

S6.6 New methods and analytical tools for technology transfer.

Title: Comparison of the structures supporting innovation universities in terms of performance of the functions of technological transfer.

Marina Bezdenezhnaya, Vera Pudkova.

Marina Bezdenezhnaya, student of Department of innovative technologies Tomsk state university of control systems and radioelectronics, Russia. This year, Marina received a Bachelor of Innovation. She has participated in 8 international conference Triple Helix in 2010 in Madrid, with a poster. Marina takes an active part in conferences and forums in Russia. For example, Tomsk Innovation Forum (innovuz), the Forum Seliger, Russia scientific-practical conference of students, graduates and young scientists "Innovation 2011" with elements of a scientific school for youth and more.

Tel.:+79234046566

e-mail: bezdenezhnaya@gmail.com

Keywords: innovation infrastructure, support of innovations, technology transfer.

Copyright of the paper belongs to the author(s). Submission of a paper grants permission to the Triple Helix 9 Scientific Committee to include it in the conference material and to place it on relevant websites. The Scientific Committee may invite accepted papers to be considered for publication in Special Issues of selected journals after the conference.

Abstract.

One of the main objectives assigned the Russian president is the modernization of economy. The main condition for achieving the task is to build a knowledge economy. Thus, it is necessary to create conditions for pre-revolution of scientific and technical knowledge in one of the main resources of long-term economic growth. The problem of creating an environment for the appearance and development of innovation within the university is very acute for Russia today. Therefore, the development of innovation infrastructure and research activities supported at the national level. The present study investigates the innovation infrastructure of universities in Russia. Of the fifty-six state universities in the winners of the competition among universities directed at the development of innovative infrastructure for the analysis were selected by ten universities. The article presents the study materials the infrastructure of universities. The estimation of the necessity and efficiency of various infrastructure to support innovation.

Introduction.

The purpose of this study is to develop recommendations for the triple helix actors in the construction of the most effective operation of infrastructure to support of innovations in Russia. The authors investigate innovative infrastructure fifteen universities that have won the competition for state financial support for the development of innovation infrastructure.

With the onset of economic growth in Russia, in the early 2000's, government started to build relationships with industry. State powers had been closed for industries; not looking at these industries should be socially responsible and implement social programs. Universities, at this time, as a rule had only basic function - education. Science in Russian universities had been and remains underdeveloped compared with the institutes of the Russian Academy of Sciences.

Only in 2009, did the university officially receive a new mission. Now, innovation development of the regional economy is directly linked to the new opportunity of universities: to create small enterprises. The State Duma of the Russian Federation adopted federal law № 217 (FL-217) on August 2, 2009. The essence of law lies in the fact that the universities can create a for-profit company (the so-called spin-out company) for practical use (implementation) of intellectual property.

Another step towards innovative development and cooperation was the adoption in April 2010 of Russian Federation Government Resolution № 219 "On state support of innovation infrastructure in the federal educational institutions of higher education."

Main objective of the study - to understand can created by an innovative infrastructure of universities to conduct rapid and effective transfer of technology.

State of the art about the topic.

Creating an enabling environment for innovation is a challenge not only for Russia but I to the world as a whole. Many scholars define the university as the main engine of the triple helix. Young and talented people who study or work in universities are able to create innovative solutions and innovative business. Therefore the creation of an infrastructure to support innovation in universities is a major problem.

In particular the Government of the Russian Federation in 2010 has taken on the active support of the universities in this area. In 2010, held an open competition of universities, where the estimated program development of innovation infrastructure. The winners received state appropriations for the implementation of this program.

The aim of the study is to assess the infrastructure to support innovation of universities, whether that infrastructure is able to produce transpfer technologies.

This study is the most important for Russian universities. Based on these studies, they will be able to adjust the operation of their infrastructure for technology transfer.

Universities that participate in the study, won public support is for the development of innovation infrastructure.

For the Government of the Russian Federation will be interesting to research results from the effective performance of Government Resolution № 219.

The Decree included a provision for state support of innovation infrastructure of the University budget allocations for up to 3 years up to 1.250 million euro a year to finance the expenditures:

1) The development of innovation infrastructure facilities in educational institutions (business incubators, technology parks, technology park zones, innovation and technology centers, engineering centers, centers for certification, technology transfer centers, centers for communities, scientific and technical information center, centers of innovation consulting and other objects of innovation infrastructure) and equipping them with modern equipment, including for its technical operation, and the software necessary to implement the results of scientific-technical and intellectual activities, the exclusive rights to which belong to the university.

2) The implementation and development of targeted training and skills development in small innovative enterprises, including of graduate students and young scientists, as well as developing educational and methodological, scientific and methodological support for small and medium-sized businesses.

3) The training and professional development of university staff in the field of innovation development and technology transfer in foreign universities with an effective infrastructure.

4) The consulting services for foreign and Russian experts in the field of technology transfer, creation and development of small innovative companies, including the involvement of faculty members in the normative-methodical and practical achievement of the creation of such companies.

