IMMANUEL KANT BALTIC FEDERAL UNIVERSITY
POLICIES TO IMPROVE ACADEMIC COMPETITIVENESS WITH THE LEADING
HIGHER EDUCATION INSTITUTIONS OF THE WORLD
FOR 2016-2020

Rector of IKBFU

A. Klemeshev_____

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1. Strategic goals and annual performance indicators

The strategic goal of the IKBFU is to increase and secure competitiveness in the national and global markets of university education and R&D through developing competences in new areas and activities in line with the breakthrough achievements in the field of biomedical, neuro- and nanotechnology.

The achievement of the University strategic goals will be complete as soon as the following target performance indicators have been reached:

Table 1

Target performance indicators

No.	Performance indicator	Unit	2016	2017	2018	2019	2020
1.	The University world ranking position						
1.1	Position in the ARWU World Top 500 (Academic Ranking of World Universities)	ranking position	0	0	0	0	0
1.2	Position in the ARWU-field/subject	ranking position	0	0	0	0	0
1.3	Position in the THE (The Times Higher Education World University Rankings)	ranking position	0	0	0	0	0
1.4	Position in the THE subject ranking	ranking position	0	0	0	0	0
1.5	Position in the QS World University Ranking	ranking position	0	701+	701+	651-700	551-600
1.6	Position in the QS subject ranking	ranking position	0	0	0	301-350	301-350
2.	Number of publications in the Web of Science and Scopus, excluding duplicates, per member of the academic staff	ranking position					
2.1.1.	Number of publications in the Web of Science per member of the academic staff (over a five year period)	number	0.30	0.38	0.48	0.84	1.62
2.1.2.	Number of publications in the Web of Science per member of the academic staff (over a three year period)	number	0.27	0.36	0.44	0.80	1.56
2.2.1.	Number of publications in Scopus per member of the academic staff (over a five year period)	number	0.32	0.39	0.48	0.86	1.66
2.2.2.	Number of publications in Scopus per member of the academic staff (over a three year period)	number	0.30	0.36	0.44	0.84	1.62
3.	Average citation index per member of the academic staff based on the total number of articles in the Web of Science and Scopus, excluding duplicates						
3.1.	Average citation index per member of the academic staff based on the total number of articles in the Web of Science	number	0.38	0.42	0.63	0.87	1.16
3.2.	Average citation index per member of the academic staff based on the total number of articles in Scopus	number	0.34	0.4	0.62	0.86	1.14
4.	Ratio of international professors and researchers in the total academic staff, including Russian citizens holding PhD degrees from international universities	%	3	3.5	4	5.5	7
5.	Number of international students currentlu enrolled in the University major educational programmes (including students from the CIS countries)	%	4.64	5.02	5.4	5.78	6.16
6.	Average United State Exam (USE) score of the University state funded full-time Bachelor and five year Specialist degree students	score	71.5	71.5	71.5	72	72
7.	Share of non-state funding in the University income structure	%	37	39	43	47	50
8.	Non-state income from intellectual property management	million roubles	0.9	1.2	7.5	11.8	12.1

9.	Share of the academic staff under the age of 35	%	23	25	27	29	30
10.	Share of Master and post-graduate students holding degrees obtained from other universities currently enrolled in graduate and post-graduate programmes	%	32	35	39	43	47
11.	Number of foreign citizens studying Russian at the University	people	150	200	250	300	350
12.	R&D revenue per member of the academic staff	thousand roubles	308	312	316	420	460

2. Target model of the university

2.1 University mission

The University mission is to develop into a national leader in new areas based on breakthrough achievements in biomedicine, neuro-, and nanotechnology; to become a trendsetter in technology; to train internationally competitive professionals.

To deliver the Mission, the University will focus on three interdisciplinary priorities selected in view of the global technological trends and promising international markets of labour, goods, and services independent of the regional and national conditions. The 'pull' priority is R&D in biomedicine and neurotechnology aimed at creating goods and services for better quality of life and improved life expectancy.

The 'associated' priority is to secure the transfer of results obtained through fundamental biomedical studies to production.

The 'supporting' priority is information and communications technology facilitating accelerating knowledge generation and transfer, as well as the introduction of technologies to the national and global markets.

The identified priorities meet the requirements of the national R&D policy and correspond to other projects – the national technological initiative and national pull projects with a substantial innovative component.

The three interdisciplinary areas make it possible to integrate all competitive areas developing at the IKBFU as a classical university. Innovative results have been achieved in these areas.

Identifying biomedical and neurotechnology as a 'pull' priority corresponds to the model and opportunities of a classical university. It makes it possible to give a new impetus to the development of fields of knowledge traditional for a classical university. The basic component of neurotechnology is biology studying the functional models involved in developing artificial cognitive systems. This will require a contribution from mathematicians (neural network models, algorithms of brain function visualisation), engineering scientists (materials science and electronics), linguists (neuromorphic low-level programming

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languages similar to natural languages), philosophers (studying the public attitude to the new pattern of interactions between humans and the technology), economists, and specialists in other sciences.

In view of limited recourses (pertaining to the staff, finances, connections with traditional industries), the model for improving the IKBFU competitiveness is based on inviting new permanent employees with work experience at the leading research and educational centres specialising in the selected interdisciplinary priorities.

Unlike the system for inviting individual researchers widely used at the pervious stage of the University development (2007-2015), the new model of accelerated development uses the group approach – the formation of cohesive and balanced project teams (laboratories) working in the priority areas.

The following tools will be used to implement this Programme:

— introducing network education programmes in collaboration with Russian and international educational institutions, research centres, and engineering and production facilities;

— pioneering educational and technological infrastructure objects (university clinic, experimental clinic, neurotechnology centre, technology park, etc.) in Russia;

— attracting best applicants for Bachelor and Master degree programmes, post-graduate programmes;

— creating an efficient system of support for talented young researchers and instructors;

— establishing independent expert institutions for developing an HR policy;

— encouraging world-class research, including research done with the leading international educational and research institutions, and large companies;

— developing a system for encouraging young researchers and creating a business environment at the university;

— participating in the formation and organisation of the work of the National technology platform.

The result will be a qualitative change in the approach to staff training aimed at setting up creative teams (in a long term, international companies). Graduates will be able to design new activities, produce creative solutions to technological and marketing problems, create promising products and services, run innovative projects, set up teams in the situations of

uncertainty and lack of resources, prove their efficiency with actual results, and respond to new challenges in a changing situation.

Constant improvement of the IKBFU international ranking requires addressing three major issues:

1) an increase in the level and quality of publications (at least 400 publication cited in the Web of Science per year);

2) at least a double increase in the funding received through R&D (hi-tech services) as compared to 2014, including intellectual property income;

3) enhancement of the international academic community's awareness of the University, primarily through implementing the University new communication strategy.

Achieving these objectives will make it possible to eliminate the existing discrepancies (see Section 3 of the Programme) and secure – while retaining the current size of the University – an increase in competitiveness observed in influential international rankings (a mid-term primary reference is the QS WUR).

The major drivers behind increased competitiveness will be research teams set up under the supervision of leading researchers, research professors integrated in the functioning IKBFU institutions, and young academics participating in priority studies. Although this programme considers these categories of employees under different sections, the HR policy will be pursued through coordinating these categories.

2.2 Reference universities

Universities of different categories having strategic characteristics relevant to the IKBFU model were selected as reference group members:

— Far East Federal University (FEFU) – a federal university located in Vladivostok;

— Petrozavodsk State University (PSU) – a multidisciplinary classical university in the city of Petrozavodsk, Karelia;

— Politechnika Gdańska (PG) – one of Poland's leading technical universities located in Gdansk, the Pomeranian voivodeship;

— National University of Ireland Galway (NUIG) – one of the four constituent universities of the National University of Ireland located in County Galway;

— Virginia Commonwealth University (VCU) — a pubic research university located in the city of Richmond, Virginia.

Table 2

Key characteristics of the reference universities (2014)

Characteristic	unit	PSU	FEFU	PG	NUIG	VCU
Number of students	thousand people	16.7	22	25	17.3	31
Total R&D funding	million roubles	283.2	792	1978[**]	3620.5	16900[*]
QS World University Rankings 2014/15	ranking	-	701+	-	280	551-600
QS University Rankings: BRICS 2015	ranking	151-200	98	-	-	-
Number of 2010-2014 publications in Scopus	units	279	1646	3458	6733	8653
University status	-	public	public	public	public	public

The selection of reference universities was based on the following criteria:

1. The University QS World University Rankings;

2. University public status;

3. Correspondence to the classical university model;

4. A strong research and academic performance in medicine and/or medical biotechnology;

5. Comparable number of students;

6. Massive R&D funding;

7. Other characteristics (coastal/border position; focus on the socioeconomic problems of the home region).

Table 3

Competitive advantages of the reference universities

	Competitive advantages
PSU	High level of the academic staff (53 % hold a doctoral and 14 % a postdoctoral degree, including 7 corresponding members of the Russian Academy of Sciences and the Russian Academy of Medical Sciences, 4 fellows of the Russian Academy of Sciences and the Russian Academy of Architecture and Construction Sciences), a wide range of academic and research areas (programming, information technology, plasma studies, microelectronics, mathematics, physics, medicine, biology, etc.)
FEFU	Unique estate and facilities (a modern campus of an area of 800,000 sq. m); strong research performance (total research funding reached 791 million roubles in 2014), including medicine; strong academic performance.
PG	A wide range of academic and research areas, including unique ones ('mechanical and medical engineering' and 'construction chemistry'); support for research, infrastructure, and educational projects from European foundations (1,978 million rouble support received in 2013)
NUIG	A high research level (over 40 patented discoveries and 1420 indexed articles a year); high intellectual property income (approximately 40 million euros a year); high graduate employment rate (above 93%); high international ranking
VCU	Strong research performance; a large number of master degree and PhD students (112 out of 220 education programmes); advanced healthcare research; tools to attract and secure highly qualified specialists; an endowment fund (562 million dollars in 2013)

2.3 Marketing strategy: description and selection of target markets

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[**] 2013 data
[*] 2011 data

2. Market of research

The IKBFU major marketing strategy is based on securing a leading market position among national universities in neurotechnology (in the framework of the Neuronet national technological initiative).

The Neurotechnology and Genetic Engineering Technology complex projects are pilot for the University. They are breakthrough projects implemented in the framework of the Programme at the interface of biology, medicine, and computer science. It is planned to implement the project results into practice at the IKBFU Institute of Medicine (functioning since 2006) and the licensed IKBFU Clinical and Diagnostic Centre (since 2012) and the IKBFU Institute of Chemistry and Biology (2014).

To ensure the transference of the Programme research results into practice, a university clinic will be designed and equipped.

Promising research markets are analysed below according to their profile.

Profile: **Neurotechnology.**

The following market segments are identified in the current global neurotechnology research market: research on software and biometric solutions to support brain health; development of deep brain stimulation devices; designing artificial organs and prosthetic limbs and implants including bionic ones; research into cognitive activity stimulation; brain monitoring studies, etc. It is an emerging market, whose output is technological solutions (results of fundamental and experimental research), unique limited issue solutions, prototypes, and trial consignment.

However, the demand for innovations is increasing in these markets. In Russia, nervous system, mental, and behavioural disorders account for more than 60,000 new disability cases a year. The total number of patients diagnosed with mental and behavioural disorders is above 1.5 million people in the Russian Federation, including 150,000 people in the Northwestern federal district and 7,000 in the Kaliningrad region. The international and national incidence statistics suggest an increasing demand for the results of research in the field.

The development of Neurotechnology makes it possible to combine obtaining cutting-edge research results and transferring them into academic and medical practice. The University has the potential to become one of the leaders in the following research areas:

— emotional activity monitoring using EEG and eye tracking;

— developing methods and platforms for differentiating glial interaction in the cortex;

— mechanisms of vesicular glial transmitter transportation;

— using the principles of neuromorphic schemes in developing self-learning algorithms;

— cortex-orphic neural network architectures;

— brain neural schemes;

— a metabolic model of the human brain;

— cognitive modelling of the human and communities;

— opt physiology;

— Neural cognitive systems for controlling virtual agents and robotic systems.

In these areas, the University plans to collaborate with the following companies and organisations: the Institute of Higher Nervous Activity and Neurophysiology of the Russian Academy of Sciences, Kurchatov Institute, Skolkovo Institute of Science and Technology, Moscow State University, OOO Neurobotics, University College London, California Institute of Technology, etc.

Profile: **Genetic engineering technology**

This specialisation emerged in the framework of the 'medical biotechnology' field of study actively developing at the University over the past five years. Its development prospects at the IKBFU lie in the field of combination treatment bringing together hormonal, immunological, physical, and minimally invasive surgical methods.

All areas of support for translational medicine – molecular genetics, post-genomic studies, proteomics, molecular physiology, genetic engineering, and bioinformatics – are developing at the University.

