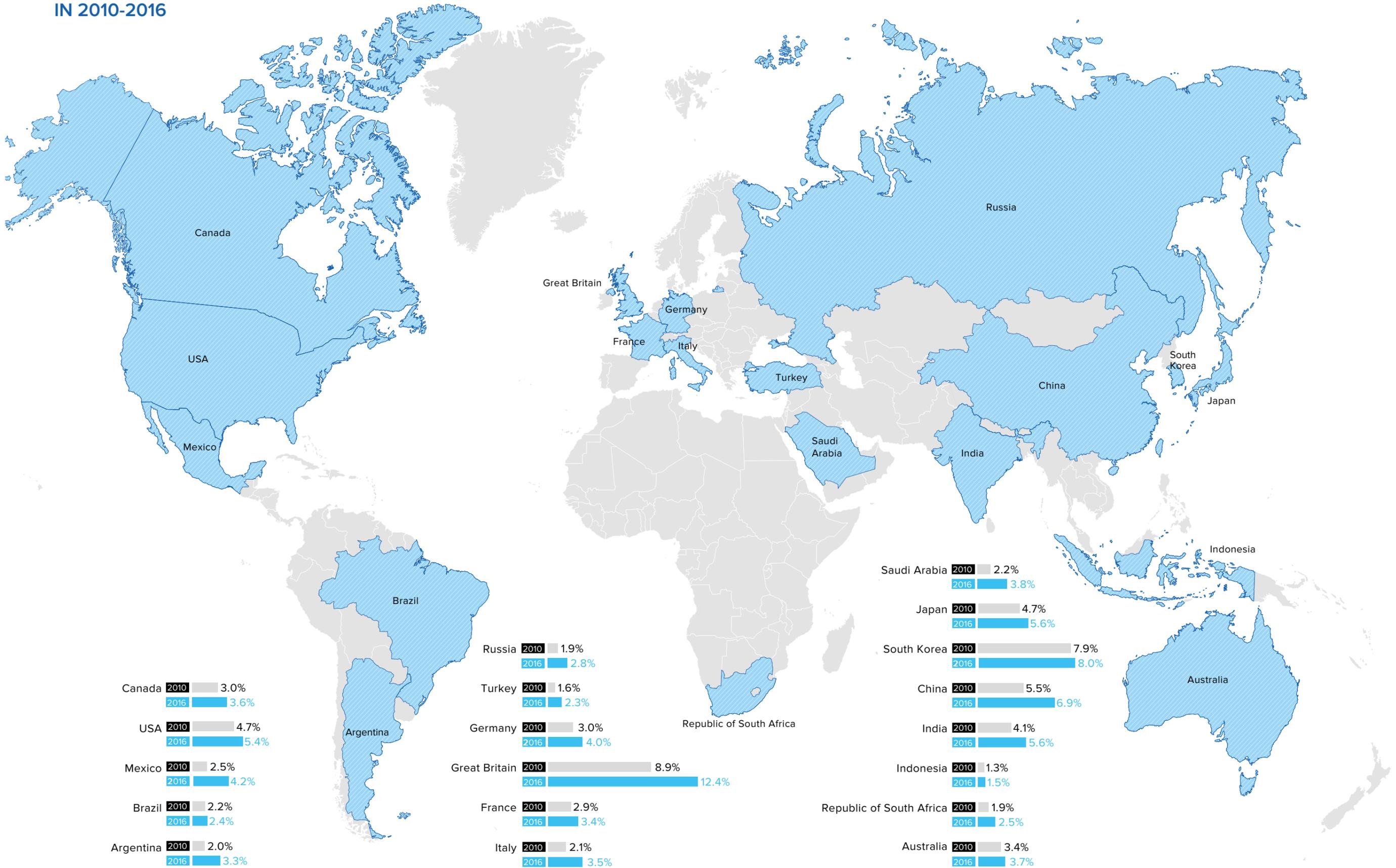
Growth of the digital economy's share in GDP of the G20 countries in 2010-2016

Country	Digital economy's share in GDP	
	2010	2016
Great Britain	8.3%	12.4%
South Korea	7.3%	8.0%
China	5.5%	6.9%
India	4.1%	5.6%
Japan	4.7%	5.6%
USA	4.7%	5.4%
Mexico	2.5%	4.2%
Germany	3.0%	4.0%
Saudi Arabia	2.2%	3.8%
Australia	3.4%	3.7%
Canada	3.0%	3.6%
Italy	2.1%	3.5%
France	2.9%	3.4%
Argentina	2.0%	3.3%
Russia	1.9%	2.8%
Republic of South Africa	1.9%	2.5%
Brazil	2.2%	2.4%
Turkey	1.6%	2.3%
Indonesia	1.3%	1.5%



* A forecast by The Boston Consulting Group (BCG)

GROWTH OF THE DIGITAL ECONOMY'S SHARE IN GDP OF THE G20 COUNTRIES IN 2010-2016



Digital Economy in Russia

In Russia, the digital economy's share in GDP is 2.8%, or 75 billion USD. The largest portion, 63 billion USD, is in the consumption sphere (Internet trading, services, online search and offline purchases). In 2010, the Internet trading share in the total volume of sales was 1.7% (12 billion USD), and in 2016 it has increased to 3.2% (43 billion USD). Export of information technologies was 7 billion USD.

The inter-industry effect of digitalization has increased by 5.5 times since 2010: from 5 to 27.7 trillion rubles. This effect has been obtained due to the introduction of e-trade platforms, growth of bank card transactions, increase in ROPO segments and online advertising.

The gap in the level of digitalization between Russia and the leading digitalized countries is 5-8 years. If the current rates of digital economy growth of Russia remain the same, then by 2020 this gap will be 15-20 years due to the high rate of global changes and innovations. However, the state of infrastructure in Russia has improved in the recent years, primarily by the level of cable Internet penetration (70.4% of the total population size). There are also serious achievements in increasing the accessibility of the broadband and mobile Internet, diffusion of smartphones.

Today, the digital economy is a high priority focus of the Scientific and Technical Development Strategy of Russia. A full-fledged consistent digitalization of the Russian economy will become a platform for a qualitative change of its structure and long-term possibilities.

2.8%

digital economy's share in
GDP of Russia

Main Directions of the Russian Digital Economy Development

E-Government

According to the Russian Federal State Statistics Service (Rosstat), at the end of 2016 more than 50% of users of state services preferred to use them in electronic form. By 2018 this indicator has to reach 70%. The new system project of e-government development implies the implementation of the «Four Any's» principle: any citizen and any agency should have a possibility to interact at any place and at any time. The document provides for the shift of focus from the infrastructure to the user needs and introduction of modern management approaches to the development of the government.

E-Healthcare

The Unified State Health Information System (EGISZ) is being developed for information support and increase of healthcare services efficiency. In November 2016 the Government of the Russian Federation called IT development of the healthcare system one of the top priority projects. The project implies that by 2025 not less than 99% of the state healthcare providers will be connected to EGISZ, not less than 99% of primary healthcare professionals will be equipped with automated workplaces and electronic healthcare services will be widely introduced for citizens with the use of telehealth technologies. In 2018, all Russian citizens will be able to receive an electronic health record.

At the end of 2016, health information systems for administration of electronic health records of patients have been introduced in 83 Federal Subjects of Russia, and 57% of medical staff's workplaces have been connected to information systems. The central element of the system, electronic health records, was created for 46 million citizens. As of early 2017, in conformance with the plan, the user account section «My Health» has been launched on the Common Government Services Portal of Russian Federation.

Digitalization of the State Control and Supervision

Reformation of the control and supervision activities has been launched in 2017. By 2025, the state control has to become «smart» (analytical, risk-anticipating, IT-equipped), «transparent» (enjoying the trust of the business and the society), «preventive» (interacting with the environment under supervision) and «resource-saving» (compact and cost-neutral for the state and the subjects under examination). Administrative expenses of entrepreneurs should decrease by 50%, and the level of financial damage from controllable types of risks – by 30%.

Digital Reform in Education

2016 saw the active introduction of the «Continent» system designed as a single database containing information on students, educational organizations and education services, equipped with a number of tools for the population and the government entities.

All its technical tools required for the implementation of the system have been checked and verified in test mode. The main objectives of the system include:

- Increase of quality of managerial decisions made in the education sector based on actual and accurate information
- Accessibility for citizens of information on educational organizations and their services both in Russia as a whole, and by territories of residence
- Possibility for parents to file electronic applications for admission to kindergartens and schools
- Collection and analysis of feedback regarding the quality of education services, including e-learning
- Transparency of personal educational paths and achievements of secondary and higher school students, and students of extended educational institutions

IT Services Development

Digital technologies are most successfully applied in such sectors of the Russian Federation as information technologies, telecommunications, finances and banking services.

The main areas of use of advanced information and communications tools by consumers (both in the commercial and the public sector) are:

- Retail customers interaction management: personalized analysis of customer behaviour, promotion of commodities/services via the Internet and mobile applications, awareness raising and provision of extra conveniences

- Harmonization and optimization of internal processes and interactions inside the company: operational business processes, document workflow, accounting and planning, analysis of data for decision making processes, forecasting, remote communications, project and task management
- Management of interactions with counter-parties (suppliers, wholesale customers) through the creation of a single coordinating information system over their information systems

According to International Data Corporation, in 2016 the volume of the IT sector in the Russian Federation was 4.52 billion USD.

Russian IT Market: Current State and Prospects

Export Trend

The reduction of the Russian IT market caused by the general economic slump in the country was the main impetus to the growth of export sales. In order to maintain and increase the volumes of sales large IT companies actively sought for export opportunities.

The number of Russian companies that started to export their products that had been previously available only on the domestic market started to grow in 2016. The key recipients of the Russian innovative solutions were the USA, Germany, Switzerland and Austria. Besides, in the recent years there has been a trend of activation of buyers from India, Brazil and countries of the Middle East, and many Russian developers started to cultivate the Chinese market.

At the end of 2016, export of Russian IT products has reached 7 billion USD.

A significant factor of new export areas development was the import substitution strategy stimulating the Russian developers to create new products. The most popular products are:

- IT products related to information security
- Corporate mobility solutions
- Document workflow software
- Office software
- Navigation systems
- Custom development

THE NUMBER OF RUSSIAN COMPANIES THAT STARTED TO EXPORT THEIR PRODUCTS THAT HAD BEEN PREVIOUSLY AVAILABLE ONLY ON THE DOMESTIC MARKET GREW IN 2016.

THE KEY RECIPIENTS OF THE RUSSIAN INNOVATIVE SOLUTIONS WERE THE USA, GERMANY SWITZERLAND AND AUSTRIA

Dynamics of software and IT services export, billion USD

Year	2009	2010	2011	2012	2013	2014	2015	2016
Software development services provided to foreign companies' development centres	0.3	0.4	0.4	0.5	0.5	0.5	0.5	N/A
Sale of products and off the shelf solutions	1.0	1.4	1.6	2.0	2.3	2.6	2.8	N/A
Software development services	1.4	1.6	2.0	2.1	2.4	2.9	3.4	N/A
Total	2.7	3.4	4.0	4.6	5.2	6.0	6.7	7.6

Source: Russoft

Development Prospects

Development of information technologies and support to advanced technological sectors of economy are one of the top priorities of the Russian economic policy for 2017-2019. The «digital inequality» will be further eliminated by the development of broadband access to the Internet, launch of digital broadcasting across the entire country, ensuring wide access to the television. In 2017-2018 there will be further support to import substitution of IT products and stimulation of software export.

The most important objectives of the industry development in 2017-2019 are:

- R&D advancement in the IT sector
- Development of the further training system for IT specialists
- Improvement of institutional conditions for the IT business
- Creation of an information and analytical base for development of the sector

Creation of New IT Jobs

The key resource determining the global competitive capacity in the XXI century is human assets. Russia possesses the highest potential at the «lowest tier» of the IT industry: qualifications of Russian programmers and information systems architects, and quality of their development are greatly appreciated around the world.

The global competition for the leadership in technological innovations leads to involvement of a tremendous number of highly skilled programmers in national projects. Today, IT specialists hold the top of the lists of the most prospective professions both in Russia and abroad.

In the long run, the most attractive IT sector areas will be artificial intelligence and trainable neural networks. Russia has a huge hidden potential with regard to the development of these IT segments. Russia has competitive and even leading schools of philosophical methodology that demonstrate not only theoretical, but also practical results in the solution of interdisciplinary communications problems and knowledge synthesis.

IT market volume, billion rubles

	2015 actual	2016 estimate
Total	740.0	747.4

Source: Ministry of Economic Development of the Russian Federation

The most important factors of growth of the national IT sector in 2017-2019 include:

- Growing demand for «smart devices» and Internet services
- Further introduction of IT systems into business management processes
- State sector automation

The large-scale diffusion of information technologies is expected in healthcare, education, science, culture, security, industry, transport, agriculture, financial sector. It is anticipated that the highest rates of development will be seen in the software market as compared to other IT market segments.

According to the forecasts of the Ministry of Economic Development of the Russian Federation, the volume of software for mobile devices will grow due to the growing demand for smartphones. It is anticipated that the market share of services and software will grow, but the hardware share will decrease. Information technologies are more actively used in the work of federal and municipal authorities.

Digital Economy Support from the President and the Government of the Russian Federation

A significant role in the IT industry development is played by the level of the state support: grow of state orders volume, preferential taxation for technologically advanced companies and support to training systems for young IT specialists.

Decree of the Government of the Russian Federation No. 1236 dated 16 November 2015 «On Prohibition of Use of Software Originating from Foreign Countries for Purposes of State and Municipal Procurement» took effect at the beginning of 2016. In the summer 2016, the Chairman of the Government of the Russian Federation D.A. Medvedev has approved a three-years' plan for switching the Russian ministries and agencies to the national software. Import substitution in the IT sector relates not only to software, but also microelectronics. It is obvious that the shift to the national IT is not only an incentive for intensification of national developments and growth of the Russian IT market, but also a matter of national security.

On 10 November 2016 at the conference «Towards the Future: the Role and Place of Russia» the President of the Russian Federation V.V. Putin declared the necessity for systemic measures aimed at stimulating the growth of the national information technologies industry. The President noted the upward dynamics of the IT market, including due to the insurance premium benefits for IT companies. Until 2023 the IT companies will pay the insurance premiums at a reduced rate (14% as compared to the standard rate of 30% for ordinary companies). In several Federal Subjects of the Russian Federation the profit tax rate has been decreased from 20% to 15% for IT enterprises.

On 1 December 2016, in his Address to the Federal Assembly V.V. Putin noted the high potential of the national IT sector development. The President of the Russian Federation emphasized such top priority objectives of the IT sector development as elimination of administrative and legal barriers, forming a system of competence centres and centres for secondary level vocational training at the level of global standards, provision of financial resources, organizational and financial support for fundamental scientific IT-related researches.

At the request of V.V. Putin the Government of the Russian Federation is preparing the «Digital Economy» programme for intensive development of digitalization in Russia. The programme focuses not only on the basic components of the digital economy, but also on the growth of public and private investments in such promising areas as the Industrial Internet of Things, big data, development of IT products and services with high export potential. This will allow to increase the share of the digital economy to 5.6% of GDP and create large-scale interdisciplinary effects and actual added value in the industries to 5-7 trillion rubles per year.

The resolutions of the President of the Russian Federation not only kick-started the scheduled work of ministries and agencies in the «Digital Economy» sphere, but also launched a large number of initiative developments by expert communities supported by various non-profit organizations (Agency for Strategic Initiatives, Centre for Strategic Researches, etc.).

On 24 January 2017 the Chairman of the Government of the Russian Federation signed the Decree on establishment of the Russian information technologies development fund aimed at financial support for scientific and innovative activities in the Information and Communication Technologies (ICT) sphere, furtherance of import substitution and export of advanced technological ICT products, as well as promotion of ICT activities and professions.

A significant role in the IT industry development is played by the level of the state support: growing volume of state orders, preferential taxation for technologically advanced companies



Rostec State Corporation and the Digital Economy

Key trends in the development of technological industries considered for the preparation of the Rostec State Corporation's Strategy

Digitalization	Automation	Network-centricity
<ul style="list-style-type: none"> Integrated digitalization on all stages of product development, including mass data processing technologies 	<ul style="list-style-type: none"> Increase of production and management systems level of autonomy, and minimization of human participation in such processes 	<ul style="list-style-type: none"> Connection of all system elements into a single information environment for implementation of the common target function

The digital economy has become an important part of the Rostec State Corporation's Strategy approved in 2015.

While meeting the challenges of the digital transformation, the Corporation is implementing a major reorganization of the corporate structure aimed at the introduction of innovative technologies into management and production processes.



DIRECTOR FOR LEGAL SUPPORT AND CORPORATE GOVERNANCE OF THE ROSTEC STATE CORPORATION A.S. LALETINA

«THE CORPORATION STRIVES FOR THE MAXIMUM AUTOMATION OF ITS BUSINESS PROCESSES. IN TERMS OF THE CORPORATE LEGAL WORK, A DATABASE OF THE CORPORATION'S ASSETS HAS BEEN LAUNCHED IN 2016 TO ENSURE TIMELY RECEIPT OF ALL THE NECESSARY INFORMATION ON THE CORPORATION'S ORGANIZATIONS IN ONLINE MODE. THIS ALLOWS TO QUICKLY MAKE INFORMED DECISIONS BASED ON OBJECTIVE DATA.»

Digitalization Benefits for the Rostec State Corporation

Increased efficiency of internal processes	More efficient interaction with consumers	Increased competitive capacity	New product development
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The Rostec State Corporation, being the conductor of the national industrial policy, is implementing the «Industry 4.0» concept at the Russian industrial production facilities.



INDUSTRIAL DIRECTOR OF THE AVIATION CLUSTER OF THE ROSTEC STATE CORPORATION A.E. SERDYUKOV

«AS TO MASTERING THE NEW DESIGN AND MODELLING PRINCIPLES, THE CLUSTER WIDELY USES MODERN MATHEMATICAL SOFTWARE SYSTEMS, MOST POWERFUL COMPUTERS AND SUPERCOMPUTERS. THE «DIGITAL FACTORY» PROJECT IS BEING DEVELOPED TO ENTER THE BRAND NEW LEVEL OF PRODUCT/CONSTRUCTION DESIGN PROCESS AND PRODUCTION APPROACHES DUE TO EFFECTIVE APPLICATION OF THE ENTIRE COMPLEX OF MULTI- AND INTERDISCIPLINARY WORLD-CLASS COMPUTER TECHNOLOGIES THAT WILL ALLOW TO DRASTICALLY IMPROVE THE CHARACTERISTICS OF FINISHED PRODUCTS WHILE STILL MEETING THE NECESSARY TECHNICAL REQUIREMENTS: IMPLEMENTATION OF THE PROJECT WILL ENSURE SIGNIFICANT REDUCTION OF LEAD-TIME AND MARKET LAUNCH OF PRODUCTS AND SOLVE KNOWLEDGE-INTENSIVE AND RESOURCE-INTENSIVE PROBLEMS.»

Today, the Corporation produces hundreds of digitalized products.



INDUSTRIAL DIRECTOR OF THE ELECTRONIC CLUSTER OF THE ROSTEC STATE CORPORATION S.A. KULIKOV

«THE INTERNATIONAL LANDSCAPE IN OUR INDUSTRY IS CHANGING, AND THE ABILITY TO DEVELOP UNDER THE «DIGITAL ECONOMY» CONDITIONS WILL BECOME ONE OF THE MAIN SURVIVAL CRITERIA. OUR ENTERPRISES PRODUCE PRODUCTS FOR THE «DIGITAL ECONOMY» IN THE SPHERE OF ELECTRONIC COMPONENTS BASE, SOFTWARE AND CYBER SECURITY EVEN AS WE SPEAK. THE ELECTRONIC CLUSTER INCREASES ITS SHARE ON THE MARKET OF MEDICAL PROCESSING EQUIPMENT AND IS INVOLVED IN THE PROJECTS OF TELEHEALTH WHICH IS ANTICIPATED TO DEVELOP INTENSIVELY BOTH IN RUSSIA AND AROUND THE WORLD.»

Due to the internal corporate partnership being developed under the aegis of the Rostec State Corporation, the Corporation's organizations hold their ground more and more firmly on such markets as telehealth, the Internet of Things, and implement the projects for creation of «smart cities», «smart factories», and develop in the sphere of the industry automation.



**INDUSTRIAL DIRECTOR OF THE CONVENTIONAL ARMAMENT,
AMMUNITION AND SPECIAL CHEMISTRY CLUSTER OF THE ROSTEC
STATE CORPORATION S.B. ABRAMOV**

«WE HAVE CREATED A PROJECT CENTRE THAT INTEGRATES MARKET COMPETENCES IN THE SPHERE OF PREPARATION AND IMPLEMENTATION OF INTEGRATED PROJECTS FOR PRODUCTION OF ARMAMENT, MILITARY EQUIPMENT AND CIVIL PRODUCTS. THIS SITE USES THE MOST ADVANCED SOFTWARE SOLUTIONS. WE ACTIVELY COOPERATE WITH OTHER CORPORATION'S CLUSTERS WHICH HAVE A QUITE HIGH SHARE OF DIGITAL TECHNOLOGIES IN THE COST OF THEIR PRODUCTS. ARMAMENT CONVENTIONALLY DRIVES THE DEVELOPMENT OF TECHNOLOGIES, AND DIGITAL TECHNOLOGIES IS NO EXCEPTION. THE SHARE OF «SMART» ARMAMENT TODAY OCCUPIES A SIGNIFICANT MARKET SHARE AND WILL GROW FURTHER. ALTHOUGH TODAY WE SEE A QUICK GROWTH OF ARMAMENT OPERATORS' COMPETENCE, THEY ARE BEING REPLACED BY ROBOTICS. IN THE LONG VIEW, THE NEW TECHNOLOGIES WILL ENTIRELY REPLACE SOLDIERS, IRRESPECTIVE OF THE BATTLE SITE – ON THE BATTLEGROUND OR ON THE DIGITAL LANDSCAPE.»

At the initiative of the Corporation, in 2014 was established LLC National Centre for Informatization (NCI) for purposes of development and deployment of promising national software in public authorities, state corporations and companies partially owned by the government.



**DIRECTOR FOR SPECIAL COMMISSIONS OF THE ROSTEC STATE
CORPORATION AND CHAIRMAN OF THE BOARD OF DIRECTORS OF
LLC NCI V.Y. BROVKO**

«THE MAIN STRATEGIC PRIORITY IS THE IMPLEMENTATION OF INTEGRATED ECO-SYSTEM PROJECTS DEFINED AS TOP PRIORITY IN THE ELECTRONIC CLUSTER'S STRATEGY, AND CERTAIN LARGE PROJECTS, SUCH AS CONSTRUCTION OF THE INFRASTRUCTURE FOR THE FIFA WORLD CUP 2018 OR EGISZ. BESIDES, WE ARE INTERESTED IN CERTAIN SEGMENTS OF THE DIGITAL ECONOMY, SUCH AS E-LEARNING, TELEHEALTH, INTERNET OF THINGS PROJECTS – THOSE AREAS THAT COULD BE IN HIGH DEMAND BOTH ON THE RUSSIAN AND THE FOREIGN MARKETS»

In 2016, the Rostec State Corporation has incorporated LLC Rusinformexport to promote the national IT solutions. The company intends to export platform-based solutions and a series of information systems for the public sector, healthcare and education. The company's portfolio includes more than 200 IT systems for automation of the state management processes.



*In 2016, the Rostec State Corporation has incorporated
LLC Rusinformexport to promote the national IT solutions*

2.2 Results of Operational Activities of the Rostec State Corporation in 2016 and Contribution of the Corporation to the Digital Economy

– SERGEY VIKTOROVICH, HOW WOULD YOU CHARACTERIZE THE YEAR 2016? WHAT WERE THE MAIN OBJECTIVES OF THE CORPORATION? WHAT WAS ACHIEVED?

– In my opinion, the main result of our work was that we could reverse the downward trend in the Russian industry. During many years we have been taking measures to keep our production facilities afloat. Today the process is completed and we confidently follow the path of development of our assets and creation of technologically advanced products that could compete at the global level.

We increase the civil products production. Since the date of incorporation of Rostec its output has increased almost by 4 times in absolute terms and by 10% in relative terms. Civil products output volume in 2016 was 374 billion rubles, which is 11% higher than in 2015.

As compared to 2009, the proceeds in 2016 grew by more than 2.5 times and was 1.266 trillion rubles.

Of course, we still have many problems and difficulties to solve, but that «luggage» of isolated enterprises that was given to us today represents a well-manageable system with clearly identified goals and motion trajectories.

– DO YOU IMPLY THE NEW STRATEGY OF THE CORPORATION'S DEVELOPMENT APPROVED IN 2015 WHEN SAYING «MOTION TRAJECTORY»? HAS ITS IMPLEMENTATION ALREADY BEGUN?

– The core of the Strategy-2025 lies in the fact that we have determined the scale of the Corporation that would be satisfactory to us, and such scale depends on the proceeds and financial indicators. The scale will not only allow us to survive among the global competitors, but also to strengthen our positions in the list of leading industrial companies of the world for the nearest 15-20 years. We also wish to view ourselves as a well-balanced corporation with a 50/50 ratio of its military and civil component. This goal appears from the Corporation's mission, and we have to think what Russia of the XXI century will be like in technological terms. Our sphere of interests also includes the human environment, health, education, security and more.

EBITDA

/ in 2015-2016, billion rubles /

268

billion rubles

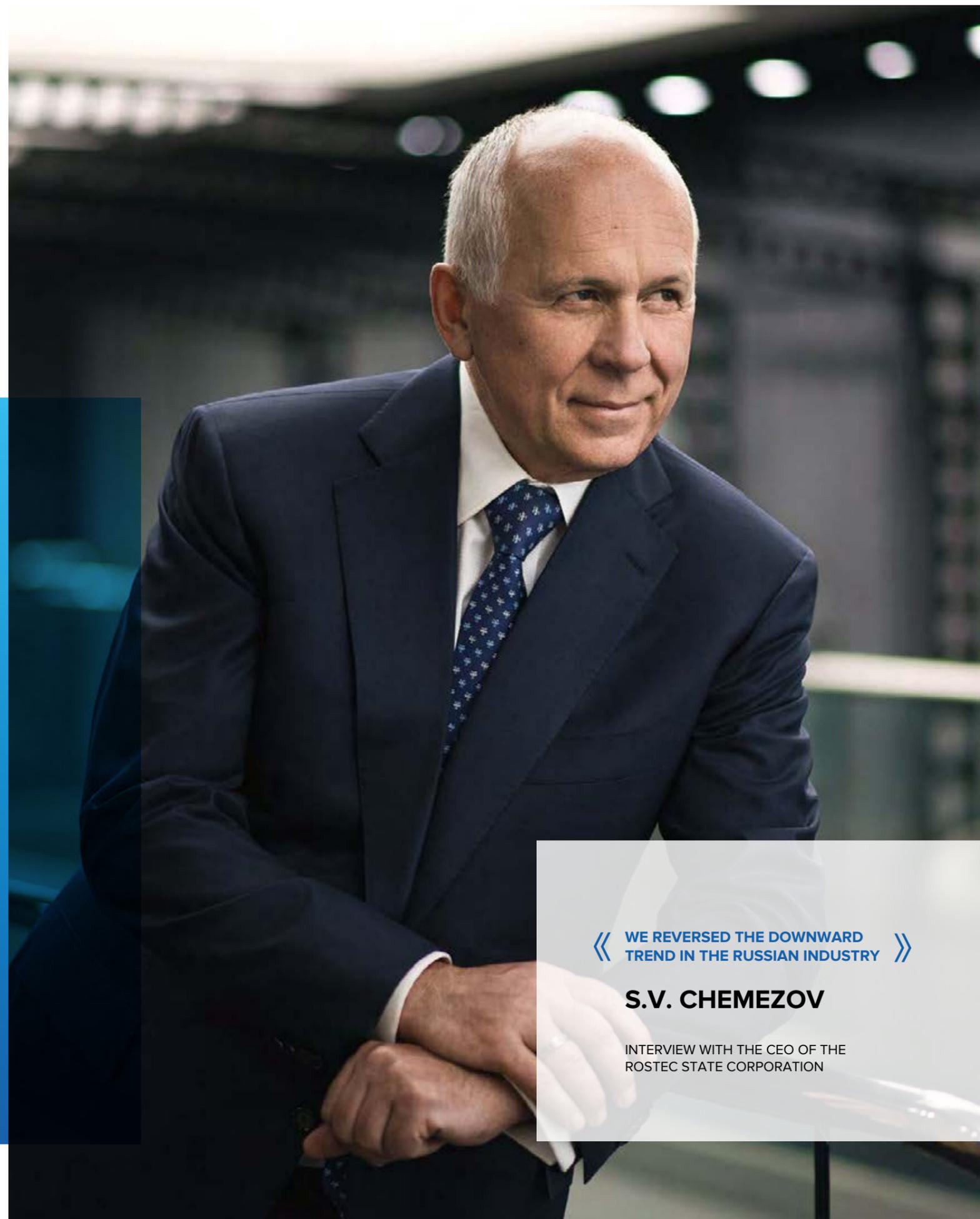


Average monthly salary

/ in 2015-2016, thousand rubles /

44

thousand rubles



« WE REVERSED THE DOWNWARD
TREND IN THE RUSSIAN INDUSTRY »

S.V. CHEMEZOV

INTERVIEW WITH THE CEO OF THE
ROSTEC STATE CORPORATION

Entering the brand new level only due to the development on conventional markets is impossible. Therefore, it is very important to enter the fast growing technologically advanced markets such as electronics, IT, automation, management systems, robotics, new materials, etc.

One of the strategy's elements is the improvement of operational performance. The Corporation has initiated structural reformatations, the number of management levels has been decreased, a performance indicators system is being introduced, and the staff incentive system is being developed.

– THE STRATEGY IS ONLY A SET OF GENERAL NUMBERS, QUITE AMBITIOUS THOUGH. HOW ARE YOU GOING TO ACHIEVE THESE INDICATORS IN PRACTICE?

– As I said before, we have already begun the implementation of the new Strategy, developed strategies for clusters, cascaded them over the level of holding companies.

Thus, the benchmark for the aviation cluster was defined as the annual growth of proceeds of the cluster's holdings by 11.9% in average. In monetary terms the cluster's proceeds must exceed 1.5 trillion rubles by 2025. According to the strategy, each cluster's enterprises will increase the share on the Russian aircraft engineering market (engine building, helicopter engineering, aircraft unit engineering and avionics) up to 75% and 5% in the respective segments of the global market. The civil products share of the cluster must reach 30-40% by 2025. A great emphasis will be placed on the aftersale service for our equipment.

The armament cluster must grow by at least 12.1% per year. In monetary terms the proceeds of the cluster must be approximately 700 billion rubles by 2025, and the net profit must exceed 50 billion rubles. The proceeds from the military and technical cooperation are anticipated to grow due to the development of new samples meeting the customer's requirements, expansion of capacities, and improvement of services.

As to our motor vehicles assets, I would like to note that together with our partner, the Renault-Nissan Alliance, in 2016 a decision regarding additional capitalization of PJSC AVTOVAZ was made. The enterprise already demonstrates positive dynamics of financial indicators and develops the family of vehicles. We expect that in 2018 the company will start making profit.

The market for commercial vehicles has seriously changed, which allowed PJSC «KAMAZ» to demonstrate solid growth in 2016 – the sales grew by 21%.

As a matter of fact, the electronic cluster has the most ambitious goals that demand other type of dynamics and convergence of efforts. According to the cluster's strategy, the average yearly rate of the holdings' and organizations' growth of proceeds has to be 22.4%. The share of civil products in the proceeds will drastically grow: by 2025 it must be more than 60%. In order to achieve this, the proceeds from the sales of civil products must grow in average by 45% per year and reach 1.5 trillion rubles by 2025.

The main sources enabling the proceeds from the civil products to grow will be telecommunications and security systems. The total volume of investments is estimated to be 1 trillion rubles. The use of the budgetary sources of financing for the investment programme will be reduced to minimum.

– IN DECEMBER 2016 THE PRESIDENT OF RUSSIA V.V. PUTIN DECLARED THE NECESSITY TO DEVELOP THE «DIGITAL ECONOMY» PROGRAMME AND INSTRUCTED THE GOVERNMENT RESPECTIVELY. WHAT KEY TECHNOLOGICAL TRENDS OF THE DIGITAL ECONOMY WOULD YOU LIKE TO EMPHASIZE?

– In fact, we are witnessing a process of digitalization of everything – the technological mode and the production chains are changing, as well as the manageability of the demand and the production.

The global shift to the digital technology will inevitably lead to irrecognizability of many economy sectors. Today, we can see that, for instance, the banking sector will undergo fantastic changes in the next 10 years, and a bank in its traditional meaning will cease to exist. We understand that mobile network operators that have been the basis of the economy of many countries are now rapidly losing the market: their business models transform and they need to continuously change, and in the nearest years they will either change beyond recognition, or cease to exist at all.

The Internet of Things and Big Data which, beyond dispute, are a global trend today, also change many spheres, create another type of opportunities and other markets – all spheres of activities are subjected to significant transformation as a whole.

More and more attention will be paid to the issue of Big Data protection as security of such data is as strategically important as territorial defence.

It is also obvious that the overall digitalization will gradually start to decrease the project lead-times from the moment when an idea is generated to the output of the final product, and the focus will shift to the maximum customization of products as per the requirements of individual consumers, and this, in its turn, will lead to fundamental changes in the approach to serial production. As a result, the government will face a critical social problem of mass dismissal of workers.

We can state with assurance that in the nearest 5-10 years life will significantly change, and our main goal is is not to miss this technological turn and bring Russia back to the ranks of technologically advanced countries.

– THE BUSINESS AND THE INDUSTRY, IN THEIR TURN, FACE THE PROBLEM OF PROVIDING THE REQUIRED TECHNOLOGICAL BASE FOR IMPLEMENTATION OF THE PROGRAMME. WHAT ROLE WILL THE CORPORATION PLAY IN ACCOMPLISHMENT OF THIS TASK?

– The work on formation of the digital economy's ideology has started in Russia long before December 2016 when the President of Russia V.V. Putin declared the respective path of development. The country already has all the necessary capacities for its development: e-government systems are being introduced at full speed on all levels of government. Telehealth technologies, digital banking products are being actively deployed. The pilot projects for the «Smart City» implementation have been developed. Representatives of the industry and the housing and public utilities test the new technologies based on the Internet of Things. A wide range of Russian agencies and largest state corporations have declared their interest in the blockchain technology as early as in the first half of 2016. For the time being, those are isolated elements, but still this is a serious premise.

Of course, the Rostec State Corporation views itself on the cutting edge of the Russian digital economy and has all the reasons to believe in this strategic prospect.



+11%

Proceeds growth
dynamics

+10%

Total volume of
investments dynamics



EGISZ is a nationwide system aimed at increasing the level of IT penetration to healthcare and improving the quality and accessibility of public health services.

– DIGITAL ECONOMY IS NOT ONLY TRANSFORMATION OF THE STATE PROCESSES BASED ON ADVANCED TECHNOLOGIES, BUT ALSO A SERIOUS REBUILDING OF ENTERPRISES AND COMPANIES FROM VARIOUS INDUSTRIES. COULD YOU PLEASE TELL ABOUT THE KEY AREAS OF DIGITALIZATION OF THE CORPORATION'S HOLDINGS?

– The distributed design engineering centres of the Corporation's holdings today broadly qualify as «digital enterprises» implying that design engineers could be located anywhere in the country but work together on a project.

As to mastering the new design and modelling principles, JSC «United Engine Corporation» widely deploys modern mathematical software systems, use most powerful computers, including a unique supercomputer with a capacity of 30.7 TFlops that was commissioned in 2014 at the A. Lyulka Experimental Design Bureau.

By the way, equipment models that have been fully designed with the use of digital technology are already «in the air». For instance, the Ansat helicopter.

– HOW WOULD YOU EVALUATE THE PROSPECTS FOR CREATION OF TRULY DIGITALIZED ENTERPRISES WITHIN THE CORPORATION?

– I would say they are highly probable. The thing is that under the National Technology Initiative JSC «United Engine Corporation» in cooperation with the Peter the Great Saint-Petersburg Polytechnic University expects to launch the implementation of a pilot project for creation of a «digital factory» in 2017.

– WHAT DIGITAL ECONOMY PROJECTS THE CORPORATION IS PARTICIPATING IN TODAY?

– First of all, I would like to note the Unified State Health Information System (EGISZ), a nationwide system aimed at increasing the level of IT penetration to healthcare and improving the quality and accessibility of public health services.

Using the computational resources provided by the Ministry of Healthcare of the Russian Federation we have developed and performed the tests of software for the information and analytical monitoring and control system in the sphere of pharmaceuticals procurement. It is ready for pilot operation. The approaches used for creation of the system will be also applied in other projects in which the Corporation participates.

Our organizations have the experience in developing the software and information environments for the federal and regional authorities, state corporations and companies partially owned by the government. LLC NCI developed unique technology platforms that will be used as a basis for building the Russian Internet of Things infrastructure, and could be applied for implementation of nationwide projects requiring the storage of big and massive data volumes, for instance, to build integrated security systems, or «Smart City» solutions.

– WHICH ENTERPRISES OF THE CORPORATIONS WOULD YOU DISTINGUISH AMONG THE MAIN SUPPLIERS OF THE DIGITAL ECONOMY ELEMENTS?

– First of all, of course, these are the radio-electronic cluster's enterprises and LLC NCI which offers its customers finished integrated solutions based on the advanced national developments, equipment and component base produced in Russia. The developers use the products of the Corporation's companies as early as at the development stage. Despite the widespread opinion that the Russian equipment is underdeveloped, the national products are highly competitive in many categories, and today we would like to use that potential.

We actively improve the internal cooperation between companies of the Corporation. A strong example is cooperation of LLC NCI with JSC Concern Automation that allowed to create our own cryptoprotection and information security solutions.

– DO THE CORPORATION'S ENTERPRISES FACE THE PROBLEM OF ATTRACTING YOUNG SPECIALISTS? IF YES, WHAT IS BEING DONE TO SOLVE IT?

– An important area of the Corporation's activities is the improvement of cooperation with educational institutions and creation of specialist training programmes. Today the Corporation and its organizations have 214 cooperation agreements concluded with higher educational institutions, and 50 agreements with vocational schools under which the target training of specialists is carried out.

Besides, the Corporation supports socially significant projects and trains its own staff. Examples of this are the «IT-Breakthrough» competition for students of industrial higher educational institutions, Yaroslavl Forum «Future Intellectual Leaders of Russia», «Sirius» Training Centre. And, of course, we continue to develop the cooperation with the international WorldSkills movement to improve the professional training standards. We even became the general partner of the WorldSkills Hi-tech National Championships for 2016-2018 and currently we are creating an ongoing centre for advanced training of workers in Tula on the basis of the Tula factory PJSC «Oktava».



« FUTURE BELONGS TO NEW TECHNOLOGIES, AND WE ARE NOT GOING TO FALL BEHIND »

A. E. SERDYUKOV

INTERVIEW WITH THE INDUSTRIAL
DIRECTOR OF THE AVIATION CLUSTER OF
THE ROSTEC STATE CORPORATION

Consolidated proceeds
in 2016

534.7
billion rubles

Consolidated net profit
in 2016

30.9
billion rubles

**– WHAT RESULTS WERE OBTAINED BY THE CLUSTER IN 2016?
DO THEY CORRESPOND TO THE STRATEGIC GOALS?**

– The aviation cluster of the Corporation has very ambitious goals, both financial and non-financial. The average yearly proceeds growth rate by 2025 must exceed 13% in rubles, and we must expand our presence on the global market of helicopter engineering from 11% to 15%, and from 2.2% to 4.3% on the global aircraft engineering market, while not forgetting about the product diversification task as per the President's instructions.

As regards the financial performance indicators, the consolidated proceeds of the JSC Russian Helicopters holding company almost did not change and were 193.1 million rubles, despite the moderate decrease in the volumes of sales of helicopter equipment. The portfolio of orders for 2017 has already been guaranteed, and it will allow to improve the performance. JSC Technodinamika's growth of proceeds was more than 20% which exceeds the average numbers in the cluster. Its proceeds was 25 billion rubles. Good growth rates were demonstrated by JSC «United Engine Corporation» – the growth of proceeds was almost 11 billion rubles which was achieved against the background of a sudden decrease of the external credit portfolio.

We expect that the consolidated proceeds of JSC KRET will be more than 90 billion rubles. And I would like to note that the holding's management structure has been reduced by selling some uncontrolled and unpromising production assets. Thus, despite a significant reduction of the JSC KRET's size, it still demonstrated the financial growth.