The above-described state support is provided on a competitive basis. The contest in support of innovation infrastructure had 199 entries. As a result of open competition 56 winning universities have been identified.

These institutions of higher education annually would be allocated budgets: in 2010 - about 500 thousand dollars, in 2011 - about 340 thousand dollars, in 2012 - about 500 thousand dollars.

Methodology.

The action is on state support of innovation infrastructure, including support for small innovative enterprises is carried out in accordance with the Government resolution of the Russian Federation on 9 April 2010 № 219 "State support for development of innovation infrastructure in the federal educational institutions of higher education".

Mechanism for implementing the program is the government support the development of innovative infrastructure of educational institutions, which is based on competitive selection of programs for the development of innovation infrastructure, including support for small innovative Enterprise, educational institutions. After a competitive selection from the federal budget to allocate additional budget allocation for the estimates or in the form of subsidies.

Budgetary allocations have been an educational institution, selected after a competition for up to 3 years of up to 50 million rubles a year to finance the development of innovative infrastructure.

Submitted for the competition program for the development of innovation infrastructure of educational institutions should have a proper feasibility study. Preference is given to programs that demonstrate a high scientific, educational, commercial significance for educational institutions, and for the development of relevant scientific (technological) trends in Russia.

In the summer of 2010, the first time, was held the open competition of universities on the basis of RF Government Resolution № 219 of April 9, 2010 "On state support of innovation infrastructure in the federal educational institutions of higher education. " As a result of this competition were the winners - 56 universities of Russia.

The present study investigates the innovation infrastructure of universities of Russia, who won an open tender for selection of programs for the development of innovation infrastructure, including support for small innovative enterprises, universities. Of all the universities of the winners were selected ten universities, six of which are technical and four - classic.

Basis for the study was taken to University development program and the program of development of innovation infrastructure of the University.

In the study, for each of the selected universities were compared for development of innovation infrastructure, the existing problems of the University, the problem to be solved in order to achieve objectives, activities, doing that solves the problem.

The investigated materials are structured in a table, an example is presented in the table № 1 following.

development objective	existing problem	tasks, which solves the university	Actions

Findings and interpretation.

The study included ten universities, 5 of which are technical, and 5 - the classic. List of selected universities is presented in table № 2 presented following.

№	Name of an university	Name of program development infrastructure
1	Federal state educational institution of higher education, " Lomonosov Moscow State University"	Development of innovation infrastructure MSU as a basis for the formation of an innovative environment at MSU, including through the creation of specialized technological platforms with high-tech enterprises sector of the economy
2	State institution of higher professional education "Moscow State Institute of Electronic Technology (Technical University)	Modern innovation infrastructure in the field of nano- and microsystem technology for the development of small high-tech entrepreneurship, commercialization of technologies and training in priority areas of Russia's economic modernization
3	State educational institution of higher education, "Saint-Petersburg State Polytechnic University"	Formation of a functionally complete innovation infrastructure Polytechnic University, which provides a vertical transfer of high technology in the real economy
4	State educational institution of higher education "Irkutsk State Technical University	The program of development of innovation infrastructure of the National Research University Irkutsk State Technical University for 2010-2012
5	State educational institution of higher education "Novosibirsk State University	Innovative platform for the convergence of education, science and industry on the basis of the classical university
6	The federal government independent institution of higher professional education "Siberian federal to university"	Rational nature: complex processing of carbonaceous materials to produce energy and high-tech products
7	State educational institution of higher education, "National Research Tomsk Polytechnic University"	Development of innovation infrastructure of the National Research Tomsk Polytechnic University as an integrated system of research, development of technology, training and certification of personnel for the organization of high-tech industries in the area of energy and resource efficiency
8	The federal government independent institution of higher education "Southern Federal University	The federal government independent institution of higher education "Southern Federal University
9	Federal State educational institution of Higher Professional Education Russian State University of Immanuel Kant "	"The development of innovation infrastructure of the University in the field of medical biotechnology in the exclave region of Russia"
10	State educational institution of higher education, "Far Eastern State Technical University (FESTU named Kuibyshev)	Development of infrastructure complex "Pacific innovative terminal of Russia "

For each of presented above universities, was considered innovative infrastructure. For each of the selected universities were compared for development of innovation infrastructure, the existing problems of the University, the tasks that must be solved to achieve the objectives, activities, following which solves our problem.

The first university - is the Lomonosov Moscow State University (MSU).

Moscow University is the oldest classical university of the Russian Federation, the recognized leader of Russian higher education. University remains the largest innovation centers. The country's first Science Park, transforming scientific advances in high technology. Over the past 3 years in the MSU Science Park was established about 70 small companies, mainly in the field of chemistry and new materials, biotechnology, pharmacology, ecology and environmental management, production of scientific equipment. More than two thousand MSU scientists involved in innovative activities. MSU scientists have been cooperating successfully with many com-paniyami, carrying out research aimed at developing new - innovative - technology.