The University can secure niches in the following areas of genetic engineering:

— managing the features of genome editing systems based on the gRNA modification;

— creating a universal system for transporting genome editing systems into mitochondria;

— creating the artificial mitochondrial genome;

— developing CRISPR/Cas9-based genome editing systems for editing the mitochondrial genome;

— using genome modification systems to reduce the antibiotic resistance of malignant bacteria;

— modifying immune system cells for accelerated treatment;

— synthesising fluorescent DNA analogues;

— creating a Parkinson model based on the modification of expression of gene neurons in laboratory mouse.

In this areas, the University potential partners and customers are the following companies and organisations: Novosibirsk National Research University, OOO Sintol, ChemRar high-tech centre, Microgen research and production facility, Human Stem Cells Institute, etc.

Profile: **Marine microbiology**

The development of this specialisation based on the University beneficial coastal position makes it possible to build a strong platform for creating modern bioremediation technology, environmental and industrial biotechnology, and models of systems of bioindicators for assessing environmental pollution. On the one hand, the introduction of such technologies will make it possible to secure the niche of marine microbial biotechnology, which is virtually empty in the Russian market, and direct the marine industry towards a better use of renewable resources. On the other hand, the bioprospecting technology makes it possible to obtain new industrial enzymes and low molecular weight biologically active substances (antibiotics, pharmaceuticals), which will give impetus to the development of high-tech biomedical products.

The bioremediation technology designed to liquidate oil spills in the World Ocean will make it possible to minimize negative environmental impact on the Russian seas and increase the economic performance of the fisheries and fish processing industry.

The development of these research and technology services markets will make it possible to implement projects within the World Ocean Federal Target Programme.

*Profile***: Nanomaterials**

Nanotechnology is one of the most rapidly developing research markets in the world. Over the past ten years, the US and China have been field leaders in the number of publications. Top 20 countries conducting research in the field of materials science and nanosystems include Germany, Japan, France, India, South Korea, the UK, Spain, Italy, Taiwan, Russia, and others. The fastest increase in the number of publications is observed in Asian countries.

Russia, as well as the other countries of the world, experiences an increasing demand for nanotechnology products, which makes the latter a prospective field for research projects. In 2010-2014, the number of nanotechnology products used by Russian companies increased 2.6-fold, the number of those developed by Russian companies twofold (Figure 1). Over 300 tons of high-tech materials for nonoindsutry are produced in the country annually.
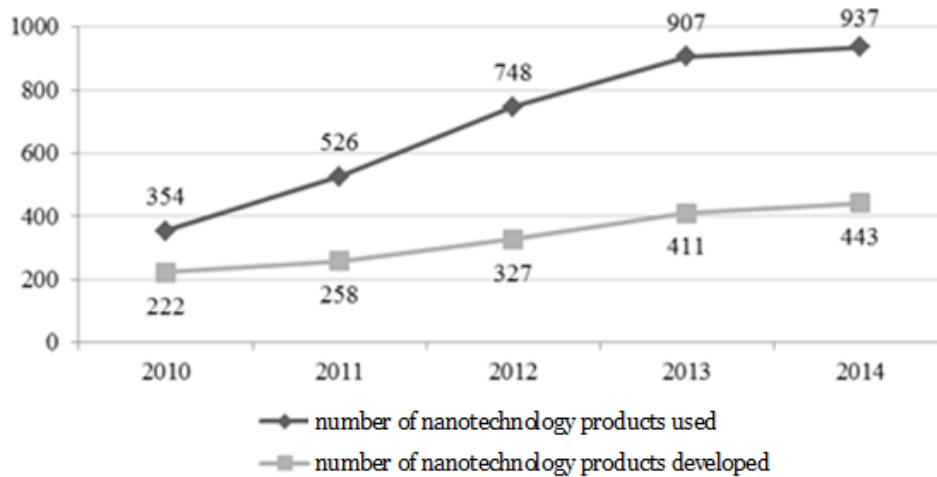
Figure 1. Nanotechnology development in Russia, units
Source: Rosstat. http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/economydevelopment/#

Among the most promising areas in this field, one can identify designing X-ray optics devices used to upgrade Mega-Science labs as well as research in laser nanotechnology and information biophysics

In X-ray optics, the University can occupy market niches in the following areas:

— the development of the conceptual frameworks and models of X-ray optical device functioning on the basis of nanostructured materials of elements of the second period and obtaining their prototypes,

— the development of the prototype of an ultra-compact X-ray zoom lens based on refractive lenses;

— the development of the system of precision optical control of the measurement of multilayer coating properties by the transmission and reflection spectra in the production process directly in the vacuum system or laboratory conditions;

— the development and testing of advanced elements of the X-ray optics for the synchrotron radiation.

As far as rare-earth materials are concerned, the University can occupy market niches related to the following prospective research subjects:

1. Materials for the high-energy permanent magnets of Neodymium Iron Boron (NdFeB). The R&D outcomes are expected to be the following ones^

— the development of powder materials to manufacture competitive magnets and magnetic systems;

— the development of technologies to process the powder materials containing rare-earth materials by the special plastic deformation method.

2. Rare-earth materials containing the alloys for electrochemical power sources, thermal elements and hydrogen absorbents.

In the field of magnetic materials the University can occupy market niches in the following prospective research areas:

— the development of coding and identification systems for information of logical systems (amorphous ferromagnetic wires of the micron and submicron size, bi-phase microwires);

— the development of magnetic memory elements (multi-layer thin-film structures with the enhanced pinning effect, spin-valve structures and materials with the increased perpendicular anisotropy);

— the creation of independent power supply sources and highly sensitive sensors of various physical parameters (magnetoplasmonic crystals, composite materials with a high value of the magnetoelectric effect (multiferroics), amorphous ferromagnetic wires of the micron and submicron size, and biphase microwires);

— the creation of micro- and nanomanipulators and magnetic tweezers (laminated materials with the cylindrical symmetry, two-phase microwires);

— materials with the shape memory and high magnetocaloric effect for medical applications (Heusler alloys, FeRh alloys);

— magnetic methods in medicine and biology (magnetic nanoparticles, films and wires with a wide range of applications in the said field).

As far as the laser technology and information biophysics are concerned, the University can occupy market niches in the following prospective research areas:

— Photonics of metal nanoparticles (silver, gold, copper etc.) including magnetic nanoparticles and quantum dots;

— Research into the optical properties of solar energy converters based perovskites with quantum dots embedded in their composition in order to increase the efficiency of solar energy conversion;

— Photonics of carbon nanomaterials (fullerenes, carbon nanotubes, fullerites, graphene and its derivatives);

— Development of biosensors based on the surface plasmon resonance;

— Fluorescent research into the protein-protein interactions at the molecular level.

The following companies and organisations are potential partners and future customers in the above –mentioned fields, European Synchrotron Radiation Facility (ESRF, France), German Electron Synchrotron (DESY, Germany), Swedish Synchrotron Centre (MAX-IV, Sweden) and leading synchrotron centres of Asia, Europe, the USA, Canada and Australia, the National Research Centre Kurchatov Institute, the Lebedev Physical Institute and other institutes of the Russian Academy of Sciences, OOO Kaliningradgazavtomatika Factory, LLC, OAO RZhD, OJSC, OOO Nanocarbon Materials, LLC (town of Gusev, Kaliningrad region), the diversified industrial commercial firm ZAO Alkor, CJSC (plant for the production of starter batteries, city of Tyumen), the Experimental Design Bureau Spetsmagnit (Special Magnet) (Moscow), the University of the Basque Country (Spain), Duisburg-Essen University (Germany), Institute of Materials Research (Japan), the National Research Centre Kurchatov Institute, OAO VNIINM, OJSC (A. A. Bochvar All-Russian Scientific Research Institute for Inorganic Materials) (the Russian Federal Atomic Energy Agency Rosatom), FSUE Basalt (Rosatom), ZAO Svetlana-Rentgen, CJSC, OAO Ramensky Instrument Engineering Plant, OJSC, OAO M.F. Stelmakh Polyus Research Institute, OJSC, Avionica Group of Companies and other companies of the Rostekh state company and Roscosmos, the Russian Federal Space Agency.

Profile: **Information security**

The data protection research niche chosen by the IKBFU is regarded by the Ministry of Economic Development as a promising area of information and communication technologies that has a high potential. The market is shaped by increasing number of information security threats and change in their qualitative characteristics as well as the implementation of import substitution measures in the field of information security technologies. Now, the market share of the information security facilities and services in the

total volume of the Russian IT market is about 7%. The main segments (70%) are network security and anti-virus protection tools.

It is expected that by 2018 the share of information security services will have risen to 40% of the IT market, and intellectual services will become a major segment. Small and medium sized companies will generate the key demand for IT products.

3. Market of prospective students

The university development trend over the last 5 years has demonstrated a steady increase in the number of Russian-speaking students from the former Soviet Union and abroad.

In 2014, the IKBFU admitted students from 68 regions of Russia, as well as from 11 countries (Lithuania, Latvia, Poland, Montenegro, Belarus, Armenia, Azerbaijan, Kazakhstan, Tajikistan, Uzbekistan, Ukraine); in 2015 entrants - from 80 regions of Russia and 19 countries (in addition to the above - Georgia, Mongolia, China, India, Brazil, United Arab Emirates).

In addition to the traditionally economic and Social Studies and the Humanities, the top 20 educational programmes also include engineering, natural science, IT and medicine.

This Programme includes the following targets for promoting the University:

— improving the quality of admission by attracting applicants from foreign countries and other regions of Russia;

— restructuring the educational programmes according to the selected interdisciplinary priorities.

By 2020, the University will reach the following indicators:

— the proportion of those enrolled in Master programmes and postgraduate programmes with a Bachelor degree, Specialist degree or Master's degree from other universities will be 47%;

— the share of foreign students enrolled in the main educational programmes of the University including the CIS countries will be 6.16%;

— The number of foreigners studying Russian at the University will make up 350 people per year;

— the average score in the Unified State Exam is 72;

— at least 30% of postgraduate students will conduct research supervised by

— invited experts coming from the world's leading scientific and education centres.

4. Market of employers

The IKBFU traditional partner employers are the largest companies and organisations in the region, with which the University intends to develop close cooperative ties in the future (Table 4).

Table 4

Types of companies the IKBFU focuses on in providing human resources for the region

Field of employment	Company name
Medicine	State-financed health institution Regional Clinical Hospital of the Kaliningrad Region, clinical centres, laboratories
Automation of production processes, electrical products, microelectronics	OOO Kaliningradgazavtomatika, LLC, OAO GS-Nanotech, OJSC
Banking	OAO Sberbank of Russia, OJSC, OAO Gazprombank, OJSC
Geodesy, land management	Baltic Federal State Unitary Aerogeodetic Enterprise OAO BaltAGP, OJSC
Museum management and preservation of historical sites and buildings	Federally funded institution Museum of the World Ocean
Mining	OOO LUKOIL-Kaliningradmorneft, LLC
Information technology	OOO System Technologies, LLC
Metals, rolled stock	OOO Delovaya Rus (Business Russia), LLC
Research and development in natural sciences and engineering	Federal State Unitary Enterprise Experimental Design Bureau FAKEL
Wholesale, retail trade, motor vehicle and motorcycle sales, motor vehicle and motorcycle maintenance and repair	Yurinat Group of Companies, OOO METRO Cash&Carry, LLC, Vester Group of Companies, Viktoria Group of Companies, Evropa Trading House, OOO Viktoria Baltiya, LLC, OOO Maximus, LLC, OOO Avtomaster, LLC
Food industry, chemistry, biology	OOO Miratorg Zapad, LLC, ZAO Sodruzhestvo-Soya, CJSC
Manufacture of machinery and equipment, manufacture of cranes	OAO Baltkran, OJSC
Manufacture of the industrial refrigeration and technical equipment	OOO Zavod Sputnik, LLC
Construction	Megapolis Group of Companies
Shipbuilding and ship repair	Baltic Shipyard Yantar
Housing and public utility	Utility MUP Vodokanal, OAO Kaliningradgazifikatsiya, OJSC, OAO Yantarenergo, OJSC
Transport and logistics	DRV Group of Companies, ZAO Khrabrovo Airport, CJSC
Telecommunications	Kaliningrad branch of OAO Rostelecom, OJSC

According to the 2015 data, the University graduates account for a significant share of all employees of the region companies and organisations, which shows that the regional employer market is capable of providing enough jobs for young professionals. At the end of 2014, the total percentage of the employed graduates was 75%; including those employed in the field of their studies was 48%.

In 2020, it is expected to achieve a high level (around 90%) of employed graduates in the calendar year following the year of graduation in the total number of the educational organisation's graduates trained in basic educational programmes of higher education.