As regards the production results of the cluster I would like to note that its «geographic presence» is very wide, so it is impossible to name all the events. So I will dwell upon the key ones.

I would call the number one event the attraction of a strategic investor to the capital of JSC Russian Helicopters – the Russian Direct Investment Fund consortium and the foreign investor Mubadala Development.

Besides, first flights of the modernized Mi-28NM and Ka-62 were performed, and Ka-62 opens for JSC Russian Helicopters a brand new market segment.

Of equal relevance in 2016 was the start of operation of SaM-146 engines as part of regional aircraft SSJ-100 operated by the first Western European operator, Irish company CityJet, which confirms that the products of JSC «United Engine Corporation» conform to the international quality standards. JSC «United Engine Corporation» also started to supply engines AL-41F-1S for Su-35 fighter jets delivered to the People's Republic of China.

I would also like to distinguish the fact of signing the agreement for establishment of the Indo-Russian Helicopters Private Limited Joint Venture implying the arrangement of production of Ka-226T helicopters and its modifications in India, as well as guaranteeing their maintenance and technical support. The document was signed in October 2016 as part of the Russian-Indian summit in Goa.

– HOW WOULD THE STRATEGY FOR DEVELOPMENT OF THE AVIATION SECTOR BEING PREPARED BY THE MINISTRY OF TRADE AND INDUSTRY OF THE RUSSIAN FEDERATION AFFECT THE CLUSTER’S DEVELOPMENT STRATEGY?

– These documents do not contradict each other as they are based on similar principles – expansion of presence on the global markets, improvement of the equipment quality, reduction of dependence on the federal budget funds. They also touch upon the matters of staff training. We have common goals and tasks, so I am sure that there will be no need to make any significant changes in our strategy.

– A KEY FACTOR FOR THE AVIATION MARKET IS THE HIGH COST OF ITS PRODUCTS AND OPERATION. WILL THE DIGITAL TECHNOLOGIES HELP TO DRASTICALLY INCREASE THE EFFICIENCY OF THE INDUSTRY’S ENTERPRISES?

– The entire world follows the path of digitalization, distributed engineering design and construction of competence centres, use of additive technologies based on electronic models and robotics. All the mentioned approaches increase the speed of operation, reliability of materials and technical solutions. Future belongs to such technologies, and we are not going to fall behind.

As to mastering the new design and modelling principles, the cluster widely uses modern mathematical software systems, most powerful computers and supercomputers.

The «digital factory» project is being developed to enter the brand new level of product/construction design process and production approaches due to effective application of the entire complex of multi- and interdisciplinary world-class computer technologies that will allow to drastically improve the characteristics of finished products while still meeting the necessary technical requirements.

Implementation of the project will ensure significant reduction of lead-time and market launch of products and solve knowledge-intensive and resource-intensive problems.

But I would like to note that isolated measures are not enough, and such decisions should be made in the entire production chain.

– WHAT WAS ACHIEVED IN 2016 TO INCREASE THE SHARE OF THE CLUSTER’S CIVIL PRODUCTS?

– Our efforts in this sphere were first of all aimed at the expansion of the product range, and as of today the new models of civil helicopters have been designed for the target segments of the global market. JSC KRET and JSC Technodinamika, in their turn, continued to play the most active role in the programme for construction of the twin-engine jet airliner MC-21 which was officially rolled in June 2016.



The «digital factory» project is being developed to enter the brand new level of product/construction design process and production approaches due to effective application of the entire complex of multi- and interdisciplinary world-class computer technologies





« WE HAVE A GREAT POTENTIAL
FOR CREATION OF NEW
ECONOMY BRANCHES »

S. B. ABRAMOV

INTERVIEW WITH THE INDUSTRIAL
DIRECTOR OF THE CONVENTIONAL
ARMAMENT, AMMUNITION AND
SPECIAL CHEMISTRY CLUSTER OF THE
ROSTEC STATE CORPORATION

Consolidated proceeds
in 2016

298.1
billion rubles

Consolidated net profit
in 2016

27.6
billion rubles

– THE CORPORATION HAS APPROVED A VERY AMBITIOUS DEVELOPMENT STRATEGY. HAS THE CLUSTER ACHIEVED THE TARGET INDICATORS IN 2016? WAS IT NECESSARY TO ADJUST THE DEVELOPMENT STRATEGY BASED ON THE RESULTS OF 2016?

– First of all, I would like to note that we are satisfied with the cluster’s operational results. All key holdings demonstrated a significant growth on 2016, and financial performance even exceeded the anticipated indicators. In particular, JSC NPO Splay demonstrated a growth of proceeds by more than 60%.

The other organizations have more moderate numbers, but in total the situation is quite positive.

Correctness of the strategic decisions made is confirmed not only by the growth of proceeds. I would like to note that detachment of JSC NPO Splay from JSC Scientific-Production Concern Mechanical Engineering and creation of a separate holding on its basis allowed not only to materially improve its financial performance indicators, but also significantly expand the product range, and this, in its turn, allowed to enter the new markets.

It should be emphasized that both the Corporation’s Development Strategy and the cluster’s development strategy are aimed at achieving the targets determined for us by the government. The Address of the President of the Russian Federation emphasizes the diversification of the defence industry as a whole, and quite clearly defines the shares of civil and military products of the United Industrial Corporation. Of course, this will result in the necessary adjustments in our strategic documents.

The basic growth targets set by us are indeed quite ambitious. Suffice it to recall the growth of proceeds from civil products which should be up to 22% in various holdings, which is higher than the same average indicator across the Corporation. This will be impossible to achieve without the concentration of efforts of the central body and various organizations of the cluster, improvement of internal and external cooperation, especially in the current period.

– WHAT IS THE POTENTIAL FOR FURTHER GROWTH IN YOUR OPINION?

– Of course, one of our most important goals is the implementation of the state defence order, and we have fully achieved it in 2016. But considering that the state defence order imposes restrictions on the cost of products, we see a significant potential for further growth in civil products.

Unfortunately, today our enterprises do not operate quite well in the market environment. This is the reason why we need to make serious decisions regarding the corporate governance, understanding where the enterprises belong on the market. We see the solution to these problems in attracting the most competent market forces and resources ready to work with us. An example of successful attraction of private capital to the defence industry is JSC Kalashnikov Concern.

At the end of 2017 it will be possible to discuss some other implemented similar projects.

– WHAT ARE THE MOST IMPORTANT PROJECTS IMPLEMENTED IN 2016?

– JSC Kalashnikov Concern has significantly expanded the product range by going beyond the limits of traditional sphere of arms manufacturing and starting the output of robotics, unmanned aerial vehicles, two-wheeled motor vehicles and civil products.

The JSC NPO High Precision Systems holding not only met the target in terms of supplies of Iskander systems, but also started cooperation with the largest Russian oil and gas companies for purposes of arranging the production of high-technology oil treatment devices.

In sum, I could say that in 2016 we managed to evaluate and, finally, entirely understand the complexity and the scale of tasks related to the diversification. We have assessed the existing and potential competences, growth directions and creation of projects on their basis. We hope that the year 2017 will become the year of many projects commencement. We will try and enter the market segments where we have a potential, thus shaping up the new economy in complex market segments where the Russian competence has been lost.

– IT IS QUITE DIFFICULT TO TELL ABOUT ALL PROMISING PROJECTS OF THE CLUSTER DURING ONE INTERVIEW. WHAT PROJECTS ARE THE MOST INTERESTING IN YOUR OPINION?

– First of all, it is the project for production of industrial explosives. We believe that this market niche has not been sufficiently occupied by us, though we have all the opportunities, including the processing chain and a developed infrastructure for sales.

Another great market potential was revealed by us in the ammunition sphere. This area is almost completely lies in the private economy sector, and the Corporation has a huge potential there with all its production capabilities. Today, we decide which assets to engage in this area and, of course, we want to attract private capital.

Besides, we are confident that the high potential is hidden in the domestic appliances area. Today, among our enterprises only JSC POZIS, manufacturer of refrigerating equipment, works in this area. We expect that the enterprise will be able to significantly increase its market share by expanding the product range.

JSC RT-Chemcomposite prepares a large project based on the composite agricultural aircraft. After the downfall of the Soviet

agricultural aviation this market niche became unoccupied. The fleet of Soviet An-2 has exhausted itself, and there appears nothing to replace it. Therefore, we see a huge potential in this sector and consider it, among other things, as an opportunity to give an additional momentum to the development of agriculture.

By laying emphasis on the sector's niches we want to use the potential of the long-term growth of such areas as agriculture, medical equipment, machine engineering, machine tool building, oil and gas industry.

– WHAT WAYS OF INCREASING THE CLUSTER'S OPERATIONAL EFFICIENCY DO YOU SEE?

– The fact that our holdings managed to meet the targets in 2016 is, first of all, attributed to their deep elaboration both on behalf of the corporate centre and the contractors. But the potential for increasing the operational efficiency is still very high. It is connected with the change of the management model depending on the strategic tasks, products and services range, market conditions, long-term contracts and the re-investment opportunities that arise out them.

Besides, there are huge reserves hidden in the so-called digitalization of the economy.

– HOW MUCH WOULD THE SHIFT TO THE DIGITAL TECHNOLOGY COULD INCREASE THE ARMAMENTS CLUSTER'S EFFICIENCY?

– It is quite difficult to talk about efficiency here as the digital technologies change the approach in the first place. Its effect could be diverse: from increasing the proceeds by several times to many-fold decrease of production sites while preserving the product output growth. Some of our enterprises require dramatic review of their business organization. Besides, this requires the attraction of new staff. Therefore, the potential in the operational efficiency area at the enterprises of the defence industry is enormous.

By laying emphasis on the sector's niches we want to use the potential of the long-term growth of such areas as agriculture, medical equipment, machine engineering, machine tool building, oil and gas industry



– WHAT HAS BEEN ALREADY DONE IN THIS AREA?

– We have created a design centre to integrate the market competences in the sphere of preparation and implementation of integrated projects for production of armament, military equipment and civil products. This site uses the most advanced software solutions. We actively cooperate with other corporation's clusters which have a quite high share of digital technologies in the cost of their products.

It should be noted that armament conventionally drives the development of technologies, and digital technologies is no exception. The «smart» armament today occupies a significant market share and will grow further. Although today we see a quick growth of armament operators' competence, they are being replaced by robotics. In the long view, the new technologies will entirely replace soldiers, irrespective of the battle site – on the battleground or on the digital landscape.

– A NEW ASSET, JSC RESEARCH AND PRODUCTION CORPORATION URALVAGONZAVOD, HAS RECENTLY JOINED THE CLUSTER. HOW MUCH DO YOU THINK THIS WILL AFFECT THE CLUSTER'S PERFORMANCE INDICATORS?

– Last year several new organizations joined the cluster. Of course, arrival of such large assets as the Federal State Unitary Enterprise Russian Scientific Centre Applied Chemistry,

JSC Research and Production Corporation Uralvagonzavod, the scheduled transfer into the management of OJSC Kurganmashzavod will cause the adjustment on not only the strategic documents.

We significantly increase the investments in certain holdings in order to meet the target volumes of armaments supplies. Despite the invariability of global plans, we will still need to change the strategic plans due to the arrival of such large assets.

– HAS THE ROLE OF THE INDUSTRIAL DIRECTOR CHANGED AS A RESULT OF ALL THE STRUCTURAL REFORMATIONS WITHIN THE CLUSTER?

– In my opinion, it has grown. The Corporation's purpose is not only to find the new market niches, but also to guarantee the high level of internal cooperation. Therefore, first of all we are looking for those products and services that would allow to increase the Corporation's proceeds in the first instance by ensuring an integrated approach towards provision of services and strengthening those initiatives that already exist on the level of separate holdings or enterprises.





« LET THE STRATEGY REMAIN
AMBITIOUS AND INSPIRING,
AND THE PLANS – REALISTIC
AND PRACTICEABLE »

S.A. KULIKOV

INTERVIEW WITH THE INDUSTRIAL
DIRECTOR OF THE ELECTRONIC CLUSTER
OF THE ROSTEC STATE CORPORATION

Consolidated proceeds
in 2016

201.0
billion rubles

Consolidated net profit
in 2016

8.5
billion rubles

– WHAT ARE THE MAIN STRATEGIC OBJECTIVES OF THE CLUSTER?

– In 2016 we developed the Electronic Cluster Strategy, and the Corporation’s Board approved the top priority areas of activities and the target financial indicators for the cluster until 2025.

The strategy is based on our priorities. First of all, this is unconditional implementation of the state defence order and guaranteeing the processing sovereignty in sensitive areas. We strive for meeting the expectations of the shareholders and investors by ensuring the target return on profitability and growth of value at the rates exceeding the growth of GDP. We remain the «partners in development» by supporting the high-technology business in formation of the new markets and stimulating the emergence of smart products and solutions. We raise the requirements to the quality management, operational efficiency and production flexibility.

All this found its reflection in the numbers and measurable tasks of the strategy – according to our plans, by 2025 the average yearly growth of proceeds should be 22.4%, and the civil products share should grow to 60-70%.

– HOW IS THE ELECTRONIC CLUSTER GOING TO ACHIEVE SUCH AMBITIOUS GOALS?

– We have assessed our own resources and opportunities, analysed the global markets and identified the fastest growing segments with the entry barriers acceptable to us in terms of our starting positions, we have determined the needs for investments and the areas of development for the next decade. Today, as the programmers say, the process of «top-down design» has been launched – in the nearest future the holdings will present their three-years’ plan along with the budget and the investment programme. It will include the product, marketing and incentive plans.

The proceeds could reach the level of 1.5 trillion rubles by 2025 only subject to the cluster’s successful entry to the markets of civil products and implementation of integrated commercial projects (with the participation of two and more holdings)/ The proceeds from the sales of civil products in 2025 will be approximately 353 billion rubles, which is 23% of the target cluster’s proceeds and the anticipated effect of the inter-holding cooperation.

In 2016 we have started the process of civil products marketing and sales centralization, we develop the sales support function in the B2G and B2B segments, shape up the targeted R&D system and review the investment programs.

As part of the management processes and the internal audit we have identified the distressed assets in relation to which we carry out rehabilitation measures or preparation to liquidation. We inspire the holdings to quickly solve the problems which prevent from the progressive movement forward and focusing on the creativeness as if some kind of weights on our legs.

– HOW IS THE APPROACH TOWARDS THE CLUSTER’S OPERATIONS BEING TRANSFORMED AFTER THE APPROVAL OF THE NEW STRATEGY?

– According to our estimates, the volume of attracted investments will be more than 1 trillion rubles by 2025. At the same time, we want limit our appetite towards the state financing by replacing it by financing from three primary sources: own funds, bank debt and private share capital.

By own funds we mean the effect of the operational efficiency growth programme. It is expected to occur in 3-5 years after the launch and promises to partially cover the financing needs.

Build-up of the bank debt solves a significant part of financial goals of the strategy. Increase of the credit portfolio looks realistic as today the average ratio of debt to EBITDA is insignificant, and we expect to bring this indicator to three by 2025. Strategic partnership as part of our relationships with the banks is our target. We expect that the increasing transparency and efficiency of the cluster will lead to the improvement of the credibility rating of our enterprises and will allow us to reduce the cost of financing and use new bank instruments. Cooperation with Sberbank and VTB Bank already bears its first fruit.

Besides, we believe that the budgetary funds need to be replaced by private capital. In 2016, as part of this task a preparation of the key assets for privatization has been completed, an investment model has been elaborated and the potential investor profile has been shaped up. We expect that our partner will share the strategy and will be ready to co-invest in order to achieve its goals. Besides, our partner must possess a confirmed experience in the operational or shareholding management. We are already engaged in the dialogue with the investors, and during the first six months of 2017 we are planning to complete the first stage of negotiations on a number of issues.

– HAS THE APPROVAL OF THE ELECTRONIC CLUSTER'S DEVELOPMENT STRATEGY LED TO ANY SERIOUS CHANGES IN THE CLUSTER?

– Identification of new goals for the holdings of the cluster required rethinking of our approach – we have understood the necessity to adjust the management model. We have performed the analysis of the quality management system and the model of corporate governance and also completed the first transformation stage. Integrated audit helped us to identify the opportunities to strengthen the team due to the change of roles of some key executives and attraction of new specialists from the market.

All this allows to seriously increase the management quality today subject to availability of a clearly understood goal, correct motivation and development.

In 2016, for purposes of efficient management of the asset portfolio in the sphere of intelligence, automatic control systems, communication means, Electronic Component Base and materials a basis was laid to form the Consolidated Company based on JSC Ruselectronics and JSC United Instrument Manufacturing Corporation. In order to harmonize the structure of the assets and competences of the Consolidated Company the assets will be distributed among product division.

In the upcoming year the cluster will consist of three holdings – the Consolidated Company, JSC Schwabe and JSC Concern Automation based on the principles of customer-oriented approach, product and technology synergy, and investment attractiveness.

We learn to implement the shareholding functions through the collegial management bodies – boards of directors with independent members.

This ensures the transparency, reasonableness of decisions and adequate involvement of shareholders. The systems evolves each year and brings better management practices.

– HOW WOULD YOU COMMENT UPON THE OPERATIONAL RESULTS OF 2016?

– Sceptics call our strategic goals «inflated», especially regarding the increase of the civil products share, but only a year later we see the first results of the Corporation's strategy.

The electronic cluster companies managed to become the leading suppliers of medical equipment in Russia and occupy 50% of the neonatal equipment market in the Russian Federation. As part of our new projects our equipment was supplied to 23 perinatal centres, more than 2,000 items of medical equipment in total.

The cluster's company win open auctions and tenders for municipal contracts. In the nearest future, as part of one of such agreements more than 70 intersections of Moscow will be equipped with modern high-technology traffic lights using the products of JSC Schwabe and solutions of JSC Concern Automation.

In 2016, JSC Ruselectronics presented a brand new products – mobile and stationary inspection and screening systems able to ensure screening of passenger cars and trucks and railway transport on the go at a speed of 70 km/h and identify the type of transported cargo.

Among the interesting projects I would like to emphasize two projects in the sphere of high-technology optical and electronic equipment that was installed on two different satellites and placed into orbit from the Baikonur and Vostochny cosmodromes.

In terms of numbers, the proceeds at the end of 2016 was 201 billion rubles, EBITDA grew from 28.6 to 29.9 billion rubles, and EBITDA margin in 2016 was 14.9% against 14.0% in 2015. The civil products share in the proceeds was 15% in 2016. These data confirm the possibilities for organic growth and demonstrate our first steps on commercial markets.

– HOW MUCH ARE THE CLUSTER'S ORGANIZATIONS READY FOR EXISTENCE UNDER THE CONDITIONS OF THE «DIGITAL ECONOMY»?

– The international landscape in our industry is changing, and the ability to develop under the «digital economy» conditions will become one of the main survival criteria. Our enterprises produce products for the «digital economy» in the sphere of electronic components base, software and cyber security even as we speak. The electronic cluster increases its share on the market of medical processing equipment and is involved in the projects of telehealth which is anticipated to develop intensively both in Russia and around the world.

The shift from «hardware» to «intelligence» is one of the bases that will allow us to develop under the «digital economy» conditions. Today we are ready to supply smart systems for city lighting or transport management that form the basis of the «smart city». Several contracts have been signed for that purposes and some new

contracts are being prepared, such as: «smart video surveillance» (including extended analytical functions), traffic lights, controllable road signs and other elements of smart transport systems.

We primarily form our offers in the IAAS format (Infrastructure as a Service). Our solutions are based on the advanced technologies, including the Internet of Things (IoT), machine-to-machine (M2M) interaction and elements of artificial intelligence.

The cluster's companies are working on products for segments of telecommunications solutions for software-defined networks (SDN), and on a range of products in the sphere of Network Functions Virtualization (NFV). What is meant here is a cross-platform software for network and information security of the next generation in the telecommunications networks. Besides, JSC Concern Automation develops products in the sphere of information and personal data protection.

A digital product is always a risk, but the chances of being left behind the digital economy are extremely high. Everyone has equal opportunities here, and this is the place for the fast, the flexible and the purposeful.

Digital technology is not the future, it is now.



The most important area today is the growth of investment attractiveness of the cluster's assets

THE INTERNATIONAL LANDSCAPE IN OUR INDUSTRY IS CHANGING, AND THE ABILITY TO DEVELOP UNDER THE «DIGITAL ECONOMY» CONDITIONS WILL BECOME ONE OF THE MAIN SURVIVAL CRITERIA

OUR ENTERPRISES PRODUCE PRODUCTS FOR THE «DIGITAL ECONOMY» IN THE SPHERE OF ELECTRONIC COMPONENTS BASE, SOFTWARE AND CYBER SECURITY EVEN AS WE SPEAK



« THE CORPORATION COULD BECOME
THE LEADER IN THE DIGITAL
ECONOMY OF RUSSIA »

V. Y. BROVKO

INTERVIEW WITH THE DIRECTOR
FOR SPECIAL COMMISSIONS OF THE
ROSTEC STATE CORPORATION AND
THE CHAIRMAN OF THE BOARD OF
DIRECTORS OF LLC NATIONAL CENTRE
FOR INFORMATIZATION (NCI)

– WHAT ARE THE KEY TECHNOLOGY TRENDS OF THE DIGITAL ECONOMY THAT YOU COULD EMPHASIZE?

– I would start with what we understand by that term, because today for many people the notion of «digital» is still associated exclusively with the IT infrastructure, online sales and the user involvement calculation mechanics. This is, of course, the basis, but more generally the «digital economy» implies understanding of the growth areas and creation of the new future.

Therefore, the main trends of development of this sphere in the nearest years will be the development and deployment of digital platforms in trade, industry and logistics, construction of «smart factories», development of technologies of the Internet of Things and «Big Data».

If we go deeper, there is a whole number of huge projects in the long term that will help Russia in becoming one of the leading technologically advanced countries again. For example, «smart» factories are one of the key elements in the fourth industrial revolution implying a set of measures aimed at production automation and a shift towards integrated solutions for engineering design and product life cycle management. This implies entering a brand new level of interaction of all enterprises in the next 5-7 years, integration, data exchange, logistics optimization and, what is most important, the critical change of the production speed and the potential for the maximum customization of products as per the requirements of each customer.

By 2025, supercomputers could reach exa-scale capacity. Development of these technologies will cause an expected jump in science and industry due to the brand new opportunities in processing and analysis of super arrays of data. Therefore, I believe that in the next decade Russia could actually witness a digitalization boom and breakthrough scientific discoveries on the edge of science and IT.

– WHAT ARE THE COMPETENCES THAT LLC NCI IS READY TO OFFER FOR IMPLEMENTATION OF THE «DIGITAL ECONOMY» PROGRAMME?

– Digital economy is an environment that will shape up for many years and will require the competences of a huge number of highly qualified specialists. No company is likely to cope with this task alone. LLC NCI is, first of all, an IT competence centre capable of not only independently implementing separate elements of a nationwide system, but also efficiently arranging the work with partners in order to achieve common goals for the digital economy development.

Today LLC NCI has an experience in implementing nationwide projects. About 1,500 specialists are engaged in various projects today. We engage competences of the Corporation's companies where the enormous intellectual potential is concentrated. Besides, the flexible structure of the company and the search for new approaches to project implementation leaves room for cooperation and creation of joint ventures.

We actively promote the idea of partnership within complex technology projects, and we are ready to cooperate with other companies on the market to expand the competence. As regards the technological participation, the company has a large experience in developing platform-based solutions, specialized and industry-specific information environments. As part of the economy «digitalization» programme the competences of LLC NCI in the development of protected data storage systems operating on proprietary operating system and a great number of software products must be in demand.

– HOW WOULD YOU ASSESS THE PROSPECTS OF THE CORPORATION'S PROPRIETARY IT SOLUTIONS ON THE MARKET?

– The prospects are clear as the solutions of this level can be created and deployed only by large corporations, and the Russian market does not have too many players.

Considering the experience of our specialists, the active interaction between the Corporation enterprises, the government's focus on digitalization, the import substitution policy and the IT export support I would say that the prospects are secure. Besides, there are strictly economic reasons for such opinion. At the end of 2016 the growth of the IT services market in ruble equivalent was about 5%, and this growth trend will remain in 2017. Moreover, during this year the interest towards cloud technologies is expected to remain on the same level, and even become on behalf of the governmental customers. LLC NCI has something to offer. Moreover, the company can become the primary channel for supply of domestic ICT to the global market.

– WHAT GOALS OF LLC NCI WOULD YOU EMPHASIZE TODAY?

– The main strategic priority is the implementation of integrated eco-system projects defined as top priority in the electronic cluster's strategy, and certain large projects, such as construction of the infrastructure for the 2018 FIFA World Cup or EGISZ.

Besides, we are interested in certain segments of the digital economy, such as e-learning, telehealth, internet of things projects – those areas that could be in high demand both on the Russian and the foreign markets.

We understand that today the IT market is actively shaping up in Russia, so one of the highest strategic priorities for LLC NCI today is active participation in the process of shaping up the new digital economy markets.

– WHAT COMPETENCES WILL BE OF HIGHEST DEVELOPMENT PRIORITY IN 2017? WHAT PRODUCTS AND SERVICES WILL BE DEVELOPED BY THE COMPANY?

– LLC NCI has selected a number of mainstream areas of development according to its competences: heavy engineering software, protected data storage systems (PDSS), database management systems, life cycle management, large IT and BI infrastructural projects.

As I already said, today LLC NCI implements a communications infrastructure project for the 2018 FIFA World Cup, and as early as this summer there will be the first challenge – the 2017 FIFA Confederations Cup.

In general, the project implies the creation of a communications system and information systems, as well as their maintenance during all events. The telecommunications services at the 2018 FIFA World Cup sites require that a single information and telecommunications infrastructure is deployed in all 11 hosting cities and other cities with training arenas.

– IN 2016, LLC NCI ACQUIRED JSC BARS GROUP. HAS THE INTEGRATION OF COMPANIES BEEN COMPLETED? WHAT HAS CHANGED IN THE WORK OF COMPANIES AFTER THE TRANSACTION?

– Judging from the updated strategy, LLC NCI does not intend to fully take over JSC BARS Group. The company acquired by us is a mature asset with its own culture, developed business processes, and our task is to help this business grow by scaling the company and developing the export of products produced by them. In this regard I would not call this an integration. It is a synergy of opportunities the entire potential of which could be unlocked within the next few years.

– DOES LLC NCI PLAN ANY NEW SIMILAR TRANSACTIONS? IN WHICH AREAS?

– We plan to carry out a number of transactions in different segments.

We expect to declare them during the Information Technology of Industrial Russia conference in late May. But I can say for sure now that the main focus will be placed by us on establishing joint ventures both with the privately financed technology companies that are present on the market, and with the governmental institutions without which the implementation of complex nationwide technology products is hard to imagine.

– WHAT DEVELOPMENTS OF LLC NCI POSSESS THE EXPORT POTENTIAL IN YOUR OPINION?

– All new projects that we launch are developed with a view to export. The Russian market is quite small to implement large projects oriented exclusively on internal consumption as in such a case the capability of making the project profitable is decreased, so the government has to subsidize such projects, and that is not what we expect.

At the same time, the IT export market is not only highly competitive, but also of a strong political nature. There are countries that are knowingly oriented, for instance, on the Western American producers. Of course, we can promise that we will enter those markets, and we can even try and do this, but the success of such projects is hardly probable. But fitting in the landscape of such countries as the countries of EurAsEC, countries of Latin America or South-Eastern Asia, Northern Africa or Middle East, Russia has all the chances. We are ready to supply the widest possible range of ICT products of the highest quality.

– ROSOBORONEXPORT IS ENTIRELY ACCOUNTABLE IN THE CORPORATION FOR THE EXPORT OF ARMAMENTS AND DEVELOPMENT OF MILITARY PRODUCT MARKETS. WILL LLC NCI EXPORT IT PRODUCTS AND SEARCH FOR NEW MARKETS DIRECTLY AND INDEPENDENTLY?

– CEO of the Corporation S. V. Chemezov at the end of the previous year supported the idea of creating a competence centre for promotion of Russian IT products abroad. We have already received the support for the development of this concept from the Presidential Administration of the Russian Federation, the Government of the Russian Federation, relevant ministries and the Russian Export Centre. All of them agree that today this is the best tool for increasing the IT products export by 2 times as per the task set by the President of the Russian Federation.



LLC National Centre for Informatization (NCI) was established in 2014 at the initiative of the Corporation for purposes of development and deployment of promising national software in public authorities, state corporations and companies partially owned by the government. The main strategic priority today is the implementation of integrated eco-system projects.

5 ECO-SYSTEM PROJECTS:

- E-Healthcare
- E-Learning
- Industrial Internet
- Smart City
- IT Infrastructure for the 2018 FIFA World Cup and the 2017 FIFA Confederations Cup

BOARD OF DIRECTORS:

V. Y. Brovko
S. G. Aslanyan
I. I. Kozlov
A. N. Nazarov
K. Y. Solodukhin

CEO:
K. Y. Solodukhin

CHAIRMAN OF THE BOARD
OF DIRECTORS:
V. Y. Brovko

Consolidated* proceeds
in 2016

2443.9
million rubles

Consolidated* net profit
in 2016

165.8
million rubles

Staff count*

1,644
employees

* including JSC BARS Group

The decision was caused by the fact that after all high profile events generally aimed at the Russia-bashing by our Western partners, the Russian IT became the global brand.

We have finally come to the understanding that the export potential of the Russian IT is very high: this is a mature market that has real, globally competitive products. But when introducing their products to the market the companies incur transaction costs that exceed the added value, and this deprives them of the opportunity to become the legitimate participants of the global competition despite the competitive product.

At the end of 2016 it was decided that these functions will be assigned to LLC Rusinformexport established earlier the same year. At the very beginning of 2017 the Corporation approved the transfer of the asset management function to LLC NCI. The new company's CEO was appointed Egor Ivanov, former vice-president of the Yota wireless Internet operator, who was one of the founders of the company and accountable for the business development and international expansion, and then – for the management of the entire infrastructure and technology business of the company. – It is important to realize that we speak about establishment of a commercial structure that would promote Russian IT products abroad, would have the status of a private public partner, would be motivated to generate profit and act on the basis of clear market and marketing principles when using the networks of JSC Rosoboronexport that have a proven record of efficiency.

2.3 Digital and Key Innovative Products of the Rostec State Corporation

Ethernet switch for corporate networks and data processing centres

HOLDING COMPANY: JSC UIMC

BS6300



The next-gen 10G switch (series BS6300) designed for corporate networks and data processing centres with an add-on option in the form of switch stack is an improved architecture of hardware and software with the possibility to install 1+1 power supply sources. The device ensures high accessibility, scalability, safety and energy efficiency. It is simple to use due to the innovative functions and capabilities such as VSF, IEEE 802.3at* and redundant power supply sources. This high capacity and reliable switch is suitable for high-density aggregation levels and kernel levels.

SUPPORTS

10G

BANDWIDTH

UP TO **96 Mpps**

SWITCHING CAPACITY

UP TO **128 Gb/s**

Control unit with four processors

HOLDING COMPANY: JSC UIMC



The unit is equipped with up to 384 GM RAM (DDR4), based on Intel chipsets, equipped with 1x24 SAS backplane and two 1x36 SAS 6 Gb/s expander plates, 24 slots for installation of 2,5-inch drives with hot backup support. Hot backup is available not only for storage media, but also any command controller and power source.

HOT BACKUP OF ANY COMMAND CONTROLLER AND POWER SOURCE

Scope of application

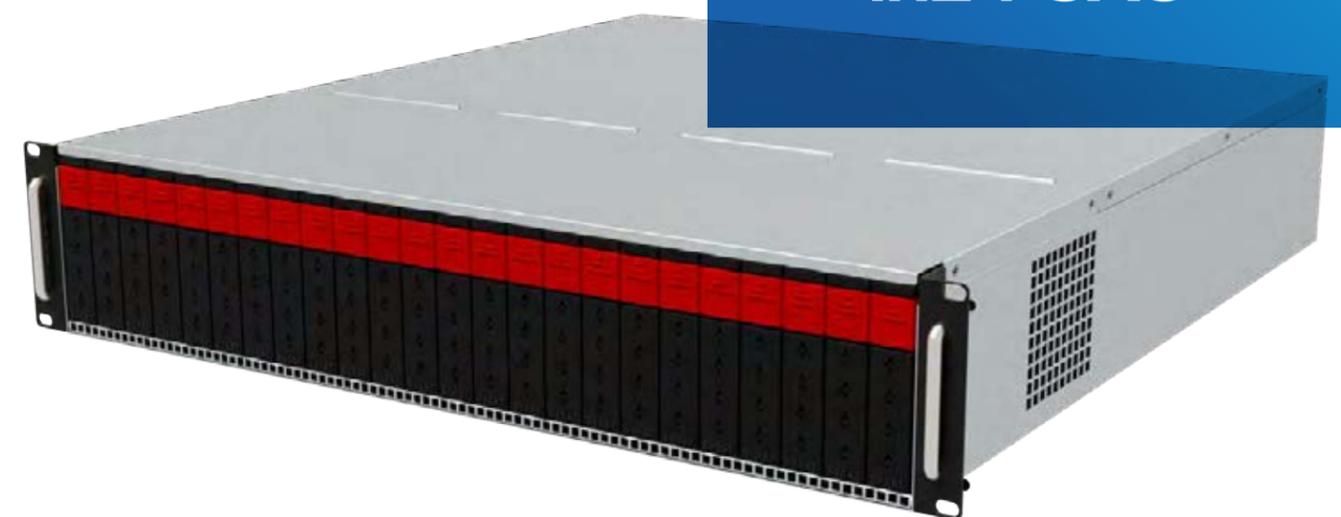
- backup systems;
- expansion of cloud storages;
- online email storage;
- local storages of video content at post-production studios;
- digital media content databases.

RAM

UP TO **384 Gb**

EQUIPPED WITH BACKPLANE

1x24 SAS



IP ATX «Alexandrite»

HOLDING COMPANY: JSC UIMC



Purpose:
Transfer of voice traffic and data by IP telephony protocols
Ensuring IP telephony services for all employees

Scope of application:

- government structures;
- commercial structures;
- export.

Functions and capabilities:

System for direct access to ATX functions (DISA)

Auto-attendant (IVR)

Conference calls of three types

Transfer of fax and fax to email

Call interception

Incoming call distribution groups

Incoming call distribution system

Automatic channel selection

Number modification

Call record

Do not disturb mode

Call redirection

Intelligent call routing

ENSURES TELEPHONE
COMMUNICATION SERVICES AND
VIDEO CALLS ON THE BASIS OF THE
PACKET SWITCHING TECHNOLOGY

SIMULTANEOUSLY SUPPORTS

UP TO **250 calls**

IP ATX «Alexandrite» is certified by the Ministry of Communications and Mass Media of the Russian Federation and the Ministry of Defence of the Russian Federation (processing of information up to the «classified» information inclusive)

IP ATX «Alexandrite» ensures telephone communication services and video calls on the basis of the packet switching technology, SIP/RTP/RTCP protocol basis for commercial enterprises, government authorities, defence and law enforcement agencies. Supports connection of digital and analogue telephones for purposes of succession.

SAS JBOD arrays storage module

HOLDING COMPANY: JSC UIMC



SUPPORTS OPERATION WITH SINGLE
AND DOUBLE EXPANDERS

DATA TRANSFER RATE

UP TO **12 Gb/s**

DESIGNED

FOR **24** FRONT LOADED **2,5**-INCH

DISCS, SUPPORTS THE HOT BACKUP
FUNCTION

Intellectual chassis architecture, SAS3 interface support, redundant power supply and cooling systems make the storage module fast and secure, easy to use for commissioning work, daily operation and preventive maintenance. The module is built in a 2U body with the data transfer rate of up to 12 Gb/s. Designed 24 front loaded 2.5-inch discs, supports the hot backup function. Supports operation with single and double expanders.

Scope of the module application:

- backup systems;
- expansion of cloud storages;
- online email storage;
- local storages of video content at post-production studios;
- digital media content databases.

Multitask computer (AAC – All-Applications Computer) and firmware bundle

HOLDING COMPANY: JSC UIMC

AAC



FOR ORGANIZATIONS AND AGENCIES
WITH HIGH REQUIREMENTS TO
INFORMATION SECURITY

WARRANTY LIFE

AT LEAST **5 years**

The module allows to convert a computer to any telecommunications device, ensures high level of data protection and has a warranty life of at least 5 years.

The module is designed for industrial companies of strategically important industry sectors, government authorities and agencies with high requirements to information security.



Electro-optical module «Polet»

HOLDING COMPANY: JSC UIMC



EQUIPMENT FOR REMOTE ROUND-THE-CLOCK MONITORING OF CONTROLLED FACILITIES AND TERRITORIES

TARGET SURVEILLANCE DURING DAY AND NIGHT TIME AT THE DISTANCE OF

UP TO **7–10 km**

Quick acquisition and detection of people, transport, low-altitude vehicles and any other moving targets in restricted areas, and identification of illegal acts and emergency situations

Equipment for remote round-the-clock monitoring of controlled facilities and territories for quick acquisition and detection of people, transport, low-altitude vehicles and any other moving targets in restricted areas, and identification of illegal acts and emergency situations.

The electro-optical module is a multi-sensor system that integrates high-definition day television cameras and a long-range cooled thermal imaging device. The electro-optical module allows target surveillance during day and night time at the distance of 7-10 km (depending on weather conditions) with a 360-degree field of view.



«Elbrus-8C» microprocessor

HOLDING COMPANY: JSC UIMC

SUITABLE FOR REPLACEMENT
OF IMPORTED COMPUTING SYSTEMS

8 PROCESSOR CORES

EACH CORE IS SUITABLE
TO PERFORM

UP TO **25** OPERATIONS



«Elbrus-8C» is a Russian 8-core server class processor intended for CPU-intensive task processing and creation of multi-processor and multi-computer systems with teraflop capacity. The microprocessor chip is designed using the 28 nm technology, has 8 processor cores with an improved 64-bit architecture «Elbrus» of 3rd generation, cache memory of 2nd level with 4 Mb capacity and 3rd level with 16 Mb capacity.

The «Elbrus» architecture has been developed in Russia and has a series of unique peculiarities:

- explicit parallelism of operations integrated in the architecture; it allows to perform up to 25 operations on each core per 1 machine phase which ensures high capacity with a moderate processor speed;
- dynamic binary translation technology allowing to ensure execution of applications and operating systems distributed in binary x86 code;
- supports secure computing with special hardware check of memory structure integrity that allows to ensure the high level of information security of the software systems using it.

«Elbrus-4.4» server

HOLDING COMPANY: JSC UIMC



HIGH-END MULTI-PROCESSOR COMPUTING
SYSTEM FOR THE «ELBRUS» OPERATING
SYSTEM ENVIRONMENT

SUPPORTS RAM
INSTALLATION

UP TO **384 Gb**

The «Elbrus-4.4» server is a high-end multi-processor computing system designed for operation in the «Elbrus» operating system environment that ensures processing of large volumes of information, including real-time processing.