MSU won the contest on the basis of the Russian Federation № 219 GR with the program of development of innovation infrastructure: Development of innovation infrastructure of MSU as the basis for the formation of an innovative environment at MSU, including through the creation of specialized technological platforms with high-tech enterprise economy. "

development objective	existing problem	tasks, which solves the university	Actions
Does not occur effective commercialization of knowledge	To ensure the effective commercialization of knowledge.	Improving the effectiveness of existing innovation infrastructure. And the creation of new elements of innovation infrastructure.	1. Managing Innovation Policy and Innovation 2. Technology Transfer Center of MSU 3. MSU Science Park 4. Business Incubator 1. Technopark. 2. Business incubators. 3. High-tech center.
The absence of a sufficient number of qualified managers and scientists possessing knowledge and skills of effective commercialization of the results of polarization educational and scientific activities, management of innovation (VC) companies and projects.	Form a system of training specialists in the areas of innovation management in high technology.	training of the small innovative companies the basics of innovation management, training of managers of high technology	1. training programs 2. Master's programs in innovation management and management of high technology on the economic and natural science faculties 3. Corporate universities together with leading Russian companies ("Basic Element", Sistema, Russneft).
Unsuccessful technology transfer from university to industry, and their introduction into the enterprise	Development system for technology transfer		Creating a common information space of educational, scientific and administrative activities of the Moscow State University.

The main objective of the program of Moscow State University stands as the goal of creating a specialized technology platforms shapes. In the development program of the University until 2020, in part by the development of innovation infrastructure, the priorities were not recorded. One large issue is technology transfer, and the problem is stated twice in different ways, and the purpose and activities are different.

All the described activities just indicated, but did not detail itemized. To solve the problem: improving the effectiveness of existing innovation infrastructure, which appear the structure will be reformed, but that is not reflected in what way.

- 1) Activities like improving the management of the Innovation Policy and Innovation, Technology Transfer Center, Science Park, a business incubator, as well as the creation of new elements such as technology parks, business incubators, different orientation, the center of high technology, will reach the goal: the effective commercialization of . This chain allows us to solve the problem: the lack of technology transfer.
- 2) Activities: creating professional development programs and master's programs in innovation management, together with business, solve problems and achieve the purpose: formed a system of training of innovation management. This chain will solve the problem The absence of a sufficient number of qualified managers and scientists possessing knowledge and skills to effectively commercialize the results of educational and scientific activities, management of innovation (VC) companies and projects.
- 3) Create a single information space for educational, scientific and administrative de-sustained MSU will develop a system of technology transfer, since the role of information systems in our society is very important. At the same time solve the problem as a whole, the failed transfer technologies, it is impossible. Must be intensified, and other systems such as the very technology transfer.

The second University - Moscow Institute of Electronic Technology (MIET).

MIET is Russian Technical University, is Russian basic institution for training specialists in the region of Microelectronics, one of 39 national research universities. Founded in 1965, geographically located in Zelenograd, Moscow region.

In total, according to the year 2010, the university studying about 5500 students. By number of employees MIET is one of the largest, and together with the students - the largest organization of the city of Zelenograd.

On the areas of innovation complex MIET has a developed infrastructure network center for collective use, the only in Russia, through implementing a series of high-tech products in the field of electronics , microelectronics and information and telecommunication technologies.

MIET was the winner of the competition on the basis of GR the Russian Federation № 219 with program development and innovation-infrastructure: Modern innovation infrastructure in the field of nano-and microsystem technology for the development of small high-tech entrepreneurship, commercialization of technologies and training in priority areas of economic modernization in Russia.

development objective	existing problem	tasks, which solves the university	Actions
	dynamic development of innovation units MIET, the creation of scientific and technical products at a competitive level and the integration of scientific and industrial electronics industry's market environment.	<ul style="list-style-type: none"> • commissioned a set of administrative and industrial buildings to the European level of equipment, comfort and service • infrastructure network of collective use 	
Low levels of commercialized scientific and technical knowledge	providing required for running a successful technology-innovative activity processes	<ul style="list-style-type: none"> • Provision of highly qualified personnel, • Development of technology transfer, • Establishment of scientific and educational base in providing a perspective direction - Nanotechnologies for microelectronics. 	<ul style="list-style-type: none"> • Innovation Center; • Center for specialized training; • Center for Technology Transfer. • Innovative area in the Special economic zone "Ze-

			lenograd"
The low level of competitive products in the field of nanotechnology, with the participation of small and medium-sized high-tech companies	creation and production of market demand competitive products in the field of nanotechnology	participation in open competition for the selection of projects for the creation of nanotechnology centers in the investment agreement with the state corporation "Russian Nanotechnology Corporation".	Nanotechnology Center
Slow and inefficient process of commercialization of scientific and technological research at the University	intensification of the process of commercialization of research results, which are held in the offices of the University	involvement of university research teams in various scientific and technical programs and innovative projects in the field of electronics	Center for Technology Transfer

The main objective of infrastructure development of the university is relevant and feasible within the university. MIET is actively working to enhance the innovation of students and employees. Major activities associated with the creation of new elements of the innovation infrastructure of the university.