2.4 University information infrastructure. Areas of informatization

A package of automated information systems (AIS) and services for the University administration and management, education, HR and R&D monitoring and supervision has

been designed and is used in the University; there is also a partially implemented automated service system. The new software is compatible with the already used and shares the data. There is also a separate automated system for the University finance management.

Further development of information services will include:

— Adaptation of the existing AIS complex for industrial needs on the basis of large-scale enterprise automation systems (ERP systems). These measures will result in complete automation of the University management.

— Process transparency of the University. There is a need for the refinement of the documents circulation system for all kinds of documentation, including financial ones.

— "Open University", similar to Open Government and Open Data projects. By creating a portal for easily accessible machine-readable data that covers general university activities as well as its technical and statistical data, will allow the regional and federal information services to access the data.

— The creation of the University service-oriented technical support and a receiving and dispatching call-centre, that will cover all aspects of the University life, including IT and maintenance issues.

— Adapting the existing and new systems and services of the University for foreign language use. The creation of a pull of services for international lecturers and students will speed up their integration.

2.5 University human resource development: senior management, academic and administrative staff

The Immanuel Kant Baltic Federal University employs 2,002 people, 1,738 of them are permanent staff members.

A total number of the teaching staff is 885 people. 65.34% of the teaching staff have doctoral and post-doctoral degrees.

The formation of the pull of researchers was the key objective of the University development in 2007 - 2015. The total number of the University researchers is 191 people; this number has increased 56% in the last 3 years.

The University has developed a policy of the academic staff replenishment, which made it possible to invite 299 guest lecturers from both Russian universities and abroad (151 Russian professors, Sc.D.; 34 associate professors, Ph.D.; 31 experts; 83 international experts, 67% of them having Ph.D.).

The current trends in HR management will enable the University to achieve the following indicators by 2020:

— increase the share of young University staff (below the age of 35) up to 30 % of the total the academic staff;

— increase the share of foreign professors, lecturers, and researchers in the University academic staff, including Russian citizens holding a Ph.D. of a foreign university, up to 7 %;

— create an efficient scheme of academic and research staff mobility;

— preserve and improve the existing system of competence development for different categories of employees.

— increase the efficiency of the University managerial staff, partially due to automated management.

2.6 Development of the University facilities

The IKBFU invested 1,538 million roubles from the Federal University Development Programme for 2011–2020 in the development of laboratory facilities and shared resource facilities. The additional sum of 255 million roubles was spent on software upgrade and PCs in the University employees' offices.
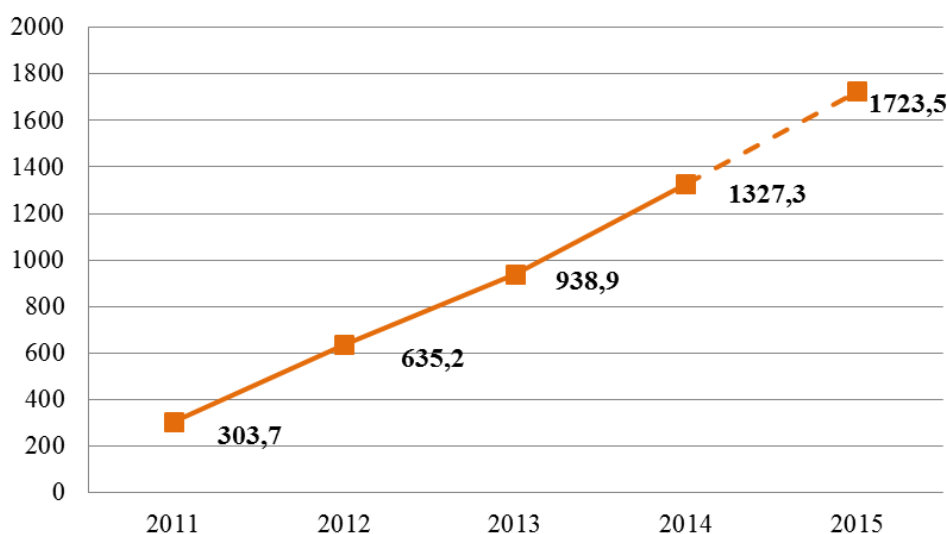
Figure 2. High-tech equipment purchased in 2011 - 2015, million rubles (progressive total).

The infrastructure of the IKBFU consists of 34 buildings, which have been partially or fully modernized. The total area of the University campus is 120,000 sq.m.

On September 24, 2014, the "Fabrika" science park opened at the IKBFU. "Fabrika" boasts 7,200 sq.m of cutting-edge laboratory and office space with potentially growing capacities.

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In the second stage of reconstruction of the adjoining area of 0.69 ha, it is planned to build an engineering centre, a business incubator, and workshops for a small-scale plant (the total area of the second stage construction is 6,800 sq. m). Preconstruction work is being carried out at the moment. Upon its completion, the total floor space of all the buildings of the "Fabrika" will exceed 10,000 sq. m. The total budget of the reconstruction project is 280 million roubles.

A joint project of the IKBFU, the Government of the Kaliningrad Region, and AeroBlok company is being implemented at the moment. The project is aimed at creation of a resource training centre for the construction industry and expert evaluation of construction projects. The site area is 5,000 sq. m and consists of three buildings joined by passages. These building will station technology laboratories, a design bureau, a maintenance department and a certification department.

September 2015 is the estimated time for the completion of construction of two new dormitories for Master and post-graduate students. The total floor area of the dormitories is 6,430 sq. m.

The University has defined the existing area of 29.13 ha by Nevskogo street in Kaliningrad as its reference point of development. At the moment, the University campus consists of the administrative buildings, several academic buildings, three dormitories, and a sports centre. It is planned to build a new swimming pool, having the total area of 2,300 sq.m (to be completed in 2016), five residence halls with shared apartments (the total area of 16,150 sq. m, two buildings to be completed in 2016, three buildings - in 2017), an academic building having the total area of 17,000 sq. m, the construction is to be commenced in 2018-2019. The development of the University infrastructure will make the University facilities both modern and functional as well as ultimately user-friendly. The campus will house more than 6,000 students. The total budget of the University infrastructure development is estimated at 1,755 million roubles.

2.7 Economic and financial model

By 2020, the decrease in some fractions of the University revenue will have been covered by new sources, new organizational units of the University as well as by means of:

— an increase in R&D revenues due to the rise in the number of advanced research and development projects and an increasing number of researchers capable of implementing large-scale research projects;

— an increase in the revenue from educational programmes (main education programmes and programmes of additional and continuing education) launched during the implementation of the Competitiveness Programme;

— a wide range of medical services (including diagnostics and treatment);

— clinical research and tests;

— revenue from intellectual property management obtained during the implementation of complex projects on strategic development;

— other types of revenue (engineering services, selling goods and services produced by the University; assets and liability management).

In the mid-term perspective, the University staff income will increase category by category. During the implementation of educational programmes, expenditures for consumable materials will definitely rise. This can be explained by the transition to the practice-oriented approach to education and a wide use of sophisticated equipment, e.g. students are asked to create prototypes and sample parts during their group and individual work.
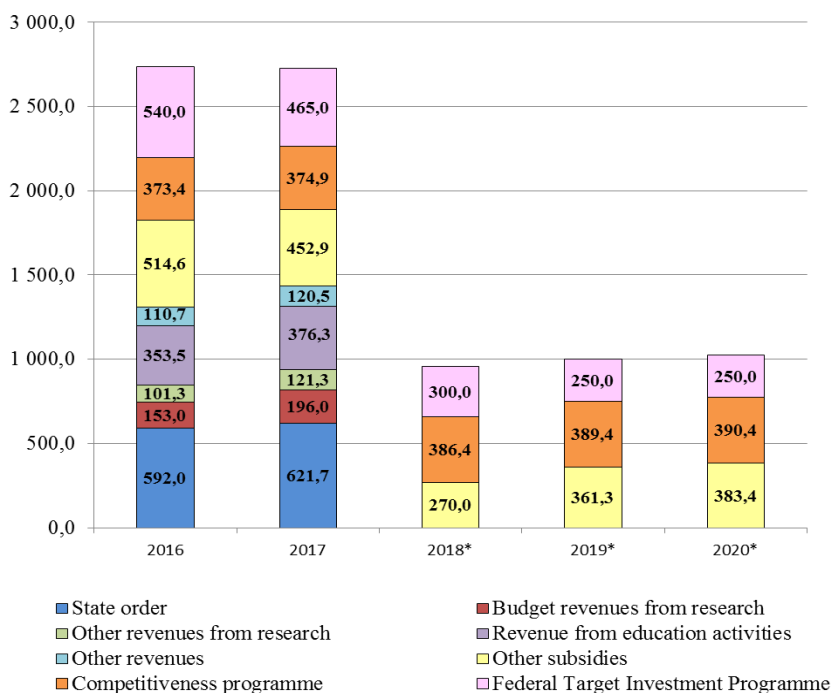
* 10% indexation

Figure 3. Expected revenue in 2016 – 2020, million roubles
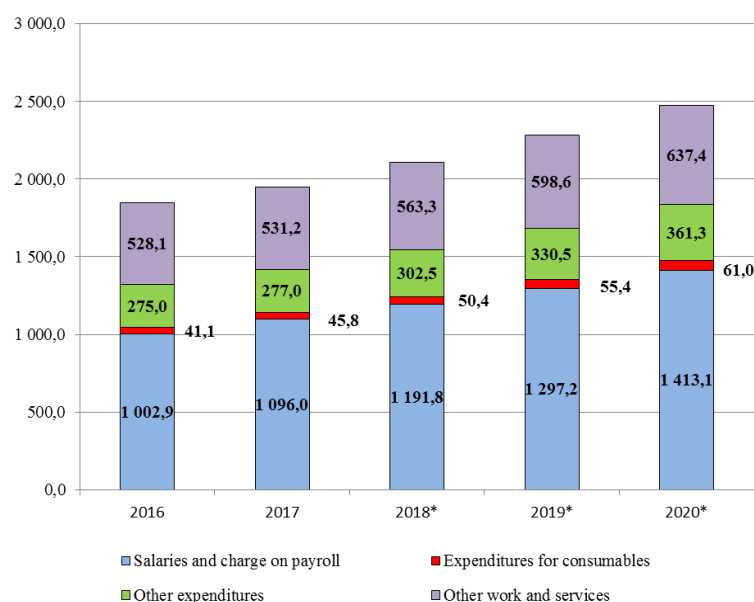
* 10% indexation

Figure 4. Expected expenditures in 2016 – 2020, million roubles

Other expenditures include participation in international conferences, exhibitions and other research activities. These expenditures are caused by the need to widely present the IKBFU achievements in Russia and abroad as well as by the growing number of the academic staff recognized internationally.
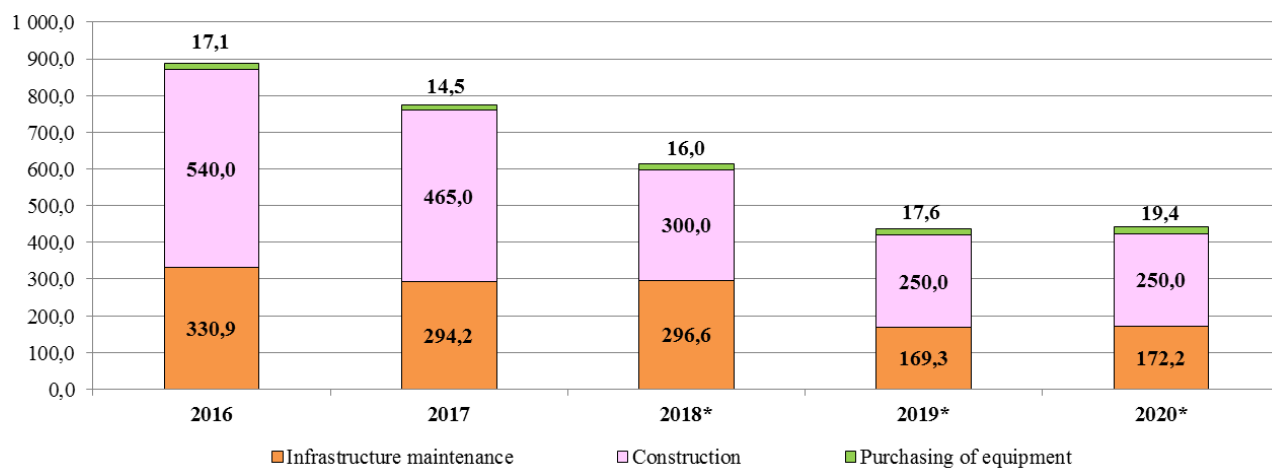
* 10% indexation

Figure 5. University investment forecast for 2016 – 2020, million roubles

2.8 Other characteristics of the target model

1. Development of the innovative infrastructure based on the hi-tech park, created on the basis of the "brown field" technology

In September 2014, the Fabrika science park opened at IKBFU. At the moment, there are several laboratories there: a laboratory of coherent optical metrology, a laboratory of

optical radiation, a laboratory of micro and nano structures; a centre for functional nanomaterials, a laboratory of 3D prototyping, a laboratory of intellectual robotics, etc.