FiberSim technology

HOLDING COMPANY: JSC RT-CHEMCOMPOSITE



INCREASES STRUCTURAL
PERFORMANCE OF PRODUCTS MADE
OF POLYMER COMPOSITES

BY **10%**

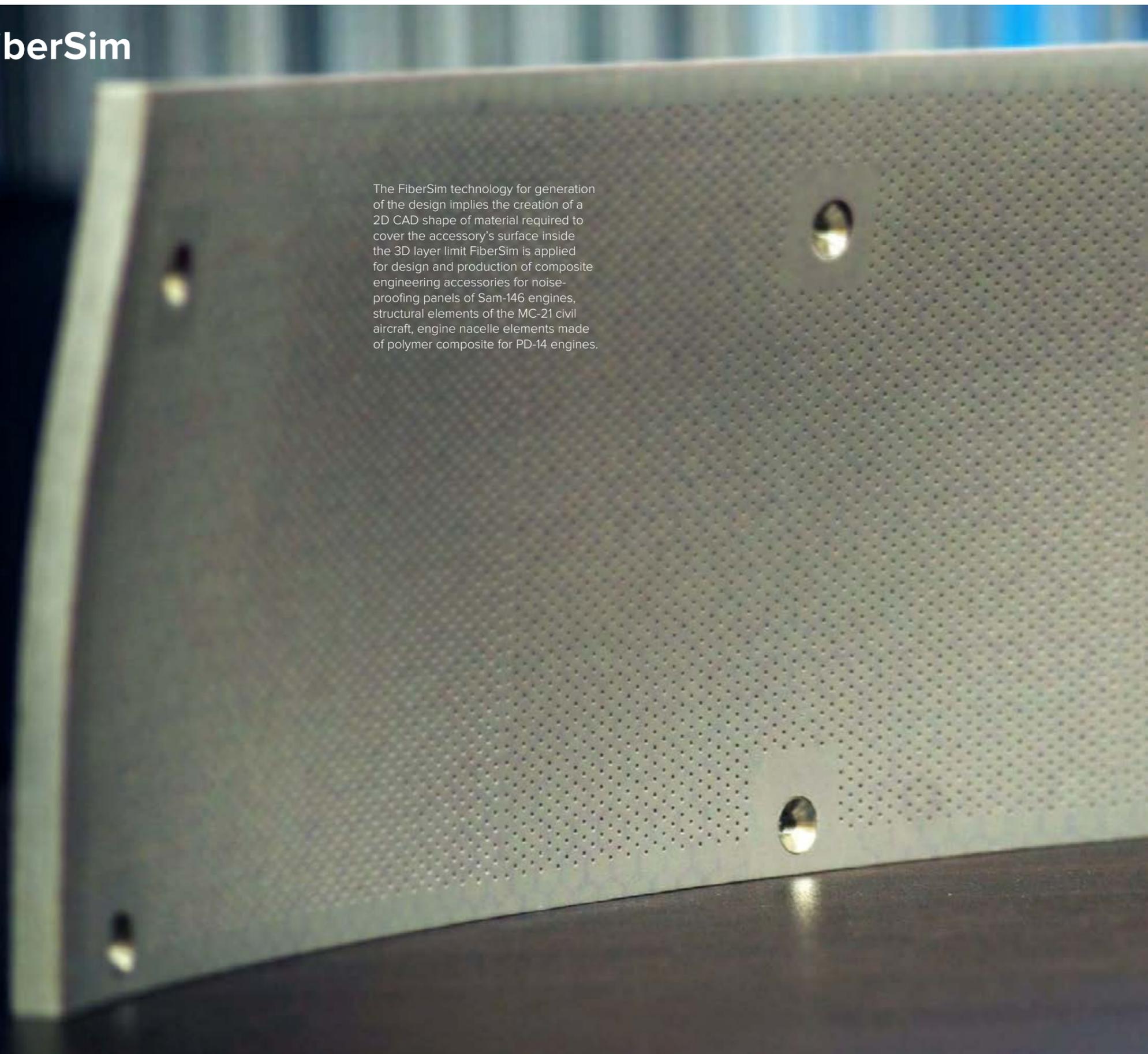
DECREASES LABOUR INTENSITY
OF PRODUCTION OF POLYMER
COMPOSITE COMPONENTS

BY **50–70%**

*The technology implies the creation
of a 2D CAD shape of material
required to cover the accessory's
surface inside the 3D layer limit*

FiberSim

The FiberSim technology for generation of the design implies the creation of a 2D CAD shape of material required to cover the accessory's surface inside the 3D layer limit. FiberSim is applied for design and production of composite engineering accessories for noise-proofing panels of Sam-146 engines, structural elements of the MC-21 civil aircraft, engine nacelle elements made of polymer composite for PD-14 engines.



«Angara» fibre-optic system for information collection

HOLDING COMPANY: JSC SCHWABE

FOR VARIOUS MODIFICATION OF
LAUNCH VEHICLE

HIGH CONFIDENCE ONLINE
MONITORING

COLLECTION OF INFORMATION FROM
SENSORS



The system is designed for collection of information from sensors (up to 960 sensors) installed on a launch vehicle, conversion of electric signals into optic signals and transfer of signals to the operations control room via the fibre optic. The device is developed for various launch vehicle modifications. The finished system will allow to perform online monitoring of on-board systems of the launch vehicle with high level of confidence.



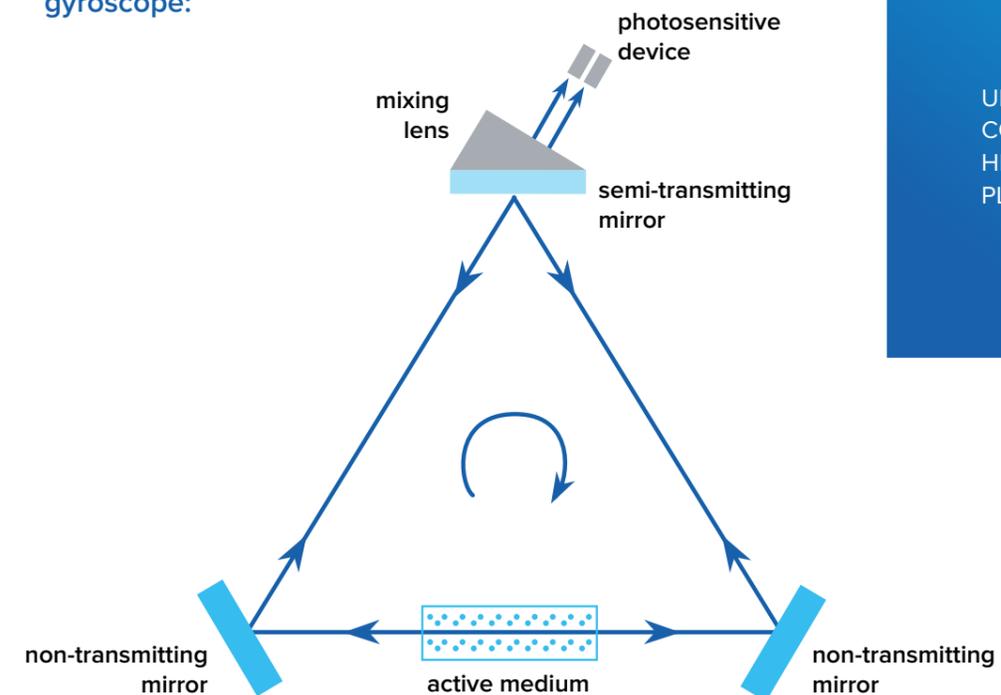
Laser gyroscope for platformless inertial navigation systems (INS)

HOLDING COMPANY: JSC SCHWABE

The use of laser gyroscopes for platformless inertial navigation systems allowed to create a unified mass-produced technology complex of high reliability and high-precision platformless INS for equipment of modern armaments.



Principle diagram of laser gyroscope:



The arrows show the directions of counter-waves and rotation of the laser gyroscope

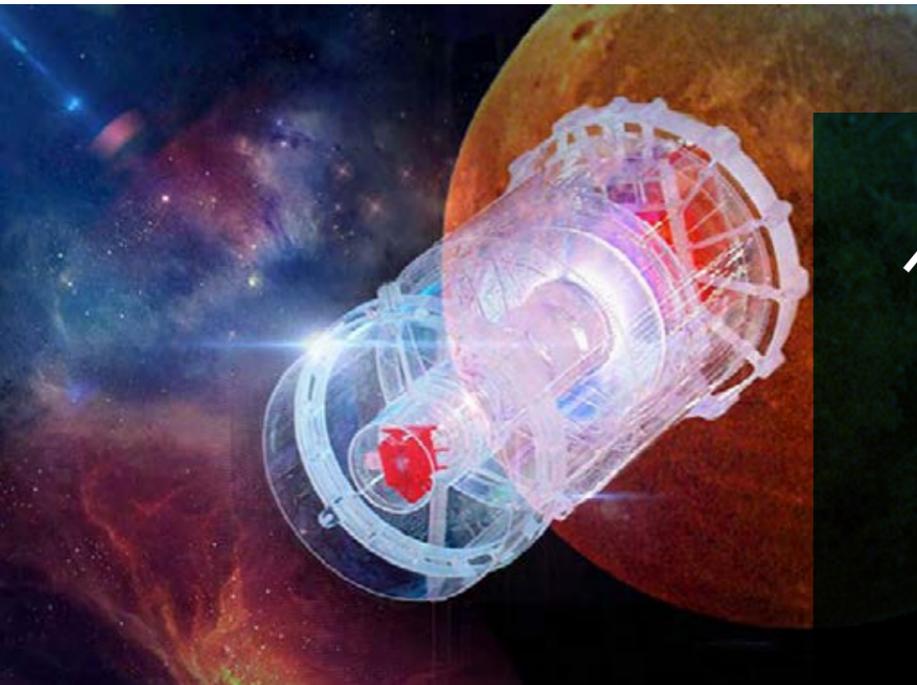
EQUIPMENT OF
MODERN ARMAMENTS

UNIFIED TECHNOLOGY
COMPLEX OF
HIGH-PRECISION
PLATFORMLESS INS

Electrooptical far-reaching multispectral equipment «Aurora» for «Aist-2D» small space vehicle (SSV)

HOLDING COMPANY: OJSC SCHWABE

Electrooptical equipment: «Aurora»



COMBINATION OF HIGH DEFINITION WITH AN EXTENDED CAPTURE RANGE

MASS OF «AURORA»

72 kg

ACQUISITION OF EARTH SURFACE IMAGES AT THE ALTITUDE OF 350-700 KM

The «Aurora» system for SSV «Aist-2D» is designed for acquisition of panchromatic Earth surface images in 3 spectral ranges at the altitude of 350-700 km. «Aurora» is a next-generation equipment for acquisition of high-detail images from space. Its main difference from foreign equivalents is the combination of high definition with an extended capture range. Mas of «Aurora» is 72 kg.



Automatic adjustment and control unit BARK-88

HOLDING COMPANY: JSC UIMC

BARK-88



BARK-88 REPLACED OBSOLETE ANALOGUE UNITS

THE USE OF BARK-88 ALLOWS TO SIGNIFICANTLY IMPROVE THE OPERATIONAL CAPABILITIES OF THE FIGHTER JET

The brand new automatic adjustment and control unit BARK-88 is designed for modernization of control systems of RD-33 engines of the MiG-29 aircraft. The use of BARK-88 in the control system of RD-33 engines of the MiG-29 aircraft allows to significantly improve the operational capabilities of the fighter jet.

Automatic adjustment and control units (BARK) for engines allow to:

- extend the life of the engine hot section;
- increase the stall margins under variable conditions and evolutions of flying vehicles;
- increase the precision of engine conditioning and quality of control;
- adapt the engine control to the external conditions;
- compensate for response of sensors measuring the controlled and adjustable parameters;
- increase the engine control depth to ensure its operation based on the technical condition;
- significantly decrease the mass and volume of units in the electronic part of the system and connection cables of aircraft.

Waveguide systems

HOLDING COMPANY: JSC RUSELECTRONICS



INTER-ELEMENT OPTICAL
COMMUNICATION TECHNOLOGY
BASED ON MULTI-LAYER
POLYMER WAVE PROPAGATION
SYSTEMS

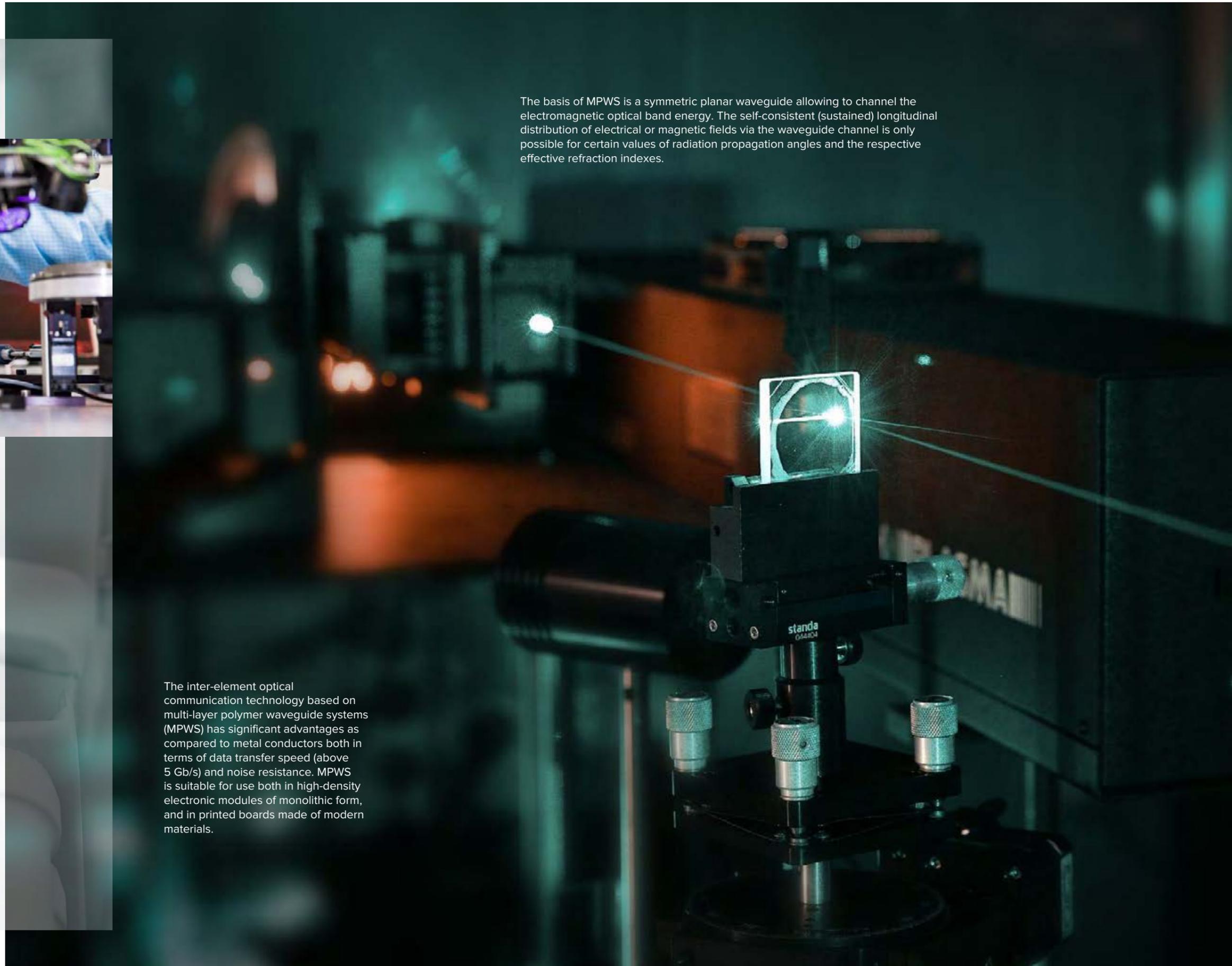
DATA TRANSFER RATES

ABOVE **5 Gb/s**

Suitable for use both in high-density electronic modules of monolithic form, and in printed boards made of modern materials

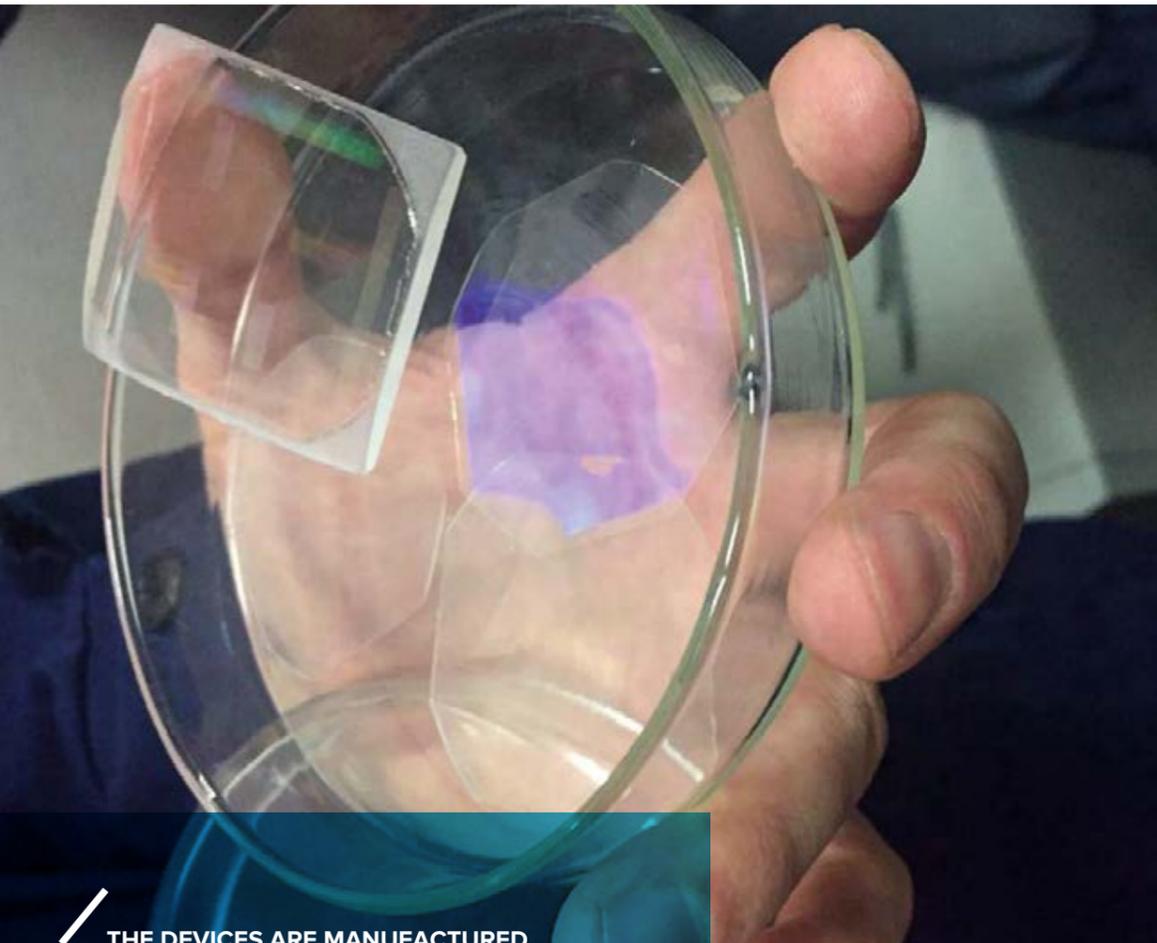
The basis of MPWS is a symmetric planar waveguide allowing to channel the electromagnetic optical band energy. The self-consistent (sustained) longitudinal distribution of electrical or magnetic fields via the waveguide channel is only possible for certain values of radiation propagation angles and the respective effective refraction indexes.

The inter-element optical communication technology based on multi-layer polymer waveguide systems (MPWS) has significant advantages as compared to metal conductors both in terms of data transfer speed (above 5 Gb/s) and noise resistance. MPWS is suitable for use both in high-density electronic modules of monolithic form, and in printed boards made of modern materials.



Multi-layer optical data storage devices

HOLDING COMPANY: JSC RUSELECTRONICS



THE DEVICES ARE MANUFACTURED
BASED ON THE WAVEGUIDE STRUCTURE
WITH INTERMITTENT POLYMER AND
PHOTOSENSITIVE FUNCTIONAL LAYERS

THE DATA STORAGE DEVICES
OUTRANK THE EXISTING CD, DVD AND
BLURAY FORMATS

The devices are manufactured based on the waveguide structure with intermittent polymer and photosensitive functional layers. The polymer layers have integrated diffraction gratings ensuring the routing of the readout radiation to the selected functional layer. Functional layers are formed with the use of chromone class substances whose capability to change the optical properties due to the two-photon absorption is used for the process of writing to the device. The data storage devices outrank the existing CD, DVD and BluRay formats by the storage volume, efficiency and the reading rate.

Star tracker

HOLDING COMPANY: JSC RUSELECTRONICS



FINDING THE ORIENTATION AND STAR
NAVIGATION OF SPACE VEHICLES

MASS LESS
THAN **300 g**

2.6 times
SMALLER THAN EXISTING
EQUIVALENTS

A television camera designed for finding the orientation and star navigation of space vehicles allows to find the coordinates of faint objects (stars) in space under the conditions of continuous radiation. This highly sensitive camera allows to determine the centres of star images with high precision, has small dimensions and the mass of less than 300 g. The mass and dimensions are the distinguishing features of the camera: it is 2.6 times smaller than its equivalents and could be placed on advanced small satellites. This star tracker outranks its foreign equivalents by a number of parameters.

Air pollution sensors and monitoring systems

HOLDING COMPANY: JSC RUSELECTRONICS



OUTRANK THEIR EQUIVALENTS BY TECHNICAL PARAMETERS AND RELIABILITY

THE SYSTEM IS DESIGNED FOR TIMELY DETECTION OF GAS LEAKS IN MOTOR TRANSPORT

Air pollution sensors and monitoring systems outrank their equivalents by a number of technical parameters and reliability. This year the production of industrial gas indicators will also be launched. Gas indicators are designed for operation under severe conditions of high humidity, high dust content, non-standard temperature modes. In particular, gas indicators in explosion-proof bodies is expected to start for the oil and gas processing facilities.

Inspection and Screening Systems (ISS)

HOLDING COMPANY: JSC RUSELECTRONICS



ALLOW TO REMOTELY IDENTIFY THE TRANSPORTED CARGO

TRANSPORT SCREENING IN MOTION

UP TO **70 km/h**

CARGO MASS IDENTIFICATION WITH AN ERROR

OF **10%** MAX

These systems are based on a linear electron accelerator and allow to remotely identify the transported cargo. Various types of systems are capable of screening passenger cars and trucks and railway transport in motion at a speed of up to 70 km/h. Apart from the full-fledged visual control, the system allows to classify the transported materials and automatically refer cargo to one of 4 categories irrespective of the density, stacking and properties of materials. Besides, ISS allows to identify both the entire mass of cargo and its components with an error of 10% maximum.

Multi-spectral photodetector

HOLDING COMPANY: JSC RUSELECTRONICS



SIGNIFICANTLY IMPROVES THE PERFORMANCE OF FLAME FIRE DETECTORS

MODULAR DESIGN INCLUDING THE MODULE OF PHOTSENSITIVE ELEMENTS AND THE MODULE OF OPTICAL INTERFERENCE FILTERS

The multi-spectral infra-red photodetector can significantly improve the performance of flame fire detectors. A distinctive feature of the device (FM-612 type) is its modular design including the module of photosensitive elements based on solid-solution films and the module of optical interference filters.

Video cameras for telemetry systems

HOLDING COMPANY: JSC RUSELECTRONICS



FOR CREATION OF ADVANCES TV SYSTEMS

ВСЕГО РАЗРАБОТАНО

14 MODELS AVAILABLE

TEMPERATURE WORKING RANGE

FROM **+80** TO **-50° C**

The family of digital cameras for advanced television systems includes monochrome and coloured versions with a wide range of resolutions: 1600 x 1200, 1920 x 1200, 1920 x 1080, 2336 x 1752, 2048 x 2048, 3296 x 2464. The model range includes 14 models. The cameras allow to generate a 12-bit flow of image digital data with a high signal-noise ratio, and to change the non-linear characteristic of the video signal's 12-bit dynamic range transformation to the 8-bit range of the digital flow of video data. Besides, the equipment allows to obtain a flow of lossless-compressed JPEG-LS (1/ITU-T81) frames for limited channel bandwidth.

«BioToken»

HOLDING COMPANY: JSC CONCERN AUTOMATION



THE USE OF A NUMBER OF AUTHENTICATION FACTORS IN THE FORM OF A SINGLE «BIOTOKEN» DEVICE

INCREASES THE PROTECTION OF ACCESS RESTRICTION MEASURES AGAINST THE USER'S NEGLIGENCE



A firmware device in the form of a USB drive for verification and creation of electronic signatures with biometric identity authentication. The use of a number of authentication factors implemented in the form of a single «BioToken» device allows to significantly increase the protection of the corporate Internet segment.

The device is designed for various application spheres, including systems for anonymization of personal data in medical institutions, electronic document workflow systems, trade and services.

Electronic door locks with biometric keys

HOLDING COMPANY: JSC CONCERN AUTOMATION



NOTABLE FOR HIGH TAMPER RESISTANCE AND RELIABILITY DUE TO THE USE OF BIOMETRICS AND NEURAL NETWORK-BASED AUTHENTICATION OF PEOPLE

AUTHENTICATION TECHNOLOGIES: FINGERPRINT, VOICE, FACE

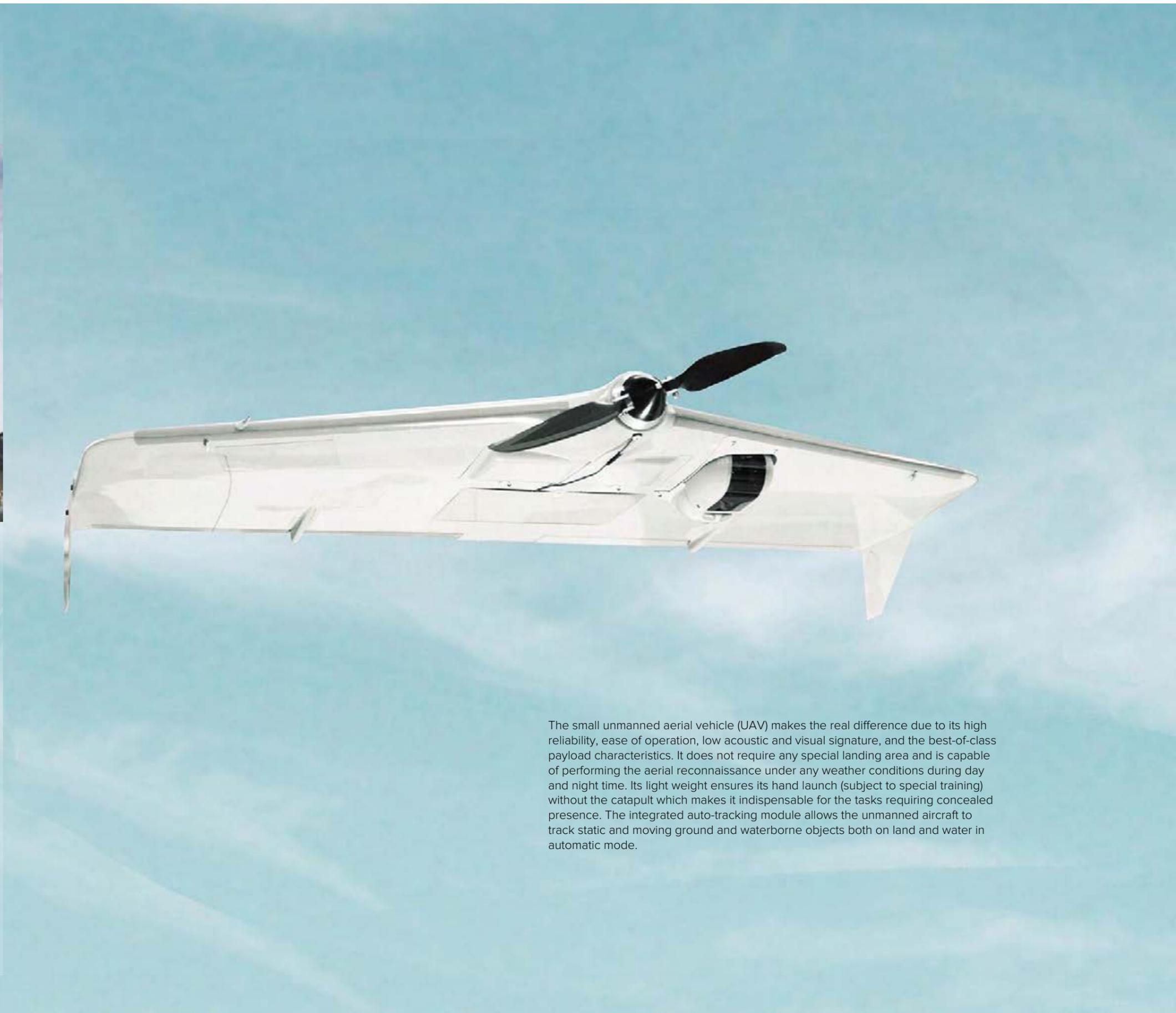
Electronic door locks distinct from foreign and domestic equivalents by high tamper resistance and reliability due to the use of biometrics and neural network-based authentication of people. These locks are characterized by low cost of installation and maintenance, smartphone-based control, security mode and various alarms, possibility to combine several locks and controls into one network.

Product peculiarities

- Low cost of installation (as compared to the existing equivalents), re-equipment of existing systems and maintenance.
- High reliability of biometric authentication technologies.
- Possibility to grant a single right of guest access or temporary access to the facility.
- Possibility to control the locks using a smartphone.
- Security mode and various alarms (entrance, exit, etc.).
- Combination and control of several electronic door locks in a single network.

Zala 421-08

JSC CONCERN KALASHNIKOV



THE BEST-OF-CLASS PAYLOAD CHARACTERISTICS

THE VEHICLES DOES NOT REQUIRE A SPECIAL LANDING AREA

LIGHT WEIGHT ALLOWS HAND LAUNCH

The auto-tracking module allows the unmanned aircraft to track static and moving objects both on land and water in automatic mode

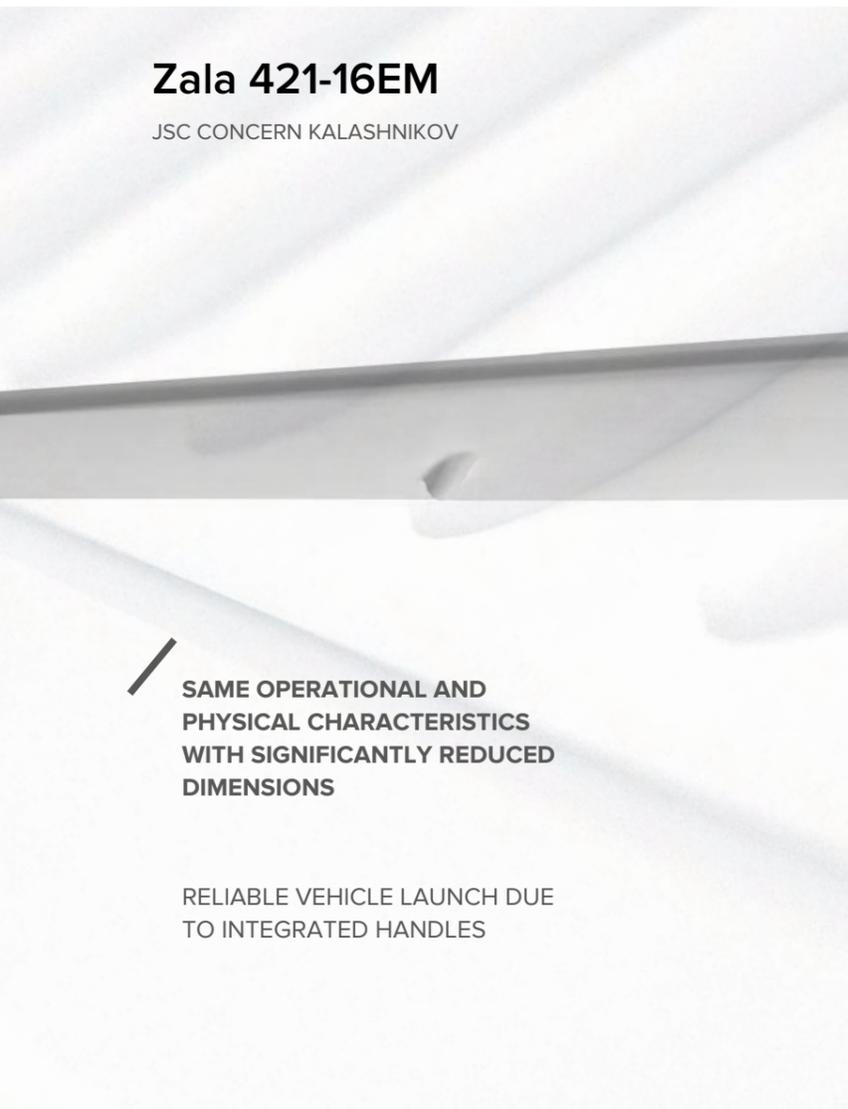
The small unmanned aerial vehicle (UAV) makes the real difference due to its high reliability, ease of operation, low acoustic and visual signature, and the best-of-class payload characteristics. It does not require any special landing area and is capable of performing the aerial reconnaissance under any weather conditions during day and night time. Its light weight ensures its hand launch (subject to special training) without the catapult which makes it indispensable for the tasks requiring concealed presence. The integrated auto-tracking module allows the unmanned aircraft to track static and moving ground and waterborne objects both on land and water in automatic mode.

Zala 421-16EM

JSC CONCERN KALASHNIKOV

SAME OPERATIONAL AND
PHYSICAL CHARACTERISTICS
WITH SIGNIFICANTLY REDUCED
DIMENSIONS

RELIABLE VEHICLE LAUNCH DUE
TO INTEGRATED HANDLES



The main advantage of the aerial vehicle is that it has small dimensions without compromising its operational and physical characteristics. Reliable vehicle launch due to integrated handles. The aerial vehicle is designed for high-quality and effective area surveillance at any time of day or night, safeguarding various objects, search and detection of unauthorized activities within the protected area.



*Designed for high-quality and
effective area surveillance at any
time of day or night*



ZALA 421-16E

JSC CONCERN KALASHNIKOV



THE BEST-OF-CLASS
OPERATIONAL AND PHYSICAL
CHARACTERISTICS

AERIAL SURVEILLANCE
AT A DISTANCE OF

UP TO **50 km**

CONTINUES TO PERFORM THE
TASK WITHOUT THE SATELLITE
NAVIGATION SYSTEM'S SIGNAL

This unmanned aerial vehicle has the best-of-class operational and physical characteristics. The unit is designed for aerial surveillance at any time of day or night at a distance of up to 50 km with online transfer of the video signal. The aerial vehicle successfully implements the tasks of safeguarding and monitoring the strategic objects, allows to find the coordinates of the target and quickly make decisions as to the adjustment of ground operations. The vehicle is capable of performing the task without the satellite navigation system's signal.

Zala 421-21

JSC CONCERN KALASHNIKOV



USED FOR OPERATIONS AT
ANY TIME OF DAY OR NIGHT

SAFEGUARDING THE PERIMETER
WITHIN THE RADIUS OF

UP TO **2 km**

Small and handy unmanned helicopter with the hand launch function allowing to successfully use it for aerial surveillance tasks at any time of day or night at sites without any landing area for unmanned aerial vehicles of the airplane type.

The helicopter is successfully used for search and detection of objects and people, unauthorized activities within the protected area and safeguarding the perimeter within the radius of up to 2 km. When necessary, this vehicle is used for LED highlighting, transmission of sound effects and signal retransmission.

Zala 421-22

JSC CONCERN KALASHNIKOV



FOLD DESIGN OF VEHICLE

SAFEGUARDING THE PERIMETER
WITHIN THE RADIUS OF

UP TO **5 km**

This vehicle does not require any special landing area and is indispensable for aerial surveillance of hard-to-reach areas

The vehicle has a fold design made of composite materials which ensures the ease of the vehicle delivery to the operation site by any transport means. It does not require any special landing area and is indispensable for aerial surveillance of hard-to-reach areas.

ZALA 421-22 is successfully operated during any time of day or night for search and detection of objects and safeguarding the perimeter within the radius of up to 5 km.



CardioMarker

HOLDING COMPANY: JSC KRET



ONE OF THE FIRST
TELEHEALTH DEVICES IN
RUSSIA

ALTERNATIVE TO HOLTER
MONITOR

AUTOMATICALLY DETECTS
PATHOLOGICAL CONDITIONS OF
CARDIOVASCULAR SYSTEM



CardioMarker is a remote cardiovascular system monitoring unit. It is one of the first telehealth devices in Russia that allows the physician to remotely monitor the patients and the user to quickly obtain the information on his/her heart and the general condition of the body. The compact portable monitor is fixed in the heart area, takes and transfers the readings to the server via a smartphone. Results of automatic readings processing are transferred in real time to the physician or a dispatcher. The user can view the readings on his/her smartphone in the form of information graphics. The unit can be used for long-term monitoring of patients with cardiovascular diseases and as an easy-to-use and cheap alternative to the Holter monitor.

Digital handheld tonometer Diaton

HOLDING COMPANY: JSC KRET

Diaton is a non-corneal transpalpebral tonometer. It is a unique device for measuring the intraocular pressure and early detection of such a dangerous eye disease as glaucoma. It combines non-standard eye tonometry technologies: transpalpebral (measurements through eyelids) and scleral (measurement in the sclera area) that significantly expands the ophthalmometry opportunities.

The Diaton digital transpalpebral devices completely satisfy present-day requirements to diagnostic equipment of that class and have a series of indisputable advantages:

- no anaesthesia required;
- no infection risk;
- IOP measurement in patients with pathologies or corneal surgery;
- high precision of measurements for preliminary diagnostics of glaucoma or other eye diseases;
- light weight and small sizes of the device make it indispensable for screenings and doctor home visits.



EARLY DETECTION
OF GLAUCOMA

COMBINES NON-
STANDARD EYE
TONOMETRY
TECHNOLOGIES

CE-MARKED
AND FDA-CERTIFIED



«FORA EZS-DC» electrical charging station

HOLDING COMPANY: JSC KRET



CHARGING TIME

3-8 hours

MAXIMUM OUTPUT POWER

50 kWt

MAXIMUM CHAGRING CURRENT

125 A

The user interface is based on the contactless access system with the use of the advanced identification technology and a RFID card



The «FORA EZS-DC» station is a stationary charging devices with vandal-resistant corrosion-proof steel body designed for express DC charging of electric car in Mode 4 as per the CCS and CHAdeMO international exchange protocols. In this mode the drive batteries charging is performed with direct current in 15-30 minutes (up to 80% of the battery capacity).

2.4 Eco-System and Integrated Products of the Rostec State Corporation

«E-Healthcare»

«E-Healthcare» is an aggregate of information technologies allowing to combine all healthcare functional areas into a single information space and guaranteeing the accessibility of all electronic information on patients required to provide medical services to patients. «E-Healthcare» is based on the introduction of unified formats of electronic medical data and unified rules for information cooperation which is equipped with a continuous information exchange system.

The electronic healthcare system implies integration of all healthcare resources and their optimization and effective planning.

It is intended to increase the quality of management, optimization of patient flow, elimination of extra red tape barriers, arrangement of barrier-free interaction between all elements of the healthcare system, activation of wide and quick introduction of the advanced diagnostic and treatment technologies in the health practice.

The technological basis for the electronic healthcare system implementation in the Russian Federation is the Unified State Health Information System (EGISZ) that ensures interaction of the government authorities and the local administrations, healthcare and pharmaceutical organizations for provision of the state services in electronic form.

The electronic healthcare system encompasses the primary and emergency medical care, prevention of diseases and hospital treatment, medication support, promotion of public awareness, physicians training, scientific activities and management of the sector.

In 2016, according to the plans of the Ministry of Healthcare of the Russian Federation, LLC NCI has modernized the «Federal Electronic Reception Desk» component of the Unified State Health Information System as part of which the «Telehealth Consultations» subsystem has been developed and implemented for scheduled telehealth consultations between the leading Federal State Budgetary Institutions and healthcare organizations in the federal subjects of the Russian Federation.

The Rostec State Corporation is developing not only the respective software, but also the medical equipment and integrated solutions of any level of complexity. In particular, JSC KRET has developed the CardioMarker system that is being prepared for the industrial production launch.

The Corporation continues the construction of advanced technology perinatal centres in the federal subjects of the Russian Federation that are being equipped with the necessary medical equipment by JSC Schwabe.

Specialists of JSC BARS Group, a subsidiary of LLC NCI, have developed the «Obstetrics Monitoring» information system that allows to perform continuous prenatal care and monitoring in combination with the dedicated medical equipment manufactured by JSC Schwabe.

JSC RT-Project Technologies together with the Ministry of Healthcare of the Russian Federation have performed the work for creation of the information and analytical monitoring and control system in the sphere of pharmaceuticals procurement. This will allow to increase the efficiency of pharmaceuticals procurement across the entire country.