- 1) The first paragraph is not displayed the problem and actions, but clearly define the purpose and objectives: the dynamic development of innovation is solved by the work already put into operation a complex of administrative and industrial buildings and the center for collective use.
- 2) Activities: creation of the innovation center, training center, the DCT, an innovative platform in the the Special economic zone "Zelenograd" solves the problem by providing highly qualified personnel to promote technology transfer. Task, the creation of scientific and educational base in the direction of nanotechnology for microelectronics, can not be solved with the help of these activities. To solve it necessary to create new master's programs and research laboratories. Tasks can implement goal: ensuring the necessary processes for a successful tech-Nico-innovative activity, which, in turn, solves the problem of low level commercialization of knowledge.
- 3) Create a nanotechnology center is rather a result of participation in the competition for the selection of projects for the creation of nanotechnology centers. Despite this, with the help of nanotechnology center, you can achieve the goal: the creation of market demand and production of competitive products in the field of nanotechnology and to solve the problem: Low levels of competitive products in the field of nanotechnology, with the participation of small and medium-sized high-tech companies.
- 4) Creation and development of technology transfer center corresponds to the task of engaging the university research team in various programs and projects (as this is one of the functions of TTC). Solution set of the problem reaches the goal, because with a larger number of participants in innovative programs and projects, and activates the process of commercialization of research results. This entire complex solves the problem of slow and ineffective technology transfer.

The third University - St. Petersburg Polytechnic University (STU).

The university was founded in 1899. Is one of the largest and most renowned technical universities in Russia. Invariably occupies a leading position in the ranking of technical universities in Russia. In the scientific and educational community of the country and the world Polytechnic University plays a significant role. More than 2600 foreign nationals studying in higher education programs, pre-and post-graduate training. STU is a partner of many leading universities in the world - business cooperation with universities supported by more than 40 countries and more than 70 companies and organizations from 19 countries are working with the Polytechnic on the basis of direct contractual relationships. Every year in the walls of the Polytechnic are more than 30 international scientific symposiums and conferences, to which are often prominent scientists of Russia and the world, Nobel laureates, winners of the prize "Global Energy".

Polytechnic University was the winner of the competition on the basis of the GR of the Russian Federation № 219 from the program of development of innovation infrastructure: the formation of a functionally complete innovation infrastructure Polytechnic University, which provides a vertical transfer of high technology in the real economy.

development objective	existing problem	tasks, which solves the university	Actions
Low level of integration of research and industry world-class technology	Modernization of the STU	<ul style="list-style-type: none"> • Analysis of the effectiveness of scientific and educational activities to meet the staffing needs of new enterprises of high-tech sectors of the; • implementation of the modernization of existing and developing new educational programs; • development of a quality management system of educational, scientific and innovation activities of innovative university; 	<ul style="list-style-type: none"> • creation of scientific and technical information; • Provision of high-tech equipment and knowledge-based world-class technology; • modernization of the information infrastructure of the university.
	Development Polytechnic University	<ul style="list-style-type: none"> • involvement of leading scientists and specialists to work at the university; 	completion of the modernization of educational training programs with the requirements of employers;
	The conquest of Polytechnic University leading position in the Russian scientific and educational space and strengthening of the position in the global scientific and educational space.	<ul style="list-style-type: none"> • creation and development of Polytechnic University Joint Science and Technology Institute • develop a network of branches in the departments of enterprises of high-tech sector 	Creating Foresight Center

- 1) Measures to create the department of scientific and technical information with high-tech equipment and knowledge-based world-class technology, upgrading the information infrastructure of the university does not meet the requirements. Activities and tasks are very different directions. In spite of this, the activities contribute to the modernization of the university, ie, of the goal, it does not solve the problem of poor integration of scientific research. Completion of the modernization of educational programs are not conducive to attracting leading academics in the university (ie, events do not realize the problem). Attracting top scientists promotes the university (ie, the problem corresponds to the target), but in actions to this target is not displayed.
- 2) Create Foresight Center is not conducive to the establishment and formation of joint scientific and technological institute and develop a network of branches (ie, activities not consistent with the objectives). In spite of this, the creation of Forsyth Center contribute to conquer the leadership in Russia-ray science and educational space.

The fourth university is Irkutsk State Technical University (ISTU).

National Research Irkutsk State Technical University - one of the largest technical universities in Russia-ray, was founded in 1930. Total size of R & D in 2006 reached more than 8 million dollars. In 2000, ISTU established industrial park, which now includes educational, research and production centers, service departments of the University, IT infrastructure, regional innovation structures, a business incubator and 16 high-tech business ventures.