The main idea behind "Fabrika" is to grant talented students with ample opportunities for self-realization by creating student design and science bureau.

The possibility for multipurpose uses of the areas and the ability for changing its specialization are the important features of Fabrika. At the moment, more than 800 sq. m of laboratory space is reserved for the guest research groups.

2. Development of the medical research infrastructure based on the University Clinical Diagnostics Centre

Clinical Diagnostics Centre of the IKBFU opened in October 2012.

In 2013, the Centre was certified for providing medical services (No FS-39-01-000769, September 9, 2013). The Centre has at its disposal medical equipment that allows the Centre to carry out biochemical and histological examinations, including electron microscopy, X-ray and ultrasonic and other functional examinations and tests.

The University's prospects of future successful development in the field of medical biotechnologies will subsequently lead to the creation of a department of translational medicine and neurotechnologies on base of the Centre.

3. Setting high standards in training hi-tech medicine professionals

A special role in implementation of the target model of the University is being allocated to cooperation between the Institute of Chemistry and Biology and the Institute of Medicine of the IKBFU. These institutes are expected to work in close interaction and to play the leading role in scientific research and personnel training by 2020 (Figure 6).

Before 2014, the financial and economic model of IKBFU expected Humanities and Social Science to be the main internal grantors of the University. The situation is expected to have changed drastically by 2020.
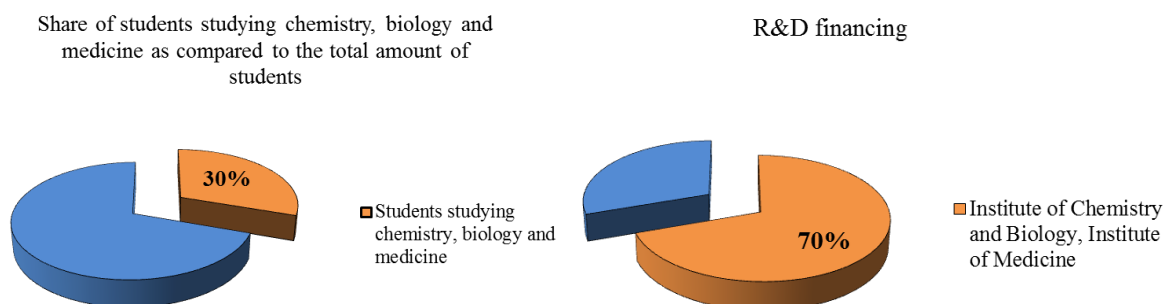
Figure 6. Forward looking indicators of the Institute of Chemistry and Biology and the Institute of Medicine of IKBFU.

In 2014, the Institute of Medicine took the lead in offering the most demanded medical profiles and in gaining the most profit from extra curriculum activities. At the same time the Institute of Chemistry and Biology keeps its leading position for being the most productive in scientific research.

By 2020, the model of the IKBFU will have become structurally closer to the model of foreign universities of the same reference group, where institutes of medicine and natural sciences play the role of the main grantor.

3.   Discrepancies between the current and target performance indicators and the University characteristics, their causes, and strategic initiatives to achieve international competitiveness

The major discrepancies are the following ones:

(A)   smaller share of joint (network-based) Master programmes compared with top universities in Russia and in neighboring states;

(B)   insufficient revenue from fundamental and applied research as well as from intellectual property;

(C)   insufficient number of academic staff who have worked in top universities in Russia and in neighboring states;

(D)   insufficient number of international students;

(E)   lower academic level of prospective students;

(F)   low performance in retraining and professional development of administrative succession pool which includes heads of Institutes –main University units;

Figure 7 shows the logical framework of the IKBFU strategic initiatives, activities and complex projects forming three interdisciplinary priorities.

Figure 7. The IKBFU strategic initiatives: the matrix approach

The table below shows the main and additional indicators and evaluation of the present gaps, their causes and ways of bridging them

Table 5

Main and additional indicators and the evaluation of the present gaps, their causes and adequate ways of bridging them

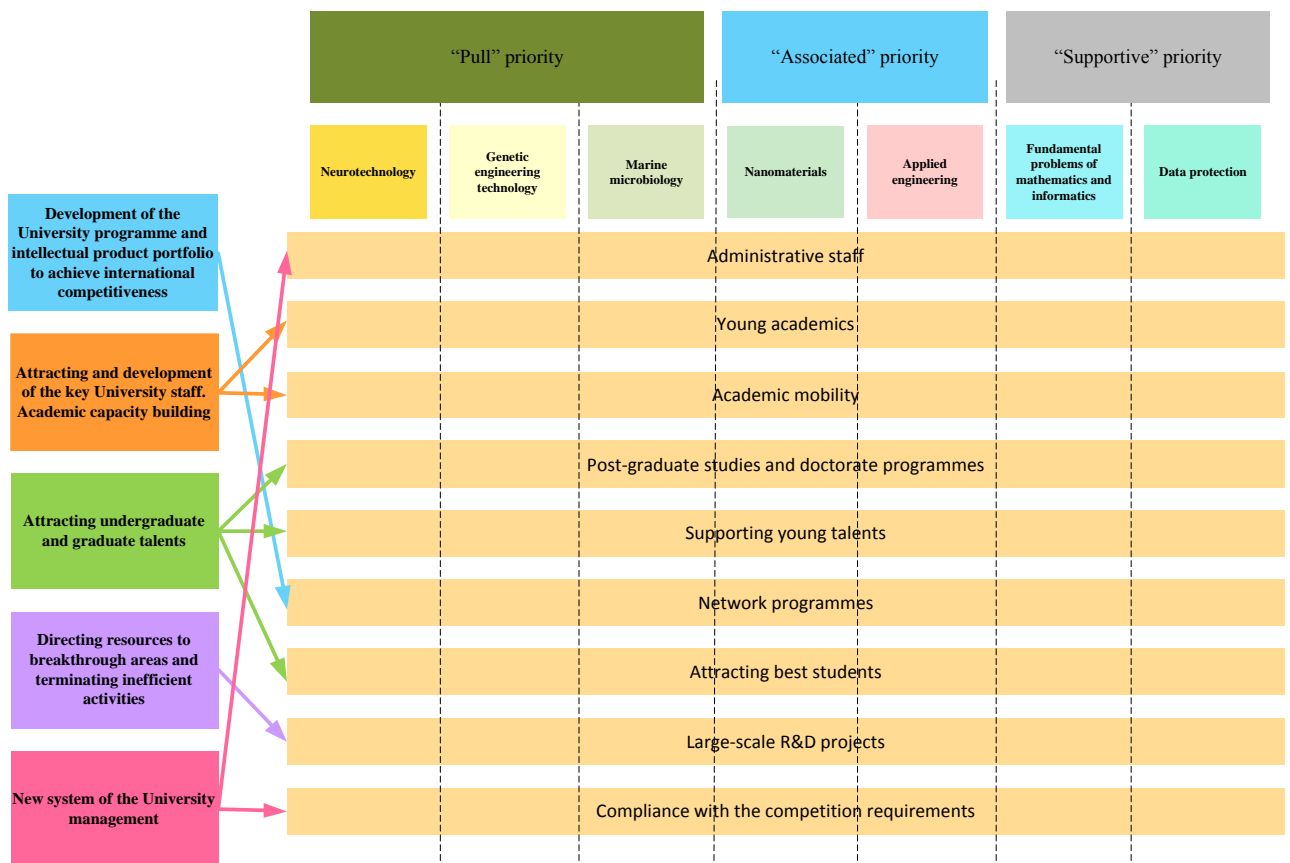| Main indicators							Identification of gap with respect to elicited problems
№	Target indicator	Units of measurement	Target indicator values		Current characteristics	Causes of gaps	
			2014	2020			
1	2	3	4	5	6	7	8
A1.	The University world ranking position				At present the University ranks 151-200 in the QS BRICS (in 2015); it is included in the Webometrics Ranking of World Universities (Spain), 4 International Colleges & Universities (Australia). It ranks 85 in Russia's "Expert RA" rating (2015), and 79 in the National University Rating (2015). The potential ranking in "Global World Communicator (GWC)" and "U-Multirank" in the nearest perspective is under consideration.	- short period of the University positioning and brand shaping on the international level; - lack of distinguished image policy on the international level; - low University brand awareness in academic and research communities; - opportunism and focus on short-term returns; - certain limitations concerning staff and infrastructure compared to international competitors.	(A), (B), (C), (D), (E), (F)
1.1	Position in the ARWU World Top 500 (Academic Ranking of World Universities)	Ranking position	-				
1.2	Position in the ARWU-field/subject	Ranking position	-				
1.3	Position in the THE (The Times Higher Education World University Rankings)	Ranking position	-				
1.4	Position in the THE subject ranking	Ranking position	-				
1.5	Position in the QS World University Ranking	Ranking position	-	551-600			
1.6	Position in the QS subject ranking	место Ranking position	-	301-350			
2.	Number of publications in the Web of Science and Scopus, excluding duplicates, per member of the academic staff				According to the Web of Science and Scopus the University had 64 publications in WoS and 91 in Scopus in 2014	- passivity of thinking and conventionalism of some members of the academic staff ; - break of continuity of academic generations; - small number of joint research with top-ranked Russian and World universities and institutions; - low salaries, a poor system of publication activity promotion; - lack of motivation, low productiveness; - low level of mathematical tools background and inability to apply it in research;	(B), (C), (D)
2.1.1	Number of publications in the Web of Science per member of the academic staff (over a five year period)	number	0,21	1,62			
2.1.2	Number of publications in the Web of Science per member of the academic staff (over a three period)	number	0,17	1,56			
2.2.1	Number of publications in Scopus per member of the	number	0,26	1,66			

5	academic staff (over a five year period)					- inadequate scope of information systems and resources available.
2.2.2	Number of publications in Scopus per member of academic staff (over a three year period)	number	0,22	1,62		
3.	Average citation index per member of the academic staff, calculated by aggregation of all publications in the Web of Science and Scopus				Present citation index per member of the academic staff is rather low and requires targeted efforts aimed at improving the quality and scientific novelty of publications	- short time of scientific and research capacity building in several prospective fundamental research fields; - poor quality of publications; - small share of the academic staff recognized internationally.
3.1	Average citation index per member of the academic staff, calculated by aggregation of all publications mentioned in the Web of Science	number	0,34	1,16		(B), (C), (D)
3.2	Average citation index per member of the academic staff, calculated by aggregation of all publications in Scopus	number	0,30	1,14		
4.	Share of international professors, lecturers and researchers in the academic staff, including Russian citizens who obtained their PhD abroad	%	1,21	7	Since 2011, the University has been actively inviting international academic staff and Russian citizens who obtained their PhD abroad to hold positions in research and development	- insufficient international recognition of the University; - inefficient scheme of attraction of top scientists and prolonging their stay	(C)
5.	Share of international students enrolled on principal educational programmes (including CIS students)	%	3,88	6,16	Due to its geographical location the Kaliningrad region is attractive for students from Belarus, Lithuania, Poland etc.	- small number of educational programmes which are competitive abroad; - small number of joint programmes with top-ranked Russian and World universities; - small number of educational programmes in English or other languages; - lack of effective distance education system and on-line courses; - University infrastructure does not meet the requirements for dwelling international students.	(E), (F)
6.	Average score for Unified State Examinations of University students of state-funded full-time Bachelor and Specialist programmes	grade	70,33	72	At present the University ranks top in the region in credibility and quality of education which allows it to attract students with high average grades from different part of the region	- low level of University recognition in other regions of Russia; - inefficient scheme of attracting students from different parts of the region and other regions of Russia; - few contacts with the region's top schools	(F)

No.	Indicator	Units			Description	Problems	Categories
7.	Share of non-budgetary source of income in the University revenue	%	20	50	Due to substantial flow of budgetary funding for the IKBFU Development Programme implementation the share of non-budgetary source of income in the University revenue is insignificant	- low efficiency of activities in the sphere of intellectual property; - insufficient collaboration with regional enterprises; - insufficient collaboration with international enterprises; - low absolute and specific indicators of income from research and development in the University revenue; - lack of endowment funding.	(B), (F)
Extra indicators							
1.	Non-budgetary income from intellectual property management	Million roubles	1,05	12,1	The University is actively creating volumes of research and development works and innovations which require efficient management and effective implementation	-low qualification of the academic staff in evaluation and commercialization of intellectual property; - low motivation of the academic staff for licensing and patenting of intellectual property.	(B), (F)
2.	Share of the academic staff under 35 in the total number of the academic staff	%	20,8	30	The University has been experiencing the academic staff aging for a long period	- inefficient efforts for attracting young researchers and lecturers; - low basic salary; - low occupational prestige of a University lecturer; - sporadic and limited activities in advanced further professional training of the academic staff .	(D)
3.	Share of Master and post-graduate students with Bachelor, Master or Specialist degrees obtained in other universities in the total number of Master and postgraduate students	%	26,5	47	In the last 4 years the University has been attracting other universities graduates (including universities of other regions and abroad) to enroll on its educational programmes (largely Master programmes).	- not reaching the whole targeted audience (including outside the region); - lack of comprehensive strategy of public relations within the neighboring competitive environment in the macroregion; - infrequent participation in joint projects with regional enterprises; - lack of activities on the attraction of other federal universities graduates.	(E), (F)
4.	Number of international students studying Russian at the IKBFU	people	120	350	There are short-term courses of Russian (mainly for Polish and German students), inclusive programmes (Russian is a supplement to major courses) and Russian for labor migrants. Due to a number of initiatives held at the regional level on resettlers and labor migrants adaptation the University attracts sufficient number of students studying Russian.	- insufficient cultural influence on neighboring countries; - low level of Russian language promotion ; - few number of initiatives and activities attracting international students to study Russian.	(E)

5.	Share of research and development per member of the academic staff	Thousand rubles	300	460	The rise of research and development efforts is due to the Implementation of Development Program	- small share of the academic staff involved in R&D; - low motivation of the academic staff in signing contracts with other enterprises on provision of services; - limited number of research groups regularly taking part in international and Russian research grant competitions .	(B)

3.1. Development of the University programme and intellectual product portfolio to achieve international competitiveness

The University programmes and intellectual product portfolio can reasonably be divided into educational and research ones. It is worth mentioning that one of the University key characteristics is its inextricable connection between research and educational subsystems.