Ministry of Healthcare of the Russian Federation



UNIFIED STATE HEALTH INFORMATION SYSTEM



Information and analytical monitoring and control system in the sphere of pharmaceuticals procurement

IEMR* | NR* | FERD* | Telehealth



User account section



Regional segments of EGISZ, regional medical information systems



Patient



Healthcare organizations, MIS, LIMS, RIS, telehealth systems



Perinatal centres



* IEHR – Integrated Electronic Medical Record, FERD – Federal Electronic Reception Desk, NR – Nosological Registers

«E-Learning»

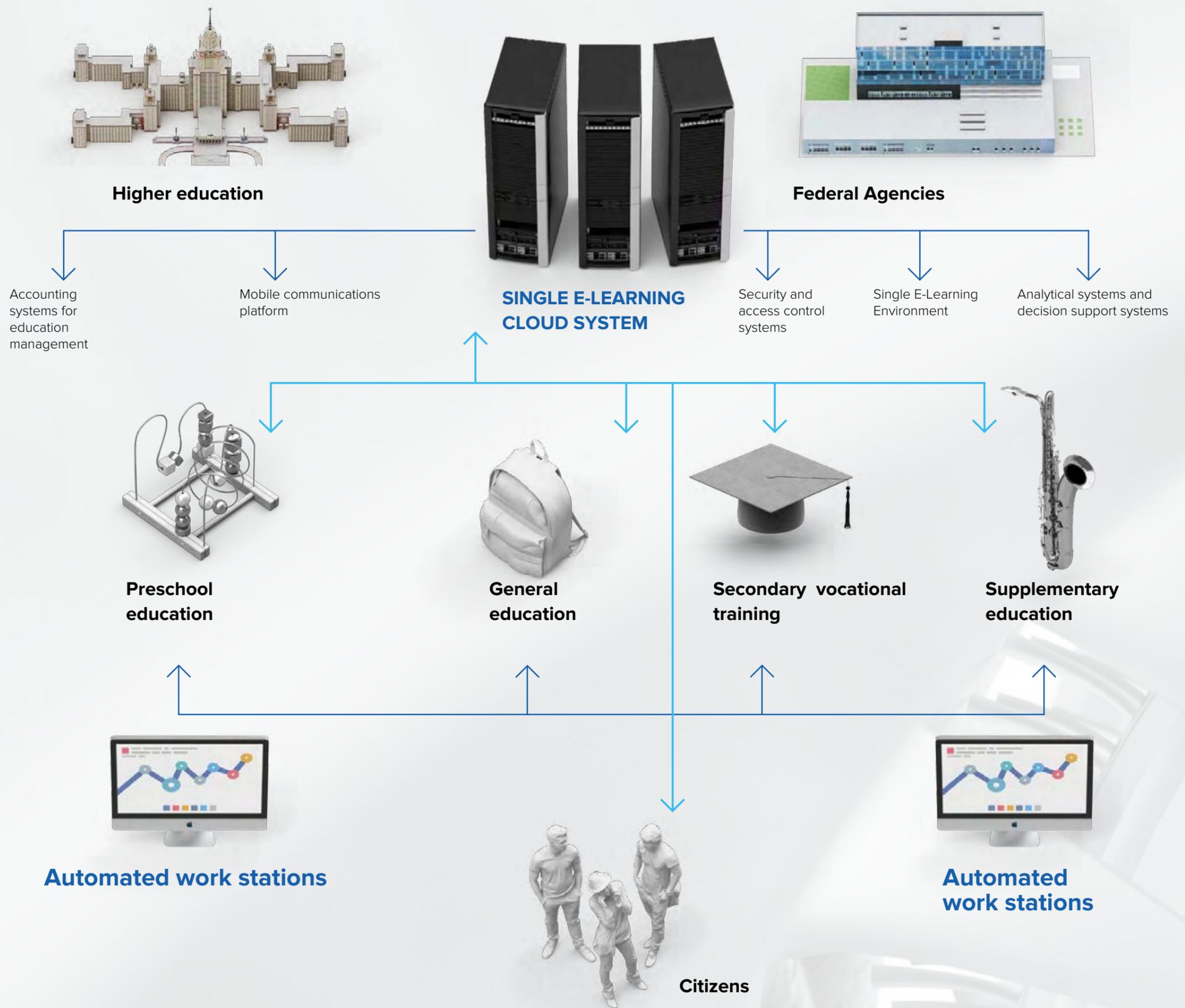
The integrated «E-Learning» project is a single environment for citizens and the government allowing to significantly increase the quality and accessibility of education for the entire population.

The project is aimed at the creation in educational organizations of a single advanced technology environment, including functional services for introduction and gradual shift to e-learning, creation and application of individual education paths based on the «Big Data» in the education sphere, remote education technologies, resources to ensure the management processes by areas of activities in the sphere of security, control, supervision and education quality assessment.

«E-Learning» allows to perform the end-to-end integration of all resources of the sector and increase the efficiency of management and create tools for making objective and justified decisions.

«E-Learning» and the Single E-Learning Environment based on the hardware-software system developed by the Rostec State Corporation allow to ensure equal accessibility of education for children irrespective of the social status and health condition, introduce the breakthrough technologies in the education system of both separate cities and the entire federal subject of the Russian Federation, ensure creation of conditions for deployment of innovative education methodologies and aggregation of the best practices.

In 2016, under the Instruction of the President of the Russian Federation No. Pr-2481 dated 03 May 2015, the administration of the Director for Special Commissions of the Rostec State Corporation has developed the concept for the Single E-Learning Environment (SELE) which was presented to the Ministry of Education of the Russian Federation. Besides, the Corporation has successfully implemented a pilot project for creation of SELE in the girls' boarding school of the Ministry of Defence of the Russian Federation. The pilot project's results were presented to the Ministry of Education and Science of the Russian Federation O.Y. Vasilieva.



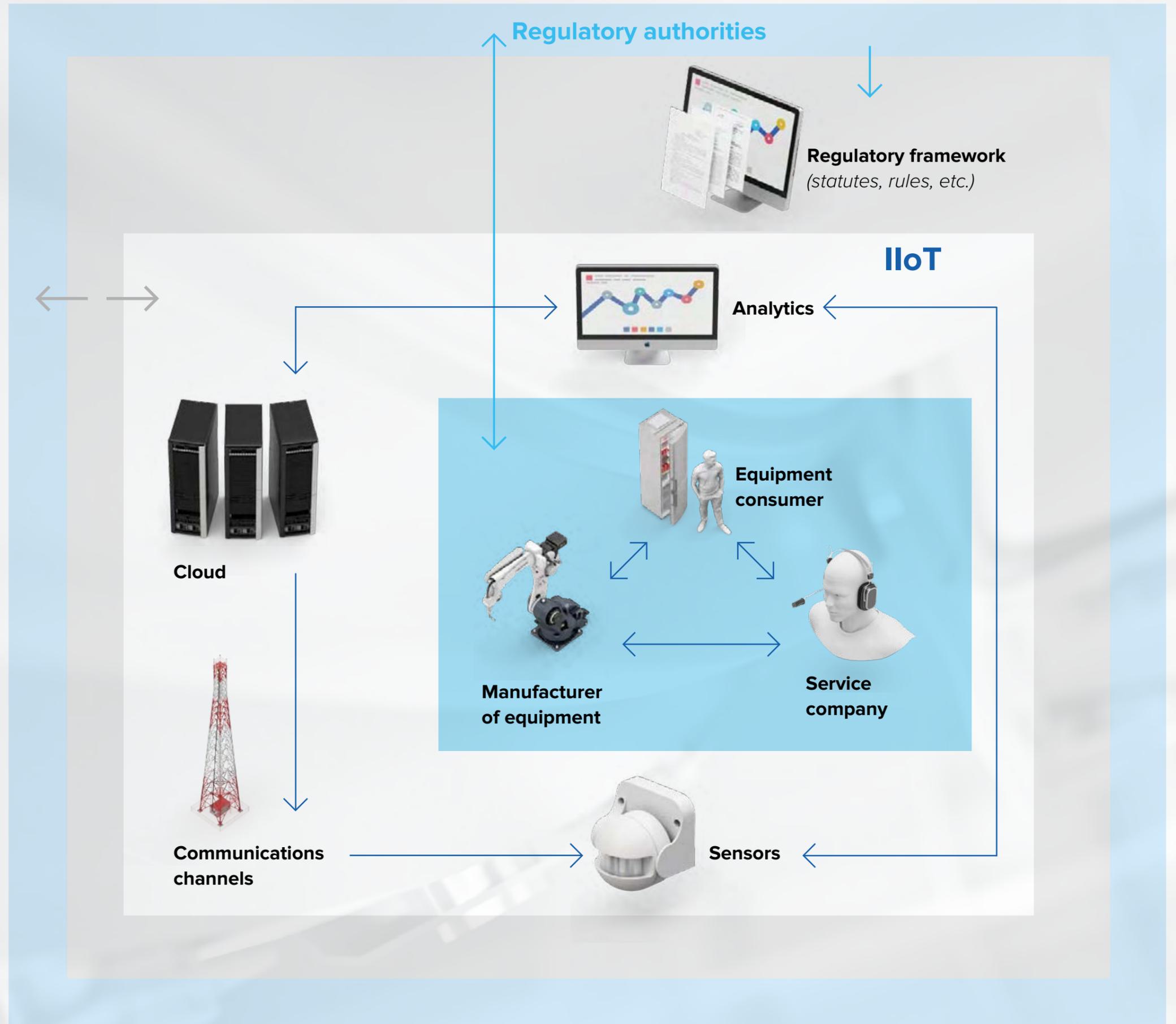
Industrial Internet

The Industrial Internet created and implemented as a separate full-fledged system allows to combine into a single structure not only isolated computer networks, but also the industrial facilities integrated into the Network with the use of special sensors of other technologies.

Such an eco-system allows to quickly obtain and process large volumes of data and remotely control and automate processes, and protect the facilities inside the networks to the maximum extent possible. Implementation and development of the Industrial Internet inside a company allows it to increase the process efficiency by many times, including by means of production facilities optimization.

The solutions offered by the Rostec State Corporation allow to optimize the processes on three levels: directly at the production facility, between enterprises, and on the level of regulating bodies.

In 2016, the products manufacturing and solutions generation experience of the Corporation's organizations has been analysed and consolidated, and the strategy for development of the Industrial Internet project has been elaborated. In particular, experts of LLC NCI offered a series of potentially interesting solutions to companies of the electric power and machine engineering sectors. The negotiations regarding the introduction of pilot projects are being held with the interested market players.



Communications channels «Smart City»

«Smart City» is an eco-system project aimed at increasing the efficiency of use of the city and regional infrastructure in order to change the quality of life and business operation.

Management of the city environment with the use of the «Smart City» system allows to automate and increase the efficiency of the business and administrative sector, ensure energy efficiency of the region, increase the environment protection of the territory, create a smart transport infrastructure that will guarantee maximum comfort for the city people and guests.

The modern technologies being developed by the Rostec State Corporation as part of the «Smart City» project allow to automatically optimize the use of the city infrastructure by the citizens and the businesses based on the feedback.

In the existing city environment the local authorities determine the set and quality of services in their own discretion and exclude any possibility to interact and quickly adapt to the needs of the citizens and the business environment.

The solutions being developed by the Rostec State Corporation include the introduction of technical devices and IT systems capable of collecting, processing and adapting the city infrastructure operation results based on the analysis of the collected data and transfer the information to local authorities regarding the need to make management decisions in order to increase the quality of life and business operation.

Thus, in 2016 a smart LED lighting system was deployed in Ulan-Ude. The Corporation has implemented an integrated programme for replacement of obsolete lighting lines by the modern energy saving adaptive LED-based equipment. The lighting equipment is remotely controlled which allows online monitoring of the city's lighting system functioning. This is specifically important on road sections with intensive traffic and on pedestrian crossings near children's institutions after dark.

Apart from introduction of individual elements of the «Smart City» project, in 2016 the Corporation started the creation of integrated typical approaches to the deployment of Russian «Smart Cities» by consolidating the experience of companies of the Rostec State Corporation in the sphere of separate subsystems and elements.



IT Infrastructure for the 2018 FIFA World Cup and the 2017 FIFA Confederations Cup

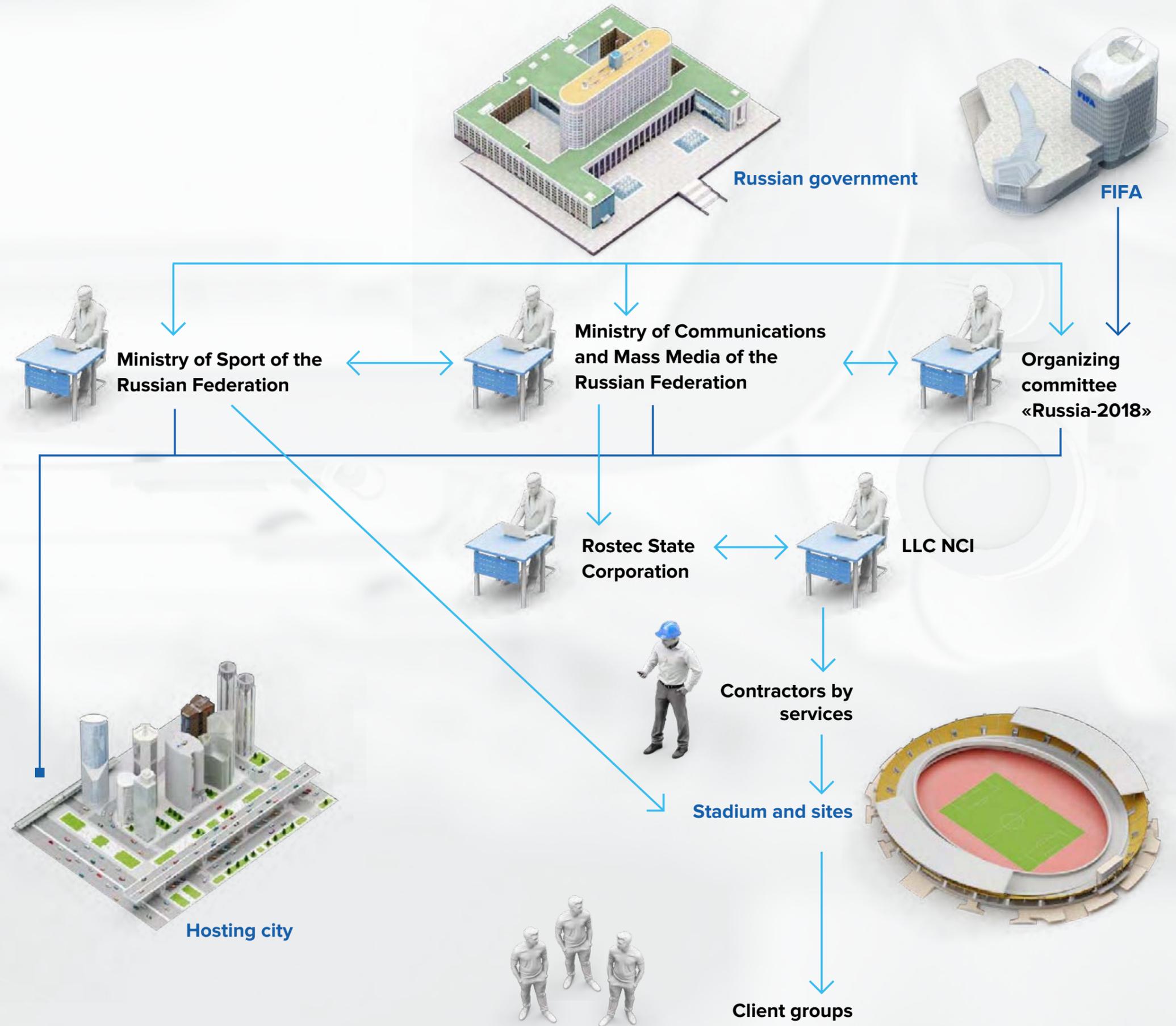
The project implies the creation of a single information and telecommunications infrastructure for provision of telecommunications services at the 2018 World Cup sites in all 11 hosting cities and other cities with training arenas. The list of services will include data transfer networks, telephony, satellite communications, professional radio TETRA communications, as well as services for TV broadcasters (delivery of television signals and remote conversion). Accessibility of services critical to the events is expected to be at the highest level – up to 99.99%.

Pursuant to the Instruction of the Chairman of the Russian Government the Rostec State Corporation was appointed as the only contractor for provision of services and performance of works and functioning of communication means and information technologies for purposes of measures aimed at the preparation and holding of the 2018 FIFA World Cup and the 2017 Confederations Cup.

The work under contract is performed by LLC NCI.

The project implementation will result in the creation of communications and information systems, and their functioning will be ensured in compliance with the Concept of IT Communications Means Development prepared by the Ministry of Communications and Mass Media of the Russian Federation. Large integrated project that include the creation of strategically important integrated infrastructure facilities must be implemented using the resources of the contractor who must be accountable for the consistent final result. The goal is timely fulfilment of obligations for creation of the IT infrastructure for the 2018 FIFA World Cup at the highest level according to the FIFA requirements and the best world standards.

In 2016 the system design of the infrastructure has been completed and handed over to the customer, tenders have been held for the primary services for its creation, stages 1 and 2 of the state contract have been implements. On 26 November the qualifying draw has been successfully held in Kazan with a broadcast to 200 countries of the world.



3. Corporate governance

JSC Concern Kalashnikov:

• Izhevsk • Rybinsk • Mytishi

JSC RT-Chemcomposite:

• Yekaterinburg • Moscow • Obninsk • Saint Petersburg • Tver

Kirov

Solikamsk

Serov

Verkhnyaya Tura

Nizhny Tagil

Yoshkar-Ola

Cheboksary

Izhevsk

Zelenodolsk

Kazan

Yekaterinburg

Aramil

Almetyevsk

Kasli

Ulyanovsk

Ufa

Chelyabinsk

Togliatti

Kopeysk

Zhigulevsk

Samara



3.1 Further Development of the Corporate Governance System



« THE CORPORATION'S CORPORATE GOVERNANCE SYSTEM IS CONTINUOUSLY BEING IMPROVED »

A.S. LALETINA

INTERVIEW WITH THE DIRECTOR FOR LEGAL SUPPORT AND CORPORATE GOVERNANCE OF THE ROSTEC STATE CORPORATION

>700

organizations included in the management structure of the Corporation

– WHAT CHANGES HAVE BEEN IMPLEMENTED IN THE CORPORATE GOVERNANCE SYSTEM IN 2016?

– In 2016, the Corporation continued the work on improving the corporate assets management system, developed and approved the respective statutes. A differentiated approach to corporate management of holding companies has also been introduced – all holdings were divided into the strategic, investment and operational model of corporate governance.

In accordance with the development vector defined in 2014, in 2016 the work has been continued on expanding the authorities and increasing the responsibility of heads of parent organizations of holding companies for the operational and administrative activities of each holding's organizations, strengthening the role of the boards of directors in the Corporation's organizations management. In particular, the reviewed limits of the independently implemented transactions allowed to extend the competence of holdings' directors in 2016.

At the same time, the issues of corporate governance of top priority have been and are directive, and the decisions on such issues are made directly by the Corporation's Headquarters. They include, among others, the issues of reorganization and liquidation of companies, change of the authorized capital, election of CEO, payment of dividends, control over the implementation of the state defence order.

Apart from the changes aimed at the improvement of corporate governance, the Corporation's assets structure is being continuously adjusted. The previous year was not an exception – the holding companies' management structures have been reviewed, new joint ventures have been established, and several existing production facilities have been optimized.

Besides, the transfer of shares in the key production assets to the Corporation as a property contribution to the Russian Federation is still in progress. Special attention is paid to their operational integration in the structure and the business processes of the Corporation. Thus, 100 joint-stock companies were transferred into the ownership of the Corporation, 32 shareholding interests were entered by the Corporation to the authorized capitals of holding companies.

It should be specifically noted that we continuously study the best national and foreign corporate governance practices, ensure conformance of the Corporation's statutes with the changes in the legislation, and increase the efficiency of corporate procedures and optimize the internal processes generally.

Thus, the corporate governance system of the Corporation is a continuously improved element. The balance between the systematic shareholding control and the trust to the management bodies of subsidiaries is the basis of the Corporation's assets management system.

– WHAT TRANSFORMATIONS IN THE CORPORATE GOVERNANCE SYSTEM ARE EXPECTED IN 2017?

– In order to achieve the goals of the Corporation's Development Strategy until 2025 and implement the decisions made in 2016 regarding the introduction of three business models for management of holdings, the work on bringing the corporate governance system into compliance with the new models and its adaptation to the strategic tasks will continue in 2017.

Correspondingly, both the structure of corporate governance and the depth of the shareholding cooperation of the Corporation with the holdings depending on the model they belong to will change in 2017. Besides, special attention is paid to the comfortable and effective integration of the assets transferred in 2016 into the existing standards and practices of the Corporation.

– WHAT IS THE ROLE OF YOUR UNIT IN THE IMPLEMENTATION OF THE INITIATIVES UNDER THE CORPORATION'S STRATEGY OF DEVELOPMENT UNTIL 2025?

– The corporate legal division continuously supports all business processes inside the Corporation, ensures mandatory legal expert review of projects and decisions.

Besides, in cooperation with the officials of the Corporation our unit implements a series of strategic initiatives. In particular, they include:

- institutionalization of the target structure of assets and introduction of an adapted model of corporate governance in compliance with the strategy of the Corporation's clusters;
- improvement of procedures and mechanisms of corporate management of the Corporation's assets and assets of holding companies and directly controlled organizations;
- building the intangible assets management system.

– SPEAKING OF INTANGIBLE ASSETS, HOW MANY DEVELOPMENTS OF THE CORPORATION'S ORGANIZATIONS ARE LEGALLY PROTECTED?

– As of the end of 2016, the Corporation's organizations obtained approximately 13,000 protection documents, including patents to inventions, utility models, industrial designs and certificates of official registration of computer software and databases.

In 2016, a series of the Corporation's holding companies became one of the first in the country to have shifted to the system organization of intellectual property legal protection aimed at achieving the required levels of protection and patent clearance for technologies as the tools for taking and preserving the primary markets for sale of products. JSC Russian Helicopters, JSC NPO High Precision Systems, JSC Schwabe and JSC «United Engine Corporation» were selected for the implementation of the pilot project.

In 2016, in the above named companies the patent strategies have been approved to be implemented until 2025.

In 2017, patent strategies are also planned by other holdings.

The Corporation's organizations continuously work on ensuring the legal protection of intellectual property

– WHAT WORK IS BEING CARRIED OUT FOR LEGAL PROTECTION OF INDIVIDUALIZATION MEANS, INCLUDING TRADEMARKS AND THE CORPORATION'S NAMES?

– This area of work is of great importance to us and is continuously controlled.

Trademarks of the Corporation have already been registered in 20 countries, and in 6 more countries the registration is pending.

A regular work is carried out for prevention of unauthorized use of the Rostec name by other organizations. In particular, at the initiative of the Corporation in 2016 the unauthorized use of the word «Rostec» as part of company names of 60 organizations has been prevented in Russia.

As regards the trademarks of the Corporation's organizations – as of the end of 2016 there were more than 500 trademarks registered, including on the territory of foreign states.

– WHAT ADVANTAGES DOES THE GLOBAL DIGITALIZATION GIVE IN IMPLEMENTING THE EFFECTIVE CORPORATE GOVERNANCE SYSTEM OF THE CORPORATION?

– The Corporation strives for the maximum automation of its business processes. In terms of the corporate legal work, Database of Assess of the Corporation has been launched in 2016 to ensure timely receipt of all the necessary information on the Corporation's organizations in online mode. This allows to quickly make informed decisions based on objective data.

In 2017 we plan to develop and introduce electronic personal profiles for the members of the board of directors that will be inter-related to the already-in-use Database of Assess of the Corporation, and further improve the functional capabilities of the Database

Considering the huge experience and the potential of the Corporation's organizations in various sectors of industry, the use of internal resources and the cooperation assume greater prominence. Thus, the Database of Assets of the Corporation was developed by one of the Corporation's organizations – the Novosibirsk Institute of Software Systems, and in terms of functional capabilities it outranks the existing equivalents by a number of parameters.

Another system actively used by the Corporation is the Database of Statutes of the Corporation. It includes the entire bulk of statutes approved by the Corporation since its establishment in 2007. Today, all parent organizations of holding companies and several directly controlled organizations are connected to that system.

– WHAT CHANGES IN THIS AREA ARE EXPECTED IN THE NEAREST FUTURE?

– It is obvious that the digitalization process within the Corporation and its organizations will only gain momentum. We continuously look forward to increasing the efficiency, minimizing the risks, and we actively use the opportunities and the advantages of the digital economy.

In 2017 we plan to develop and introduce electronic personal profiles for the members of the board of directors that will be inter-related to the already-in-use Database of Assess of the Corporation, and further improve the functional capabilities of the Database.

These changes will allow to reduce the costs on the search of the necessary information, preparation of reports, monitoring of events, and more effectively arrange the work of the board members considering the large number of the Corporation organizations and its geographic spread.

– HOW WOULD THE LAWYER PROFESSION CHANGE UNDER THE DIGITAL ECONOMY CONDITIONS IN YOUR OPINION?

– Today there exist various software for lawyers allowing to obtain and process data in online mode, provide quick access to the information.→ The Corporation actively uses the labour automation means, introduced typical samples of contractual documents which allows to reduce the load on the specialists of our division and focus on complex legal issues.→

In the future, digitalization will allow to reduce to minimum the technical work of a lawyer related to documents preparation, and at the same time will allow to place a maximum focus on solving complex legal issues and fully unlock one's own potential in the professional competence sphere.→

In my opinion, qualified lawyers should not be afraid of digitalization.→ The «lawyers will be unemployed» thesis is incorrect. Smart software products allowing to automate routine functions of lawyers is an inevitable trend that should be integrated to our profession to the maximum extent possible.→ Highly qualified lawyers with flexible thinking, field-specific education and diversified experience will always be in demand.→ At the same time, we all need to be prepared for the changes, think flexibly and be capable of adapting to the new conditions of work and the growing rates of activity. However, this relates not only to lawyers.

A differentiated approach to corporate management of holding companies has also been introduced in the Corporation – all holdings were divided into the strategic, investment and operational model of corporate governance



SOFTWARE FOR LAWYERS HAS BEEN DEVELOPED TO OBTAIN AND PROCESS DATA IN ONLINE MODE

THE CORPORATION ACTIVELY USES THE LABOUR AUTOMATION MEANS, INTRODUCED TYPICAL SAMPLES OF CONTRACTUAL DOCUMENTS WHICH ALLOWS TO REDUCE THE LOAD ON THE SPECIALISTS OF OUR DIVISION AND FOCUS ON COMPLEX LEGAL ISSUES

3.2 Corporate Reorganization Results

In 2016, the Rostec State Corporation continued the work on improving the operation of the Corporation that will allow to increase the work efficiency and introduce the best world practices of corporate governance.

The reorganization of the Corporation's structure resulted in the following key changes:

- development of shareholding control tools for controlled assets by strengthening the authorities of the industrial division and determination of tense budget KPIs;
- increase of transparency of the management system through the development of the industrial directors institute, creation of structural units for risk management and internal audit;
- risk-oriented approach to the management implying an effective distribution of shareholders' limited resources for solving the top priority problems.

As the Corporation is a socially responsible organization, the industrial safety function was formed within the Headquarters aimed not only on the prevention of injuries, but also on the alteration of the production culture within the Corporation's organizations. It is expected that this will result in the increase of the labour productivity and motivation of employees, as well as reduction of costs.

In 2016, the industrial directors who are assigned with the following key tasks continued their work:

- shaping up and development of industry-specific competences;
- increase of capitalization rate and value of assets;
- productivity of work and implementation of the budget, ensuring growth of the dividend flow;
- strategic marketing, development of markets and new areas for the Corporation's holdings;
- control over implementation of State Defence Orders and Federal Targeted Programmes.

Under the management of the industrial directors were approved the industrial clusters' strategies which will be further detailed in the level of holdings.

THE INDUSTRIAL SAFETY FUNCTION WAS FORMED WITHIN THE HEADQUARTERS

AIMED NOT ONLY ON THE PREVENTION OF INJURIES, BUT ALSO ON THE ALTERATION OF THE PRODUCTION CULTURE WITHIN THE CORPORATION'S ORGANIZATIONS

3.3 KPIs and Labour Compensation System

In 2016, the Corporation continued the work on improvement of the incentive system and balancing the key performance indicators (KPI). The Corporation is guided by the best market practices in the sphere of labour compensation and employees motivation and tries to correspond to such practices with due regard to the specifics of its operations.

One of the basic principles of the incentive system is the inter-relation between the level of remuneration and the results of work. The key performance indicators for purposes of payment of annual bonuses to the employees of the Corporation's headquarters and heads of the Corporation's organizations reflect the key goals, priorities and initiatives forming the basis of the Corporation's Strategy of Development until 2025.20252025

Following the analysis of the market practices in 2015 was introduced a new remuneration and incentive system for the Corporation's employees and CEOs of holding companies (integrated structures) of the Corporation. In the reporting year its improvement was continued. Special attention was paid to the productivity management culture through engagement of directors in the discussion of the key tasks, expected outcome and resources for their achievement. The productivity management tools became more sight after and proved to be efficient in increasing the level of interest, loyalty and motivation of all stakeholders.

The KPI structure developed in 2015 for the CEOs of parent organizations of holding companies (integrated structures) was maintained in 2016 as well:

1. «CEO Performance» group of indicators including the primary financial and economic performance indicators that are the most relevant for the Corporation and the holding: implementation of contracts under State Defence Orders and Federal Targeted Programmes, dividend flow to the Corporation, consolidated net profit margin, consolidated proceeds from sales of products, proceeds from sales of civil products, outcome of innovative activities, etc.
2. «Specific KPIs» group of indicators reflecting the performance of CEOs in solving the strategic problems and implementing the relevant projects of holdings in the short term.
3. «Corporation's CEO Assessment» group of indicators.

The KPI structure was improved in 2016 with regard to the directly controlled organisations' directors and heads of infrastructural subsidiaries. Project KPIs were included in their bonus cards along with the financial indicators considering the specifics and current, strategically valuable tasks and areas of their development.

The holdings became gained more independence with regard to the creation of an incentive system and regulating the salary level of directors of their subsidiaries as part of the methodology developed by the Corporation. The authorities regarding the management of remuneration for CEOs of subsidiaries were transferred from the Headquarters to the level of holdings.

The plans for 2017 include the modification of the system of incentives for the Headquarters employees and the development of an incentive system in the Headquarters and the Corporation's organizations.

The Rostec State Corporation is guided by the best market practices in the sphere of labour compensation and employees motivation and tries to correspond to such practices with due regard to the specifics of its operations



3.4 Internal Audit and Risk Management

As of today, the integrated development of the internal audit function is one of the top priorities related to the achievement of strategic goals of the Rostec State Corporation.

A centralized internal audit function is being implemented in the Corporation and its organizations under the management of the internal audit director who is reporting to the CEO. An audit plan for the year is prepared in conformance with the Corporation priorities.

In 2016, JSC KPMG has performed an analysis and assessment of the current activities of the Corporation's internal audit function and prepared practical recommendations for improvement of such activities.

An important event in the reporting year was the development and introduction by the internal audit function of the «hot line» information system aimed at timely identification and prevention of fraud, thefts and corruption within the Corporation and its organizations, which also allows the employees and third persons to send messages regarding the signs and facts of such unlawful acts. In total, the «hot line» received and processed 846 messages.

53 audits and 17 inspections were carried out in 2016 in the following areas:

- compliance with the financial discipline within the Corporation's organizations and adherence to the decisions of the management and officials of the Corporation's organizations;
- accuracy, completeness, objectiveness and timeliness of the accounting (financial) statements of the Corporation's organizations and adherence to the procedures for its preparation, as well as compliance with the requirements of the effective legislation by the Corporation's organizations;
- safety of property (assets) of the Corporation's organizations and analysis of efficiency of use thereof.

As a result of inspections more than 500 violations and deficiencies were revealed for which the respective recommendations regarding their elimination were given.

Risk Management System

The Rostec State Corporation is interested in timely identification of all risks related to its operations. This is the task of the Corporation's risk management system which is being developed today.

The Corporation applies the Risk Management System Policy of the Rostec State Corporation approved by the Board in 2015.

The work on development of the statutory and methodological framework for risk management.

As a result of such work, the Rules of Cooperation for Risk Management, the technique for identification, assessment and management of risk and the Key Risks Matrix have been approved under the Order of the Corporation.

The Rostec State Corporation's risk management system includes a series of procedures, methods and mechanisms used by the authorized bodies and employees for purposes of ensuring reasonable guarantees of achieving the Corporation's goals in the following areas:

- ensuring reasonable guarantees of achieving the Corporation's goals defined in the development strategy;
- efficient and productive use of resources;
- accuracy, completeness and timeliness of the accounting (financial) statements and management reports;
- prevention of unlawful acts of the Corporation's employees and third persons with regard to its assets;
- compliance with the applicable legislative acts and statutes.

Risk management process participants and their functions

Board	<ul style="list-style-type: none"> • approves the Risk Management System Policy; • approved the preferred risk of the Corporation.
CEO	<ul style="list-style-type: none"> • accountable for efficient risk management; • set the tasks for the first deputy (deputies) of the CEO, the executive director and the heads of structural unit of the Corporation and determines the ways for solving such tasks; • determines the development strategies and goals of the Corporation; • approves the risks register and the risks map of the Corporation; • approves the reports on risk management and implementation of the respective measures; • approves statutes and other documents of the Corporation related to the risk management being developed in addition to the Policy.
Structural units of the Corporation (risk owners)	<ul style="list-style-type: none"> • implement the Policy and ensure the respective monitoring of compliance with its provisions as part of the accountable structural unit; • timely identification and assessment of risks inherent in their business processes; • develop and shape up the mechanisms aimed at minimization of the respective risks that are reflected in the respective statutes of the Corporation; • monitor the inherent risks; • implement the measures aimed at risk management within their scope of competence; • determine the need for training of subordinate employees regarding the risk management matters.
Risk coordinators of structural units (risk owners)	<ul style="list-style-type: none"> • coordinate the risk identification process within the respective structural unit; • coordinate the risk assessment process within the respective structural unit; • consolidate the information on the risks of the respective structural unit; • prepare the data sheets and the register of risks of the respective structural unit; • send the data sheets and the register of risks to the CEO's administration.
CEO's administration	<ul style="list-style-type: none"> • generally coordinates the risk management processes; • develops and improves the risk management methodological documents; • participates in the arrangement of training for employees of the Corporation and its holding companies regarding the risk management; • ensures methodological and consultation support to the Corporation regarding the risk management; • analyses the risk portfolio of the Corporation and prepares suggestions regarding the response strategy and reallocation of resources for the management of the respective risks; • develops and prepares the consolidated reports on risks (register of risks, map of risks, etc.) for presentation to the Board for purposes of review; • makes decisions regarding the degree and depth of automation of the risk management system; • monitors the risk management process implementation by the Corporation structural units and holding companies, as well as the generally accepted accounting principles in terms of risks; • informs the Board on the efficiency of the risk management process, significant deviations from the prescribed processes of risk management.
Internal Audit Unit	<ul style="list-style-type: none"> • performs independent monitoring and assessment of the risk management system's performance.

Financial Risk Management

Under the modern conditions one of the main type risks for the Rostec State Corporation are financial risks whose management system has already been deployed in the Corporation.

The financial risk management system of the Corporation and its organization is being developed by the Single Corporate Treasury (SCT) of the Corporation.

A methodological and regulatory framework has been formed as part of the SCT formation for management of various types of financial risks: credit, foreign currency, interest, risks related to placement of idle funds of the Corporation.

Typical statutes have been developed to govern the functional systems for management of financial risks in the organizations of the Rostec State Corporation

The following work has been performed in 2016 for management of financial risks:

- typical statutes have been developed to govern the functional systems for management of financial risks in the organizations of the Rostec State Corporation. During the 2016 the Corporation's organizations introduce the regulatory framework and tools for management of financial risks;
- the tools are being implemented to ensure the control of the risks assumed by the Corporation when granting the loans and guarantees – both at the stage of decision-making and during the term of the respective agreement;
- the limits of funds being placed by the Corporation and its organization in credit institutions are being monitored;
- the tools have been developed and introduced for the management of credit risks related to possible default on obligations by the Corporation's and its organizations' suppliers of products and services. An institute of guarantor banks whose guarantees are used as a security for the contractual obligations of suppliers has been introduced.

CREDIT RISKS MANAGEMENT TOOLS HAVE BEEN DEVELOPED AND INTRODUCED

AN INSTITUTE OF GUARANTOR BANKS WHOSE GUARANTEES ARE USED AS A SECURITY FOR THE CONTRACTUAL OBLIGATIONS OF SUPPLIERS HAS BEEN INTRODUCED



4. Overview Of Operational Activities

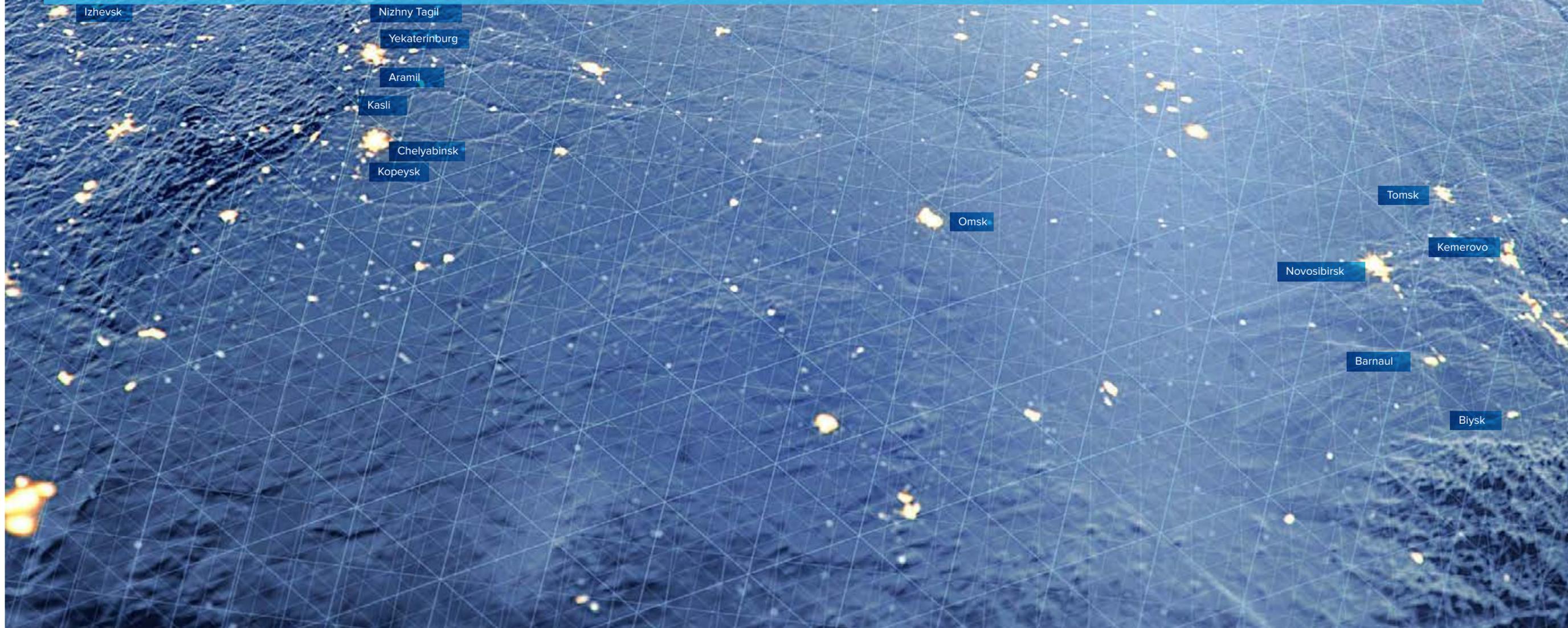
JSC Scientific-Production Concern Mechanical Engineering:

- Aleksin • Balashikha • Biysk • Verkhnyaya Tura • Dzerzhinsk • Zheleznodorozhny • Zelenodolsk
- Nizhny Lomov • Nizhny Tagil • Novosibirsk • Perm • Kalinovo • Saint Petersburg • Sergiev Posad

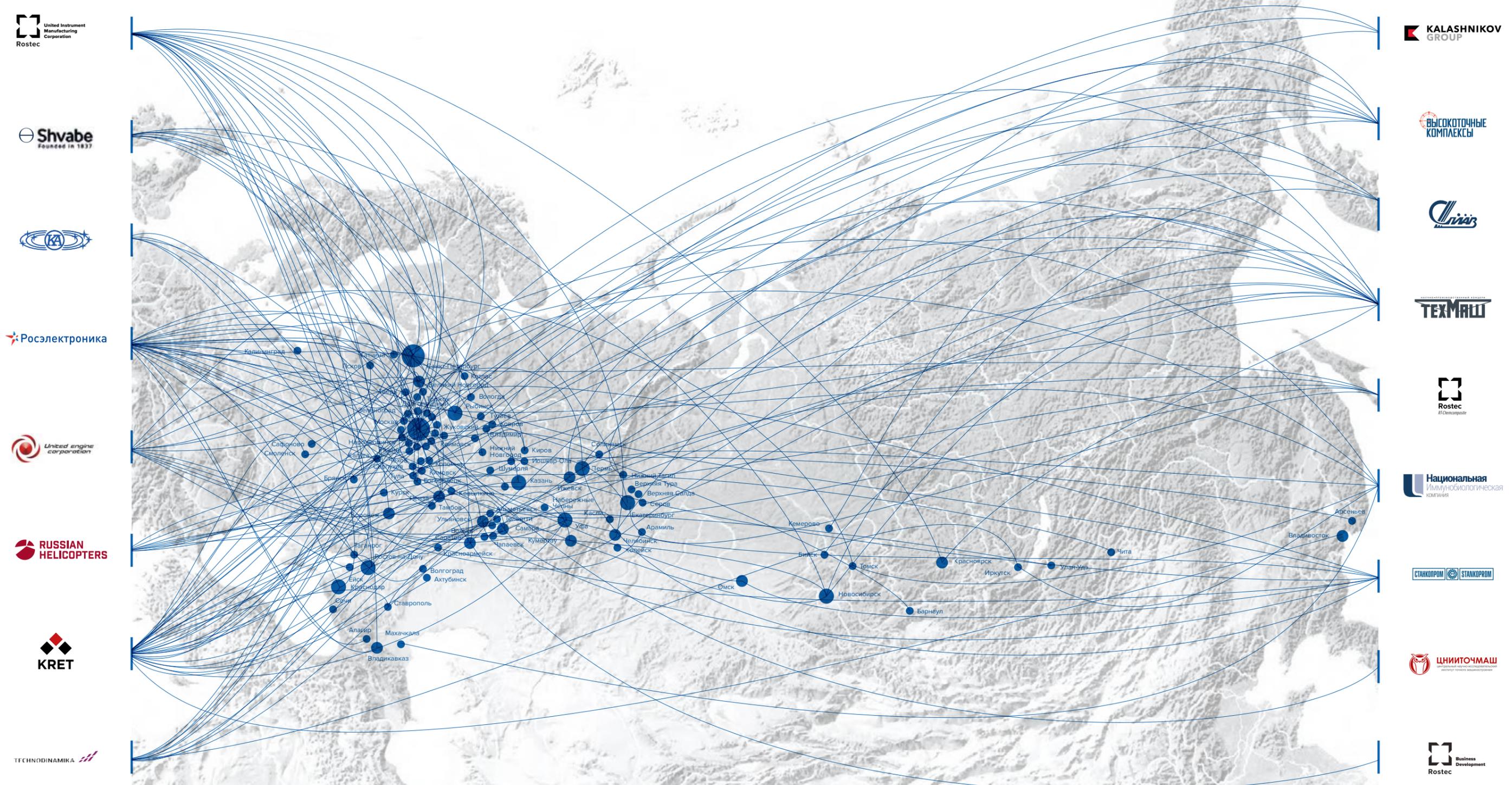
JSC NPO High Precision Systems:

- Volsk • Kovrov • Kolomna • Moscow • Saratov • Safonovo • Serpukhov • Tula • Chelyabinsk

- Kemerovo • Kirov • Kopeysk • Krasnozavodsk • Krasnoarmeysk • Krasnoyarsk • Moscow • Murom
- Serov • Smolensk • Solikamsk • Tula • Chapaevsk • Cheboksary • Chelyabinsk



4.1 Overview of activities of the key holding companies and groups of the Rostec State Corporation in 2016





Aviation Cluster

Staff number
in 2016 / employees /

192,206

Consolidated
proceeds / in 2016, billion rubles /

534.7

Consolidated net profit / in 2016, billion
rubles /

30.9

JSC Technodinamika



The holding specializes in the development, production and after-sales servicing of aircraft systems and units and civil and military helicopters, and outputs a series of products for the space, oil and gas, transport and other sectors

The holding specializes in the development, production and after-sales servicing of aircraft systems and units and civil and military helicopters, and outputs a series of products for the space, oil and gas, transport and other sectors. The holding's products are being installed on all Russian line aircraft, heavy aircraft and helicopters. In the transport aviation segment the share of the holding is 75%, in the operational air force segment – 63%, in the passenger aviation segment – 17%.