Irkutsk State Technical University was the winner of the competition on the basis of the Russian Federation № 219 GR with the program of development of innovation infrastructure: software development of innovation infrastructure of the National Research State Medical University Irkutsk State Technical University for 2010-2012.

development objective	existing problem	tasks, which solves the university	Actions
Low levels introduced knowledge and technology	efficient introduction of new knowledge and technologies.	equipping university unique scientific and educational equipment, new centers of collective use, popular academic and university science, high-tech business.	<ul style="list-style-type: none"> • will be acquired advanced training, laboratory, scientific research and technological equipment, as well as software tools for creating new and developing existing research laboratories, academic research centers, centers for collective use; • Will be installed multimedia equipment for lectures and specialized classrooms and halls in priority areas of the university.
	creating the conditions for the activities of small innovative enterprises	<ul style="list-style-type: none"> • attracting faculty ISTU for innovation • transmission developed innovative products to enterprises 	<p>The development of Technopark ISTU</p> <p>The development of business incubator.</p>

- 1) Activities to equip educational, laboratory and scientific auditoriums are solve uniquely equipped units of the university. These activities are insufficient to achieve the goal: the effective implementation of the results of new knowledge and technology can not fully achieve it, and thus can not solve the problem of low level introduced the results of scientific research and development. To solve such problems is not enough to equip the units with new equipment, it is necessary to organize a common information network and create a structure whose main duty is to introduce new knowledge to the market.
- 2) Development of industrial park and business incubator does not fully meet their stated objectives, but also meets the goal: the creation of conditions for the activities of small innovative businesses.

The fifth university is Novosibirsk State University (NSU).

NSU different innovative approaches to combining classical education with research practices, succession of outstanding scientific schools, continuing the tradition of the oldest universities in Russia. Since the foundation of the walls of the NSU left more than 40,000 professionals. Over 4 thousand of them have defended their theses, more than a thousand have doctorates. In the Russian Academy of Sciences elected 42 graduates of NSU. According to the edition of The Times - «Higher Education Supplement» in 2005 in the top 200 universities in the world to include only two Russian universities: Moscow State University and NSU.

NSU has won the competition on the basis of the GR of the Russian Federation № 219 from the program of development of innovation infrastructure: An innovative platform for the convergence of education, science and business on the basis of the classical University.

development objective	existing problem	tasks, which solves the university	Actions
Lack of specialists in an innovative direction	prepare graduates with an innovative worldview	<ul style="list-style-type: none"> • development of new interdisciplinary, project-oriented master's programs in high technology cooperation with foreign partners; • empowerment of additional vocational training in the field of innovative entrepreneurship, management and commercialization of innovative strategies-ting development for students and staff of NSU, specialists, university teachers and all stakeholders; • Further expansion of training and staff development at the University of innovation 	Develop and implement training programs and skills development: <ul style="list-style-type: none"> • innovative entrepreneurship; • intellectual property management; • Project and proizvodstvenny management; • Funding innovation • organization and operation of small innovative companies; • development of training and scientific and methodological support for small and medium enterprises with the participation of international experts; • training and staff development.
Insufficient number of implemented high-tech innovation	effective implementation of high-tech innovation with the potential commercialization		<ul style="list-style-type: none"> • Center for Innovative Development NSU; • innovation and technology and engineering centers in the area of instrumentation, living systems; • Department of Innovation Consulting and partnerships NSU; • Center for Master's; • Department of Innovation and Entrepreneurship; • Certification
A small number of start-ups NSU	Creation and development of innovative start-ups NSU	<ul style="list-style-type: none"> • attracting faculty to the normative-methodical and practical achievement of creating start-ups; • Creation and development of small innovative companies with NSU; • working out the organizational and economic mechanisms of interaction of NSU with these companies. 	Development of the existing facilities of the innovation infrastructure of the NSU. <ul style="list-style-type: none"> • Business Incubator; • specialized centers of creation and promotion of innovation-based, research and education center, research and education complex, scientific and educational innovation system; • Center for Continuing

			Education; • Centre for Development of innovative competences;
--	--	--	---

- 1) Develop and implement training programs and advanced training in various areas to meet the requirements and objectives: To prepare graduates with an innovative outlook, and solves the problem of shortage of specialists in an innovative direction.
- 2) Creation and development of new innovative structural units NSU contributes to the goal of effective implementation of high-tech innovation with the potential commercialization of polarization, but does not solve it completely. The problem of lack of implemented high-tech innovating developments with these activities, is solved, but not completely. To solve this problem, create structures that are responsible for technology transfer.
- 3) Activities to develop the existing objects of innovation infrastructure meet the challenges that solves the university, as well as consistent with the goal: the creation and development of innovative startups. This solves the problem of a chain of small amounts of start-ups at NSU.

The six universities - the Siberian Federal University (SFU).