The first subsystem is an *educational subsystem;* it covers the current staff training and is inertial in its character. The second subsystem is a *research one;* it shapes a new distinctive profile of modern university and is a development subsystem in its character. There are several internationally competitive education areas, which are to be subsidized within the framework of the first subsystem:

— biotechnologies and neurotechnologies;

— materials science and nanotechnology;

— information and communication technologies;

Within the second subsystem there are several major research areas, which are considered the University development priorities, and lucrative areas of international cooperation. It is appropriate to integrate these research areas into *complex projects* forming the University interdisciplinary priorities:

— neurotechnologies;

— genetic engineering;

— marine microbiology;

— nanomaterials;

— applied engineering technologies;

— fundamental mathematics and informatics;

— information security.

The current complex project reflect strategic priorities of the University development as identified in the IKBFU Development Programme.

3.2. Attracting and development of the key University staff. Academic capacity building

The University staff capacity development system includes the following elements:

1. A mechanism of academic and administrative staff replenishment and formation of the modern competitive professional environment in the University by inviting leading experts both from Russia and abroad to participate in academic, research and administrative activities. Experts are expected to have worked in leading universities, research centers, and other organizations; experts with notable professional achievements are also welcome.

2. A system of support and stimulation of the academic staff professional growth, which includes social support, further professional training, internships, programmes of language competence development and the development of competences, required in the field of inclusive or distance education, or e-learning.

3. Efficient contracts for all members of academic and administrative staff, creating incentives to improve professional competence; further development of the staff evaluation system.

4. A system of academic and administrative staff complex evaluation.

The above-mentioned elements aim at creating a hierarchy of the University academic staff.

Researchers are to become a key staff category in the suggested hierarchy. The increase in the proportion and number of researchers in the period prior to 2020 will allow the University to gradually increase their influence on the educational subsystems and to introduce new standards of modern university education.

3.3. Attracting undergraduate and graduate talents

Attraction of talented undergraduate and graduate students is to be carried out through the development of competitive educational programmes, taught in English. In the present day situation, the most popular programmes might be Master and Postgraduate programmes, and short-term programmes of professional retraining that make good use of the existing University facilities and resources.

The general system of modernization of educational activities in the IKBFU includes the following elements:

1. A flexible system of continuous education;

2. Network educational programmes implemented in collaboration with other educational and research institutions; educational programmes using e-learning and programmes of distance education; applicable educational programmes, including

Bachelor programmes, carried out in collaboration with employers in the University's resource centres.

3. Post-graduate programmes; doctorate programmes and programmes of professional retraining designed in line with the region's priorities and needs.

4. Activities aimed to attract potential students with excellent USE results to Bachelor and Specialist programmes; mechanisms of attracting the best graduate students to continue their education enrolling on Master or Postgraduate programmes.

5. Material, technical and software support of educational activities.

6. An independent system of students' academic achievements evaluation; professional, public and international accreditation of educational programmes.

7. A system of labour market monitoring showing the demand for particular specialists, as well as a feedback system for former students and their current employers.

3.4. Directing resources to breakthrough areas and terminating inefficient activities

The optimization and concentration of resources will be implemented in compliance with the previously introduced concept of 7C (Figure 8). The unique mechanism of the 7C model is designed to create an internationally competitive university, which will become a prestigious higher education institution to study and work at.
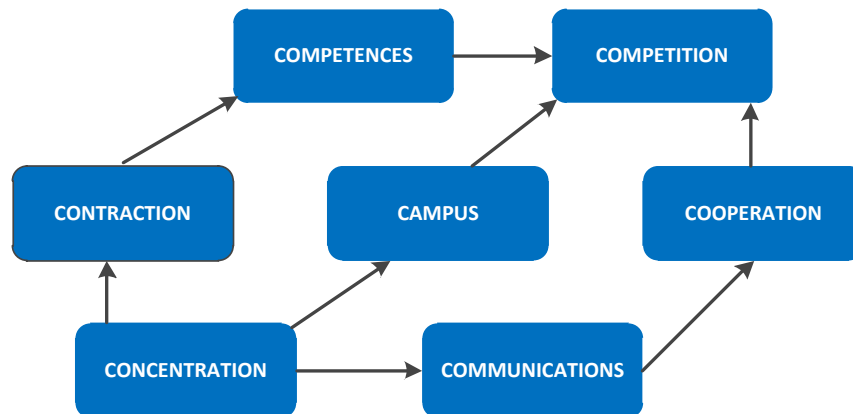

Figure 8. Conceptual model «7C»

Explanation to the elements of the conceptual model of IKBFU development is given in the Table below.

Table 6

University strategy model – «7C»*

Elements of the «7C» model	Mechanisms
Concentration	Directing resources in accordance with the University strategic priorities Modernizing the University administrative structures Optimizing the system of control to ensure maximum transparency of all processes; introduction of the quality assurance system Supporting the development of the educational subsystem Organizational support to the research subsystem having an impact on the educational subsystem. Informatization of educational processes Positioning the University as a research, technological and innovative development hub in the region, strengthening its brand and image, blurring the image of the University as a university of the Humanities
Contraction	The introduction of effective personalized contraction system Resources in exchange for development
Cooperation	Enhancing interaction with regional enterprises, modernizing the existing educational programmes according to the regional demands Cooperation with European universities in priority development areas Active participation in the federal university networking Active cooperation with the institutes of the Russian Academy of Science Exchange in educational programmes and standards Active promotion and export of education services (distant learning) Strengthening links with federal, regional and municipal authorities, developing new partnership mechanisms and interbudget relations
Competences	Introducing a new competence-based approach Encouraging a publishing activity Introducing professional and international standards in teacher-student evaluation (primarily in the evaluation of foreign language skills and knowledge of mathematics) Encouraging the use of English in professional environment by all staff Organizing business courses for all staff groups and students Professional guidance, the module approach and career guidance for students
Communications	Promotion of the Russian language Introducing educational programmes in foreign languages Implementing measures to overcome the language barrier Promoting the University on the national, European and global levels (PR and other promotion activities)
Competition	Overcoming mental inertia through a new system of values and attracting new staff Attracting highly qualified researchers from leading national and international academic institutions Holding open international competitions for key positions, particularly for senior researchers Promoting a new role hierarchy "teacher – researcher – entrepreneur (in science)" Ensuring a competitive salary rate Introducing a system of non-material motivation of the University staff Clear division of roles and responsibilities for all University staff groups
Campus	Developing and promoting the "Fabrika" science park on the inter-regional level (including the neighboring regions of other countries) Developing research centers of international level

3.5. New system of the University management (key principles, administrative staff and systems, and the University organisational structure) to achieve target performance indicators and characteristics

When creating a system aimed at achieving target performance indicators, it makes sense to consider the experience of the Development Programme of the Baltic Federal University for 2011 – 2020 and follow the main principles of *consistency* and *continuity*.

The structure of the present Programme is highly compatible with the project vision and the matrix structure of the project contour, which was successfully implemented by IKBFU in 2011-2015.

The Programme will be implemented according to the horizontal network model based on the principles of decentralization and delegation of responsibilities to research

and education units of the University. A combination of the matrix and linear-functional management models within the program is presented in the figure below.
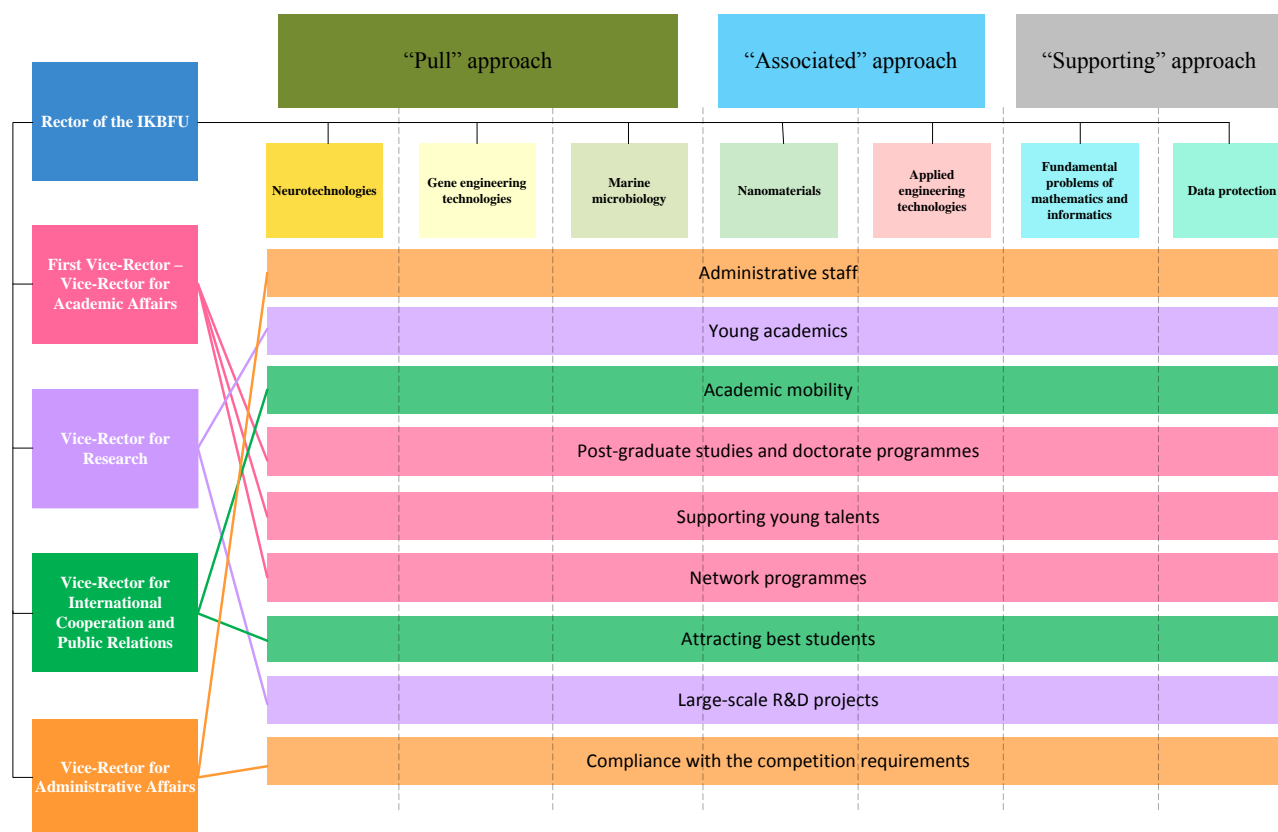
Figure 9. Matrix structure of the Programme management

It is proposed to use the existing system of automated project management for an effective and competitive distribution of funds between the selected activities and projects included in the list of strategic initiatives.

The main functions of the project management system in the implementation of identified activities include:

— directing resources to projects and selected activities;

— preparation of reports, content and financial analysis of the project activity implementation process;

— regular communication of project results through information systems of the University as well as preparing publications in mass media.

Evaluation and control over the implementation of projects and activities will be exercised by the University Senate, which will meet at least once every month, and the Supervisory Board, which will meet every quarter. The Supervisory Board evaluates a draft report on executing the plan of financial and economic activities of the University in the identified fields.