Staff number, employees

13,283

BOARD OF DIRECTORS



CEO
Igor Georgievich **Nasenkov**



CHAIRMAN OF THE BOARD OF DIRECTORS
Anatoly Eduardovich **Serdyukov**



Andrey Ivanovich **Boginsky**



Tatiana Mikhailovna **Gololobova**



Maxim Vladimirovich **Kuzyuk**



Ilna Valerievna **Migal**



Zhanna Nikolaevna **Skorina**



Ivan Alexandrovich **Skrylnik**

Consolidated proceeds

/ in 2015-2016, billion rubles /



Consolidated net profit (loss)

/ in 2015-2016, billion rubles /



OJSC Russian Helicopters



The world's leading manufacturer of strike, medium and super heavy helicopters

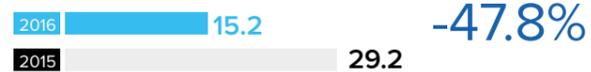
Consolidated proceeds

/ in 2015-2016, billion rubles /



Consolidated net profit

/ in 2015-2016, billion rubles /



The world's leading manufacturer of strike, medium and super heavy helicopters. Geography of JSC Russian Helicopters encompasses the entire country. The holding includes design engineering bureaus, helicopter factories, enterprises for production, servicing and repair of spare parts, aircraft repair plants, as well as service companies ensuring the after-sales servicing of equipment in Russia and abroad. In 2016, the proceeds from the after-sales service was almost 30% of the total proceeds of the holding.

Staff number, employees

43,495

BOARD OF DIRECTORS



CEO
Aleksandr Aleksandrovich **Mikheev**



CHAIRMAN OF THE BOARD OF DIRECTORS
Vladimir Vladimirovich **Artyakov**



Andrey Ivanovich **Boginsky**



Alla Sergeevna **Laletina**



Dmitry Yurievich **Lelikov**



Rustam Nurgalievich **Minnikhanov**



Aleksandr Aleksandrovich **Mikheev**



Anatoly Eduardovich **Serdyukov**



Sergey Viktorovich **Skvortsov**



Kirill Valerievich **Fyodorov**



JSC Concern Radio-Electronic Technologies (KRET)



The holding is a leading manufacturer of electronic warfare and the governmental detection devices, airborne instruments electronic equipment systems, as well as measuring instruments for various application spheres

The holding is a leading developer and manufacturer of electronic warfare devices (more than 60% of the market) and devices for the government detection (more than 90% of the market), airborne instruments and electronic equipment systems (more than 80% of the market), as well as measuring instruments.

A promising area of activities of the holding is the significant expansion of the range of civil products produced.

Staff number, employees

43,572

BOARD OF DIRECTORS



CEO
Nikolay Alexandrovich **Kolesov**



CHAIRMAN OF THE BOARD OF DIRECTORS
Alexey Vladislavovich **Aleshin**



Nikolay Alexandrovich **Kolesov**



Yury Nikolaevich **Koptev**



Alla Sergeevna **Laletina**



Anatoly Eduardovich **Serdyukov**



Sergey Vladimirovich **Khokhlov**



Yulia Dmitrievna **Tsvetkova**

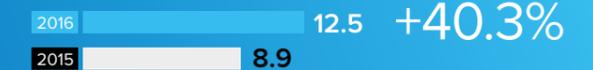
Consolidated proceeds

/ in 2015-2016, billion rubles /



Consolidated net profit

/ in 2015-2016, billion rubles /



JSC United Engine Corporation



JSC United Engine Corporation is the leader of the engine sector of Russia that combines more than 85% of the sector's assets

JSC United Engine Corporation is the leader of the engine sector of Russia that combines more than 85% of the sector's assets. The holding manufactures engines for the military and civil aviation, space programmes, units with various capacity for generation of electrical and heat energy, gas transmission and shipborne gas turbine units.



Staff number, employees

91,856

BOARD OF DIRECTORS



CEO
Alexander Viktorovich **Artyukhov**



CHAIRMAN OF THE BOARD OF DIRECTORS
Vladimir Vladimirovich **Artyakov**



Alexander Viktorovich **Artyukhov**



Andrey Ivanovich **Boginsky**



Dmitry Yurievich **Lelikov**



Ekaterina Sergeevna **Nikitina**



Anatoly Eduardovich **Serdyukov**



Kirill Valerievich **Fyodorov**

Consolidated proceeds

/ in 2015-2016, billion rubles /



Consolidated net profit (loss)

/ in 2015-2016, billion rubles /





Conventional Armaments, Ammunition and Special Chemistry Cluster

Staff number
in 2016 / employees /

104,948

Consolidated
proceeds / in 2016, billion rubles /

298.1

Consolidated
net profit / in 2016, billion rubles /

27.6

JSC NPO High Precision Systems



A holding of developers and manufacturers of precision weapons, spare parts and components

The holding develops, manufactures, modernizes and repairs the advanced armaments, military and special-purpose equipment. The products manufactured by the enterprises of the holding dominate on the domestic market of precision weapons, short-range and assault missile systems for the army, portable anti-aircraft and anti-tank missile systems. Percentage of military products of the total volume of the enterprise's products is about 98%.

Staff number, employees

28,278

BOARD OF DIRECTORS



CEO
Alexander Vladimirovich **Denisov**



CHAIRMAN OF THE BOARD OF DIRECTORS
Sergey Borisovich **Abramov**



Natalia Vladimirovna **Borisova**



Alexander Vladimirovich **Denisov**



Oleg Nikolaevich **Evtushenko**



Aleksandr Alekseevich **Kotenkov**



Alla Sergeevna **Laletina**



Igor Anatolyevich **Sheremet**

Consolidated proceeds

/ in 2015-2016, billion rubles /



Consolidated net profit

/ in 2015-2016, billion rubles /



JSC Scientific-Production Concern Mechanical Engineering (TechMash)



JSC Techmash unites the developers and manufacturers of artillery ammunition and special chemistry



The holding specialized in the manufacturing of ammunition for the strike groups of the army and the Aerospace Forces, naval armaments and various missile systems of various designation as part of the space missile, anti-aircraft and other armament systems of the nuclear deterrence forces and strike groups of various basing.

Staff number, employees

45,226

BOARD OF DIRECTORS



CEO
Sergey Nikolaevich **Rusakov**



CHAIRMAN OF THE BOARD OF DIRECTORS
Sergey Borisovich **Abramov**



Yury Nikolaevich **Koptev**



Alexander Veniaminovich **Kulikov**



Alexander Sergeevich **Ruban**



Sergey Nikolaevich **Rusakov**



Ivan Alexandrovich **Skrylnik**



Kirill Valerievich **Fyodorov**

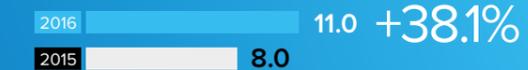
Consolidated proceeds

/ in 2015-2016, billion rubles /



Consolidated net profit

/ in 2015-2016, billion rubles /



SC RT-Chemcomposite

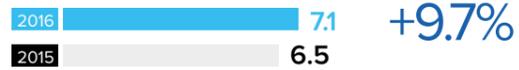


The holding is the leading manufacturer of polymer composites in Russia by output volumes

The holding is the Russian industrial leader by volumes of output of polymer composite products for the defence industry, transport, construction and energy. The primary markets for the chemical products are the construction industry, agriculture, industrial chemistry, general engineering, household chemistry and medicine.

Consolidated proceeds

/ in 2015-2016, billion rubles /



Staff number, employees

4,582

Consolidated net profit

/ in 2015-2016, billion rubles /



BOARD OF DIRECTORS



CEO
Kirill Yurievich **Shubsky**



CHAIRMAN OF THE BOARD OF DIRECTORS
Alexey Alexeevich **Kuzmitsky**



Sergey Borisovich **Abramov**



Alexander Veniaminovich **Kulikov**



Ilna Valerievna **Migal**



Andrey Alexandrovich **Smotrisky**



Larisa Vladimirovna **Chursova**



Kirill Yurievich **Shubsky**



JSC NPO Splav



The developer of “Grad”, “Uragan” and “Smerch” multiple-launch rocket systems

JSC NPO Splav is the developer of «Grad», «Uragan» and «Smerch» multiple-launch rocket systems. Manufacturer of shipboard rocket systems for shore surface attacks, heavy flame thrower systems, unguided and guided air-to-surface missiles, artillery ammunition armaments, armaments for soft-skin vehicles and tanks, etc.



BOARD OF DIRECTORS



CEO
Vladimir Nikolaevich **Lepin**



CHAIRMAN OF THE BOARD OF DIRECTORS
Sergey Anatolyevich **Kogogin**



Sergey Borisovich **Abramov**



Yury Sergeevich **Adviev**



Алексеев
Евгений Михайлович



Vladimir Nikolaevich **Lepin**



Alexander Sergeevich **Ruban**



Kirill Valerievich **Fyodorov**



АО «Концерн «Калашников»



The developer and manufacturer of automatic and sniper weapons, cannon-launched guided projectiles and civil products



The Concern is the largest manufacturer of automatic and sniper weapons, cannon-launched guided projectile and a wide range of precision weapons. Today, the Concern manufactures the fourth generation of Kalashnikov automatic rifles, and the tests of the fifth generation of AK-12 are being completed. The Concern is a flagship of the national shooting weapons sector with the share of about 95% of the shooting weapons market of Russia.

Staff number, employees

5,926

BOARD OF DIRECTORS



CEO
Aleksey Yurievich **Krivoruchko**



CHAIRMAN OF THE BOARD OF DIRECTORS
Sergey Borisovich **Abramov**



Maria Gennadievna **Akoeva**



Andrey Removich **Bokarev**



Aleksey Yurievich **Krivoruchko**



Alexander Veniaminovich **Kulikov**



Alla Sergeevna **Laletina**



Alexander Yurievich **Nazarov**



Kirill Valerievich **Fyodorov**



Nikolay Viktorovich **Tsekhomsky**

Consolidated proceeds

/ in 2015-2016, billion rubles /



Consolidated net profit (loss)

/ in 2015-2016, billion rubles /



SC TsNIITochMash (Central Scientific-Research Institute for Precision Machine Engineering)



The company develops and manufactures shooting weapons, ammunition, shooting simulators, battle suits for soldiers, armaments for the airborne forces and means of protection of weapons and military equipment against precision weapons

The company develops and manufactures shooting weapons, ammunition, shooting simulators, battle suits for soldiers, armaments for the airborne forces and means of protection of weapons and military equipment against precision weapons. One of the important results of 2016 was the successful implementation of the state contract with the Ministry of Defence of the Russian Federation for the development of second generation battle suits for soldiers.

BOARD OF DIRECTORS



CEO
Dmitry Yurievich **Semizorov**



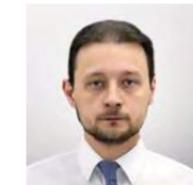
CHAIRMAN OF THE BOARD OF DIRECTORS
Sergey Borisovich **Abramov**



Vyacheslav Vladimirovich **Burdin**



Aleksandr Aleksandrovich **Zaburdyayev**



Alexander Sergeevich **Ruban**



Dmitry Yurievich **Semizorov**





Electronic Cluster

Staff number
in 2016 / employees /

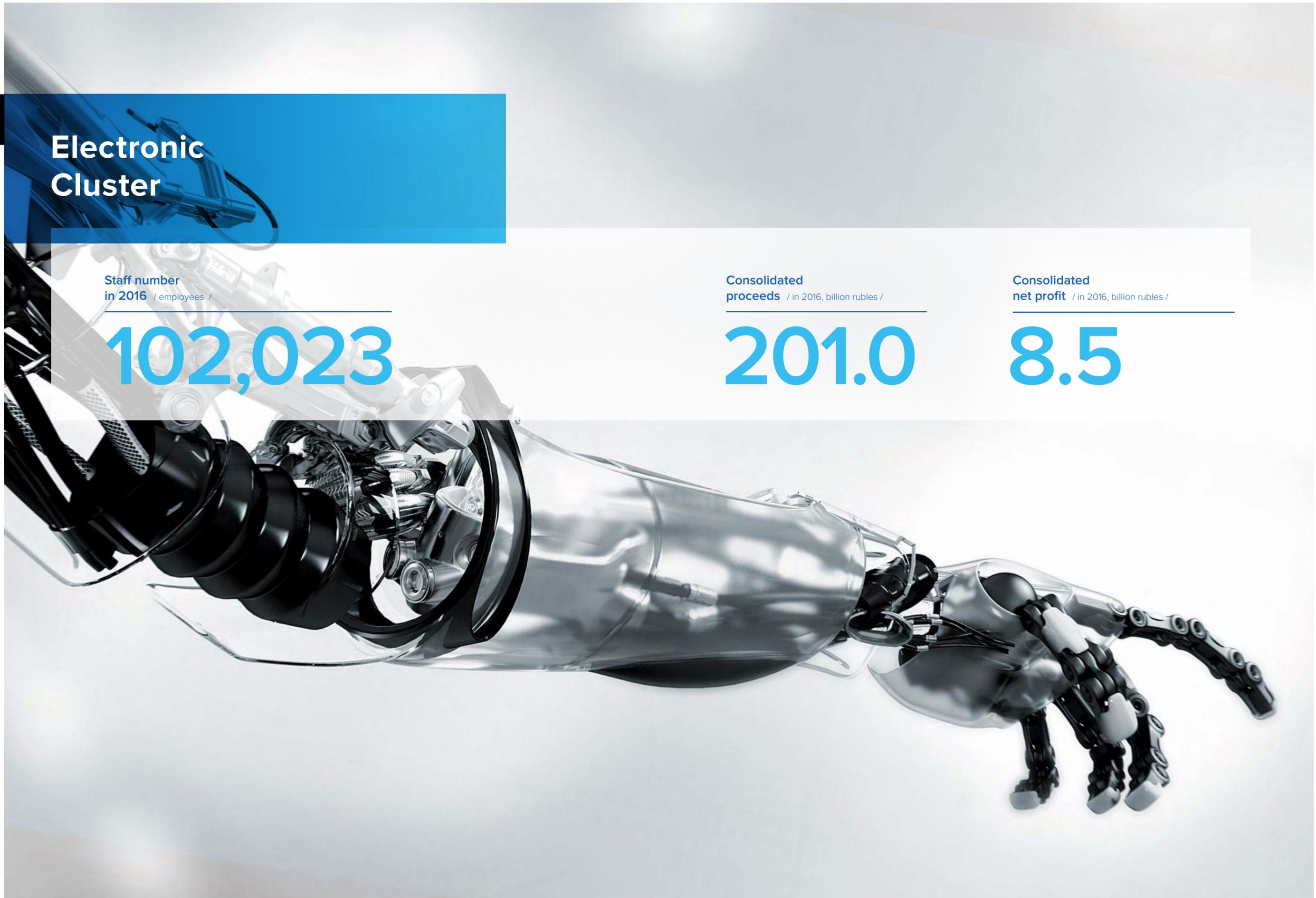
102,023

Consolidated
proceeds / in 2016, billion rubles /

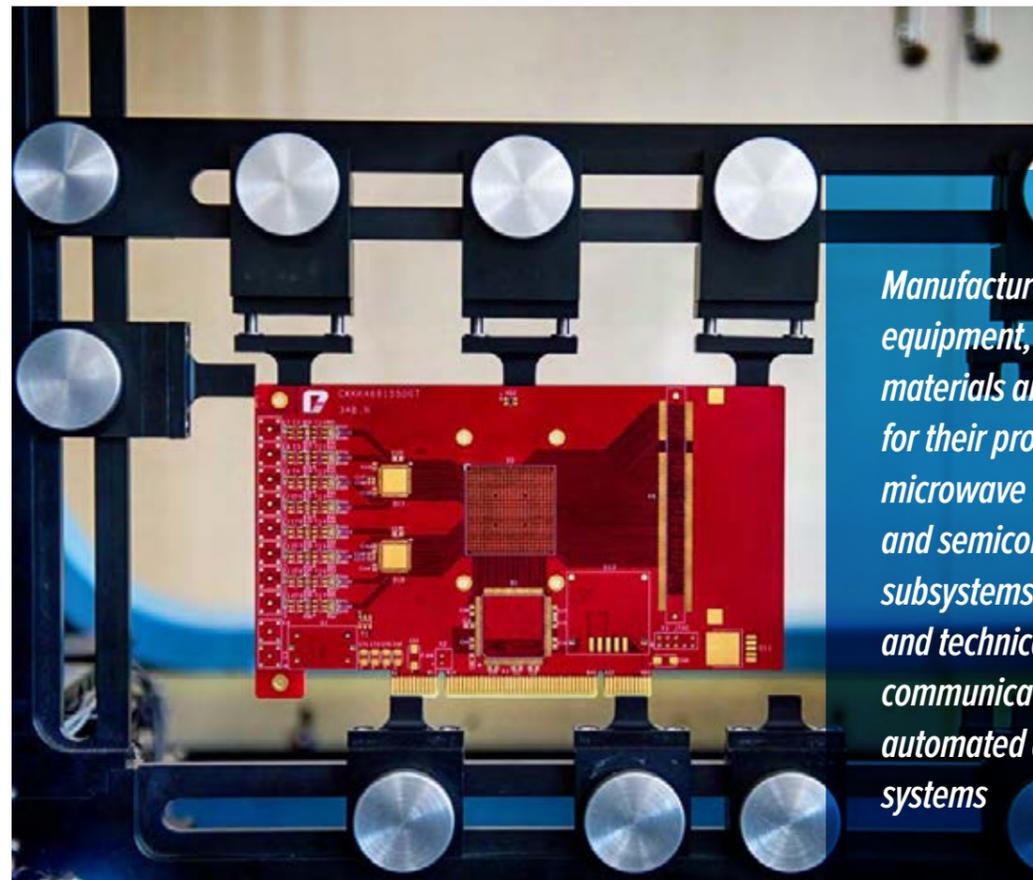
201.0

Consolidated
net profit / in 2016, billion rubles /

8.5



JSC Ruselectronics



Manufacturer of electronic equipment, electronic materials and equipment for their production, microwave technologies and semiconductor devices, subsystems, systems and technical means of communications, as well as automated and information systems

Consolidated proceeds

/ in 2015-2016, billion rubles /



Consolidated net profit

/ in 2015-2016, billion rubles /



JSC Ruselectronic combines enterprises of the electronic industry specializing in the development and manufacturing of the electronic components base, electronic equipment, electronic materials and the equipment for their production, as well as microwave technologies and semiconductor devices. One of the main events of 2016 in the development sphere was the creation of a prototype of the data transfer equipment entirely based on the domestically produced hardware components. The equipment is designed for production of portable radio stations with a protected communications channel.

Staff number, employees

35,682

BOARD OF DIRECTORS



CEO
Igor Ilyich **Kozlov**



CHAIRMAN OF THE BOARD OF DIRECTORS
Sergey Alexandrovich **Kulikov**



Alexey Anatolyevich **Belinsky**



Igor Ilyich **Kozlov**



Kirill Valerievich **Fyodorov**



Sergey Vladimirovich **Khokhlov**



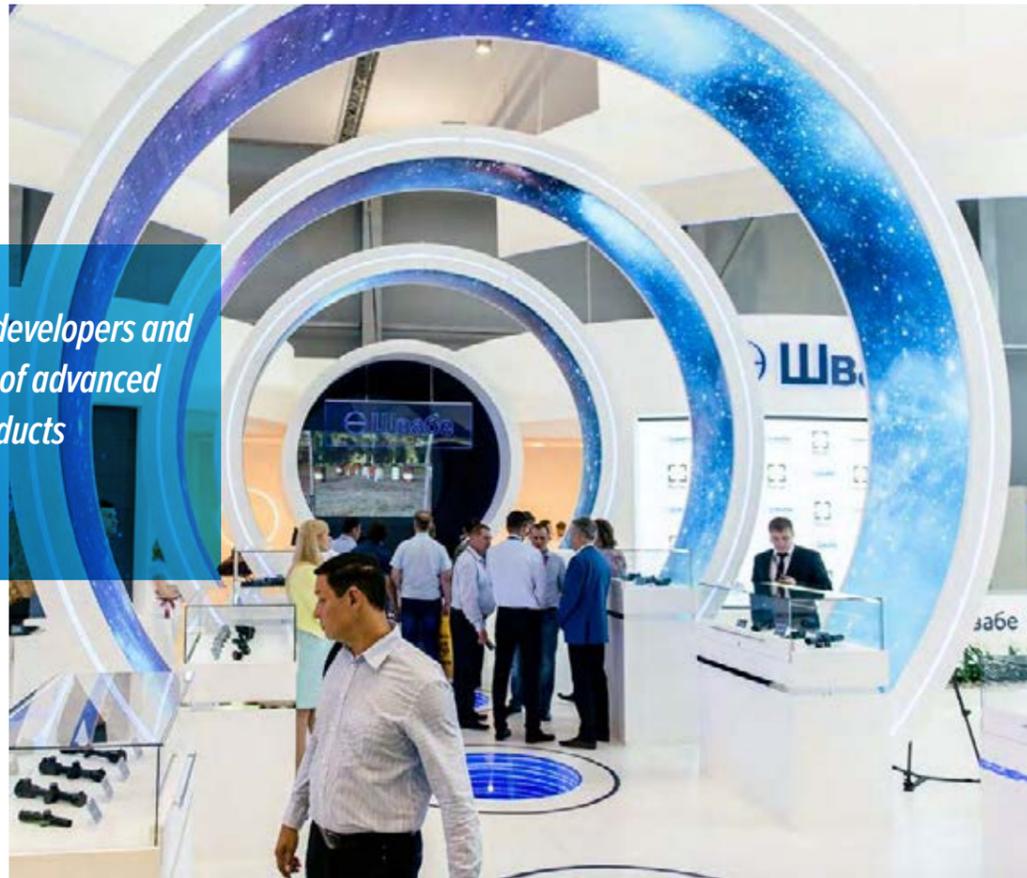
Alexander Sergeevich **Ruban**



Anna Nikolaevna **Sharipova**



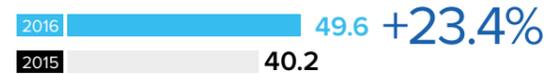
JSC Schwabe



The holding of developers and manufacturers of advanced technology products

Consolidated proceeds

/ in 2015-2016, billion rubles /



The holding of developers and manufacturers of advanced technology products. The holding combines several dozens of organizations, including 19 enterprises forming the core of the optical sector of the industry. Today, the portfolio of intellectual property of the holding exceeds 1,800 items. The product portfolio exceeds 6,500 items. The holding's products substitute import and confirm the high scientific and technical potential in 95 countries of the world.

Consolidated net profit

/ in 2015-2016, billion rubles /



Staff number, employees

18,468

BOARD OF DIRECTORS



CEO
Aleksey Pavlovich **Patrikeev**



CHAIRMAN OF THE BOARD OF DIRECTORS
Ilya Iosifovich **Klebanov**



Igor Ilyich **Kozlov**



Sergey Alexandrovich **Kulikov**



Aleksey Pavlovich **Patrikeev**



Alexander Sergeevich **Ruban**



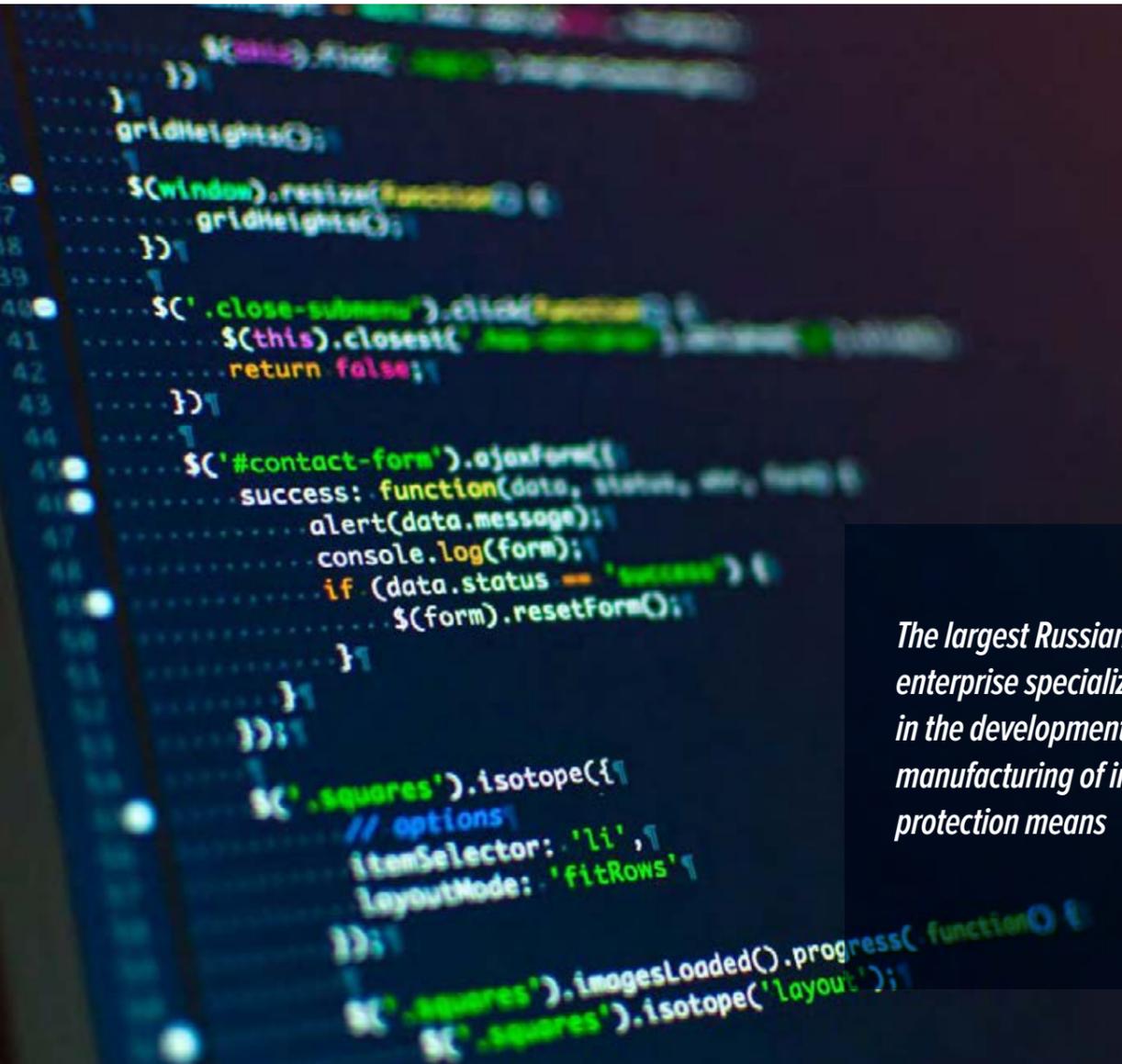
Yulia Dmitrievna **Tsvetkova**



Anna Nikolaevna **Sharipova**



JSC Concern Automation



The largest Russian enterprise specializing in the development and manufacturing of information protection means

Staff number, employees

8,988

The largest Russian enterprise specializing in information protection, development and manufacturing of technical devices and systems of secure communications, protected information and telecommunications systems, as well as special-purpose automated control systems.

BOARD OF DIRECTORS



CEO
Sergey Anatolyevich **Bukashkin**



CHAIRMAN OF THE BOARD OF DIRECTORS
Sergey Alexandrovich **Kulikov**



Sergey Anatolyevich **Bukashkin**



Nikolay Anatolyevich **Volobuyev**



Mikhail Ivanovich **Kritenko**



Andrey Alexandrovich **Smotrisky**



Sergey Vladimirovich **Khokhlov**



Alexander Vasilievich **Tsarenko**

Consolidated proceeds

/ in 2015-2016, billion rubles /

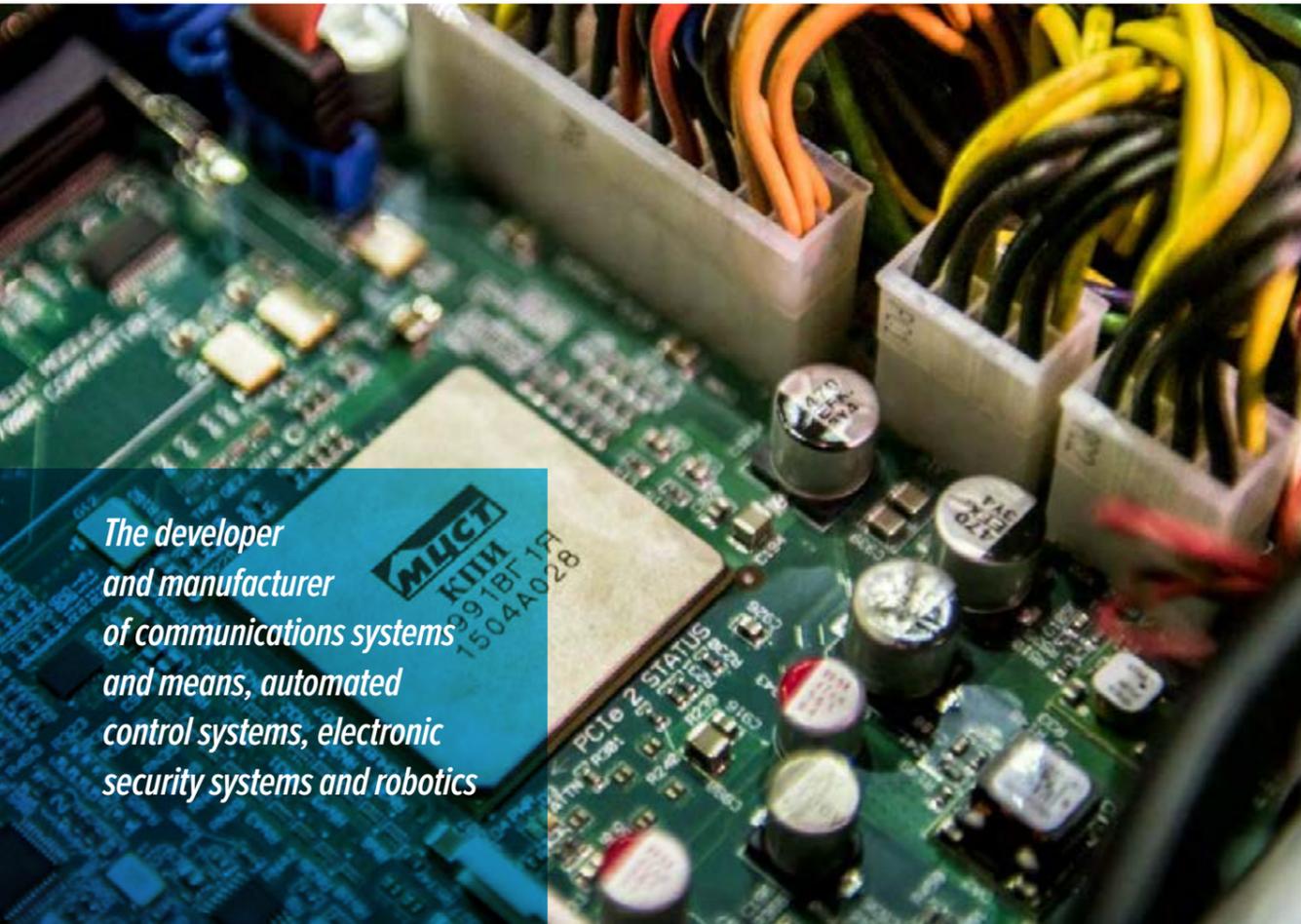


Consolidated net profit

/ in 2015-2016, billion rubles /



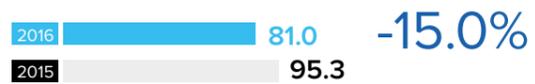
JSC United Instrument Manufacturing Corporation



The developer and manufacturer of communications systems and means, automated control systems, electronic security systems and robotics

Consolidated proceeds

/ in 2015-2016, billion rubles /



Consolidated net profit

/ in 2015-2016, billion rubles /



The developer and manufacturer of communications systems and means, automated control systems, electronic warfare devices, robotics systems, telecommunications and computing equipment. In 2016, the company ranked 48th in the Top-100 largest armaments manufacturers*.

Staff number, employees

38,720

* SIPRI, Stockholm International Peace Research Institute

BOARD OF DIRECTORS



CEO
Alexander Sergeevich **Yakunin**



CHAIRMAN OF THE BOARD OF DIRECTORS
Sergey Alexandrovich **Kulikov**



Andrey Ivanovich **Boginsky**



Mikhail Ivanovich **Kritenko**



Alexander Sergeevich **Ruban**



Kirill Valerievich **Fyodorov**



Grigory Iosifovich **Elkin**



Alexander Sergeevich **Yakunin**

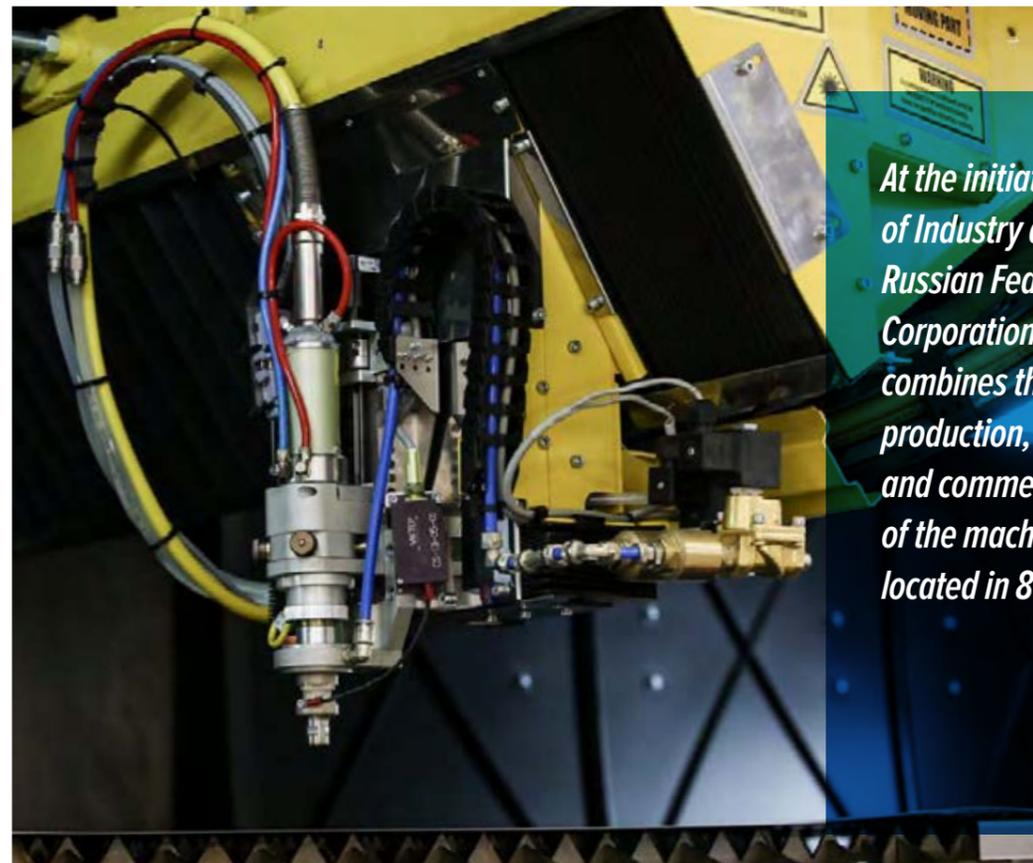




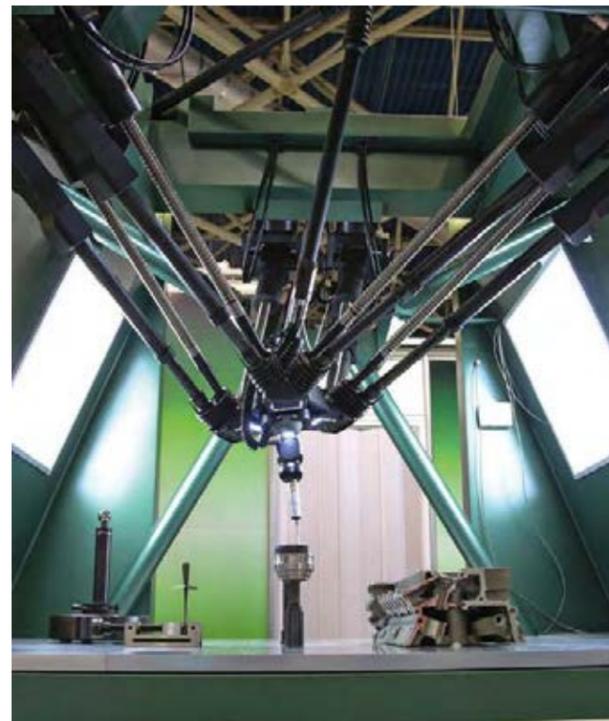
Holdings Outside Clusters



JSC Stankoprom



At the initiative of the Ministry of Industry and Trade of the Russian Federation and the Corporation, JSC Stankoprom combines the state-owned production, scientific, tool-making and commercial organizations of the machine-tool industry located in 8 regions of Russia



The holding combines and upgrades the machine-tool industry of Russia with the use of the best global practices for the development of the Russian machine-tool sector. One of the key tasks of the holding is the high quality alteration of approaches towards the technical re-equipment of Russian enterprises: from local replacement of equipment to integrated technology refurbishing.