In 2006, in Krasnoyarsk, was established Siberian Federal University. It consists of four major Krasnoyarsk University. Today, Federal University - a 19 institutions, 41,000 students, more than three thousand teachers, most of them - doctors and candidates of sciences.

SFU has won the competition on the basis of the Russian Federation № 219 PP with the program of development of innovation infrastructure: environmental management: integrated processing of carbonaceous materials to produce energy and high-tech products. University partners in the program will be the Krasnoyarsk Scientific Center, Russian Academy of Sciences and Institute of Catalysis, Russian Academy of Sciences (Novosibirsk).

development objective	existing problem	tasks, which solves the university	Actions
	creating a balanced system of innovation infrastructure, providing stable support and ongoing development of educational, research, innovation, technological activities	<ol style="list-style-type: none"> 1. Development of a balanced research capacity of the university; 2. Ensuring the educational process-oriented practice; 3. Providing innovative and adaptive technological basis for the diffusion of applied technologies in the real economy; 4. Implementation of the Agreement on Cooperation in the field of education and science between the Ministry of Education and Science, Government of Krasnoyarsk Region, Rosneft Oil Company and Siberian Federal University of 29 December 2008; 5. Implementation of interdisciplinary scientific and technological reserve, determined by the specific regional development (a large share of the commodity sector and extractive industries) on the basis formed by the initiative (or participation) FMS technology platforms. 	

1) The tasks contribute to achieving the goal, it does not appear any events planned for this conduct is also not displayed the main problem of the innovation infrastructure of the University.

Despite these shortcomings development program carried out jointly with the Krasnoyarsk Scientific Center, Russian Academy of Sciences and Institute of Catalysis, Russian Academy of Sciences (Novosibirsk), which reflects the cooperation of various organizations of innovative activity.

The seventh university is Tomsk Polytechnic University (TPU).

TPU - the first technical university in the Asian part of Russia, founded in 1896 and opened in 1900, has a rich tradition in the training of engineering personnel of higher qualification. During its existence, the TPU has trained over 130,000 professionals, including more than 500 were academicians, winners of state prizes and other prestigious awards. The university students: 22,000 students of all forms of learning, 568 graduate students and 48 doctoral students.

Polytechnic University was the winner of the competition on the basis of the Russian Federation № 219 GR with the program of development of innovation infrastructure: the development of innovation infrastructure of the National Research Tomsk Polytechnic University as an integrated system of research, development of technology, training and certification of personnel for the organization of high-tech industries in the area of energy and resource efficiency .

development objective	existing problem	tasks, which solves the university	Actions
	Development of infrastructure for the fundamental and applications research	Definition of priority areas for development	Increased cooperation with the University academic science, industry, leading universities and companies. Attracting leading foreign scientists. Increased publication activity of university employees.
	The development of innovation infrastructure	Improving material and technical basis infrastructure.	Equipping of research laboratories and centers of collective use. The publication is highly rated scientific and technical journals, including electronic.

- 1) The activities to enhance cooperation between the university with various organizations, the involvement of leading scientists, increasing publication activity allows you to define priority areas of development (ie, activities correspond to the problem). Definition of priority areas for development helps determine the direction of basic and applied research, but does not affect the development of infrastructure.
- 2) Laboratory equipment, publishing high-ranking scientific and technical journals, improves the material and technical base of the infrastructure of innovation activity (i.e. activities realize the task). However, the integrated development of innovation infrastructure not only for these events (i.e. the goal is not feasible through the presented activities and tasks).

The eighth university is South Federal University(SFU).

South Federal University was founded in 2006 by the Federal Government by acceding to the Rostov State University Rostov State Academy of Architecture and Art, Rostov State Pedagogical University, Taganrog State University. Since July 2010 the University changed its status and became an autonomous federal state educational institution. Increasing independence of the University opens new opportunities to improve educational and research activities, university management, improving economic management.

SFU has won the competition on the basis of the Russian Federation № 219 GR with the program of development of innovation infrastructure: a program for development of innovation infrastructure of the Southern Federal University, 2010-2013.

development objective	existing problem	tasks, which solves the university	Actions
	providing the possibility of bringing the results of fundamental and applied research to the level of technological development	creating objects of innovation infrastructure, enabling to form process chains for high-tech products.	<p>Creating Innovation and Technology Centre "Precision Engineering".</p> <p>Creation of Innovation and Technology Centre of Biotechnology of SFU.</p> <p>Creation of Innovation and Technology Center "Remote sensing of the Earth."</p> <p>Creation of Innovation and Technology Center Building Technologies. "</p> <p>Creating Innovation and Technology Center "Nuclear Energy".</p> <p>Creating Innovation and Technology Centre "Electronic and Information Technology."</p> <p>Creating Innovation and Technology Center "New ferroelectric materials and devices based on them."</p> <p>Creating Innovation-technology center "laboratory tissue cultures.</p>
The disadvantage of specialists in the field of new materials			Creating Innovation and Education Center "New Materials".
	improving efficiency and quality of scientific activities and is guided by a deliberate policy in the sphere of intellectual property of SFU.	• creation of legal norms for the effective use of intellectual property rights in scientific research SFU and in the economic turnover of the country as the object of licensing agreements, the legal framework of investment projects, the basis of agreements on	Creation of Interregional Center for Intellectual Property

		scientific-technical cooperation, etc.;	
		<ul style="list-style-type: none"> • Establishment of legal and economic conditions that balance the interests of legal entities in the creation, execution, legal protection and commercial use intellectualproperty. 	