3.6. Other fields

1.   Creation of the University hospital on the basis of clinical-diagnostic center and the Institute of Medicine

One of the most important assets of the IKBFU is the modern medical school in its structure. The demand for medical education is expected grow in the long run, as developing countries generally demonstrate lower share of healthcare spending than the industrialized nations.

On the one hand, specialization in the medical field put the university ahead of its direct competitors (similar higher educational establishments without a medical programme on board),

On the other hand, the very presence of the Institute of Medicine brings the University structure closer to that of the leading universities of the world.

In general, both healthcare and medicine are applied, hands-on fields, so the Institute of Medicine is mostly focused on educating future doctors, while the majority of related research is conducted at the Institute of Chemistry and Biology.

Top priority in the field of medicine is the creation of the University hospital and the department of translational medicine in the clinical-diagnostic center, which will strengthen both education and research. The University hospital creates prerequisites for the development of selected interdisciplinary priorities in the mid- and long term.

Along with Chemistry and Biology, the Medical/Biological cluster promises to be among the strongest in the University after 2020[1].

2.   Creation of the "Fabrika" science park

15 laboratories already operate on the premises of the "Fabrika" science park. Research and technological offer of the park ranges from the study and analysis of materials, design, prototyping (including 3D printing), board setting, and controller programming, to limited issue production (including services of processing centers), prototype assembly, packaging design, packaging printing and other services.

Currently 60% of the park's capacity is filled, which opens opportunities for further development of priority research areas.

In perspective, "Fabrika" will focus on the following projects:

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[1] This cluster received the largest investment - more than 37% of all investment funds - in the framework of the priority national project "Education" and Development Program until 2020.

— "FabLab", a laboratory designed to inspire schoolchildren and students to be get more involved with innovation and research. The lab will be equipped with a set of computer-controlled universal tools;

— Engineering center for research, design and production. This center will serve as an educational and expert platform in the field of engineering;

— A business incubator for 30 start-ups;

— Areas for limited issue production.

4. Change management: effective transformation mechanisms

The main *driver* of change is the human resources policy. The main promoters of change are the invited experts - highly qualified academic staff, who come to the region to work and live. This policy of change has confirmed its viability. In 2008-2015 (within the framework of the educational Programme Priority National Project "Education" and the Development Programme for 2011-2020) more than 20% of the academic staff was represented by invited experts.

The basis of change management is the form of contract, similar to the standards of the international academic labor market, which ensures high academic performance at relatively low teaching workload (up to 200 contact hours per year, depending on the field of study).

The University will also introduce the following supporting organizational initiatives:

— to create an International Advisory Council on Competitiveness, tasked with the approval of personnel policies and auditing their implementation;

— to create the Board of Trustees to audit and approve the investment policies of the University;

— to attract proficient, internationally experienced experts to head major divisions of the IKBFU;

— to implement a series of training programmes in change management for middle and senior administrative staff of the University, including the heads of major units;

— to implement an international PR and image-making campaign to influence international academic rating.

In addition, one of the main requirements for academics aspiring to fill the positions available through the Programme, will be mandatory organization of regular research and

training seminars for the existing academic staff.

Another trigger of the University model change will be a dramatic improvement in the quality of the student population, primarily by raising the bar (minimum, and consequently, the average score of the Unified State Exam) for admission to the University - in 2015 an average score for state-funded places was 71.5.

A better student population will become a good stimulus to use the potential of highly qualified academic personnel, invited to permanent positions within the Programme.

The University will encourage more demanding academic standards for students in all educational programmes, which means that not all of the students will be able to graduate in time. The bar will be raised for all educational activities, including student research projects and examinations (thus dealing with the problems of cheating, plagiarism, etc.).

Funding allocation within the University will also change and adopt a bottom-up approach. The main structural units of the University will be informed about the measures of the Programme through budget caps and relevant performance indicators. They will then be tasked with personnel reshuffling. Conflicts of interests and unwise choice of new applicants will be reduced through a number of measures, including: attracting new employees will be added to the list of key performance indicators of departmental heads, and the International Advisory Board will partake in personnel decisions.

2. Programme Activities

1. *Compulsory activities stipulated by the Regulations of the Government of the Russian Federation of March 16, 2013, № 211*

Activity №1 "The implementation of measures for developing administrative staff reserve of universities and attracting specialists with experience in leading Russian and foreign universities and research institutions to the university managerial positions"

1.	Task 1		Development and implementation of a competitive incentive system for the administrative staff, incentive-compatible with the requirements of international labor market.			
	Target indicator		*The share of administrative and managerial staff working on the effective contract system.*		*Percentage*	
	2016	2017	2018		2019	2020
	0	20	50		75	100
	Implementation mechanisms		*— study of the Russian and international experience in developing personnel reserve and recruiting university management staff;* *— monitoring priority labor markets and university internal environment for developing a personnel reserve of administrative staff;* *— improving internal regulatory documentation and procedures to manage the system of incentives for administrative staff through effective contract .*	Cost (total and in subsidies)	*383,3*	*11*
	Year	Major outcomes			Cost	Incl. subsidies
	2016	*A new system of administrative staff motivation, including the regulations and procedures, is introduced.*			*69*	*3*
	2017	*A personnel reserve of administrative personnel, including management staff of the University is created.*			*68*	*2*
	2018-2020	*100% of administrative personnel transferred to effective contracts.*			*246,3*	*6*

2.	Task 2		Implementation of additional professional programmes for administrative staff, including top management of the University .			
	Target indicator		*The share of administrative and managerial personnel, including University top management trained in additional professional programmes.*		*Percentage*	
	2016	2017	2018		2019	2020
	60*	70	80		100	100
	Implementation mechanisms		*— analysis of domestic and international markets of additional professional programmes for administrative staff, including top management of the University;* *— the development of individual and group plans (strategies)*	Cost (total and in subsidies)	*25,5*	*19*

			Cost	Incl. subsidies
	of additional training for top university management; *— educational programmes for the top management of the university, analysis of the results, adjustment of individual and group plans.*			
Year	Major outcomes		Cost	Incl. subsidies
2016	*Members of the administrative staff, including top management of the university, have undergone additional professional training according to the group training strategies.*		*12,5*	*11*
2017	*Members of the administrative staff, including top management of the university, have undergone additional professional training according to the individual training strategies.*		*3,5*	*2*
2018-2020	*100% of the University top management have undergone tailored training on various aspects of management (administration).*		*9,5*	*6*

Activity 2 "The implementation of measures for attracting young academics with experience in research and education in the leading Russian and foreign universities and research institutions"

3.	**Task 1**		*Development and implementation of a competitive system to attract young academics, incentive-compatible with the requirements of the international labor market .*			
	Target indicator		*The number of young academics with experience in research and education in the leading Russian and foreign universities and scientific institutions or a degree from those institutions.*		*Number of people, increased by*	
	2016	2017	2018		2019	2020
	20	20	20		20	20
	Implementation mechanisms		*— analysis of domestic and international markets to attract young researchers and teachers in priority areas of the Programme ;* *— creating the International Advisory Board to audit personnel policy to attract academic staff with international experience;* *— a complex of measures to attract academics, including public interviews;* *— inclusion of young academics in the effective contract system;* *— periodic assessment of young academic staff, accepted for the relevant positions.*	Cost (total and in subsidies)	*150*	*150*
	Year	Major outcomes			Cost estimation	Including the subsidy
	2016	*A system of attracting young academic staff is designed and implemented, including the creation of positions for young academic staff with experience in research and education in leading Russian and foreign universities and scientific organizations;* *At least 20 people are taken to the respective positions.*			*30*	*30*
	2017	*At least 20 people are working in the respective positions.*			*30*	*30*
	2018-2020	*At least 20 people work in the respective positions annually.*			*90*	*90*

4.	Task 2		Ensure that the University is engaged in the dedicated international fairs, exhibitions, presentations, forums and other events to enhance awareness, image and ranking among the leading centres for research and education.			
	Target		Number of international events in which the university was involved.		Units	
	2016	2017	2018		2019	2020
	1	2	2		2	2
	Implementation mechanisms		— Review and monitor the international experience in the promotion of universities; — Develop a list of key activities aimed at promoting the image and rating; — Develop a set of displays and exhibit materials as well as information analysis products for promoting the University; — Update displays and exhibit materials taking into account any changes in technology and information.	Cost estimation (total and with subsidies)	12.5	10
	Year	Major outcomes			Cost estimation	incl.subsidies
	2016	Basic exhibition package is compiled (a set of displays and exhibit materials as well as information analysis products). Participation in at least one of the key international events aimed at promoting the image of the University.			2.5	2
	2017	Participation in at least two key international events aimed at promoting the image of the University.			2.5	2
	2018-2020	Participation in at least 6 of the key international events aimed at promoting the image of the University.			7.5	6

Activity 3: "The implementation of programme of international and domestic academic mobility of academic staff in the form of internships, professional development training, professional retraining and others".

5.	Task 1		Participation of the academic staff members in internships, professional development training, professional retraining and other forms of international and domestic academic mobility.			
	Target indicator		The number of the academic staff members who have participated in internships, professional development training, professional retraining and others in the world's leading research and education centres.		People	
	2016	2017	2018		2019	2020
	190	190	190		190	190
	Implementation mechanisms		— making the list of the world's leading research and education centres in terms of participation of academic staff in various forms of outgoing academic mobility; — development of individual plans for participation in various forms of outgoing international academic mobility; — internal competitive selection of participants of international academic mobility among academic staff members.	Cost estimation (total and including the subsidy)	206,4	198
	Year	Major outcomes			Cost estimation	Including the subsidy

	2016	*At least 15% of the academic staff have been trained in various forms in the world's leading research and educational centres.*	*40,6*	*39,6*
	2017	*At least 25% of the academic staff have been trained in various forms in the world's leading research and educational centres.*	*41,1*	*39,6*
	2018-2020	*At least 40% of the academic staff have been trained in various forms in the world's leading research and educational centres.*	*124,7*	*118,8*

6.	Task 2		*Invitation of experts from the world's leading research and educational centres for participation in research and educational activities carried out at the University.*		
	Target indicator		*The number of invited experts from the world's leading research and educational centres who have participated in research and educational activities carried out at the University.*	*People*	
	2016	2017	2018	2019	2020
	95	115	120	115	110
	Implementation mechanisms		— development of the regulations (concepts) for inviting experts from the world's leading research and educational centres; — development of the schedule of scientific and educational events held at the University for the period of the programme implementation; — competitive selection of the participants for the programmes of incoming academic mobility with the participation of experts from the world's leading research and educational centres.	Cost estimation (total and including the subsidy)	*113,32*	*111*
	Year	Major outcomes		Cost estimation	Including the subsidy
	2016	*At least 10% of the academic staff and 5% of students of the University have been trained within the framework of scientific and educational activities with the participation of experts from the world's leading research and educational centres.*		*19,27*	*19*
	2017	*At least 15% of the academic staff and 10% of students of the University have been trained within the framework of scientific and educational activities with the participation of experts from the world's leading research and educational centres.*		*23,4*	*23*
	2018-2020	*At least 40% of the academic staff and 20% of students of the University have been trained within the framework of scientific and educational activities with the participation of experts from the world's leading research and educational centres.*		*70,65*	*69*

Activity 4: "The implementation of measures to improve the post-graduate and doctorate studies".