Staff number, employees

3,582

BOARD OF DIRECTORS



CEO
Dmitry Evgenievich **Kosov**



CHAIRMAN OF THE BOARD OF DIRECTORS
Vasily Anatolyevich **Akimov**



Roman Valentinovich **Deniskin**



Dmitry Evgenievich **Kosov**



Ivan Alexandrovich **Skrylnik**



Andrey Alexandrovich **Smotrisky**



Sergey Nikolaevich **Chicherin**



Anna Nikolaevna **Sharipova**

Consolidated proceeds

/ in 2015-2016, billion rubles /



Consolidated net profit (loss)

/ in 2015-2016, billion rubles /



JSC National Immunobiological Company

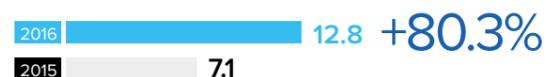


The holding develops and manufactures major pharmaceuticals and medical devices

The pharmaceutical holding for the development and manufacturing of immunobiological drugs. The holding's strategic task is achievement of Russian independence from the import of major pharmaceuticals and ensuring sustainable growth and upgrade of the national pharmaceutical sector.

Consolidated proceeds

/ in 2015-2016, billion rubles /



Consolidated net profit (loss)

/ in 2015-2016, billion rubles /



Staff number, employees

5,741

BOARD OF DIRECTORS



CEO
Maryam Yunusovna **Khubieva**



CHAIRMAN OF THE BOARD OF DIRECTORS
Vitaly Lvovich **Maschitsky**



Yulia Antonovna **Voronova**



Oleg Nikolaevich **Evtushenko**



Alexander Yurievich **Nazarov**



Zhanna Nikolaevna **Skorina**



Maryam Yunusovna **Khubieva**



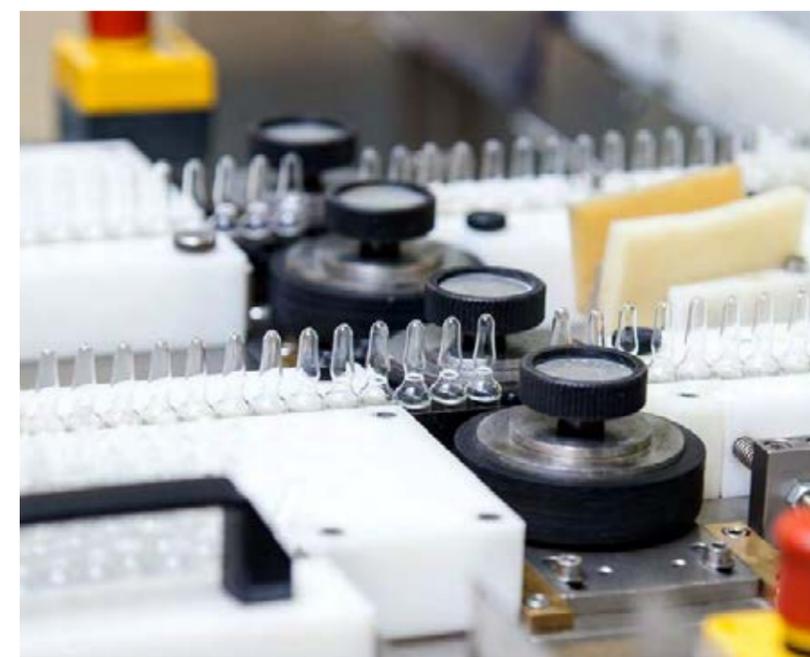
Yulia Dmitrievna **Tsvetkova**



Nikolay Viktorovich **Yurgel**



Tatiana Vladimirovna **Yakovleva**



ООО «РТ-Развитие бизнеса»



BOARD OF DIRECTORS



CEO
Alexander Nikolaevich **Nazarov**



CHAIRMAN OF THE BOARD OF DIRECTORS
Dmitry Yurievich **Lelikov**



Alla Sergeevna **Laletina**

Consolidated proceeds

/ in 2016, billion rubles /



Consolidated net profit

/ in 2016, billion rubles /



Ekaterina Viktorovna **Lapshina**



Kirill Valerievich **Fyodorov**



Alexander Nikolaevich **Nazarov**

LLC Rostec-Business Development professionally manages the assets and sells financial and industrial projects. The structure of LLC Rostec-Business Development is based on the best global practices for the corporate management of investment projects. As part of the strategy implementation, in the next few years the company expects to shift to the direct investments fund model of operation.

Staff number, employees

628



4.2 Review of activities of the key directly controlled organizations of the Rostec State Corporation in 2016

JSC Rosoboronexport



CEO
Anatoly Petrovich **Isaykin**



The company is a state intermediary for the export and import of the entire range of finished products, technologies and services of military products and dual-use products. JSC Rosoboronexport offers the foreign customers the armaments and military equipment for the army, airborne and maritime forces, air defence weapons, special-purpose assets, as well as spare parts, materials, tools, supplementary and training equipment. The share of JSC Rosoboronexport in the export of the Russian military products is more than 85%.

JSC TEC Russia

CEO

Vladimir Yurievich **Vlasov**



The exhibition complex allows to organize and hold demonstrations of armaments and military equipment, as well as civil products. With the support from JSC TEC Russia, various events are regularly held on the territory of JSC Gromov Flight Research Institute such as the Aviation and Space Salon MAKS, the Engineering Technologies International Forum and other exhibitions of the national and international scale, as well as permanent exhibitions of the ground forces' armaments, transport engineering products and products of high-technology sectors of the Russian industry.

JSC Kaliningrad Amber Factory

CEO

Mikhail Ivanovich **Zatsepin**



JSC Kaliningrad Amber Factory is the only Russian enterprise extracting amber on a commercial scale. The extraction and production sites are located near the Yantary settlement where about 90% of the world's reserves of amber, the age of which is approximately 50 million years, are concentrated. JSC Kaliningrad Amber Factory is undergoing a large-scale intellectual and technical re-equipment with the purpose of shifting from the extraction and sales of raw materials to the extraction, processing and sales of finished products.

PJSC KAMAZ

CEO

Sergey Anatolyevich **Kogogin**



The largest Russian manufacturer of trucks. The company includes more than 150 organizations located in Russia, CIS and non-CIS countries. The single production complex of the PJSC KAMAZ group encompasses the entire technology cycle of trucks manufacturing from the development, manufacturing, assembly of motor vehicles and components to the sales of finished products and service support. The company's share on the Russian heavy trucks market is 56%.

JSC VO Tyazhpromexport

CEO

Grigory Yakovlevich **Wolkenstein**



The organization provides support to foreign countries in the design, construction, reconstruction and operation of iron works and non-ferrous smelters, mining and coal companies, engineering works both on the terms of technical cooperation and on a turnkey basis. It cooperates with more than 30 countries of Europe, Asia, Africa and Latin America.

JSC Central Research Institute Electronica

CEO

Alyona Vladimirovna **Fomina**

The institute is an information analysis centre of the national electronic industry that coordinates the activities of the industry's enterprises in the sphere of economy, scientific and technical policy and international cooperation. JSC Central Research Institute Electronica provides information support and consultations to the Corporation, the Ministry of Industry and Trade of the Russian Federation and other agencies. One of the most important tasks of the institute is the elaboration of offers for integration of the national electronic sector in the global economy and determination of the paths of further development of competitive electronic devices.

JSC Izhevsk Mechanical Plant

Sole Executive Body

JSC Concern Kalashnikov

The largest Russian diversified enterprise utilizing the advanced technologies of engineering, metallurgy, instrument engineering, micro-electronics that produces civil and duty weapons, electrical tools, packaging equipment, oil and gas equipment, medical equipment, precision steel casting. The enterprise's products are being sold in more than 70 countries of the world, including countries with a highly developed weapons industry.

LLC RT-Energy

CEO

Dmitry Igorevich **Gottlieb**

The company established energy companies based on the energy assets of the Corporation's organizations and manages their value. The main objective of LLC RT Energy is the reduction of the share of costs of the Corporation's enterprises on the energy resources in the cost of products and, as a result, increase of the competitive capacity on the national and global markets.

JSC RT-Techpriemka

CEO

Vladlen Mausyrovich **Shorin**

The main area of the company's operations is the assessment and confirmation of conformance in the form of quality control and acceptance of raw materials, materials and semi-finished products used for production of aviation, space, defence and dual-use products. On the basis of the organization was created and functions the Quality Management Systems Voluntary Certification System allowing the Corporation's organizations to certify compliance of their quality management systems with the national standards. The company supplies materials, blanks, semi-finished products of ferrous and non-ferrous metallurgy made of special types of steel and alloys, doping materials of military, double and civil purpose for the needs of the defence industry and the aviation.

JSC Zelenaya Roshcha Resort

CEO

Zaurbek Khasanbekovich **Dzhelev**



The main areas of activities of the organization are therapeutic resort services, medical functions, provision of sightseeing services, entertainment, sports and health services.

JSC Centraviamed

CEO

Ekaterina Vladimirovna **Lokhova**

A diversified healthcare facility whose main areas of activities include periodic medical examinations, provision of health services under various programmes of optional medical insurance, flight certification examination, R&D.

LLC RT-SocStroy

CEO

Pavel Pavlovich **Loginov**

The company builds advanced technology healthcare facilities in the Russian Federation (perinatal centres).

JSC RT-Project Technologies

CEO

Sergey Nikolaevich **Yarosh**

The company manages non-core and distressed assets. The main tasks of JSC RT-Project Technologies are efficient disposal of non-core assets of the Corporation and reorganization of enterprises and organizations that got into financial difficulties.

LLC RT-Expo

CEO

Pavel Nikolaevich **Prudikov**

The main objective of LLC RT-Expo is the support in launching the results of scientific and technical and innovative activities of the Corporation's enterprises on the market and ensuring their more efficient participation in various industry-specific exhibitions and congresses. The company arranges integrated exhibitions in Russia and abroad, and organizes its own exhibition projects.

LLC RT-Inform

CEO

Kamil Kayumovich **Gazizov**

The company is a single centre of competences for the trade and procurement activities of the holding companies and the Corporation's organizations in the segment of information technologies, information security systems and other equipment, purchase, deployment and support of software for the management and production accounting, provision of services in the IT sphere.

JSC Neftegazavtomatika

CEO

Konstantin Vladislavovich **Stanislavchik**

The Corporation's centre for oil and gas technologies under the cooperation agreements entered into with the enterprises of the oil and gas sector for purposes of upgrading the industrial enterprises, further growth of production and export of advanced technology industrial products of the Corporation.

The main area of activities is related to the promotion of promising and innovative technologies and the equipment, machinery and materials manufactured by the Corporation's organizations to the companies of the fuel and energy sector and coordination of such activities.

JSC RT-Logistics

CEO

Sergey Alexandrovich **Chesnyak**

The main areas of activities of the company include organization of cargo transportation using the motor road, railway, air and sea transport, provision of customs services, etc.

The main objective of JSC RT-Logistics is optimization of cargo transportation processes and reduction of general logistics costs of enterprises included in the Rostec State Corporation.

4.3 Implementation of State Defence Orders and Federal Targeted Programmes by the Corporation's organizations

One of the statutory functions of the Corporation is ensuring implementation of the State Defence Order (SDO), Federal Targeted Programmes (FTP) and programmes for military and technical cooperation of the Russian Federation with foreign states (MTC)

State Defence Order (SDO)

In 2016, the activities of the Corporation and its organizations related to the defence industry was performed in compliance with the Basics of the State Policy for Development of the Defence Industry of the Russian Federation until 2020 and further, the Basics of the Military and Technical Policy of the Russian Federation until 2020 and further, the Basics of the Policy for Development of Science and Technology of the Russian Federation until 2020 and further.

The Corporation's organizations related to the defence industry hold the key positions in the Russian Federation on the market of the following products:

- civil and military helicopters;
- aircraft engines, aircraft units and instruments, avionics, parachute systems;
- short-range missile systems, multiple-launch rocket systems;
- short-range air defence systems;
- shooting weapons and close combat weapons;
- ammunition and pyrotechnics;
- mechanical optical and electrooptical devices;
- automated control systems, communications means, communications and radar surveillance equipment, C3 countermeasures systems;
- ciphering systems and means;
- electronic warfare and government detection devices;
- items of the electronic components base and electron discharge devices;
- military motor vehicles.

The sphere of activities of the Corporation's organizations includes:

- development, manufacturing and upgrade of armaments, military and special-purpose equipment (AMSPE);
- aftersale service, repair and disposal of AMSPE;
- development, manufacturing and service support for civil industrial products.

In 2016, 294 organizations of the Corporation were involved in the implementation of SDO, including: 157 organizations involved in the tasks under contracts with the governmental customers, and 137 organizations - cooperation-related tasks.

The problems that arise during the implementation of SDO were reviewed by the the Corporation's Supervisory Board and the Board.

During the year the Corporation took organizational and corporate measures to increase the role and responsibility of parent organizations of the Corporation's holding companies during the SDO implementation.

Generally, the SDO tasks for 2016 were completed by the Corporation.

The largest volume of products (works, services) as per SDO in 2016 was manufactured by the aviation cluster's organizations (37.6% of the total volume).

The most important AMSPE supplied by the Corporation's organizations to the Ministry of Defence of the Russian Federation include:

- helicopters Ka-52, Mi-28N, Mi-8AMTS, Mi-8MTV-5-1;
- army missile systems «Iskander-M»;
- surface-to-air and anti-tank missile system «Panzir-S»;
- multiple-launch rocket systems «Tornado-G»;
- man-portable air-defence systems «Verba» and «Igla S»;
- ammunition, airborne bombs;
- battle suits «Ratnik»
- tactical protected vehicles «Taifun K.

During the implementation of the SDO tasks in 2016 the Corporation successfully cooperated with the federal authorities, governmental customers, as well as integrated structures – primary contractors under SDO: JSC Concern Almaz-Antey, JSC Tactical Missiles Corporation, JSC Corporation MIT, PJSC United Aircraft Corporation, JSC United Shipbuilding Corporation and LLC Corporate Management Company Concern Tractor Plants.

Federal Targeted Programmes (FTP)

In 2016, the Corporation's organizations participated in a series of measures under the key Federal Targeted Programmes for the development of the defence industry, including:

- Development of the Defence Industry of the Russian Federation for 2011-2020 (FTP-1)
- Aviation Industry Development for 2013-2025
- Support, Development and Use of GLONASS in 2012-2020
- Development of the Pharmaceutical and Medical Industry of the Russian Federation for the Period Until 2020 and Further
- Development of the Industry and Improvement of its Competitive Capacity

As part of the sub-programme «Tool-Making Industry» of the state programme «Development of the Industry and Improvement of its Competitive Capacity» in 2016 the Corporation arranged the work on the adjustment of regulatory, result-oriented, technical documents for the previously approved projects which allowed to continue the implementation of investment projects for establishment of serial production facilities manufacturing tools and machines with a total volume of financing of 2.7 billion rubles. The projects are being implemented in three federal subjects of the Russian Federation: Ryazan Region, Lipetsk Region and Perm Territory.

During 2016 the Corporation under various FTPs has entered into 380 contracts (including 66 contracts and supplementary agreements under which the Corporation made contributions to authorized capitals) to the total amount of 95.6 billion rubles – for the implementation of construction projects and technical re-equipment, R&D, acquisition and introduction of basic and critical technologies.

Volume of agreements entered into by industry sectors

Industry sector	Volume, billion rubles
Aviation	34.7
Conventional armaments, ammunition, special chemistry	10.0
Electronics	50.9

In 2016, as part of the FTP-1 the Corporation commissioned 17 construction projects in 9 regions.

The restructuring of the ammunition sector and implementation of integrated projects for arrangement of production of import substituting products and materials for armaments, military and special-purpose equipment continued in the previous year.

For purposes of cooperation between the Ministry of Industry and Trade of the Russian Federation and the Corporation under the investment projects for budget allocation by the Ministry to the Corporation, the parent organizations of the holding companies (integrated structures) of the Corporation and its organizations the Ministry and the Corporation entered into the Agreement for Cooperation Under Investment Projects dated 21 December 2016 No. RT/1555-12360.

The Commission for Review of the Corporation's Offers Regarding the State Programme Projects was established under the Corporation's Order No. 124 dated 21 October 2016 for preparation of consolidated offers of the Corporation regarding the state programme armament projects for the next programme term, the state defence order, the state programme for development of the defence industry of the Russian Federation, other state and federal targeted programmes implemented in the defence industry sector, assessment of completeness, balance and integrated (inter-holding, inter-cluster and inter-sectoral) coordination.

4.4 Activities of the Rostec State Corporation on Global Markets

Military-Technical Cooperation (MTC)

In 2016, the Corporation's participation in the Military-Technical Cooperation of the Russian Federation with foreign states continued under complicated foreign policy and economic conditions due to the extension of the anti-Russian sanctions introduced by the USA, the European Union and a series of foreign states, the tense military and political situation in the regions of the Middle East and Northern Africa, as well as activated competition on the armaments market. Against this background the initiators of economic sanctions and their allies put direct pressure on our partners under the military and technical cooperation, blocked mutual settlement systems, took aggressive information countermeasures aimed at destructing the strong foreign trade links.

Under these conditions the Corporation's efforts were aimed at:

- support to exporters of military products;
- increase of competitive capacity of exported military products;
- increase of the quality of armaments, military and special-purpose equipment (AMSPE);
- improvement of the military products aftersale service system;
- implementation of measures related to import substitution of components manufactured by Western manufacturers and used in the domestic military products for export;
- implementation of measures aimed at countering the international sanctions and restrictions introduced both against the Corporation as a whole, and its separate organizations and their subsidiaries and associates.

JSC Rosoboronexport included in the Corporation's structure in 2016 supplied military products to the amount of 13.1 billion USD. The share of the state intermediary in the total volume of military products manufactured by the Corporation's organizations was 43%.

The volume of foreign currency funds received in 2016 as payment under export transactions of JSC Rosoboronexport was 12.3 billion USD. The portfolio of JSC Rosoboronexport's orders was 42.7 billion USD.

The share of MTC subjects in the Corporation's export volume as 11.8%. Besides, pursuant to the decisions of the Federal Service for Military-Technical Cooperation of Russia the Corporation's organizations supplied military products to the member states of the Collective Security Treaty Organization (CSTO) to the amount of 2.6 million USD.

Military-technical cooperation with the CIS countries occurred on several levels and included not only the supplies of military products for the national armed forces, but also ensuring the functioning and development of national enterprises of the defence industry with the use of the production, scientific and technical cooperation mechanism.

In general, the volume of supplies of military products to the CIS countries was 244.2 million USD, of which about 7.45 million USD were received for the products supplied to defence enterprises in the CIS countries as part of the production, scientific and technical cooperation.

MILITARY-TECHNICAL COOPERATION WITH THE CIS COUNTRIES OCCURRED ON SEVERAL LEVELS

IT INCLUDED NOT ONLY THE SUPPLIES OF MILITARY PRODUCTS FOR THE NATIONAL ARMED FORCES, BUT ALSO ENSURING THE FUNCTIONING AND DEVELOPMENT OF NATIONAL ENTERPRISES OF THE DEFENCE INDUSTRY WITH THE USE OF THE PRODUCTION, SCIENTIFIC AND TECHNICAL COOPERATION MECHANISM

Industry sectors' shares in the total volume of military products supplies

Industry sector	Share, %
Aviation industry	59.0
Conventional armaments	30.5
Ammunition and special chemistry	7.6
Electronic sector	2.8
Shipbuilding industry	0.1

The volume of funds received in 2016 by the Corporation's enterprises as payment for export supplies was 6.1 billion USD.

The inflow of foreign currency funds allowed the enterprises to adequately ensure renewal of the production technologies, increase the number of R&D and scientific projects, maintain the stability in the social sphere.

99 organizations of the Corporation participated in the implementation of foreign trade contracts for the supply of military products to foreign customers in the reporting year.

Supplies of military products through JSC Rosoboronexport and MTC subjects were made to 52 countries of the world.

In regional terms the primary export of military products was carried out to the countries of Asia (57.8%) and Africa (37.6%).

During 2016 the Corporation actively participated in the improvement of the MTC regulatory framework, including by granting the right to foreign trade activities in relation to the military products to the parent companies of the holding companies (integrated structures) of the defence industry of Russia. The above named requirement was met by the parent companies of three Corporation's holdings JSC NPO High Precision Systems, JSC Scientific-Production Concern Mechanical Engineering, JSC Schwabe. Besides, the Corporation exercised control over the contractual obligations for the supply of military products to foreign customers and implemented measures aimed at promoting the advanced technology products on the foreign market.

The results of the military-technical cooperation demonstrate that the products of the Corporation's organizations are highly competitive. The stable portfolio of orders, wide geography of military products supplies, high level of professionalism of the staff of the Corporation's organizations ensure the strong positions on the global armaments and military equipment market.

Key International Projects in 2016

As a result of active marketing work the Corporation's representative offices in the foreign states elaborate and implement a large number of projects.

In 2016, the key projects implemented on the target markets included the following:

As a result of active marketing work the Corporation's representative offices in the foreign states elaborate and implement a large number of projects

Azerbaijan

JSC Russian Helicopters entered into an agreement with Silk Way Helicopter Services for opening of a Mi-8/17 civil helicopter maintenance workshop in Azerbaijan.

Italy

OJSC Russian Helicopters PJSC Oil and Gas Company Rosneft and Leonardo- Finmeccanica signed a trilateral agreement for the development of strategic cooperation for local AW189 helicopter construction in Russia.

India

During the Russian-Indian Summit an agreement was signed for the establishment of Indo-Russian Helicopters Private Limited Joint Venture implying the arrangement of production of Ka-226T helicopters and its modifications in India, as well as guaranteeing their maintenance and technical support.

JSC RT-Chemcomposite signed an agreement with the Indian company Omega Corporation for the supply to India of test samples of amorphous boron produced by JSC Ural Chemical Research Institute with the Pilot Plant.

JSC National Immunobiological Company and Cipla signed an agreement for the transfer of technologies for production of pharmaceutical substances and finished dosage forms of drugs for HIV infection treatment.

JSC Azimut signed an agreement for cooperation in the sphere of aircraft navigation systems with the largest Indian concern TATA.

JSC SIBER (Innovative Security Systems of Russia) entered into an agreement with the Checkmate company for strategic cooperation in the sphere of security.

Indonesia

JSC Azimut won a tender for the supply of a command and monitoring centre for the air traffic control for the Ministry of Transport of Indonesia.

JSC SIBER (Innovative Security Systems of Russia) entered into an agreement with Anglo African Capital for strategic cooperation in the sphere of security.

Iran

OJSC VO Technopromexport and the Holding Company for Production of Electrical Energy on Thermal Stations of Iran signed a contractual agreement for the construction of a 1,400 MWt thermal electric power station.

JSC Russian Helicopters and IHSRC entered into a framework contract for the supply of spare parts, units, training and accessory assets for operation of Mi helicopters.

PJSC AVTOVAZ entered into a general agreement with the company Iran Khodro Azerbaijan for the assembly of up to 200 thousand various modifications of Lada cars in Iran for the term until 2020.

THE RESULTS OF THE MILITARY-TECHNICAL COOPERATION DEMONSTRATE THAT THE PRODUCTS OF THE CORPORATION'S ORGANIZATIONS ARE HIGHLY COMPETITIVE

THE STABLE PORTFOLIO OF ORDERS, WIDE GEOGRAPHY OF MILITARY PRODUCTS SUPPLIES, HIGH LEVEL OF PROFESSIONALISM OF THE STAFF OF THE CORPORATION'S ORGANIZATIONS ENSURE THE STRONG POSITIONS ON THE GLOBAL ARMAMENTS AND MILITARY EQUIPMENT MARKET





China

The Russian and the Chinese governments signed an Inter-Governmental Agreement for joint building of advanced civil heavy helicopters. Pursuant to the agreement JSC Russian Helicopters will provide support to the Chinese state company AVICOPTER for the development of the heavy helicopter and its serial production in China.

JSC Russian Helicopters signed contracts with Chinese companies Qingdao Helicopter, Jiangsu Baoli, Easy Best Group, Wuhan Rand Aviation Technology Service, Jiangsu Baoli Aviation Equipment for the supply of 14 Ka-32A11BC and Ми-171 helicopters in 2017-2018. The parties also entered into an optional agreement for 13 helicopters.

JSC Russian Helicopters signed a Framework Agreement with Chinese companies AVIC International Holding Corporation and CITIC Offshore Helicopter Corporation for the establishment of a maintenance and repair centre for Russian helicopters in China.

JSC United Engine Corporation entered into contracts with the companies CATIC,

AVIC International and Tianli for the supply of spare parts, provision of maintenance support services and operation of aircraft engines to the total amount of more than 65 million USD.

JSC Ruselectronics and the China Electronics Technology Group Corporation (CETC) signed an agreement for cooperation in the sphere of production of electronic components base.

JSC Neftegazavtomatika and the China Electronics Technology Group Corporation (CETC) signed an agreement for the establishment of a joint experimental and production laboratory for development of equipment and software for directed drilling of oil and gas wells.

JSC Schwabe signed a contract with Caton Luoyang Intelligent Technology for the supply of diffractive gratings for the meteorology purposes.

JSC Schwabe and Shenzhen UniStrong Science & Technology Co., Ltd. signed an agreement for the development, production and marketing of global positioning equipment based on GLONASS/BEIDOU/GPS signals for various economy sectors.

JSC RT-Business Development signed a Memorandum of Agreement for the sales of investment projects with China CYTS Industrial Development.

JSC SIBER and DeWe Group signed a Memorandum of Strategic Partnership in the sphere of security.

JSC Kaliningrad Amber Factory signed a contract for the supply of amber to China to the amount of 10 billion rubles.

Participation in Exhibitions

In 2016, the Rostec State Corporation became an organizer of the Russian displays at 18 international exhibitions of military products:

Название выставки	Дата и место проведения
Bahrain International Air Show BIAS-2016	21–23 January Sahir Airbase, the Kingdom of Bahrain
International Land, Naval & Internal Homeland Security Systems Exhibition DEFEXPO India 2016	28–31 March Goa, India
International Air & Space Fair FIDAE 2016	29 March–3 April Santiago, Chile
International Arms and Military Equipment Asian Exhibition DCA 2016	18–21 April Kuala Lumpur, Malaysia
Special Operations Forces Exhibition SOFEX 2016	9–12 May Amman, Jordan
International Aerospace Exhibition and Conference ILABerlinAirShow 2016	1– 4 June Berlin, Germany
4th International Exhibition of Weapons and Military Equipment KADEX 2016	2–5 June Astana, Kazakhstan
International Defence and Security Industry Trade Show Eurosatory-2016	13–17 June Paris, France
International Exhibition of Arms and Military Machinery MILEX 2016	July Minsk, Republic of Belarus
Farnborough International Airshow 2016	11–17 July Farnborough, Great Britain
International Defence Industry Exhibition ADEX 2016	27–30 September Baku, Azerbaijan
Aerospace and Defence Exhibition Africa Aerospace and Defence 2016	14–18 September Pretoria, RSA
International Helicopter Exhibition HeliTech	11–13 October Duxford, Great Britain
25th International Naval Defence and Maritime Exhibition Euronaval 2016	17–21 October Le Bourget, France
Aviation & Aerospace Exhibition China AirShow 2016	1–6 November Zhuhai, China
International Weapons and Military Technology Exhibition Indo Defence 2016	2–5 November Jakarta, Indonesia
International Helicopter Exhibition Dubai Helishow	7–9 November Dubai, UAE
International Naval & Maritime Exhibition ExpoNaval 2016	29 November–2 December Viña del Ma, Chile

Myanmar

JSC VO Tyazhpromexport completed the cold start of production as part of the obligations under the contract for the construction of an ironworks using the Romelt technology in Myanmar. The final stage of commissioning is the warm start is expected to occur in the II-III quarter of 2017.

Thailand

The Joint Venture Rostec-Pirelli entered into an agreement for the supply of 6000 tons of natural rubber from Thailand for the Russian tire factories.

Republic of South Africa

JSC Russian Helicopters and Denel Aviation approved a roadmap for the development of cooperation for purposes of establishing a centre for maintenance and repair of military helicopters and supplementary equipment for 2016-2018.

Japan

JSC NPO High Precision Systems and Takisawa signed an agreement for joint production of machine tools under the joint trademark Takisawa/KEMZ.

JSC Ruselectronics and the JOGMEC corporation signed a memorandum of agreement for the project of lithium production in the countries of the Latin America using the Russian sorption technology.

Army 2016 International Forum

The Rostec State Corporation participated in the Second International Military and Technical Forum «Army 2016» that was held in the congress and exhibition centre of the Patriot park near Moscow, in the town of Kubinka from 6 to 11 September.

The forum was attended by the leading Russian defence industry enterprises, scientific and research institutes, civil and military educational institutions, foreign manufacturers of military and dual-use products, scientific organizations.

As part of the Army 2016 Military and Technical Forum the Corporation demonstrated the newest developments of nine holdings – more than 300 samples of products manufactured by holdings JSC NPO High Precision Systems, JSC Concern Kalashnikov, JSC Scientific-Production Concern Mechanical Engineering, JSC Russian Helicopters, JSC United Engine Corporation, JSC Technodinamika, JSC UIMC, JSC Ruselectronics, JSC Schwabe.

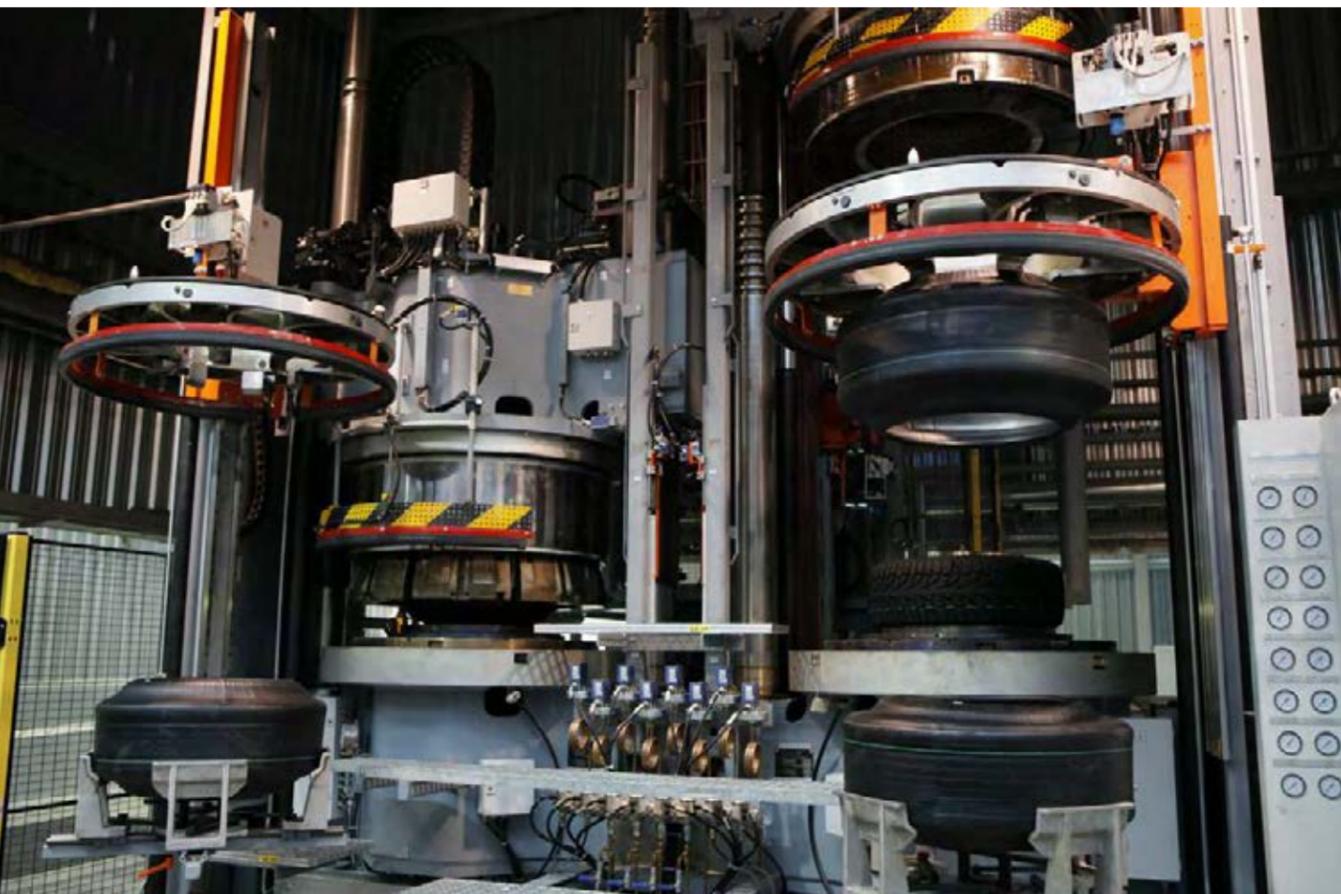
One of the largest displays was the demonstration centre of JSC Concern Kalashnikov with a total floor area of 1,500 sq. m. where the entire range of the Concern’s products were presented. The Minister of Defence of the Russian Federation,

Army General S.K. Shoigu presented to the CEO of JSC Concern Kalashnikov Alexey Krivoruchko the first prize of the Army 2016 Forum for the achievements in the development of armaments, military and special-purpose equipment, and for the contribution to the preparation and holding of the Forum.

The Corporation also demonstrated missile systems «Kornet» and «Iskander» manufactured by JSC NPO High Precision Systems, and helicopters Mi-38, Mi-175V-5 and Ka-226 modified for medical purposes, «Ansats» modified for the Russian MIA special operations, as well as models of combat helicopters Mi-28NE, Ka-25K and transport helicopter Mi-26T2.

JSC UIMC demonstrated a personal small size electronic intelligence device for reconnaissance teams and bomb technicians, as well as a high mobility multi-purpose electronic warfare system «Palantine» for purposes of communications surveillance and radio suppression of advanced enemy communications systems.

During the exhibition the Corporation also demonstrated a device developed by JSC Schwabe for treatment of diseases and injuries to soft tissues, articulations, and for accelerated fusion of bone tissues in fractures.



The Corporation participated in the following relevant international exhibitions for promotion of civil products in 2016:

- International Sporting and Hunting Weapons Exhibition IWA-2016 (4-7 March, Nuremberg, Germany)
- International Civil Aviation Exhibition IndiaAviation (16-20 March, Hyderabad, India)

- Latin American Business Aviation Conference & Exhibition LABACE (30 August -1 September, São Paulo, Brazil)
- Havana International Fair FIHAV (31 October - 4 November, Havana, Republic of Cuba)

Besides, in 2016 the Corporation actively participated in exhibitions in Russia and took part in 20 exhibition projects.

4.5 Corporate Finances and Budgeting Process

Corporate Finances and Budgeting Process Improvement of the Corporation's financial planning

In 2016, for purposes of increasing the efficiency of financial planning of the Corporation the efforts aimed at integrated financial and economic expert review of the Corporation's expenses were further developed. These measures imply synchronization and optimization of the business processes for purposes of procurement and budget planning procedures, automation of financial planning, project-specific analysis of expenses considering their economic efficiency and conformance to the approved Strategy of the Corporation.

The integrated control over the reasonableness of prices for the products and services being procured was strengthened for purposes of minimizing the costs of the Corporation at the stage of procurement procedures in 2016. Compliance with these procedures allowed to reduce the Corporation costs in 2016 by more than 270 million rubles without prejudice to the requirements to the products and services being procured.

The Corporation's top priority in the area of financial resources management in 2016 was the implementation of the approved Strategy. Due to the more intense contents and use of the funds the problem of concentration and centralization of resources at the corporate centre's level was solved. The decisions regarding the allocation of funds to the amount of 3.173 billion rubles for purposes of financing were made with due regard to the needs of the Corporation and its organization, as well as the anti-crisis management tasks.

Improvement of the Corporation Budgeting Process

In order to increase the quality and timeliness of decisions for purposes of financial management of the Corporation in 2016 the development of the information analysis resources of the Financial Unit aimed was continued with the aim of preparation and improvement of the budgeting methodology, management of finances and treasury operations, systematization of the budget planning and control processes.

During 2016 the Corporation ensured a number of changes in the budgeting process:

- terms for preparation and justification of budgets of the Corporation's organizations until 1 January of the current year were optimized for the purpose of timely elaboration of targets based on the Corporation's Development Strategy for the next year, identification of potential financial risks and preparation of measures for their elimination;
- the number of organizations included in the budget was increased by more than two times by consolidating their primary indicators according to the IFRS principles depending on the effective ownership share;
- synchronization of the budgeting, investment processes and procurement planning was ensured.

Thus, the main tasks in 2016 in terms of the budgeting processes were the changes in the methodological framework and creation of budgets in the Corporation's organizations for 2017 considering the strategic initiatives stipulated by the Corporation's Development Strategy, including management of financial investments for purposes of identifying the strategically valuable financial investments and financial investments requiring development, as well as non-core and inefficient financial investments, optimization of non-production costs, increase of accuracy and quality of financial statements, increase of efficiency of investment expenses and development of corporate financial services.

The pilot project for automation of the budgeting process was started in 2016 in order to significantly advance in the solution of the Corporation's tasks of building a single finances management system and ensure the alignment of the budgeting structures with the IFRS and redistribute the financial resources among clusters. For purposes of implementing the task the Corporation acts as a pilot site for this system and plans to duplicate the results and set such tasks as the achievement of transparent pricing processes, optimization of procurement expenses of the Corporation and the government.

State and Corporate Programmes Financing

In 2016, during a short term the receipt of the property contribution of the Russian Federation to the Corporation was ensured for purposes of implementing the measures under FTP-1 and their dissemination in the organizations implementing the respective investment projects. The Corporation's organizations entered into 66 contracts and supplementary agreements to the total amount of 31 billion rubles.

In order to guarantee implementation of certain tasks set by the President and the Government of the Russian Federation, in 2016 the Corporation ensured the receipt of subsidies as property contributions of the Russian Federation to the total amount of more than 29 billion rubles and allocation of funds to the implementation of the following efforts:

- works on the arrangement of production of import-substituting components and materials for armaments, military and special-purpose equipment;
- financing of the Corporation's and its subsidiaries' obligations as part of industrial construction projects and energy facilities construction projects;
- ensuring the financial and economic stability of the defence industry's organizations (repayment of credits and loans of subsidiaries of JSC United Engine Corporation);
- support for critical and special aircraft flights;
- financing of the expenses of JSC United Industrial Corporation Oboronprom on coupon payments under bonded loans placed in the period from 2011 to 2014 against the state guarantees of the Russian Federation.

The Corporation's costs were decreased by more than

270 million rubles

due to systematization and strengthening of the integrated control over the reasonableness of prices for the products and services being procured

The pilot project for automation of the budgeting process was started in 2016 in order to significantly advance in the solution of the Corporation's tasks of building a single finances management system

As a result of the treasury monitoring of contracts for provision of subsidies introduced in 2016, the Corporation established the necessary cooperation with the main owner of budgetary funds and the Federal Treasury for purposes of timely implementation of measures, and the respective changes were made in the Corporation's deeds regarding the financing and administration of allocated funds.

The Corporation's organizations use the funds allocated from the federal budget under the respective allocated funds administration system used by the Corporation. Pursuant to the prescribed procedures, the financial unit of the Corporation verifies compliance of the payments planned by the Corporation with the designated use and the approved documentation, and identifies various risks related to the construction of facilities, equipment procurement and other operations.

The system's functioning results in 2016 are:

- timely financing of efforts under state programmes as per the laws of the Russian Federation;
- minimization of risks related to the Corporation's misuse of subsidies and introduction of measures for their prevention;
- elimination of risks of penal sanctions for the misuse of funds.

The work on improvement of automation of a number of processes under the allocated funds administration system was started in 2016 for purposes of building a single automated system for control of implementation by the Corporation's organizations of the state programmes (ASC SP) which will be deployed in holding companies, organizations and the Headquarters of the Corporation. ASC SP will allow to more efficiently control the implementation of measures under the state programmes, finance them and prepare reports.

Preparation of the Corporation's Consolidated Financial Statements

The Corporation's consolidated financial statements is prepared pursuant to the Federal Law No. 270-FZ dated 23 November 2007 «On the State Corporation for Assistance to Development, Production and Export of Advanced Technology Industrial Product «Rostec»».

Accuracy of the Corporation's consolidated financial statements for 2016 is certified by the positive audit report issued by the audit company LLC RSM RUS that had been selected under a tender process in compliance with the Federal Law No. 44-FZ dated 05 April 2013 «On the Contractual System for Procurement of Goods, Works, Services for the State and Municipal Needs».