- 1) The creation of innovative technology centers in different directions creating objects of innovation infrastructure, enabling to form process chains for high-tech products, ie activities correspond to the problem. Ensuring the possibility of bringing the results of fundamental and applied research to the level of technological development, ie objective is achieved through these activities.
- 2) Another problem is the lack of specialists in the field of new materials - it can be solved by creating innovative educational center "New Materials".
- 3) Creation of an interregional center for intellectual property based on the SFU promotes the formation of legal rules for the effective use of intellectual property rights and create legal and economic conditions that balance the interests of legal entities in the creation, registration, legal protection and commercial exploitation of IP. These activities and tasks contribute to achieving the goal: improving efficiency and quality of scientific activities and is guided by a deliberate policy in the sphere of intellectual property.

Nine universities is the Baltic Federal University of Immanuel Kant (BFU).

Today BFU of Immanuel Kant - the largest educational, scientific, cultural, and educational center of the western region of Russia. Over the past five years has successfully implemented a program of horizontal and vertical diversification of basic education programs. Doubled the number of specialties and disciplines are implemented training programs for bachelor's and master's degrees, which are respectively about 30 and 6% of the total number of educational programs. Open to training programs with secondary vocational education. Currently, the university sold about 300 educational programs for secondary, higher, further and postgraduate education, and 1,5 thousand employees and has around 14,000 students and trainees.

BFU won the contest on the basis of the Russian Federation № 219 GR with the development program of innovation infrastructure: Development of innovation infrastructure of the University in medical biotechnology in exclave of Russia.

development objective	existing problem	tasks, which solves the university	Actions
	Creating a modern innovation environment in the area of medical biotechnology	Improving the innovation infrastructure BFU	<ul style="list-style-type: none"> • Creation of new centers of collective use in the field of biomedical research for competitive advantage BFU, the development of cooperation with partner organizations to implement new and innovative projects. • Equipping of the existing centers for collective use modern equipment and software, upgrading of facilities, creation of conditions for advanced research in the field

			<p>of medical biotechnology.</p> <ul style="list-style-type: none"> • Create a business incubator to support small innovative enterprises. • Establishment of small innovative companies with the university.
	<p>Creation of new mechanisms to support innovative entrepreneurship and improving innovative capacity exclave region of Russia.</p>	<ul style="list-style-type: none"> • Improve management competencies Sawtry nicknames BFU in innovation management; 	<p>Education staff BFU program of excellence in innovation to strengthen human resource capacity of the University.</p> <ul style="list-style-type: none"> • Developing and implementing educational training programs for innovation-oriented personnel for the region.

- 1) Creation of new infrastructure and the development of the old, equipping them with new equipment, creation of small innovative companies with the university meets the task, that is These activities improved innovation infrastructure of the University. Improved innovation infrastructure contributes to the creation of modern innovation environment.
- 2) Training activities for staff and development of new educational programs, professional development enhances the management skills of staff BFU, but creates mechanisms to support innovation activities (that is activities and tasks are consistent, and the target has a different character).

Tenth University is the Far Eastern State technical university named V. Kuibyshev (FENTU) - powerful holding company among the universities of the Far Eastern region. It is composed of 17 institutions and 14 branches located in the Primorsky Krai, Sakhalin, Kamchatka and overseas - in Korea and China.

FENTU won the competition on the basis of the Russian Federation № 219 GR with the program of development of innovation infrastructure : the development of infrastructure complex " Pacific innovative terminal of Russia. "

development objective	existing problem	tasks, which solves the university	Actions
Late assessment of commercial and innovative R & D prospects	the accelerated increase of technological level and competitiveness of production	<p>Creates and develops the theoretical and practical foundations of the complex infrastructure of Innovation terminal</p> <p>The legal protection and evaluate the results of intellectual activities, rights belong to the university</p>	<p>Development Office of Intellectual Property</p> <p>Legal protection of intellectual activity</p>