7.	Task 1		*Development of the programmes for postgraduate and doctoral studies under the supervision of academic staff members who have working experience in the world's leading scientific and educational centres.*		
	Target indicator		*The number of the programmes for postgraduate and doctoral studied developed with the participation or under the supervision of the leading academic staff members who have working experience in the world's leading scientific and educational centres.*	*Number, accrued total*	
	2016	2017	2018	2019	2020

	1	3	5		8	10
	Implementation mechanisms		— *development of the list of prospective educational programmes for postgraduate and doctoral studies taking into account the priorities of the university development;* — *development of a system of independent audit of the programmes developed for postgraduate and doctoral studies;* — *competitive selection of the managers of the programmes for postgraduate and doctoral studies among the academic staff members who have working experience in the world's leading scientific and educational centres;* — *improvement of the mechanisms and forms of appraisal of the participants of the programmes for postgraduate and doctoral studies.*	Cost estimation (total and including the subsidy)	*30*	*30*
	Year	Major outcomes			Cost estimation	Including the subsidy
	2016	*The list of the programmes for postgraduate and doctoral studies is developed.* *At least 1 educational programme for postgraduate and doctoral studies is developed.*			*3*	*3*
	2017	*At least 5 educational programmes for postgraduate and doctoral studies are developed.*			*6*	*6*
	2018-2020	*At least 10 programmes for postgraduate and doctoral studies are developed and introduced.*			*21*	*21*

8.	**Task 2**			*Invitation of the academic staff members who have experience of working in the programmes of postgraduate and doctoral level in the world's leading scientific and educational centres to the positions of lecturers and researchers.*		
	Target indicator		*The number of visiting lecturers and researchers who have experience of working in the programmes of postgraduate and doctoral level in the world's leading scientific and educational centres.*	*People*		
	2016	2017	2018		2019	2020
	14	14	14		14	14
	Implementation mechanisms		— *analysis of the domestic and international markets of the attraction of academic staff to the positions of lecturers and researchers;* — *formation of the International Advisory Board with the functions of audit of the personnel policy in the attraction of academic staff with international experience;* — *implementation of a complex of procedures aimed at the attraction of academic staff who have experience of working in the programmes of postgraduate and doctoral studies to the positions of lecturers and researchers;* — *periodic performance reviews of the academic staff members, who have been taken to the respective positions.*	Cost estimation (total and including the subsidy)	*143,35*	*140*
	Year	Major outcomes			Cost estimation	Including the subsidy
	2016	*At least 15 postgraduate students (doctoral candidates) undergo training under the supervision (with consultative support) of lecturers and researchers.*			*28,4*	*28*
	2017	*At least 30 postgraduate students (doctoral candidates) undergo training under the supervision (with consultative*			*28,6*	*28*

		support) of lecturers and researchers.		
	2018-2020	*At least 60 postgraduate students (doctoral candidates) undergo training under the supervision (with consultative support) of lecturers and researchers.*	*86,35*	*84*

Activity 5: "The implementation of the measures to support students, postgraduate students, trainees, young academics".

9.	**Task 1**		*Implementation of the incentive scheme for the best students' academic achievements, including the system of grants.*		
	Target indicator		*The number of students who have received support in the reporting period.*	*People per year*	
	2016	2017	2018	2019	2020
	60	60	60	60	60
	Implementation mechanisms		*— elaboration of the criteria and mechanism of the competitive selection of the best students;* *— functioning system of financial motivation of the best Master students.*	Cost estimation (total and including the subsidy) *71,2*	*62*
	Year	Major outcomes		Cost estimation	Including the subsidy
	2016	*Development of the system of the best students' financial support.* *At least 60 students receiving incentives for academic achievements.*		*13,9*	*12,4*
	2017	*At least 120 students receiving incentives for academic achievements.*		*14,1*	*12,4*
	2018-2020	*At least 300 students receiving incentives for academic achievements.*		*43,2*	*37,2*

10.	**Task 2**		*Implementation of the system of individual internal grants to support postgraduate students' research, including financing projects in making prototypes and sample devices, the acquisition of the necessary sources of information, laboratory supplies, software and hardware, financing the visits to the world's leading research and educational centres.*		
	Target indicator		*The number of postgraduate students receiving support.*	*People per year*	
	2016	2017	2018	2019	2020
	30	30	30	30	30
	Implementation mechanisms		*— elaboration of the regulations (rules) for internal distribution of grants, including criteria for evaluating projects;* *— application of the procedures for competitive selection of postgraduate students applying for research grant support, including the examination of applications;* *— collective evaluation of project results.*	Cost estimation (total and including the subsidy) *49,5*	*49,5*
	Year	Major outcomes		Cost estimation	Including the subsidy
	2016	*The system of individual internal grants is developed.* *At least 30 postgraduate students receiving support.*		*9,9*	*9,9*
	2017	*At least 30 postgraduate students receiving support.*		*9,9*	*9,9*
	2018-2020	*At least 90 postgraduate students receiving support.*		*29,7*	*29,7*

11.	**Task 3**	*Provide financial support to students, postgraduate students, young academic staff members of the University for participation in international scientific and educational activities, including covering the costs of membership fees, registration and other fees*

		charged by organizations in research and educational spheres.			
	Target indicator	*The number of students, postgraduate students, young academic staff members, who are members of international organizations and associations in the research and educational spheres.*		*People*	
	2016	2017	2018	2019	2020
	50	70	100	150	200
	Implementation mechanisms	— elaboration of a mechanism of competitive selection of candidates for financial support for internationalization; — establishment of a fund to support students, postgraduate students and young teachers, designed to encourage joining professional organizations and associations, as well as participation in international scientific events; — monitoring of the activities of international organizations and associations in the research and educational fields, as well as the events organized by them.	Cost estimation (total and including the subsidy)	*11,1*	*7,5*

	Year	Major outcomes		Cost estimation	Including the subsidy
	2016	*Participation of at least 50 students, postgraduate students, young academic staff members of the University in the events organized by international organizations and associations in the research and educational spheres.*		*2*	*1,5*
	2017	*Participation of at least 70 students, postgraduate students, young academic staff members of the University in the events organized by international organizations and associations in the research and educational spheres.*		*2*	*1,5*
	2018-2020	*Participation of at least 450 students, postgraduate students, young academic staff members of the University in the events organized by international organizations and associations in the research and educational spheres.*		*7,1*	*4,5*

Activity 6: "The introduction of new educational programmes in higher educational institutions in collaboration with leading Russian and foreign universities and scientific organizations".

12.	**Task 1**	*Introduction of network programmes implemented together with educational institutions of higher education (domestic and foreign), with scientific institutions and industrial and technological establishments.*			
	Target indicator	*The number of network programmes introduced*		*Number*	
	2016	2017	2018	2019	2020
	—	2	1	1	1
	Implementation mechanisms	— creation of a network of partner organizations; — elaboration of regulations and internal standards of quality for educational programmes implemented in the form of a network; — development of the programmes implemented in the form of a network; — introduction of new educational technologies facilitating the implementation of the network programmes; — analysis of the programme implementation, including independent audit of the implemented programmes quality.	Cost estimation (total and including the subsidy)	*15*	*15*

Year	Major outcomes	Cost estimation	Including the subsidy
2016	*Creation of a network of partner organizations, the development of joint regulations for the development and implementation of network programmes.*	*3*	*3*
2017	*Implementation of at least 2 network programmes on an accrual basis.*	*3*	*3*
2018-2020	*Implementation of at least 5 network programmes on an accrual basis.*	*9*	*9*

13.	**Task 2**		*Development of Master programmes with involvement of experts from leading Russian and foreign universities and scientific organizations.*			
	Target indicator		*The number of Master programmes developed with involvement of experts from leading Russian and foreign universities and scientific organizations.*		*Number, accrued total*	
	2016	2017	2018		2019	2020
	3	6	9		12	16
	Implementation mechanisms		— development of the list of prospective educational Master programmes taking into account the priorities of the university development; — development of a system of audit of the programmes developed for Master's degree; — competitive selection of the developers of the educational learning materials for Master programmes among the experts from leading Russian and foreign universities and scientific organizations;	Cost estimation (total and including the subsidy)	*53*	*53*
	Year	Major outcomes			Cost estimation	Including the subsidy
	2016	*The list of the Master programmes is developed.* *At least 3 Master programmes are developed.*			*9*	*9*
	2017	*At least 6 Master programmes are developed.*			*9*	*9*
	2018-2020	*At least 16 Master programmes are developed and introduced.* *An audit of the developed Master programmes is conducted.*			*35*	*35*

14.	**Task 3**		*Develop draft educational standards on the basis of promising (advanced) professional draft standards by priority of the University.*			
	Target		*Number of developed educational draft standards on the basis of promising professional standards.*		*Units, on an accrual basis*	
	2016	2017	2018		2019	2020
	—	2	4		6	8
	Implementation mechanisms		— Study international standards and databases to set up a list of prospective (advanced) professions related to the University priorities; — Conduct an independent audit of the demand for perspective (advanced) professions among the leading employers; — Create an educational draft standard on the basis of perspective (advanced) professional standards;	Cost estimation (total and with subsidies)	*24*	*24*

		— *Adjust the developed standards taking into account updating the information and legislative framework.*		
	Year	Major outcomes	Cost estimation	incl. subsidies
	2016	*Developed is a system of evaluation and acceptance of the developed professional standards; develop a list of prospective (advanced) professional standards and related advanced education standards.*	*0*	*0*
	2017	*Developed at least 2 educational standards on the basis of prospective (advanced) professional standards.*	*6*	*6*
	2018-2020	*Developed at least 4 draft sets 'Professional Standard – Educational Standard'.*	*18*	*18*

Activity 7: "The implementation of the measures to attract students from leading foreign universities to study in Russian higher educational institutions, including the implementation of partner educational programmes with foreign universities and university associations".

15.	**Task 1**		*Provide scholarship support for international students from leading foreign universities who are enrolled in the programmes of exchange education.*			
	Target indicator		*Number of foreign students receiving individual scholarships for the programmes of exchange education at the university.*		*People, accrued total*	
	2016	2017	2018		2019	2020
	20	20	20		20	20
	Implementation mechanisms		— *development and implementation of the Regulations on the competitive allocation of scholarships to foreign students coming to the university for exchange education courses;* — *development of conditions and criteria to apply for a scholarship;* — *creation of a scholarship fund for foreign students.*	Cost estimation (total and including the subsidy)	*10*	*10*
	Year	Major outcomes			Cost estimation	Including the subsidy
	2016	*At least 50 foreign students coming to exchange education courses.*			*2*	*2*
	2017	*At least 70 foreign students coming to exchange education courses.*			*2*	*2*
	2018-2020	*At least 200 foreign students coming to exchange education courses.*			*6*	*6*

16.	**Task 2**		*Development of courses in foreign languages in order to attract foreign students and increase the attractiveness of the university in the international education market.*			
	Target indicator		*The number of courses provided with teaching packages and given in foreign languages.*		*Number*	
	2016	2017	2018		2019	2020
	10	20	30		40	50
	Implementation mechanisms		— *analysis of the demand from foreign students coming to exchange education courses for a period of 1-2 semesters as well as those taking a full course of study;* — *development and pilot testing of courses in foreign languages, including the development and publication of*	Cost estimation (total and including the subsidy)	*17,2*	*7,5*

		teaching materials; — *financial incentive for academic staff members developing teaching materials and giving courses in a foreign language.*			
	Year	Major outcomes		Cost estimation	Including the subsidy
	2016	*At least 1% of students take courses within the educational programme in a foreign language.*		*2,5*	*1*
	2017	*At least 2% of students take courses within the educational programme in a foreign language.*		*3*	*1,5*
	2018-2020	*At least 10% of students take courses within the educational programme in a foreign language.*		*11,7*	*5*

Activity 8: "The implementation of research and technological projects in cooperation with Russian and international high-technology organizations, including the possibility of establishing structural departments in universities, in accordance with the long-term programme of fundamental research in universities of the Russian Federation taking into account the priorities in international fundamental and applied research".

17.	**Task 1**		*Creation of research centres (laboratories) and formation of research teams implementing research programmes under the supervision of leading Russian and foreign scientists.*			
	Target indicator		*The number of research centres (teams of at least 5 employees) implementing the programmes of scientific research under the supervision of leading Russian and foreign scientists and/or in cooperation with the world's leading research, educational and technology centres.*		*Number, accrued total*	
	2016	2017	2018		2019	2020
	—	5	5		5	5
	Implementation mechanisms		— *development of the regulations (concepts) for inviting leading Russian and foreign scientists;* — *elaboration of the criteria for selection and evaluation of the research programmes implemented under the supervision of leading Russian and foreign researchers;* — *development of the system of scouting for and invitation of the top-level scientists;* — *inviting leading scientists to manage the research teams in the framework of the priorities established by this Programme;* — *planning and conducting R&D projects on the basis of the research programmes;* — *restructuring of the previously created shared research facilities for the operation of new research centres (teams).*	Cost estimation (total and including the subsidy)	*218,75*	*216*
	Year	Major outcomes			Cost estimation	Including the subsidy
	2016	*Organizational and financial mechanisms of the new centres are created.*			*24,3*	*24*

		At least 5 heads of the established centres (teams) are invited to organize the work. *R&D plans for at least 5 research topics are developed.*		
	2017	*At least 25 academic staff members are employed in the established centres.*	*48,5*	*48*
	2018-2020	*At least 25 academic staff members are employed in the established centres.*	*145,95*	*144*

18.	**Task 2**		Development of the existing research infrastructure of the University for the needs of the research projects involving leading Russian and foreign scientists as supervisors.			
	Target indicator		*The amount of research and development work per one academic staff member.*		*Thousand rubles*	
	2016	2017	2018		2019	2020
	306	312	320		360	499
	Implementation mechanisms		— *inventory of the existing material and technical infrastructure, including instrumentation and laboratory facilities;* — *development of the schedule of the modernization of new laboratories in collaboration with leading scientists and hi-tech organizations;* — *holding tenders and the purchase of laboratory equipment, furniture, supplies and other material and technical values and assets necessary to implement R&D plans.*	Cost estimation (total and including the subsidy)	*499*	*499*
	Year	Major outcomes			Cost estimation	Including the subsidy
	2016	*On the basis of the established centres, there published at least 10 articles in the journals included in the international citation indexes.*			*153*	*153*
	2017	*On the basis of the established centres, there published at least 40 articles in the journals included in the international citation indexes.*			*49*	*49*