In 2016, the Corporation continued to increase its share of ownership in the developers and manufacturers of advanced technology products. This increase was ensured both in the form of property contribution as per the Decree of the President of the Russian Federation «On the Property Contribution of the Russian Federation to the State Corporation for Assistance to Development, Production and Export of Advanced Technology Industrial Product «Rostec»» No. 20 dated 14 January 2014 and the Decree of the President of the Russian Federation «On Certain Matters Regarding the State Corporation for Assistance to Development, Production and Export of Advanced Technology Industrial Product «Rostec»» No. 1052 dated 10 July 2008, as well as agreements for sale of securities.

A decision was also made in 2016 regarding the assignment to third persons of shareholding interests in Erdenet Mining Corporation and LLC Mongolrostsvetmet. The profit received from sale of those shareholding interests will be used to finance the activities aimed at the support for development, production and export of advanced technology industrial products by ensuring the support on the domestic and foreign markets to Russian developers and manufacturers of advanced technology industrial products.

In 2016 the list of companies independently preparing their statements as per IFRS was increased due to the shift of JSC Technodinamika to the independent preparation of consolidated financial statements. Thus, the following parent organizations of the Corporation's holding companies and organizations independently prepare the consolidated financial statements as per IFRS within their groups:

- JSC Ruselectronics
- JSC Concern Radio-Electronic Technologies (KRET)
- JSC Schwabe
- JSC United Industrial Corporation Oboronprom
- JSC Russian Helicopters
- JSC United Engine Corporation
- JSC United Instrument Manufacturing Corporation
- JSC Technodinamika
- PJSC VSMPO-AVISMA Corporation,
- PJSC KAMAZ
- PJSC Motovilikha Plants
- PJSC AVTOVAZ
- JSC Joint-Stock Commercial Bank Novikombank

For purposes of preparing the consolidated financial statements the Corporation uses the Unified Accounting Policy Principles that define the unified approaches to the preparation of the consolidated financial statements as per IFRS by the holding companies preparing them as part of the parent organization's management structure. The Corporation's consolidated financial statements ensure the following (without limitation):

- preparation of information on the financial status required to make the strategic, management and economic decisions;
- timely response to non-efficient functioning of assets;
- possibility of timely optimization of the assets and liabilities structure of the Corporation's Group, including (without limitation) the improvement of the system for control of stocks, capital, level of accounts payable and accounts receivable;
- analysis of the Corporation's operations for purposes of preparing the performance forecast, including based on the principle of comparability of the previous reporting periods' data;
- integrated analysis of the financial and economic operations of the Group as a whole, and by separate holding companies and directly controlled organizations with due regard to the peculiarities and the specifics of their economic operations;
- assessment of efficiency of the system for management of the Corporation's organizations.

4.6 Activities of the Treasury

In 2016, the Corporation continued the work on introduction and functioning of the centralized system for management of finances on the basis of the Single Corporate Treasury (SCT) aimed at implementing the following tasks:

- increase of efficiency of the Group's liquidity processes management;
- optimal allocation of resources within the Group, including by means of establishing and developing of the intragroup financing system based on the Corporation's pool leader, JSC RT-Finance;
- implementation of effective mechanisms for investment of idle funds;
- optimization of processes for the current assets management;
- deployment of a system for control of financial risks at the level of the Corporation's organizations and practical application of financial risks management tools.

During 2016 the following measures were taken within the Corporation for the achievement of these goals.

Methodological Support

Unified methodological documents governing the primary business processes of SCT have been developed and approved for purposes of establishing SCT.

In 2016, the typical rules formalizing the business processes of SCT were introduced vertically in the direction «Corporation – Corporation's Holding Company – Holding's Organization» (the Corporation's organizations have introduced about 90% of typical rules of SCT).

A methodological framework of the intragroup financing system was prepared and introduced on the basis of the Corporation's pool leader. The decisions on the use by the Corporation's organizations of the intragroup financing mechanism were ensured through the management bodies of holding companies and directly controlled organizations.

Forms of reports on treasury operations carried out by the Corporation's organizations have been approved and the mechanism for their regular submission to the Corporation has been implemented.

A significant work has been performed for the improvement of the centralized procedure for administration and control of the Corporation's allocated funds' use.

A system for management of financial risks of the Corporation and its organizations has been introduced.

Automation

SCT is being established in the Corporation and its organizations based on the unified centralized methodological and information analysis solution, and by introducing in all organizations the specialized IT system that can be integrated with the payment systems of servicing banks and allows to automate the treasury's business processes – the Single Corporate Treasury's Automated System (SCT AS).

In 2016, most of the Corporation's organizations were connected to SCT AS. As of 31 December 2016, the number of Corporation's organizations connected to SCT AS was 482 (about 90%).

The main elements of the system were put into pilot operation for purposes of SCT AS development: accounts management, payment function, external finances attraction. The funds allocation function was launched in the test mode. The work on improvement of functionality and setting up the automation of key business processes of the Treasury are being carried out on a continuous basis.

Interaction with Banks

In 2016, the Corporation's Treasury continued to actively optimize the interaction of organizations with the servicing banks in order to ensure integrity of funds of the Corporation's organizations and reduction of bank expenses. The criteria for selection of the most reliable banks authorized for cooperation with the Corporation and its organizations were determined pursuant to the Unified Provisions on Procurement of the Rostec State Corporation and its organizations. The work on accumulation of funds and operations of the Corporation's organizations in the most reliable and financially stable banks.

The Treasury's centralized systemic work with the bank in 2016 allowed to achieve significant positive results, and the work in the following areas was continued:

- unification and introduction of single discounted service rates for the Corporation's organizations in certain banks which allowed to cut the expenses of the Corporation's organizations on the bank servicing by about 200 million rubles;
- increase of efficiency of use of the Corporation's funds;
- reduction of interest rates under credits of the Corporation's organizations which allowed to save more than 800 million rubles;
- withdrawal of the Corporation's funds from banks whose licenses were revoked.

Approximately 64 billion rubles were withdrawn in the period of 2013-2016.

Liquidity Planning System Alignment

Based on the approved Regulations for Timely Planning and Management of Liquidity of the Corporation and the Corporation's Organizations, a continuous process has been arranged for timely planning of revenue receipts and payments that allowed to increase the efficiency of use of funds, profitability of their allocation, and improved the payment discipline both of the Corporation and the Group as a whole.

In 2016, the liquidity planning process alignment ensured the Corporation's entire and early settlement of its liabilities under the non-recurrent credit line granted by PJSC Sberbank to the amount of 11.3 billion rubles. In this regard, as of today the Corporation has no debt under credits and loans. The economic effect of the early settlement of liabilities was more than 352.0 million rubles.

Intragroup Financing System Alignment

In 2016, a system for intra-corporate financing on the basis of the Corporation's pool leader – JSC RT-Finance intentionally established by the Corporation – was created and started to function.

Since April 2016, JSC RT-Finance attracts idle funds of the Corporation's organization on a daily basis

Considering the volume of funds accumulated by the Corporation's pool leader, the interest rates offered by JSC RT-Finance are higher than the similar rate offered by authorized banks for certain organizations which allows to ensure additional profitability when allocating the funds by the Corporation's organizations.

As of the end of 2016, approximately 339 organizations of the Corporations entered into agreements with JSC RT-Finance for allocation of their idle funds.

In 2016, the financing limits applied by JSC RT-Finance were approved for 142 organizations of the Corporation based on the assessment of the financial status of the Corporation's organization (as per the Risk Assessment Technique developed by the Corporation). JSC RT-Finance started to grant corporate loans at the interest rate that are most optimal to the organizations which allows to optimize the Corporation's expenses on the debt portfolio servicing.

The further stages of the Single Corporate Treasury establishment being implemented today also allow to:

- reallocate funds on the inter-holding level to allow financing of the most critical state projects and efforts;
- control the compliance with the payment schedules and budgets of the Corporation's organizations at the level of the Corporation, etc.

Centralized Administration of the Corporation's Allocated Funds

In 2016, the Corporation's Treasury performed a significant work in improving the procedure for centralized administration and control of allocated funds of the Corporation, including the following:

- the list of funds that are subject to mandatory control on behalf of the Corporation was refined;
- the procedure for centralized administration and control of funds received by the Corporation on its business accounts opened with the territorial bodies of the Federal Treasury and subject to treasury's control;
- the procedure for control of allocated funds' use was automated (control of balance, acceptance of payments, monitoring of cash flows, etc.) with the use of SCT AS.

This work allowed to minimize the risk of non-efficient use of allocated (including budgetary) funds of the Corporation, ensure their allocation strictly to financing of efforts and projects as per the requirements of the federal and targeted state programmes and the Corporation's resolutions.

In 2016, the Corporation's Treasury established effective cooperation with the Federal Treasury and its territorial bodies. As a result of this work, in 2016:

- 84 business accounts were opened for non-participants of the budgeting process for purposes of settlements under subsidies and state contracts of the Corporation;
- the total volume of settlements under business accounts of the Corporation was 84.61 billion rubles.

4.7 Informatization of Processes

In 2016, LLC RT-INFORM accountable for maintenance of information and communications technologies of the Rostec State Corporation and its organizations has implemented more than 20 projects for deployment of information systems in the Corporation's organizations.

In 2016, a project for development and introduction of a financial planning and budgeting system has been launched by the Headquarters of the Rostec State Corporation.

At the end of 2016 a project for experimental development of a corporate data exchange network was launched at the Ryazan State Instrument-Making Enterprise. A project for development of a system for receipt and registration of feedback from the employees regarding the corruption facts in the Rostec State Corporation («Hot Line»).

The most important project aimed at upgrading the IT infrastructure of the Corporation was the «360 Service». The project was awarded the «Project of the Year» prize by the club of IT directors Global CIO.

A number of agreements was entered into with the enterprises of JSC Russian Helicopters (JSC United Engine Corporation and PJSC Tupolev) for the shift to domestically developed information technologies under the state import substitution programme. This will ensure uninterrupted operation of IT services under conditions of sanctions risks, reduce the costs on procurement and support of software, allow to develop an integrated technique for import substitution of information technologies applicable within the entire Corporation.

Another stage of the project for import substitution of infrastructure services and operating system of organizations included in the structure of JSC Russian Helicopters has been implemented. An infrastructure using Astra Linux was deployed in the company to ensure the operation of basic applications and services of the holding.

LLC RT-INFORM performs the analysis and search for the most optimal solution for the Rostec State Corporation's organizations both in terms of costs and technical parameters. This will allow the Corporation to cut expenses on IT products due to the following:

- establishment of strategic relationships with the software vendors under exclusive pricing conditions due to the economy of scale;
- introduction of the Unified Provisions on Procurement where LLC RT-INFORM will be the organizer of procurement for infrastructure types of activities;
- control of products trademark selection based on the approved technical standard;
- type-design of the information architecture and optimization of management in the IT sphere and information security;

- verification of compliance of the solutions being introduced with the Corporation's requirements and requirements to consolidated supplied of certified products in the best interests of the Corporation's enterprises and key infrastructure projects.

In 2016 the Corporation established the Corporate Centre for Detection, Prediction and Mitigation of Computer Attacks (CCDPM) for prevention and prediction of information security incidents. CCDPM actively cooperates with the Information Protection and Special Communications Centre of the Federal Security Service of Russia in terms of information exchange regarding the computer attacks on the Rostec State Corporation's organizations. Activities of CCDPM are aimed at increasing the level of information security in the Corporation's organizations and optimizing the expenses on information protection due to the economy of scale when centralizing the service.

Further development of processes informatization in the Corporation includes the following steps and measures:

- implementation of the look-ahead procurement mechanism allowing to forecast the demand by categories, reduce the number of conditions affecting the price, but not the quality;
- establishment of a database of typical IT and IS products – RT-CATALOGUE – aimed at increasing the accuracy of calculations of budget requests for the next year and the average-term target period, as well as initial maximum prices and reduction of labour input of customers when preparing the statements of work and primary accounting documents;
- development of informatization programmes for holding companies;
- duplication of solutions for production management at enterprises with discrete manufacturing;
- development of testing and technical expert review of telecommunications equipment and computers and software in order to ensure technical control;
- acquisition of the communications provider license by LLC RT-INFORM for provision of Internet access services and implementation of the project for establishment of a corporate data exchange network in the best interests of the Corporation;
- creation of a mobile virtual network operator.

4.8 Brand and Communications

The reporting year is characterized by the preserved main trend of increasing the media exposure of the Corporation and holdings and, as a result, preserved high level of transparency

Transparency and openness are considered by the Corporation the most important criterion of its work. The information on the Corporation's activities is available to customers, partners, mass media. The media office of the Rostec State Corporation is accountable for the interaction with the mass media.

The media office responses to the mass media inquiries in a timely and essential manner and fully satisfies their need for information on the Corporation's activities, provides all necessary materials, comments of the management and analysts. The media office regularly organizes press conferences and briefings attended by the Corporation's officials in order to inform the wide circle of persons interested in the Corporation's activities. The Corporation interacts with regional mass media via its representative offices located in the Russian Federation.

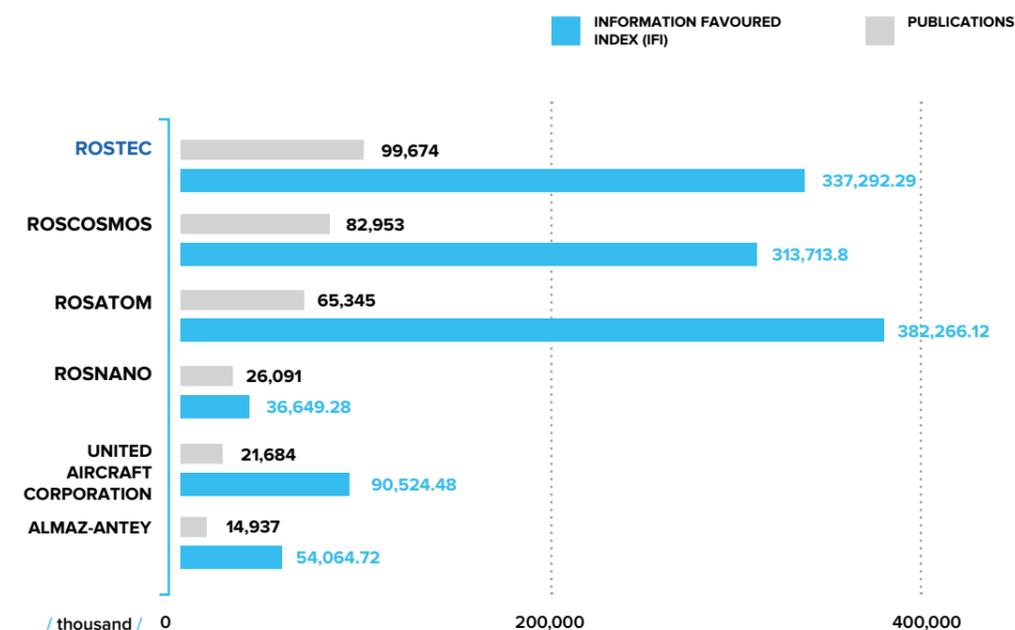
The business reputation of the foundation for the strong brand, therefore, the Corporation's management regularly reviews the analytical reports based on the mass media materials for purposes of the situation monitoring.

The reporting year is characterized by the preserved main trend of increasing the media exposure of the Corporation and holdings and, as a result, preserved high level of transparency.

312,618 publications were recorded in 2016. By the number of publications in the Russian and foreign mass media the growth as compared to 2015 was 12%, and the aggregate media index increased by 40%.

Due to the high quality content, large number of various news and the promotion of the official site its audience in 2016 exceeded 5 million people. Besides, the official accounts of the Corporation in the social media also increase the number of subscribers – in 2016 the number of users exceeded 600 thousand.

Media index of Russian advanced technology corporations



Ratings

The Rostec's positions in the ratings prepared by business and industry-specific mass media has qualitatively changed in 2016. The Corporation took 7th position in the Top-500 of the Russian leading companies in terms of proceeds (RBC 500), and the TAdviser industry-specific portal placed the Corporation on the top of the 100 largest IT companies of Russia.

Among the Russian state corporations the Rostec State Corporation also holds the leading position in terms of the media index of the «Medialogy» analytical system.

Most business media include the CEO of the Rostec State Corporation S.V. Chemezov in the top lines of media exposure ratings, and according to Kommersant-Dengi the head of the Corporation was included in the top ten heads of Russian companies by a number of media indicators.

In the rating of the most influential businessmen and politicians of Russia prepared in 2016 by the Centre for Political Technologies (CTP) S.V. Chemezov was second in the «Business Leaders» category. The CTP experts calculated the index of influence of each of 145 persons in the list based on the expert poll, media index and assessments of various categories of specialists – politicians, political analysts, social scientists and journalists.

MOST BUSINESS MEDIA INCLUDE THE CEO OF THE ROSTEC STATE CORPORATION S.V. CHEMEZOV IN THE TOP LINES OF MEDIA EXPOSURE RATINGS

ACCORDING TO KOMMERSANT-DENGI THE HEAD OF THE CORPORATION WAS INCLUDED IN THE TOP TEN HEADS OF RUSSIAN COMPANIES BY A NUMBER OF MEDIA INDICATORS



Rating of the Corporation's Holdings

As a result of introduction of the rules for external communications of the Corporation and the system of continuous control over the compliance therewith, and the KPI system in 2015, the holdings' performance in terms of the number of positive publications and the media index shows a growth tendency each year.

The leading position in the rating of media exposure of the Corporation's holdings is maintained by the Corporation itself due to the development of its own industrial agenda and promotion of holdings.

The second position is kept by the independent brand of PJSC AVTOVAZ (11% references together with the Corporation). JSC Rosoboronexport made way for JSC Russian Helicopters and PJSC KAMAZ, but managed to remain in the top-5. JSC Concern Kalashnikov and JSC Ruselectronics that placed a bet on the civil products development as per the Corporation's strategy significantly strengthened their positions in the rating. In 2016, for the first time the rating included JSC National Immunobiological Company, JSC TsNIITochmash and JSC Concern VEGA.

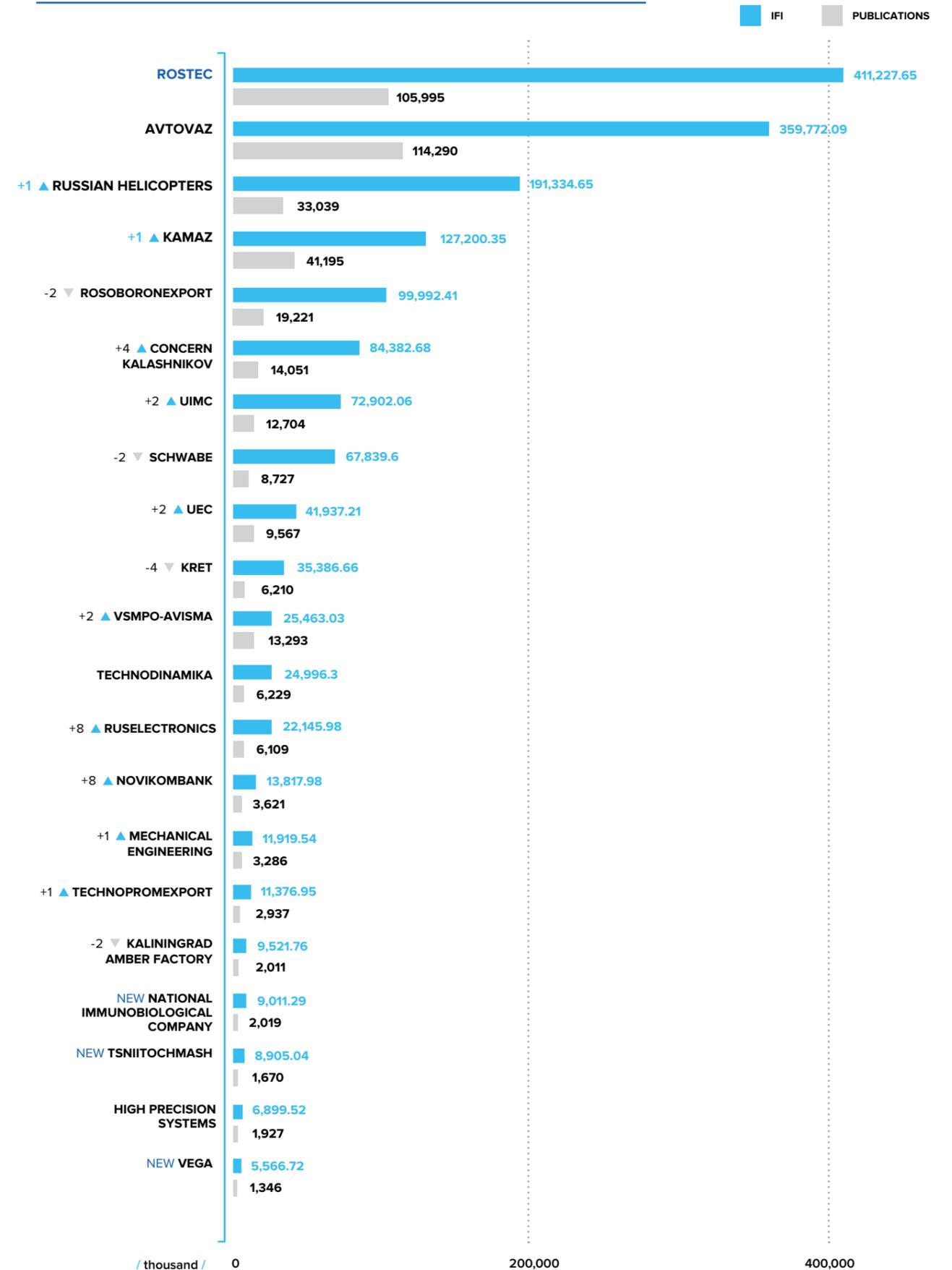


THE SECOND POSITION IS KEPT BY THE INDEPENDENT BRAND OF PJSC AVTOVAZ

JSC ROSOBORONEXPORT MADE WAY FOR JSC RUSSIAN HELICOPTERS AND PJSC KAMAZ, BUT MANAGED TO REMAIN IN THE TOP-5



Media rating of the Rostec State Corporation's holdings at the end of 2016



High-Profile Events and Newsworthy Events

A significant contribution to the media exposure is made by events organized or directly participated by the Corporation.

In 2016, with the support of the Corporation, the «Digital Industry of Industrial Russia» (DIIR), the first Russian IT forum, was held in Innopolis and gathered all key players of the IT sector.

The first Biotechnologies Conference «Biotechmed» was held in Gelendzhik.

The Corporation actively participated in the Saint Petersburg International Economic Forum and displayed a showcase dedicated to the 100 years' history of the Russian industry. The showcase was nominated to the Event.ru award in the «Most Creative Idea» category.



In 2016, with the support of the Corporation, the “Digital Industry of Industrial Russia” (DIIR), the first Russian IT forum, was held in Innopolis and gathered all key players of the IT sector

References in International Mass Media

The Corporation significantly influences the formation of the international information agenda. Traditionally, the leaders by the number of references remain the USA and China, but in such strategic regions as India, Argentina, Indonesia the Corporation qualitatively increases its presence.

The Corporation presented a wide range of military products during the Army 2016 exhibition.

The most important component of the Corporation’s information policy in 2016 was the coverage of the Corporation’s participation in the initiative for the development of human capital assets and increase of the occupational prestige of blue-collar workers. The Corporation held the first corporate championship among blue-collar workers according to the Worldskills standards based on the industrial and creative cluster at the facilities of the Oktava factory, participated in the Russian championship of blue-collar workers Worldskills HighTech in Yekaterinburg, supported the Yaroslavl Forum «Future Intellectual Leaders of Russia».

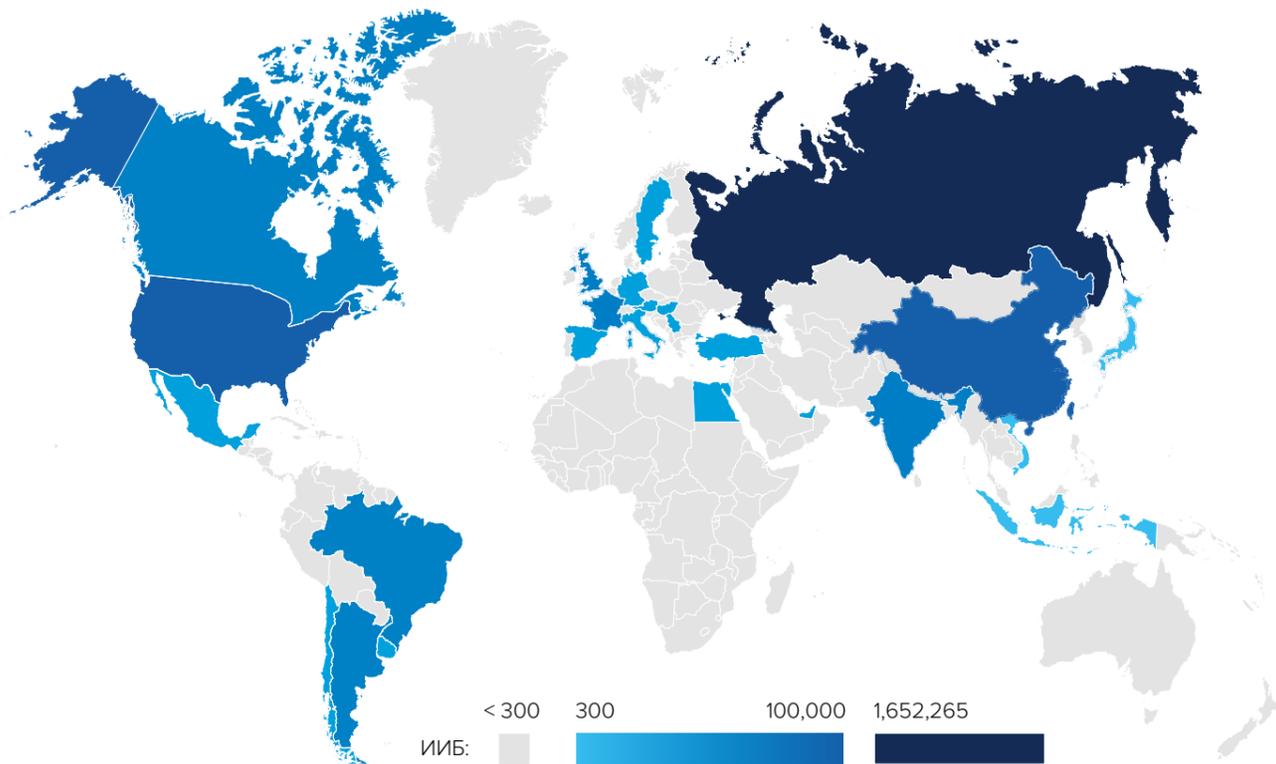


Впервые была организована профильная конференция по биомедицинским технологиями «Биотехмед» в г. Геленджик



The Corporation’s showcase was nominated to the Event.ru award in the “Most Creative Idea” category

Distribution of Countries by the Information Favoured Index



As compared to 2015, geography of references to the Corporation and its holdings in the foreign press remained almost unchanged. The key influence on the information realm is still exerted by the publications of the USA and China. In 2016, the qualitative indicators of the Corporation and its companies noticeably improved in the foreign sources.

During 2016 the Corporation's representatives participated in the largest international events and exhibition, including

DEFEXPO 2016, FIDAE 2016, BRICS Summit, etc. and this affected the citation ratio of the Corporation in the foreign mass media.

In June-July 2016, the Corporation supported the Russian broadcasts of the Euro-2016 football matches from France. During the broadcasts on the Channel One and the Russia channel, the Corporation's 3D-animated video was demonstrated showing the most advanced developments of the holdings.



Management of Rights to Results of Intellectual Activity and Means of Individualization

The active work on the development of the system for management of rights to the results of intellectual activity (ROI) was continued in the Corporation and its organizations. There are 11 typical standards (statues) used in the Corporation for the management of rights to ROI whose development and introduction is being implemented by the parent organizations of the holding companies (IS). For purposes of integrated professional review the above mentioned documents were analyzed and approved by the members of the Expert Council of the Intangible Assets Management Committee of the Corporation.

Based on the Corporation's decision four parent organizations of the holding companies (IS) were selected (JSC NPO High Precision Systems, JSC Russian Helicopters, JSC United Engine Corporation and JSC Schwabe) for the participation in the pilot project for legal protection of key products and basic (critical) technologies. In 2016, in the above named organization the patent strategies have been approved to be implemented until 2025.

The procedure for the international registration of trademark (service marks) of the Corporation in 26 states was continued in 2016. As of the end of 2016, the legal protection was guaranteed for the trademarks of the Corporation in 19 states. Besides, at the initiative of the Corporation in the reporting year was prevented unauthorized partial use of the Corporation's official name (the word «Rostec») as part of names of 60 commercial organizations of the Russian Federation.



5.

JSC Ruselectronics:

- Alagir • Barnaul • Bogoroditsk • Veliky Novgorod • Vladikavkaz • Kirov • Kovytkino
- Moscow • Mytischy • Nizhny Novgorod • Novosibirsk • Omsk • Penza • Pskov • Ryazan • Saratov

- Elektrougli • Volzhsky • Yasnaya Polyana • Zelenograd • Yoshkar Ola • Kaluga • Krasnoyarsk
- Saint Petersburg • Tver • Tomsk • Torzhok • Tula • Fryazino

JSC Schwabe:

- Vologda • Yekaterinburg • Kazan • Krasnoyarsk • Lytkarino • Moscow • Novosibirsk

- Saint Petersburg • Sergiev Posad

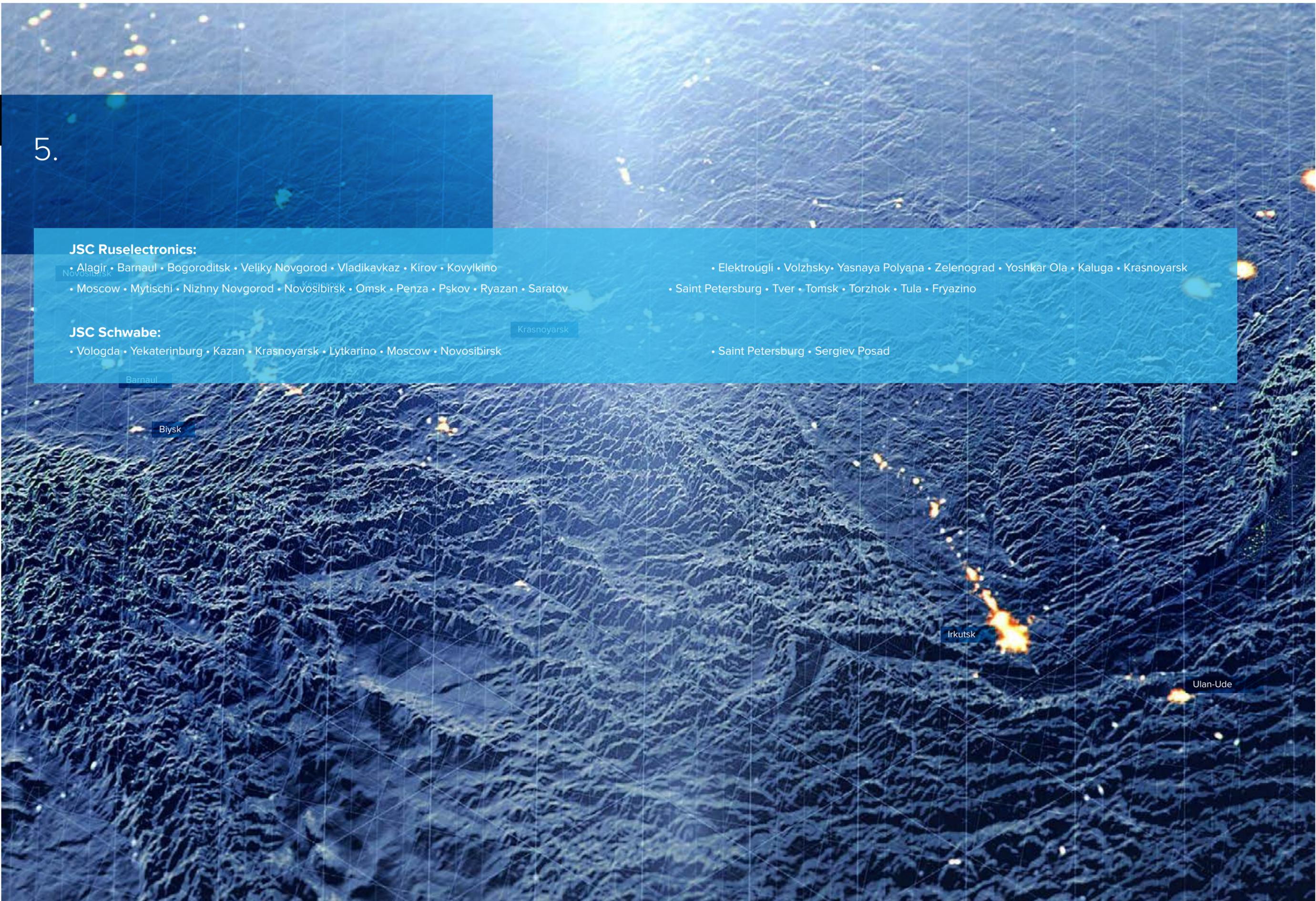
Barnaul

Biysk

Krasnoyarsk

Irkutsk

Ulan-Ude



5. Investment Activities

The Corporation implements a large-scale investment programme for purposes of growth on the existing markets and entry to new markets.

In 2016, the total volume of investments was 142 billion rubles.

The investments are divided into two main components:

- investments to maintain the production volume;
- investments to ensure the target proceeds growth.

The Rostec State Corporation's goal is financing the investment programme using its own funds.

The growth of the investment programme and the deterioration of the federal budget capabilities could be compensated for by attracting the investors to the investment capital of separate enterprises and holding companies of the Corporation.

The Corporation's strategy for the increase of capitalization in commercial advanced technology, resource-oriented and other relevant infrastructure projects is implemented by the special-purpose investment company LLC RT-Business Development using its own funds.



Largest investment projects in 2016

	Key features	Investment attractiveness factors
Karachi-Lahore gas pipeline in Pakistan	Oil and gas projects	
	Project implementation under the inter-governmental agreement between the Russian Federation and Pakistan. LLC RT-ПК was nominated as the project developer on behalf of the Russian Federation. A build-own-operate-transfer (BOOT) project for the term of 25 years Estimated project cost – 2.5 billion USD	Return on investments due to the gas pump fee (take-or-pay in USD) State guarantee of the Government of Pakistan for the project financing and payment of the fee Strategically valuable project for the Government of Pakistan – the lack of electric power limits the economic growth in the country
Sukhoy Log gold field in the Irkutsk Region	Mining projects	
	Reserves are 930 million tons of ore with an average content of 2.1 g/t which is an equivalent of 62.8 ounces of gold 1st stage: 51% – JSC Polyus. 49% – LLC RT-Business Development with further gradual sale of 23.9% by instalments for 5 years 2nd stage: 74.9% – JSC Polyus. 25.1% - LLC RT-Business Development (after the auction)	Largest field (more than 20% of all reserves in the Russian Federation)
Integrated development of the Udokan copper field in the Zabaykalsky Krai	LLC RT-Business Development owns an option for a 25% share in the project Review and approval of the field development project – 2018 Start of construction – 2019 Start of development – 2021 Investments – 4.8 billion USD Development term – 40 years	Second largest field in the world (in terms of reserves) Third largest copper field in the world (in terms of copper content in ore) Low capital intensity and operational costs The Baikal–Amur Mainline connects Udokan with the transport hubs, construction of a power transmission line is included in the investment programme of PJSC Federal Grid Company of United Energy System (FGC UES) Vicinity to China, Japan and South Korea for export purposes Supervisory board of Vnesheconombank approved the bank's participation in the financing of the pre-project stage by capital acquisition to the amount of 11.4 billion rubles
Integrated development of the Itaka gold field	The project is being implemented by JSC Mogoichinskaya Mining Company Project participants: JSC Mangazeya Zoloto (75%, 1 share), LLC RT-GR (25% +1 share)	The field is located in an area of the Chita Region with a developed infrastructure The field consists of two proven sectors of the C1+C2 category and the P1 category Reserves of the C1+C2 category are 63 tons; the raw materials base may be extended at least twice to obtain a site with approximately 100 tons of reserves Average gold content in ore – 9.8 g/t

	Key features	Investment attractiveness factors
Integrated development of coal field in the Amur Region	<p>Project participants: LLC RT-GR - 50%, private partners - 50%</p> <p>The largest coal field in the Russian Far East – 1.5 billion tons of reserves, design volume of extraction - 30 million tons per year</p> <p>Start of development – 2019, attainment of projected capacity – 2025</p> <p>Preliminary budget – 3.6 billion USD, with the state support – 2.5 billion USD (to be determined based on the results of pre-feasibility study)</p>	<p>Lower costs as compared to Russian and foreign producers</p> <p>Lower strip ratio, short shipment distance</p> <p>Convenient logistics: less than 2,000 km to the ports of the Far East</p> <p>Access to the railroad infrastructure – the Baikal–Amur Mainline and the Trans-Siberian Railway</p> <p>High quality of coal</p> <p>Potentially one of the largest exporter of coal with significant reserves</p>
Construction of coal marine terminal in the Primorsky Territory (Port Vera)	<p>Project participants: LLC RT-GR (25% + 1 share), private partners (75% - 1 share)</p> <p>Total area of the site for construction of the terminal – 184 ha</p> <p>Maximum capacity of the I and II stage – 10 and 20 million tons respectively</p> <p>Stage I start – 2018, stage II start – 2019, attainment of projected capacity – 2020</p> <p>Project budget – 664 million USD, with the state support - 370 million USD</p> <p>Preliminary agreements for coal transshipment have been concluded</p> <p>As of today, agreements for cooperation with the Chinese energy, engineering and construction corporations have been entered into to ensure the project financing</p>	<p>Deficiency of special-purpose capacities for coal transshipment in the Far East, independent producers have no access to the market</p> <p>Growth of volumes of transshipment to the countries of the Asia-Pacific Region</p> <p>Distance to the markets of the Asia-Pacific Region - 1,500 km to the ports in China, South Korea, Japan as against 6,500 km to Australia</p>
EPC(M)-contractor	Science, design and construction	
	<p>EPC(M)-contractor includes:</p> <p>Industry-specific scientific institutes: JSC Giprotsvetmet and JSC Institute Gintsvetmet are the leading scientific institutes specializing in the field development design, beneficiation plants and metallurgical plants in the non-ferrous metals sphere, as well as JSC VIOGEM, the leading institute specializing in the field development design, design of water supply and water drainage systems, mining work automation</p> <p>JSC Giprorivs A diversified scientific and production group providing the full range of works from the development of the ore raw materials beneficiation technology, equipment manufacturing, project implementation to the turnkey operation with attainment of the processing parameters against its own financial guarantees</p>	<p>Increase of the investment attractiveness of new and existing mining enterprises</p> <p>Development of breakthrough technologies in the mining sector, including the application of nano-technologies</p> <p>Development of mining projects in Russia, including organization of equipment manufacturing in Russia not manufactured as of the transaction date</p> <p>Development and offer of new mining projects on the market</p> <p>Participation in the expert review of existing and potential mining projects, including the analysis of the ore base</p> <p>Formation of association of mining equipment manufacturers for organization of integrated supplies to the customers both in Russia and abroad</p> <p>Construction of ore processing enterprises or their parts on a turnkey basis with further creation of an internationally recognized brand for full service companies specializing in the implementation of mining projects with any degree of complexity</p>

	Key features	Investment attractiveness factors
Yota Devices	<p>Telecommunications and information technologies</p> <p>Russian team of developers</p> <p>Two generations of smartphones developed</p> <p>A smartphone with cryptographic protection created</p> <p>An electronic textbook for educational institutions was presented in 2015</p>	<p>Third generation of YotaPhone is being prepared for production</p> <p>Top priority markets – Russia and China</p> <p>B2C, B2B and B2G distribution</p> <p>Approximately 100,000 devices sold since 2013</p>
PJSC Corporation VSMPO-AVISMA (25% +1 share)	<p>Portfolio investments</p> <p>One of the few vertically integrated organizations – the leader on the global advanced technology market of titanium products: from titanium bars to all types of semi-finished products made of titanium alloy</p> <p>The corporation is deeply integrated in the global aerospace industry. For many companies, including Boeing, Airbus, Rolls-Royce it is the primary strategic supplier of titanium products</p>	<p>Regular dividend payments</p> <p>Capitalization growth</p> <p>The company's shares are traded on the Moscow Exchange</p>

6. Research and Technology Advancement And Innovative Activities

JSC United Instrument Manufacturing Corporation:

- Saint Petersburg • Veliky Novgorod • Vladikavkaz • Voronezh • Dolgoprudny • Zelenograd
- Rybinsk • Ryasan • Solnechnogorsk • Tambov • Tver • Chelyabinsk

JSC Concern Automation:

- Kaluga • Moscow • Penza • Saint Petersburg • Ufa

- Kalulga • Kimovsk • Krasnodar • Krasnoyarsk • Moscow • Nizhny Novgorod • Penza • Rostov-on-Don



6. Research and Technology Advancement And Innovative Activities

Research and Technology Advancement Programme

In 2016, the Corporation's Board approved the Research and Technology Advancement Programme of the Rostec State Corporation for 2016-2020 (hereinafter referred to as the RTA Programme 2020).