Lack of expert evaluation in the early stages of development of innovative projects		Implementing foresight studies concerning the development of university	Creating Foresight Center
Lack of mechanisms prototyping		Developing objects of innovation infrastructure in the required sequence and with proper dynamics	Creating a Center for prototyping.
Lack of innovation engineering work (projects)		Markets innovation infrastructure with modern equipment and software required for implementation in the real sector of scientific and technical activities of the university and its partners	Creating TRIZ Center. Creation and development of engineering Centre.
Lack of skilled personnel, able to support innovative development and modernization of the economy	adequate to staffing support of innovation development	Develops and implements training programs and advanced training in the field of innovation management, innovative small businesses, intellectual property protection Organizes training and refresher training in the field of innovative entrepreneurship and technology transfer Develops educational and methodological, scientific and methodological support of innovation entrepreneurship training in the innovative development of regional economy and innovation management	Implementation and development of targeted training and skills development. Organization of the internship. Creation and development of the Higher School of innovative technologies
The problem of demand for Russian innovation as both Russian and foreign markets	output of innovative products to domestic and foreign markets substitution of imported products on domestic market	formation of the network interactions of the University of innovation and technology transfer (including cross-border) formation and subholding long-term research and innovation cooperation between the university with local companies	Development Center for scientific-technical and innovative-technological co-operation of Russia and APEC, including the development of methodological support for trans-boundary transfer of technologies in the Asia Pacific region. The development of TTC Far East Federal Okrug
		Generates innovative	Reorganization and de-

		environment directly FENTU formation of an effective innovation infrastructure of the University and on the basis of infrastructure innovation terminal of Russia in Asia Pacific	velopment of "DalTehnoparka". Creation and development of business incubator
	rapid increase of technological level and competitiveness of production	Facilitating collaboration with leading Russian and foreign research teams, including leading academic schools in the directions of development of university create conditions for preservation, multiplication, and effective use of the innovation potential of the region	Creating a Center for Energy Efficiency Development Research Institute of Ocean Technology Development Research and Education Center "Nanotechnology"
	development of small innovation enterprises	Provides consulting services, involving, Russian and foreign experts in the field of innovation. formation and development of small and medium-sized innovative enterprises in the region	Consulting services Support of companies innovation belt University, development of a package of business models for business-driven projects of the University. Raising finance to bring the results of intellectual activities to the stage of commercialization. Search and selection of investors at all stages of project development.
		Creates and develops innovative small companies that support their development at early stages, promotes investment in them.	Enterprise creation Recommendations, search of investors Conducting technology audits. Target business valuation, adjustments to business models and developed methodological support

- 1) The event: the development of IP management creates and develops the theoretical and practical wasps nova infrastructure complex Innovative terminal. Activities: Legal protection of innovation provides legal protection and evaluate the results of intellectual activities, rights belong to the university. Thus, the activities respond to the task. In turn, the implementation

of tasks contributes to the accelerated increase of technological level and competitiveness-Trial (because of innovation, which are backed by security documents, have long-term assets over the pre-analogues). The problem of late assessment of commercial and promotional prospects of R & D is solved for achieving the goal.

- 2) Create Foresight Center will allow for Foresight research concerning the development of the university. Solution of this problem will solve the problem of lack of expert assessment in the early stages of development of innovative projects.
- 3) Creation of the center prototype developed infrastructure, creating a complete chain. This action decides the lack of mechanisms for prototyping.
- 4) development activities TRIZ Center and the engineering center will solve the problem of lack of innovation engineering work (projects).
- 5) The implementation and development of targeted training programs and skills development, organization of the internship, the creation and development of the Graduate School of innovative technologies consistent with the objectives of the University and reach the goal: adequate support for innovative development, as innovative development is impossible without a trained and professional staff. Events solves the problem of lack of skilled personnel, able to support innovative development and modernization of the economy.
- 6) Development of the Center for Science and Technology and Innovation and technological cooperation between Russia and APEC, including the development of methodological support of the trans boundary transfer of technologies in the Asia-Pacific is responsible for creating university network interactions in the field of innovation and technology transfer (including cross-border) that reaches the target output innovative products to domestic and foreign markets. Development of the Far Eastern Federal District TTC generates and maintains a long-term scientific and innovative collaboration with the University of enterprises in the region to the technological modernization of the regional industrial complex. These activities address the problem of demand for Russian innovation as both Russian and foreign markets.
- 7) Reorganization and development "Daltehnoparka, creation and development of business incubator Generates innovative environment directly FESTU, and is also responsible for the formation of an effective innovation infrastructure of the university and based on this infrastructure Innovative hub of Russia in the Asia Pacific region.
- 8) With the help of measures to create the Center for Energy Saving, Development Research Institute of Ocean Technology, Development REC "Nanotechnology" is realized goal the accelerated increase of technological level and competitiveness of production.
- 9) Providing consulting services and support of companies reflects the challenges of university and implements goal: the development of small innovative businesses.
- 10) The creation of new companies, advice, finding investors, carrying out technology audit confirms the problem of the University in the creation and development of small innovative companies.

The result of this study is an analysis of the innovation infrastructure of Russian universities. This analysis is an interesting university official to develop further ways of development.

This work is not complete. These studies will continue. The next stage of development is the study and analysis of the innovation infrastructure of foreign universities. Experience the most innovation-active universities in comparison with the activity of Russian universities will show ways for further development.

This work is a basic Bachelor of one of the author.