

## SCIENCE AND INNOVATIVE ACTIVITY IN THE REPUBLIC OF BELARUS

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Science and science services in Republic of Belarus are focused on solving urgent tasks of economic and social progress. They also act as the most powerful stimulus of intellectual and material perfection of a society.

Numerous staff of research institutes and institutions of higher education sector work on the implementations of research projects and state programmes. There are 446 research, industrial, experimental, technological and other organizations in the country. More than 31 ths professionals are engaged in scientific research.

Research intensity of GDP which is calculated on the sum of internal costs (OECD method) is 0.65%.

Priority directions of scientific and technical activity in Belarus:

1. Power and the power savings
2. Agro-industrial technologies and production
3. Industrial and building production technologies
4. Medicine, medical technology, pharmacy
5. Chemical technologies, nanotechnologies and biotechnologies
6. Information-communication and aerospace technologies
7. New materials
8. Rational wildlife management, efficient use of resources and protection against emergency situations
9. Defense and national safety

Basis of the system of centralized management of science and innovations is represented by programmer and target methods, implying development and execution of state, state scientific and technical programmes, basic and applied research ones.

Belarusian science took on special significance in innovative design sphere with adoption of The State Innovation Development Program of the Republic of Belarus for 2011-2015. The main goal of the Program is the progress of the National economy.

Machine-building and metal-working are the leading branches of the industry. Due to these sectors, national economy is provided with reliable high-quality machineries: buses, trucks, tractors, agricultural equipments and others. Production of the sector is in popular demand not only in Belarus, but also on abroad too.

Chemical and petrochemical industry is a science intensive, high performance and export-oriented sector. The enterprises of the branch produce potash, nitrogenous and fertilizers, chemical fibers and threads, plastic, automobile tyres and other products.

Agriculture is the one of the main branches of The State Innovation Development Program structure. Much attention of many other scientific and president's programs is drawn to the development of the sector.

Power efficiency and the power savings is an implementation of low-power technologies, an increase of economy's regime, search and realization of commercially effective schemes of alternative deliveries of power resources, development of nuclear and industrial power, an effective utilization of renewed local energy sources.

International scientific and technical co-operation is priority-oriented direction of scientific and technical policy. It realizes by scientific organizations, industrial enterprises and other production associations.

Priorities of joint activity are information and communication technology, technological interchange, innovation production and innovation enterprise infrastructure, nuclear power engineering, space engineering and training of personnel.

National Academy of Science of Belarus (NAS of Belarus) organizes, conducts and coordinates basic and applied R&D for the most important directions of natural, technical, and social sciences, humanities, and arts.

There are seven departments functioning within the National Academy of Science of Belarus:

- Department of Agrarian Sciences;
- Department of Biological Sciences;
- Department of Humanities and Arts;
- Department of Medical Sciences;
- Department of Physics, Mathematics and Informatics;
- Department of Physical and Technical Problems;
- Department of Chemistry and Earth Sciences.

Training of research personnel in Belarus is based on the system of higher education, the development of which is a top-priority. In the Republic of Belarus were 46 public and 10 private higher education establishments with about 400 ths students.

The following higher education establishments maintain the leading positions within the national educational system: Belarusian National Technical University, Belarusian State University, Belarusian State University of Informatics and Radioelectronics, Belarusian State Economic University, etc.

BNTU is a modern educational and scientifically-innovative complex which doesn't have analogues among other universities of the republic. It includes 18 departments, 109 chairs, 60 branches of chairs at industries, Research section which comprises 46 structural departments such as research and innovative centers and laboratories, 8 centers and subsidiary, institutes of retraining of personnel and skill development, Experimental plant «Polytechnic», modern Science and technological park BNTU « Polytechnic », 15 councils for doctoral and master's theses, about 5000 employees including higher-education teaching personnel, researchers, engineering and technical staff, auxiliary educational staff, over 35 thousand students - students, undergraduates, post-graduate students. National Technical University trains qualified specialists in 88 specialties and 121 specializations, offers Master's degree in 55 specialties, postgraduate degree in 54 specialties and doctoral degree in 34 specialties.

Since its founding BNTU has prepared more than 175 000 highly skilled professionals for Belarus and over 6500 professionals for 120 countries.

The following facts testify to the high level of elaborations of BNTU:

- They are in demand abroad. More than 300 contracts has been executed with EU states, Asia and including Germany, Poland, Turkey, Sweden, China, Finland, Switzerland, Lithuania, the Russian Federation and Ukraine.

- BNTU was the first in Belarus to develop, implement and certify in 2005 the system of quality management research-scientific work, design and experimental, technological works. The university also provided the performance of products tests, product certification and quality management systems in accordance with the requirements established by international standard ISO 9001-2000.

- National Technical University is a leader in innovative and patent and licensing activities within the Ministry of Education. Over the last 5 years the university has obtained more than 500 patents for intellectual and industrial property.

- In 2007 National Technical University was named the winner of "The best organization of inventive activity and intellectual property management" and was awarded with special prize of the World Intellectual Property Organization (WIPO).