The RTA Programme 2020 is an important supplement to the entire system of the Corporation's measures aimed at ensuring the research and technology advancement and technology upgrade of the scientific and industrial base of its organizations. It is a document containing the scientifically proven ideas of promising areas of long-term research and technology activities of the Corporation.

As part of the RTA Programme 2020 development a Forecast of Science, Equipment and Technology Development Forecast was prepared for the Corporation's lines if activities for the period of up to 2025 and further. The priorities of the research and technology activities of the Corporation and the lists of the critical projected research and technology results for 2016-2020 and the period of up to 2025 were formed on its basis.

The main area of the applied research and development scheduled by the Corporation is the evolutionary improvement of conventional advanced technology industrial products. At the same time, a shift to a brand new industrial product, non-conventional schemes and arrangements, and implementation of brand new concepts are projected.

Most of the innovative products included in the RTA Programme 2020 refer to the R&D results that ensure the research and technology and technical competitive capacity of the Corporation on the global market of innovative products. A serious number of projected R&D results will potentially guarantee the Corporation's leadership on the market of advanced technology industrial products. A part of the expected results is aimed at the liquidation of the research, technology and technical inferiority of the Corporation, and at the import substitution.

Innovative Development Programme Implementation

Pursuant to the Instruction of the Chairman of the Russian Government dated 07 November 2015 No. DM-P36-7563, in 2016 were updated the programme for innovative development (PID) of 14 holding companies and directly controlled organizations for the years 2016-2020 that have been reviewed by the federal authorities (including the Ministry of Industry and Trade of the Russian Federation, Ministry of Economic Development of the Russian Federation and the Ministry of Education and Science of the Russian Federation) and approved by the holdings' boards of directors. The Corporation's PID for 2016-2020 was also reviewed by the federal authorities and approved by the Technology Development Interdepartmental Commission and the Supervisory Board of the Corporation.

The main efforts under the PIDs in 2016 were aimed at the implementation by the Corporation's organizations of R&D tasks, manufacturing of advanced technology products, technology modernization to ensure the implementation of the State Defence Order and the Federal Targeted Programmes, increase of energy efficiency and environmental friendliness of the production processes, creation of the corporate innovative infrastructure.

The RTA Programme 2020 defines the following:

- 76 top priority areas of the research and technology activities of the Corporation until 2025 that have a significant applied potential for the creation, production and sales of highly competitive innovative products on the domestic and foreign markets
- 265 most significant innovative products of the Corporation as part of the top priority research and technology areas
- 645 key industrial basic and critical technologies for further development

A significant portion of R&D was implemented by the Corporation's organizations under the State Defence Order and the Federal Targeted Programmes, i.e. the innovative activities of the Corporation's organization are still focused in the R&D for the state needs. The aggregate volume of R&D financing in 2016 was 110 billion rubles, including 43 billion rubles of own funds of the Corporation's organizations. As a result of these measures, 235 innovative products were commercialized, 66 new industrial technologies were introduced. 886 patents were obtained, 1,290 know-how solutions were developed. The proceeds from the sale of innovative products grew by 38% as compared to the previous year, the share of the innovative products in the total proceeds was 44%. Export of innovative products seriously increased.

During 2016, the Corporation holding companies and organizations actively cooperated with higher educational and scientific institutions for purposes of applied scientific researches and R&D. Higher educational institutions and scientific organizations were engaged as joint contractors for purposes of researched under the state programme or ambitious R&Ds.

The top priority efforts also included measures related to the further training of the employees of the Corporation and the holding companies in the sphere of innovative growth management which is one of the most important conditions for the successful PID implementation. Of special significance is the further training course in the sphere of innovative management at the specialized departments of the Corporation of the Plekhanov Russian University of Economics and the Peoples' Friendship University of Russia having the MBA module «Specialized Management Disciplines: Management of Innovative Development of Partially Government-Owned Companies». In 2016, 189 employees of the Corporation's organizations completed this training course. A prominent feature of training at these departments is its applied nature: the teachers at the department are employees and managers of the Corporation,

its holding companies and organizations. The classes are dedicated to the exchange of experience, discussion of various problems and matters of the innovative development programme.

In the reporting period, a significant attention was paid to the promotion of the Corporation's advanced developments commercialization as part of the small and medium innovative business based on a wide use of open innovation mechanisms and implementation of pilot projects within the holding companies for the purpose of building the corporate innovative infrastructure. 6 small innovative companies were established. R&D cooperation of the Corporation's organization with the higher educational and scientific organizations was extended.

Serious efforts were made to further introduce the open innovation model in the practical activities of the Corporation's organizations, form the elements of the innovative infrastructure (a system for management of innovative competences, a centre of open innovations, etc.). The Open Innovation Centre of the Corporation at the corporate departments of the Plekhanov Russian University of Economics provides assistance to the organization for the introduction and development of open innovation systems and their components through the research, consulting, educational, communications and other programme and efforts, including the preparation and support of the respective management decisions.

In 2016, the Corporation updated the corporate regulatory and methodological documentation dedicated to the PIDs management for purposes of improving the innovative development management system. The corporate criteria for classification of goods, works and services as innovative and the new methodical recommendations on the preparation of annual reports on the PIDs implementation were developed and approved by the decree of the Corporation dated 02 November 2016 No. 133.



7. Sustainable development

JSC National Immunobiological Company:

• Irkutsk • Kolyubakino • Makhachkala • Moscow • Nizhny Novgorod • Perm • Saint Petersburg

• Stavropol • Tomsk • Ufa

JSC Stankoprom:

• Vladimir • Kimry • Moscow • Omsk • Perm • Saint Petersburg • Togliatti • Ulyanovsk



Arsenyev

Vladivostok

7.1 Staffing Policy

Staffing Policy Principles

One of the critical conditions for the achievement of the Rostec State Corporation's strategic goal, i.e. getting on the path of long-term growth and taking the leadership among the global industrial corporations, is the solid and highly qualified team.

As of the end of 2016, the Corporation had 462,000 employees which is 4% higher than in 2015. Considering the industry's specifics, most employees are male. Nevertheless, women have the same opportunities for professional and career development as men.

The Corporation strictly adheres to the laws of the Russian Federation and strives for creation of competitive conditions for the employees, provides opportunities of further training and career development, and implements a wide range of social programmes.

The Corporation pursues the policy for standardization and increase of transparency of the staffing decision-making process: all holdings have staffing committees under the boards of directors and a three-level selection system for appointment to the key posts.

The Corporation also actively introduces the performance control system that allows to combine the corporate, project and individual targets, increase the efficiency of work and the level of employees' motivation.

Training Programme and Cooperation with Higher Educational Institutions

The work at the Rostec State Corporation requires unique knowledge and skills, well-balanced interaction of professionals from various spheres. In view of this the relevance of the staff potential development functions, one of the most important vector of the Corporation's strategy, is getting higher.

The Corporation implements integrated projects for training of employees of the Corporation and its organization in order to provide the conditions for sustainable development. Each year the scope of training grows, and the employees undergo mandatory training and take voluntary professional development courses in various formats, including new formats: breakfast meetings, conferences, meetings with experts.

The Corporation carries out an active work for the staffing that implies cooperation with the leading higher and secondary educational institutions of Russia, including the following areas:

- development of a system for ongoing education of employees;
- development and improvement of a system for targeted contractual training of specialists and further training of staff for the Corporation and its organizations subject to the prospects of development of equipment and technologies;
- development of specialized departments in the organizations of the defence industry and scientific laboratories in vocational educational institutions.

Today the Corporation and its organizations cooperate with more than 200 higher educational institutions and 50 vocational schools under the respective agreements for targeted training of specialists, development of cooperation in various scientific and technology areas, and joint performance of research, engineering and technology works.

The Corporation lays special emphasis on the training of extra-qualified staff. The Joint Dissertation Council D999.058.03 established by the Higher Attestation Committee of the Ministry of Education and Science of the Russian Federation at the initiative of the Peoples' Friendship University of Russia, the Corporation and JSC Central Research Institute Electronica started to effectively operate in 2016. Two candidate's dissertations have already been defended and one doctoral and two candidate's dissertations were accepted for defence. 7 employees of the Corporation participate in the part-time doctoral programme and the post-graduate programme. Graduate of the joint master's programme «Management in the Sphere of Military and Technical Cooperation and Advanced Technologies» at the Moscow State Institute of International Relations of the Ministry of Foreign Affairs N.M. Kuprikov has successfully defended the candidate's dissertation and was admitted to the part-time doctoral programme of the Moscow State Institute of International Relations.

WorldSkills Blue-Collar Workers Championships

Following the signing of the three-years' agreement for partnership with WorldSkills Russia the Rostec State Corporation has acquired the status of the general partner of the WorldSkills Hi-Tech - the largest Russian championship of blue-collar workers from the advanced technology sectors of industry.

The support to the championship helps towards the attainment of the Corporation's global mission – recreation of the working intelligence class and increase of the occupational prestige of qualified labour.

During the WorldSkills Hi-Tech 2016 in Yekaterinburg the Corporation for the first time was represented by a single combined team of more than 40 employees from ten holdings of the Corporation: SC United Engine Corporation, JSC Russian Helicopters, JSC Schwabe, JSC Ruselectronics, PJSC KAMAZ, JSC KRET, JSC UIMC, JSC NPO High Precision Systems, JSC Concern Kalashnikov, JSC Technodinamika. Besides, 29 experts of the Corporation's enterprises also participated in the event.

The Corporation's team specialists proved their competences at the most prestigious national championship and were awarded the first prizes in the «Life Cycle Management» category for the development of an exoskeleton powering the biomechanics of the lower limbs of human body.

The device allows to build up a stepping speed of up to 10 km/h and accelerate up to 30 km/h with the load up to 150 kg. Golden medals were also awarded to the specialists of the «Lathe Work» and «Polymechanics» categories.

Besides, at the Saint Petersburg International Economic Forum the Rostec State Corporation, the administration of the Tula Region and WorldSkills Russia signed an agreement for establishment of a unique Russian educational institution – the Higher Technical School. The complex professions training centre will become a part of the new creative cluster that will be created in the historic centre of Tula at the facilities of the PJSC Oktava's plant.

The first students of the new technical school will be the employees of the Corporation's enterprises, but in the long term any Russian company will be able to send there its employees for a course of studies or a further training course. The school will become a platform for federal and regional WorldSkills championships. This will allow the school students not only study under the teachers, but also the best representatives of workforces from the entire country.



* Total number of the Corporation's employees per budgeting structure in 2016 was 453,000 persons.

7.2 Social Responsibility

The Rostec State Corporation, being a socially responsible employer, pays significant attention to the social problems and the development of the social infrastructure for the best interests of the employees of the Corporation and its organizations. The Corporation carries out the work on the introduction of an integrated social policy pursuant to the instructions of the President of the Russian Federation.

The key tasks for development of the Corporation's social policy in 2016 were the increase of reasonableness and efficiency of social expenses, formation creation of a social policy management system aimed at the achievement of the following goals of the Corporation:

- ensuring the guaranteed social support for all categories of employees;
- standardization of social policy elements, application of the policy tools in all holdings and organizations of the Corporation;
- focus on the attraction/retention of highly qualified specialists possessing the required competences for implementation of the approved Strategy;
- adaptation of the social policy elements to the individual requirements and life plans of the Corporation's employees, development of a personalized approach.

In 2016, the Corporation developed the Unified Corporate Social Policy Standards including the list of social programme, the mechanisms and terms of their implementation for purposes of performing the Corporation's tasks. The standards were prepared following the review of the best practices for social programmes implementation of the leading Russian companies. They consider the positive experience of implementation of the respective programmes by the Corporation's organizations.

The principles of the Standards include the so-called «cafeteria» principle that implies that each employee can choose the components of the corporate social package within the specified limits and the list of social benefits. The mandatory components of packages include the extended welfare assistance and optional medical insurance for employees.

The practical implementation of the Standards will start in 2017.

Social Programmes

Housing Programme of the Corporation

Pursuant to the Housing Programme of the Rostec State Corporation approved in 2015 the corporate support for the employees of the Corporation and its organizations is provided in three key areas:

- compensation or subsidizing of interest/initial instalment under credit agreements for the purchase of immovable property (mortgage);
- compensation or subsidizing of rental and utilities payments;
- organizational, methodological and financial support for housing cooperatives formed by the employees of the Corporation's organizations engaged in the defence industry.

The programme provides for optimization of interest rates for the employees, provision of more attractive terms as compared to the standard market offers. The mortgage programme's participants include the Corporation partner banks, as well as the partner banks of the Mortgage and Housing Financing Agency with which the Corporation has entered into an agreement.

The mortgage programme's participants are selected by the Corporation and its organizations from the list of employees of such organizations based on the professional and social factors and the experience of work at the Corporation.

In 2016, all holdings of the Corporation joined the programme. Most active introduction of the programme is carried out in such companies as JSC Russian Helicopters, JSC NPO High Precision Systems, JSC Technodinamika, JSC Scientific-Production Concern Mechanical Engineering, JSC Rosoboronexport.

In July 2016, a pilot project of the Corporation's Headquarters has been successfully completed. The programme's participants were the employees that were qualified according to the pre-defined criteria and approved by the housing commission that included the Corporation board members, heads of the Corporation's units supervising the social and staffing policy.

The Corporation has established a social fund replenished by the funds received from the sale of non-core assets of the Corporation's organizations of social nature for purposes of creating an additional source for financing the Corporation's Housing Programme and a provision for the long-term social liabilities to the employees.

In 2016, 828 million rubles were allocated for the implementation of the Housing Programme.

Non-State Pension Schemes

A project for consolidation of retirement assets of the Corporation and creation of a single non-state pension fund of the Corporation was started in 2016 through the consolidation of non-state pension funds included in the Corporation's structure (NPF First Industrial Alliance, NPF Avtovaz, NPF Rostvertol). The consolidation is aimed at the increase of efficiency of the Corporation's retirement assets management and development of pension schemes. The Corporation's NPF ultimately joined the pension security system in 2016.

In the reporting year, 850 million rubles were allocated by the Corporation for the additional pension coverage. The return on investment of pension reserves and pension savings was 10%.

Optional Medical Insurance

The optional medical insurance (OMI) programme are being implemented by the Corporation in conjunction with its authorized organization LLC Insurance Agent RT-Insurance and the OMI market leader SOGAZ which allows to offer the best insurance schemes to the Corporation's employees.

In 2016, 1,228 million rubles were allocated for the Corporation's OMI schemes.

Expenses on the OMI scheme, million rubles



Preventive Examinations and Health Assessment

The Rostec State Corporation pays special attention to the matters of work safety, healthcare, prevention of occupational diseases and efficiency of medical treatment of employees at the expense of the Corporation's enterprises.

For purposes of these tasks the Corporation arranged medical services at the enterprise, yearly health assessments and preventive medical examinations for employees which allows to significantly improve the production environment and prevent the diseases. The industrial medicine is being developed using the funds and resources of the Corporation's organizations. Comprehensive schedules of periodic health assessments are being elaborated, mobile medical systems including digital photofluorographs, laboratories, portable ultrasound scanners and MRI units, telehealth equipment are being developed.

Pursuant to the Rostec State Corporation's Social Programme and for purposes of implementing the resolution of the Corporation's Supervisory Board (minutes No. 2 dated 17 March 2016) the clinic of JSC Centraviamed assumed the functions of the primary healthcare unit of the Corporation for periodic health assessments and examinations for employees of the Corporation's enterprises not only in Moscow and the Moscow Region, but also in other large cities of Russia: Saint Petersburg, Stavropol, Ryazan, Kazan, Ufa, Ulyanovsk, Taganrog, Chelyabinsk, Nizhny Novgorod, Kursk, etc.

At the end of 2016 JSC Centraviamed has entered into agreements with 35 enterprises of JSC KRET for medical

treatment and health assessment of more than 40,000 persons: JSC United Engine Corporation's enterprises – for medical treatment of more than 7,000 employees of JSC Gas-Turbine Engineering RPC Salut, more than 1,500 employees of the Federal State Unitary Enterprise Voskresensk Machine-Building Plant Salut and more than 1,000 employees of the A. Lyulka Experimental Design Bureau.

In 2017, a healthcare project engaging the JSC Centraviamed's mobile teams will start with the primary purpose of preservation and promotion of health of the employees of the Corporation and its organizations, increase of the productivity of labour by active identification and treatment of diseases at the initial stage, study and elimination of causes of occurrence and dissemination of diseases, wide use of a system of sanitary and hygiene, preventive and health improving measures.

Occupational Health And Safety

Today, the Corporation's budgeting structure includes 158 enterprises with 722 extremely hazardous production facilities which increases the relevance of the Corporation's responsibility towards the society and control of the related risks.

In 2016, a decision was made on the establishment of the «Industrial Safety» function to be implemented by the Managing Director for Infrastructure Projects. The main tasks of the function are:

- creation of an integrated system for industrial safety in the Corporation;
- assistance to the Corporation's enterprise for implementation of changes in the sphere of industrial safety;
- development of a concept, strategy, system of incentives and a decision-making system in this area.

Implementation of various measures for creation of the integrated industrial safety system of the Corporation has started for purposes of achieving the above named goals, including:

- getting a true picture of the industrial safety status within the Corporation's enterprises;
- elaborating a unified technical policy, standards, requirements and techniques of the Corporation in the sphere of industrial health and safety;
- ensuring the quality of the management decisions made by the officials related to the industrial health and safety measures;
- increasing the corporate culture, forming the corporate values and beliefs, increasing the production culture.

Health Resort Services

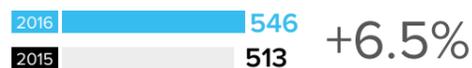
The Corporation has developed and introduced the Procedure for Health Resort Services for the Corporation's Employees which is a socially relevant effort aimed at maintaining the health of the Corporation's staff. The objective of the Procedure is maintenance and promotion of health of the Corporation's employees, prevention of occupational diseases, creation of adequate conditions for a proper rest of employees and, as a result, increase of motivation and productivity of the Corporation's staff.

In 2016, the Corporation continued to develop JSC Zelenaya Roshcha Resort included in its structure according to plan.

In August 2016, construction and commissioning of a new medical and a new SPA centres equipped with the state-of-the-art medical equipment and additional 38 rooms has been completed.

In 2016, 546 million rubles were allocated for the health resort services for the Corporation's employees.

Expenses on the health resort services for staff, million rubles



Social programmes of the Corporation in 2016 in figures

Social expenses volume, billion rubles



Social expenses volume per 1 employee, thousand rubles



Support to Social Events

The Corporation's most important social activities include charity and sponsorship, including the following areas:

- implementation of state social programme;
- development of the social infrastructure of the Russian regions;
- assistance to the efforts in the sphere of education, science, culture, art and awareness, spiritual development of personality;
- support to sports;
- development of a healthy generation, promotion of healthy lifestyle;
- environment protection and preservation of natural resources.

Programme for Perinatal Centres Development in Russia

In 2016, the Corporation continued to implement the Programme for Perinatal Centres Development in the Russian Federation to which it is a participant along with the Ministry of Healthcare of the Russian Federation, the Federal Compulsory Medical Insurance Fund and the authorities of the federal subjects of the Russian Federation.

The Corporation builds and equips perinatal centres in 15 federal subjects of the Russian Federation: in 6 republics – Bashkortostan, Buryatia, Dagestan, Ingushetia, Karelia and Sakha (Yakutia), and in 9 regions – Arkhangelsk, Bryansk, Saint Petersburg, Orenburg, Penza, Pskov, Smolensk, Tambov and Ulyanovsk.

In the autumn of the reporting year the Corporation completed the construction of the perinatal centre in Ufa. A modern clinic with 130 beds is equipped with the state-of-the-art medical equipment with an option of intensive care and nursing for children with congenital pathologies and extremely low body mass. The total cost of construction was 1.9 billion rubles.

In December 2016, a perinatal centre with 170 beds was opened in Orenburg. The centre is equipped with the modern medical equipment and is intended nursing the children with pathologies. The total cost of construction was 2.5 billion rubles.

The perinatal centres were transferred by the Corporation into the ownership of the Republic of Bashkortostan and Orenburg, respectively.

More than 2.5 thousand items of equipment were supplied to the newly opened centres: neonatal tables, phototherapeutic irradiators, heaters and lung ventilators for the newborn, as well as other equipment manufactured by the enterprises of the JSC Schwabe holding.

13 more perinatal centres are expected to be commissioned until the end of 2017.



The Corporation builds and equips perinatal centres in 15 federal subjects of the Russian Federation

Spasskaya Tower Festival

The world's No.1 festival of military bands Spasskaya Tower was again held in Moscow with the Corporation's support.

From 24 August 2016 to 4 September 2016 twenty best military bands from 12 countries of Europe and Asia and an international band of highland dancers appeared on stage at the Moscow Kremlin walls. Silent drill teams from Russia, Belarus, Kazakhstan and Mongolia and the Cavalry Escort of Honour of the Presidential Regiment and the Kremlin Riding Academy presented their repertoire.

Approximately 75 thousand visitors watched the show live at the Kremlin walls, and one million people watched the TV broadcast. A part of the audience visited the festival for free as part of the charity programme.



The world's No.1 festival of military bands Spasskaya Tower was again held in Moscow with the Corporation's support

International Fireworks Festival «Rostec»

On 23-24 July 2016, the second International Fireworks Festival «Rostec» was held in Moscow.

The festival participants included the best teams from eight countries who demonstrated the latest developments of pyrotechnics. The competitive programme was dedicated to the cinema: 25 tons of pyrotechnics were used to make more than 50 thousand shots to the height of 300 metres to the music from popular motion pictures.

The winners were selected by the judges. The grand prize was awarded to the team from China, the first prize was awarded to the specialists from Kazakhstan, second – to the team from Azerbaijan, third – to Russian fireworkers. A special prize was awarded by the judges to the guests from Portugal.

In two days the show was watched by more than 500 thousand people.



On 23-24 July 2016, the second International Fireworks Festival «Rostec» was held in Moscow

National Programme «Ice Moscow. In the Family Circle»

During the New Year holidays a spectacular ice town «Ice Moscow. In the Family Circle» was opened on the Poklonnaya mountain with the support of the Corporation and the Moscow City Government. In the period of 30 December 2015 to 11 January 2016 it was visited by more than 300 thousand people.

Moscow residents and visitors to the capital could see the unique exhibition of ice sculptures, watch an entertainment show, participate in various funny winter games and buy Christmas gifts at the fair. All this – s single New Year project organized by the National Programme «In the Family Circle».



Первый всероссийский фестиваль промышленности «ТулаТех»

In June 2016, the Rostec State Corporation and the Government of the Tula Region and investor Mikhail Shelkov have signed an agreement for implementation of a unique investment project in the region. The project implies the construction of the creative industrial cluster located in the heart of Tula.

The factory complex with an area of approximately 45 thousand sq. m. will include the Higher Technical School managed by the Corporation, a children's technology park «Quantorium», common office spaces for young businessmen engaged in the advanced technologies and production sectors, a hotel complex for students, children and young specialists.

In August 2016, the Corporation held the first centralized corporate championship of blue-collar workers «Young Professionals» according to the WorldSkills standards at the premises of the already upgraded Oktava plant. More than 120 workers of the Corporation participated in the championship. Following the championship, the First All-Russian Industrial Festival «TulaTech» was held on the Oktava territory with the purpose of promoting interest towards the blue-collar professions. The event was attended by more than 3,000 residents of Tula.



The Corporation held the first centralized corporate championship of blue-collar workers «Young Professionals» according to the WorldSkills

IV All-Russian Forum «Future Intellectual Leaders of Russia»

The Corporation became the official partner of the IV All-Russian Forum «Future Intellectual Leaders of Russia» that was held from 21 to 24 November in Yaroslavl. The forum gathered 500 talented school students from all parts of Russia – winners of contests and competitions in the sphere of creative science, technology and natural sciences, holders of patents and authors of inventions.

For purposes of the Forum the Corporation holdings JSC Russian Federation, JSC Technodinamika, JSC UIMC and JSC Stankoprom have developed business cases that were solved by the participants with the assistance from the leading design engineers of the Corporation's enterprises.

Three school students were awarded by JSC UIMC with certificates, diplomas, laptops, watches with the corporate identity marks. The main prize – a certificate for employer-sponsored education in the leading higher educational institutions of Moscow – was awarded to a student of 11th form for the successful solution of engineering problems in the sphere of unmanned aviation.



The Corporation became the official partner of the IV All-Russian Forum “Future Intellectual Leaders of Russia”



The VI International Industrial Youth Forum “Engineers of the Future 2016” was held on the territory of the Chekeril complex in the Republic of Udmurtia

International Industrial Youth Forum «Engineers of the Future 2016»

With the support of the Corporation, the VI International Industrial Youth Forum «Engineers of the Future 2016» was held from 8 to 18 July 2016 on the territory of the Chekeril complex in the Republic of Udmurtia.

More than 1,500 people participated in the Forum, 200 spokesmen gave lessons as part of the educational programme. The Forum's site was attended by about 120 guests – heads of corporations, scientists and businessmen – who held more than 130 round tables dedicated to various topics as part of the Forum's business programme.

The «Engineers of the Future» Forum is an educational summer camp for young engineers, designers and production engineers. Approximately 120,000 young specialists, scientists, candidates and students participated in the event in six years. More than 350 industrial companies and 70 higher educational institutions from 60 regions of Russia participate in the Forum each year.

Digital Industry of Industrial Russia 2016

The Rostec State Corporation became one of the strategic partners of the First Annual Conference «Digital Industry of Industrial Russia» (DIIR) that was held on 7-10 June 2016 in the Innopolis town of the Republic of Bashkortostan – the first Russian town build in the XXI century for purposes of creating a unique eco-system promoting the development of the IT industry and advanced technologies in the Russian Federation.

DIIR 2016 is a central Russian event dedicated to the problem of global technological development of the Russian industry. The main agenda included the issues of applying the electronic component base and modern IT in the industry, elaboration of a roadmap for the Russian electronics development and the foresight of industry sectors digitalization until 2035.

In four days DIIR 2016 was attended by more than 3,000 people, 45 panel sessions and 12 special events were held, 270 spokesmen, heads of the relevant ministries and largest industrial holdings and corporations presented their reports. More than 100 Russian and international companies participated in the conference.

The conference provided a great number of opportunities for the representatives of small and medium business whose portfolio includes electronics and software development solutions. Corporations and holdings can assist in deploying such solutions in the relevant sectors of the national economy.



The Rostec State Corporation became one of the strategic partners of the First Annual Conference “Digital Industry of Industrial Russia 2016”

BIOTECHMED

The Rostec State Corporation became a strategic partner for the largest Russian biotechnologies conference «Biotechmed». The event was held on 26-27 September in Gelendzhik at the Corporation's initiative and with the support of the Ministry of Industry and Trade of the Russian Federation and the Ministry of Healthcare of the Russian Federation.

The conference became the flagship site for biotechnologies and the next generation medicine of Russia. The forum combined the advantages of a scientific conference in terms of expert exchange of opinions and an exhibition space for the current and objective assessment of the sector's development prospects and informed decision-making.

The Corporation presented the developments of its subsidiaries at the conference: LLC NCI, JSC UIMC, JSC KRET and JSC National Immunobiological Company. JSC Schabe holding was the general partner of the conference and presented a new laser microscope MIM-340 capable of creating a «live» 3D-image of a cell nucleus and could guarantee a Russian breakthrough in the sphere of pharmaceuticals development and pre-clinical trials.



The Rostec State Corporation became a strategic partner for the largest Russian biotechnologies conference "Biotechmed"

Children's Technology Parks «Quantorium»

The Corporation is a partner of the network of children's technology parks «Quantorium».

By the end of 2016, in addition to the 7 already existing parks 17 new parks were built in different regions of Russia – from the Khabarovsk Territory to the Kaliningrad Region. Today, there are 24 modern technology parks in 19 regions for children and the youth. This means that 12,000 children could get an ongoing education in the modern technology fields of study in such centres.

Many production facilities are expected to cooperate with future technology parks and their developments could assist in the work of companies. Children will attend various events, get acquainted with their work and solve problems of improvement of production processes.



Tolstoy Weekend Theatre Festival

The Rostec State Corporation became the General Partner of the Tolstoy Weekend Theatre Festival dedicated to the great Russian writer Leo Tolstoy. The Festival was held from 9 to 11 September 2016 at the «Yasnaya Polyana» memorial estate.

The «Yasnaya Polyana» festival gathered theatre ensembles that presented their interpretations of Leo Tolstoy's works.

The visitors watched theatrical performances by the Chekhov Moscow Art Theatre, the Theatre of Nations, the Vsevolod

Meyerhold Centre, the theatre «U Nikitskikh Vvorot», the Lipetsk State Drama Theatre named after Leo Tolstoy. The audience was surprised not only by the individual interpretations of Leo Tolstoy's works performed by the recognized masters of the theatre realm, but also by young companies. Tickets for all performances were sold out.

The «Yasnaya Polyana» festival was attended by about 3,000 people.



The Rostec State Corporation became the General Partner of the Tolstoy Weekend Theatre Festival

Discovering Utopia: Forgotten Records of Russian Designers

The Corporation became a partner of the exhibition of the Moscow Design Museum called «Discovering Utopia: Forgotten Records of Russian Designers» held in September 2016.

The exhibition took place on London as part of the First London Design Biennale. The visitors got acquainted with the unknown pages of the Soviet design history.

The display that reconstructed the system for storage of information materials in the Soviet scientific and research institutes for the first time showed the unique records of industrial designers of 1960-1980's from the collection of the Moscow Design Museum.

During the high-profile award ceremony of the First London Design Biennale the display was awarded the golden medal for the most accurate interpretation of the biennale's topic - «Utopia Design».



International Women's Tennis Tournament «St. Petersburg Ladies Trophy-2016»

The International Women's Tennis Tournament «St. Petersburg Ladies Trophy-2016» was held in Saint Petersburg with the Corporation's support.

The WTA tournament that was held in Saint Petersburg for the first time ever became a really interesting and bright event for all sports lovers in Russia. The organizers managed to gather an impressive entry list: four tennis players from the Top-20 became the images of the «St. Petersburg Ladies Trophy-2016» Tournament – young and promising Swiss player Belinda Bencic, runner-up of the US Open-2015 Roberta Vinci, former world No.1 Caroline Wozniacki and Ana Ivanovic.

The Corporation's holding JSC Russian Helicopters became the general partner of the tournament.



Russian Mountaineering Federation

For several years the Corporation's organization JSC Rosoboronexport has been a sponsor of the Russian Mountaineering Federation. The Federation provides specific training for soldiers and officers of the Russian Armed Forces who go on missions in highland areas.

In the summer 2016, as part of the «Vysota» project supported by JSC Rosoboronexport 7 mountaineers set a new world record for the number of participants who climbed five seven thousand-meters peaks during one season.



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Russian Ice Hockey Federation

Since 2006 the Corporation's organization JSC Rosoboronexport has been an official partner of the Russian Ice Hockey federation and the Russian men's national ice hockey team.

The funds contributed by JSC Rosoboronexport in the development of the resources and facilities, holding of children's and youth tournaments, preparation of the national team become one of the main components of the glorious victories of the ice hockey players at the most important world tournaments.



JSC Rosoboronexport is an official partner of the Russian Ice Hockey federation and the Russian men's national ice hockey team



«Krylya Sovetov» Ice Hockey Team

The Rostec State Corporation and the TNS Energo Group have joined their efforts to return the legendary ice hockey team «Krylya Sovetov» to the elite sports.

To that end a new legal entity was formed – Autonomous Non-Profit Organization «United Ice Hockey Club «Krylya Sovetov». The development strategy for the next three years has been approved, the key staff of the club has been selected and the main marketing tools have been created.

In 2016-2017 the youth team of the club played in the Division A of the Youth Ice Hockey League. In three years it is expected that a master team with the same name will be created with a view to play in the Kontinental Hockey League.

Football Tournament «Rostec Super Cup 2016»

In December 2016, the winter championship «Rostec Super Cup 2016» was held at the «Lokomotiv» stadium. The tournament was the largest Russian corporate football competition held in a 8-a-side format.

The event was organized by the Physical Training and Sports Support and Development Fund, the Corporation and Sovintersport company. JSC Scientific-Production Concern Mechanical Engineering was the sponsor of the competition in 2016.

The leading holding companies of the Corporation and other large Russian industrial enterprises participated in the tournament.

Besides, the final winter futsal tournament «Rostec – New Year Corporate Cup» was held on 18 December with the participation of 16 teams of the leading Russian enterprise and organizations. The best team in 2016 was the team of JSC Russian Helicopters.



In December 2016, the winter championship “Rostec Super Cup 2016” was held at the “Lokomotiv” stadium. The tournament was the largest Russian corporate football competition held in a 8-a-side format

CSKA Football Club

The Corporation's holding JSC Russian Helicopters continued its partnership with the CSKA football club. The parties have entered into an agreement for cooperation effective until March 2017.

In 2016, CSKA won golden medals in the Russian Football Championship and confirmed the status of the most award-winning club of our country. The long-standing partnership between the holding and CSKA strengthens the reputation of the Russian sports on the global arena and promotes the healthy life style among the youth. Thus, the holding makes its contribution to the social and economic development of the country.



«Arsenal» Football Club

In April 2016, the Corporation became a strategic partner of the professional football club «Arsenal» The general sponsor was JSC NPO High Precision Systems, one of the Corporation's organizations.

The agreement is aimed at the support and development of mass sports in Tula at the facilities of the «Arsenal» PFC.

The Corporation will help the club build a modern management system, marketing communications, and will participate in the infrastructure development together with the regional and the municipal administration. The Corporation will also assist the club for updating its strategy, identification of gaps and means of eliminating them.



In April 2016, the Corporation became a strategic partner of the professional football club “Arsenal”

Cycling

In 2016, JSC Rosoboronexport supported the Russian Cycling Federation and the women's national team «Katyusha» during the preparation to the XXXI Summer Olympics in Rio de Janeiro (Brazil). The qualitative preparation to the competition, persistence and commitment of our female athletes brought the Russian team silver medals. Anastasia Voynova and Darya Shmeleva won silver medals in bunch sprint.



7.3 Anti-Corruption Practices

The Corporation takes anti-corruption measures pursuant to the federal laws, decrees of the President of the Russian Federation, orders of the Russian Government and statutes of the Ministry of Labor and Social Protection of the Russian Federation.

In the reporting year, the work in this area was carried out in compliance with the Anti-Corruption Plan of the Rostec State Corporation for 2016-2017 developed as per the Decree of the President of the Russian Federation dated 01 April 2016 No. 147 «On the National Anti-Corruption Plan for 2016-2017».

An “Anti-Corruption” section was created on the official website of the Corporation with regularly added and updated information as per the requirements of the laws

The approved plan was implemented in the following areas:

Development of the regulatory framework

The legal framework of the Corporation was updated based on the requirements of the anti-corruption laws. In 2016, ten statutes of the Corporation regarding the anti-corruption practices were elaborated and put into effect.

Following the organizational and staffing measures a systemic analysis of the job descriptions of employees, the provisions on the organizational units of the Corporation was performed, an assessment of corruption risks related to the functions of employees (organizational units) which resulted in the review and update of the following:

- list of positions requiring presentation of information on the incomes, expenses, assets and property liabilities (hereinafter referred to as – income and property information) by the Corporation’s employees who are appointed to such positions or fill in the vacancy, and whose substitution is connected with corruption risks;
- list of positions whose substitution entails the prohibitions enlisted in Article 349.1 of the Labour Code of the Russian Federation;
- list of positions whose substitution entails the prohibitions stipulated by the provisions of the Federal Law dated 07 May 2013 No. 79-FZ «On the Prohibition to Open and Maintain Accounts (Deposits), Save Personal Funds and Valuables in Foreign Banks Located Outside the Russian Federation, Own and/or Use Foreign Financial Instruments by Certain Categories of Persons»;
- list of positions whose substitution entails publication of the income and property information on the Corporation website.

Anti-corruption control and corruption risks management

Anti-corruption expert review was carried out in relation to more than 20 of draft statutes and the existing statutes and executive directives of the Corporation.

The activities of the commission for compliance with the requirements to the official behaviour of the Corporation’s employees and settlement of the conflict of interests have been ensured. During the reporting period 3 meetings were arranged and held at which the results of the Corporation’s employees audit were reviewed.

Efforts aimed at collection of the income and property information related to the Corporation’ employees and their families have been taken. During the reporting period 733 statements (including statements of family members) of incomes of 292 employees have been presented.

During the reporting period a preliminary analysis of 348 sets of materials presented by the Procurement Commission has been carried out to identify the signs of corruption factors.

A «trust line» was arranged in the Corporation in order to provide the employees and organizations timely inform of corruption signs in the Corporation, and a «hot line» has been arranged together with other competent units of the Corporation. The respective information has been published on the website.

Further Training of Employees

In 2016, 22 employees of the Corporation and 113 representatives of 69 organization of the Corporation took education courses and underwent further training at the premises of LLC RT-Complectimpex, the Rosatom Corporation’s Academy, the Scientific Research Institute for Standardization of Defence Products and Technologies (Rosoboronstandard). For purposes of legal and anti-corruption awareness raising among the Corporation’s employees 46 specialized events were held.

Interaction with the State Bodies and Non-Governmental Organizations

Anti-corruption information exchange and planning and implementation of joint measures was arranged as part of the Corporation’s cooperation with the law enforcement authorities.

7 corruption-related criminal cases were initiated based on the materials provided by the Corporation, 200 million rubles of damages were compensated under the pending cases, a threat of assignment of the federal property with the cost of more than 460 million rubles was eliminated, damage to the amount of more than 120 million rubles was prevented.

A visiting session of the inter-agency work group consisting of representatives of the state corporations of the Russian Federation was arranged at the premises of the Corporation with the participation of representatives of the Presidential Administration of the Russian Federation, the Prosecutor’s General Office of the Russian Federation, the Ministry of Labour and Social Protection of the Russian Federation, the National Anti-Corruption Committee where various anti-corruption practices were reviewed.

In 2016, the Agreement for Anti-Corruption Cooperation was signed by the Corporation and the National Committee for Public Control as part of the cooperation with civil institutions.



DISCLAIMER

Some statements contained in this annual report of the Rostec State Corporation are based on forecasts of future events. Such statements contain the terms referring to the future nature of an event, including (but not limited to) the words «considers», «assesses», «expects», «assumes», «plans», «could», «intends», «will», «must», their equivalent negative forms, phrases with similar meaning, as well as discussions of strategies, plans, goals, tasks, future events or intentions of the Corporation.

Statements of the forecast nature may include (without limitations) the following information:

- assessment of the Corporation's future operational and financial results as well as the forecast of the factors having an effect on the current value of future cash flows;
- the Corporation plans for construction and upgrading of industrial facilities, as well as scheduled capital investments;
- the Corporation's product demand behaviour and plans for development of new products, as well as pricing plans;
- plans for the improvement of the corporate governance practice in the Corporation;
- the Corporation's future industry position and forecasts of the development of market segments the Corporation works in;
- possible regulatory changes and the assessment of effect of various statutes on the Corporation activities;
- other plans and forecasts regarding future events.

The above statements that contain forecasts related to future events are subject to the effects of risk and factors of uncertainty, which may result in the non-conformance of the forecasts with the actual results. The Rostec State Corporation therefore does not recommend that readers unreasonably rely on any information in this annual report with respect to future events. The Corporation assumes no obligations to publicly revise these forecasts, neither in an attempt to reflect the events or circumstances taking place after the publication of this annual report, nor aiming to refer to an unexpected event, except as needed in accordance with legal requirements.

Annual Report in the Virtual Reality Format

You can review the key information from the annual report of the Rostec State Corporation with the help of the **virtual reality technology**.



In order to do so you need to enter the following address in your smartphone's web browser:

vr2016.rostec.ru



A 360° spherical video panorama will open.



If you use VR glasses, press the "Glasses" icon (right bottom side) to open the stereo image.