19.	**Task. 3**		Involve healthcare professionals (of the highest academic qualification) with experience in leading Russian and foreign universities and medical research institutions for teaching in medical educational programmes including the high-tech medicine			
	Target		*Number of healthcare professionals with experience in leading Russian and foreign universities and medical research institutions for teaching in in the specialist's degree and medical residency programmes.*		*People*	
	2016	2017	2018		2019	2020
	5	5	5		5	5
	Implementation mechanisms		— *Develop an academic staff incentive programme compatible with the domestic labour market by incentive in the field of medicine and public health;* — *Develop a regulation concerning its own clinical facilities of the Institute of Medicine.*	Cost estimations (total and with subsidies)	*50*	*50*
	Year	Major outcomes			Cost estimation.	incl.subsidies
	2016	*At least 5 academic staff who perform research and practice and teach with their own clinical facilities.*			*10*	*10*
	2017	*At least 5 academic staff who perform research and practice and teach with their own clinical facilities.*			*10*	*10*

	2018-2020	*At least 5 academic staff who perform research and practice and teach with their own clinical facilities.*		*30*	*30*

20.	**Task 4**		*Prepare the concept of development and design estimates for modernisation of the diagnostic and treatment centre and creation of the department of translational medicine and neurotechnology in the Institute of Medicine.*		
	Target		*The amount from another income activity related to the provision of medical services by the University departments.*	*RUB mln*	
	2016	2017	2018	2019	2020
	20	30	40	50	60
	Implementation mechanisms		— *Develop the concept of development of the diagnostic and treatment centre and creation of a department of translational medicine and neurotechnology;* — *Develop the design estimates for modernisation of the diagnostic and treatment centre;* — *License the necessary medical activities.*	Estimated value (total and with subsidies)	*252* *252*
	Year	Major outcomes		Cost estimation	incl.subsidies
	2016	*The developed concept and design estimates for modernisation of medical units of the University.*		*12*	*12*
	2017	*The medical units of the University are provided with the equipment for research, practice and educational activities, also in the field of neurotechnology.*		*90*	*90*
	2018-2020	*Set up a department of translational medicine and neurotechnology in the Institute of Medicine.*		*150*	*150*

2. *Mandatory additional activities*

Additional activity 1. Compliance with the competition requirements

21.	**Task 1**		*Compliance with the competition requirements (as per the competitive documentation)*		
	Target indicator		*Completion of the Programme activities*	*Thousand rubles*	
	2016	2017	2018	2019	2020
	100	100	100	100	100
	Implementation mechanisms		— *preparation of the documentation and receiving necessary approvals from the Ministry of Science and Education of the Russian Federation;* — *development of necessary internal documents and executive orders;* — *approval of the documentation at the Academic board and Advisory board.*	Cost estimation (total and including the subsidy)	*3* *0*
	Year	Major outcomes		Cost estimation	Incl.subsidies
	2016	*Within 90 days of the announcement of the Competition results, the University provides the Ministry of Science and Education with a roadmap for the Programme developed together with the independent experts in accordance with the Ministry guidelines.* *The roadmap is approved at teh Academic board and Advisory board.* *Internal regulations and contracts with the top management are amended to account for the Programme indicators and for the procedure of evaluation of the top management performance by the Ministry of Science and*		*3*	*0*

		Education. *Accounting for 2016 is harmonized with the international accounting standards.* *The University applies for a position in the QS ranking.* *Academic efficiency criteria are established and included into the short-term contracts with the academic staff.* *These criteria are then used to review the contracts and vary the payable incentives for the academic staff.*		
2017		*Accounting for 2017 is carried out in accordance with the international standards.* *Auditing of 2017 accounting reports.* *Receiving a QS ranking.*	*0*	*0*
2018-2020		*Accounting for 2017 is carried out in accordance with the international standards.* *Auditing of 2017 accounting reports.* *Receiving a QS ranking: 551-600 in the general ranking and 301-350 in the subject rankings*	*0*	*0*

Summary table of financial needs for policies to improve academic competitiveness

Million rubles

Activity	Cost estimation (total and including the subsidy)		By years					
			2016		2017		2018-2020	
	Cost estimation	Incl.subsidies	Cost estimation	Incl.subsidies	Cost estimation	Incl.subsidies	Cost estimation	Incl.subsidies
Activity 1	408,8	30	81,5	14	71,5	4	255,8	12
Activity 2	162,5	160	32,5	32	32,5	32	97,5	96
Activity 3	319,72	309	59,87	58,6	64,5	62,6	195,35	187,8
Activity 4	173,35	170	31,4	31	34,6	34	107,35	105
Activity 5	131,8	119	25,8	23,8	26	23,8	80	71,4
Activity 6	92	92	12	12	18	18	62	62
Activity 7	27,2	17,5	5	3	5	3,5	17,7	11
Activity 8	1019,75	1017	199	199	198	197	622,95	621
Activity 9	3	0	3	0	0	0	0	0
Cost estimation by activities	2338,12	1914,5	449,87	373,4	449,6	374,9	1438,65	1166,2

№		2016 year		2017 year		2018-2020 years	
1.	Subsidy and non-budget finance concerned with policies to improve academic competitiveness realization for activities of the Regulations of the Government of the Russian Federation of March 16, 2013, № 211	subsidy	non-budget sources	subsidy	non-budget sources	subsidy	non-budget sources
	Total cost	373,4	73,47	374,9	74,7	1166,2	272,45
	a) the implementation of measures for developing administrative staff reserve of universities and attracting specialists with experience in leading Russian and foreign universities and research institutions to the university managerial positions	14	67,5	4	67,5	12	243,8
	b) the implementation of measures for attracting young academics with experience in research and education in the leading Russian and foreign universities and research institutions	32	0,5	32	0,5	96	1,5
	c) the implementation of programme of international and domestic academic mobility of academic staff in the form of internships, professional development training, professional retraining and others	58,6	1,27	62,6	1,9	187,8	7,55
	d) the implementation of measures to improve the post-graduate and doctorate studies	31	0,4	34	0,6	105	2,35
	e) the implementation of the measures to support students, postgraduate students, trainees, young academics	23,8	2	23,8	2,2	71,4	8,6
	f) the introduction of new educational programmes in higher educational institutions in collaboration with leading Russian and foreign universities and scientific organizations	12	0	18	0	62	0
	g) the implementation of the measures to attract students from leading foreign universities to study in Russian higher educational institutions, including the implementation of partner educational programmes with foreign universities and university associations	3	1,5	3,5	1,5	11	6,7
	h) the implementation in frames of research plans in accordance with the long-term programme of fundamental research in universities of the Russian Federation taking into account the priorities in international fundamental and applied research of:	199	0,3	197	0,5	621	1,95
	research projects leading by top international and Russian scientists and (or) in cooperation with promising scientific organizations including the possibility of establishing structural departments in universities	24	0,3	48	0,5	144	1,95
	research and technological projects in cooperation with Russian and international high-technology organizations, including the possibility of establishing structural departments in universities	153	0	49	0	297	0
2.	Non-budget finance concerned with policies to improve academic competitiveness realization for activities of the Regulations of the Government of the Russian Federation of March 16, 2013, № 211	3		0		0	
3.	Other sources finance concerned with policies to improve academic competitiveness realization excluding subsidy and non-budget finance	0		0		0	

Annex 1.

To the Programme of the IKBFU

List of Performance Indicators, Values and the Methods of Calculation of Additional Indicators.

№	Key indicators Indicator	Unit of measurement	Projected change in indicators				
			2016	2017	2018	2019	2020
1.	The University world ranking position						
1.1	Position in the ARWU World Top 500 (Academic Ranking of World Universities)	ranking position	0	0	0	0	0
1.2	Position in the ARWU-field/subject	ranking position	0	0	0	0	0
1.3	Position in the THE (The Times Higher Education World University Rankings)	ranking position	0	0	0	0	0
1.4	Position in the THE subject ranking	ranking position	0	0	0	0	0
1.5	Position in the QS World University Ranking	ranking position	0	701+	701+	651 - 700	551 - 600
1.6	Position in the QS subject ranking	ranking position	0	0	0	301 - 350	301 - 350
2.	Number of publications in the Web of Science and Scopus, excluding duplicates, per member of the academic staff						
2.1.1.	Number of publications in the Web of Science per member of the academic staff (over a five year period)	number	0.30	0.38	0.48	0.84	1.62
2.	Number of publications in the Web of Science per member of the academic staff (over a three year period)	number	0.27	0.36	0.44	0.80	1.56
2.2.1.	Number of publications in Scopus per member of the academic staff (over a five year period)	number	0.32	0.39	0.48	0.86	1.66
2.2.2.	Number of publications in Scopus per member of the academic staff (over a three year period)	number	0.30	0.36	0.44	0.84	1.62
3.	Average citation index per member of the academic staff based on the total number of articles in the Web of Science and Scopus, excluding duplicates						
3.1.	Average citation index per member of the academic staff based on the total number of articles in the Web of Science	number	0.38	0.42	0.63	0.87	1.16
3.2.	Average citation index per member of the academic staff based on the total number of articles in Scopus	number	0.34	0.4	0.62	0.86	1.14
4.	Ratio of international professors and researchers in the total Academic staff, including Russian citizens holding PhD degrees from international universities	%	3	3.5	4	5.5	7
5.	Number of international students currently enrolled in the University major educational programmes (including students from the CIS countries)	%	4.64	5.02	5.4	5.78	6.16
6.	Average Unified State Exam (USE) score of the University state funded full-time Bachelor and five year Specialist degree students	score	71.5	71.5	71.5	72	72
7.	Share of non-state funding in the University income structure	%	37	39	43	47	50
Additional indicators*							
1.	Non-state income from intellectual property management	RUB mln	0.9	1.2	7.5	11.8	12.1
2.	Share of the academic staff under the age of 35	%	23	25	27	29	30
3.	Share of Master and post-graduate students holding degrees obtained from other universities currently enrolled in graduate and post-graduate	%	32	35	39	43	47

№	Key indicators		Unit of measurement	Projected change in indicators				
	Indicator							
	programmes							
4.	Number of foreign citizens studying Russian at the University		people	150	200	250	300	350
5.	R&D revenue per member of the academic staff		RUB thou.	308	312	316	420	460

*)

Additional Indicator Calculation Methodology 1.

The indicator is calculated as the total value of agreements entered into by the Federal University on the management of intellectual property items (IPI) at various levels, V (IPI) = Σ IPI (i), where IPI (i) – value of the i agreement, at various levels, entered into by the Federal University on the management of intellectual property items (including direct agreements, licence agreements etc.)

Additional Indicator Calculation Methodology 2.

The indicator is calculated with the automated accounting personnel information system of the shell 1C: Enterprise by calculating the percentage of the academic teaching staff younger than 35 of the total academic teaching staff including external part-timers

Additional Indicator Calculation Methodology 3.

The indicator is calculated as the ratio of the number of students in Master programmes and postgraduate training programmes for graduates with a bachelor's degree, a specialist's degree or a master's degree of other institutions to the total number of students enrolled in Master programmes and trained under postgraduate training programmes in per cent.

Additional Indicator Calculation Methodology 4.

The indicator is calculated as the total number of foreign citizens studying Russian in the University. The indicator takes into account the following categories of students: foreign students studying the Russian in language schools, short-term language courses and exchange education under other educational programmes (including the philological profile); the students of foreign universities undertaking a high-school-based language internship; the foreign teachers of Russian studying under professional development programmes (including distance learning); foreign migrants taking Russian as a foreign language training courses.

Additional Indicator Calculation Methodology 5.

The indicator is calculated as the ratio of the total amount of funds received from the performance of research and development activities (R&D) to the number of academic staff. The total R&D scope is determined according to a report in the Federal Statistical Monitoring Form 2-science "'Information on the Execution of Research and Development' provided for the reporting year.

List of Authors

1. Andrei P. Klemeshev, Rector, Doctor of Political Science, Professor.

2. Timur R. Gareev, Vice-Rector for Development and Strategic Planning, Candidate of Economics, Docent.

3. Irina U. Kuksa, First Vice-Rector – Vice-Rector for Academic Affairs, Candidate of Philology, Docent.

4. Artyom V. Yurov, Vice-Rector for Research, Doctor of Physics and Mathematics, Professor.

5. Igor I. Zhukovsky, Vice-Rector for International Cooperation and Public Relations, Candidate of Political Sciences, Docent.

6. Tatyana C. Romel, Vice-Rector for Economic and Financial Affairs.

7. Olga L. Usmanova, Vice-Rector for Administrative Affairs.

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