

R&D Environment in Russia and Expectations from Research Centers' Activity

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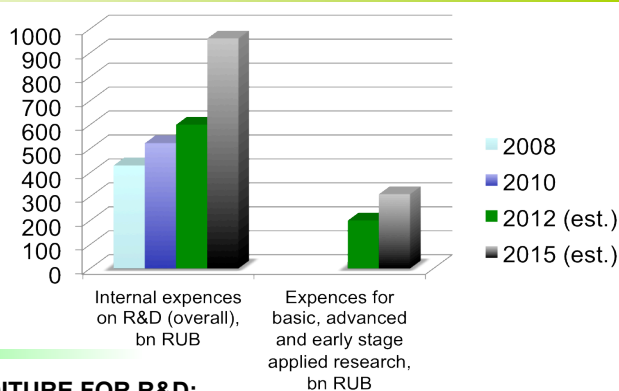
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Russian Government's Expenditures on Research and Development



GOVERNMENT EXPENDITURE FOR R&D:

~70% of overall R&D expenses,

More than 80% in expenses for basic, advanced and early stage applied research (BAEA)

Target overall R&D expenditures in 2015 – **1.77% GDP**.

Skolkovo Tech Russian Government's Major Budget Financed Industrial Programs

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- Nuclear Energy
- Space
- Aviation
- Shipbuilding
- Pharmaceutical
- Technological Base for Industries (NTB)

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Skolkovo Tech Governmental Measures for Increasing R&D Activity

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- ▶ **Direct increase of budget financing** of R&D
(mostly grants and current financing for basic and advanced research; mostly governmental contracts for applied research and development)
 - ▶ Budget financing of **R&D infrastructure** creation
(university equipment, mega-science etc.)
- ▶ Co-financing of **applied research contracts**
for companies and universities and other research institutes
 - ▶ Programs for **stimulation of technological changes**
in a number of industries
(for example, enforcing new standards, including ecological standards)
- ▶ **Legislative changes** on R&D conditions, including easing international cooperation.
 - ▶ Large **non-budget investment programs**
(for example, Arctic shelf – ~\$800 Bn; replacement of most of energy supply infrastructure on the base of next generation of energy plants is another exiting source of demand to R&D)

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Skolkovo Tech R&D Sector's Current Challenges
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Specialization of traditional Russian R&D

GAP between

New technological industry needs

Research opportunity

- ▶ Gap in **qualification** in top-priority directions for the industry *Education opportunity*
- ▶ Gap in **organizational structure** in cooperation between research&education and the industry *Opportunity for new mechanisms of collaboration*

Demand
(industry and state)

GAP between

Supply of research
(financial limits)

(example: MES failed in allocation of \$150 million for advanced research projects)

Opportunity to leverage funding and co-fund

Internationalization
 as one of the main ways to overcome the gaps
Opportunity to bring together Russian and international partners

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A new model of organization of **effective collaboration** between *education, science and industry, and innovative entrepreneurship* as a new issue of post-soviet culture in education and science.

MIT support as an essential instrument for Internationalization and getting it right from the start

An instrument to ease access to **international research and educational network** for Russian universities, research institutes and industry to exchange knowledge and competences with the world's top players in science and education.
It is only the top research level, which is interesting for the industry in the conditions of global competition

MIT – Massachusetts Institute of Technology

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Expectations of Russian Industry and Government from SkolTech

SkolTech Research Centers

- will be created on the highest world level
- will be established on the directions where **competencies** of Russian R&D and Educational sectors, requested from the industry, are not enough from the point of Vision 2030
- will develop **competencies in basic and advanced research** on the boarder of those applied research, which can be used by companies in future

A balance between wide range of basic research, done by the best teams and **basic and advanced research** aimed at being transferred into Russian companies.

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New Focus on Funding Basic, Advanced and Early Applied Research

State Program
“Development of Science and Technologies 2013-2020”

- about **90%** of funds for BAEA research
- responsibility of *Ministry of Education and Science of Russian Federation*

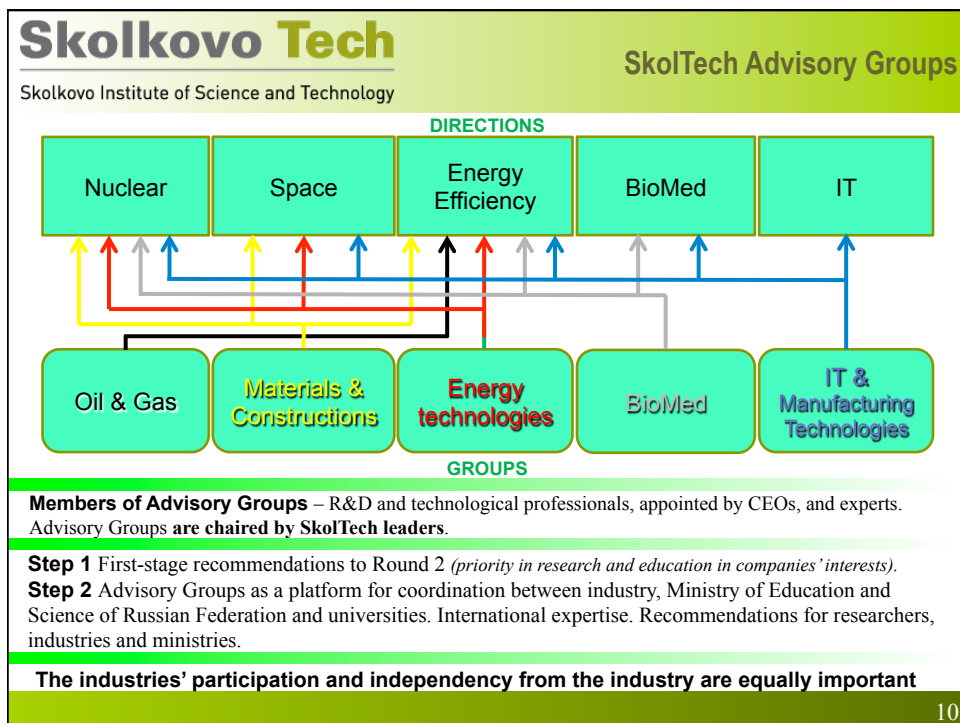
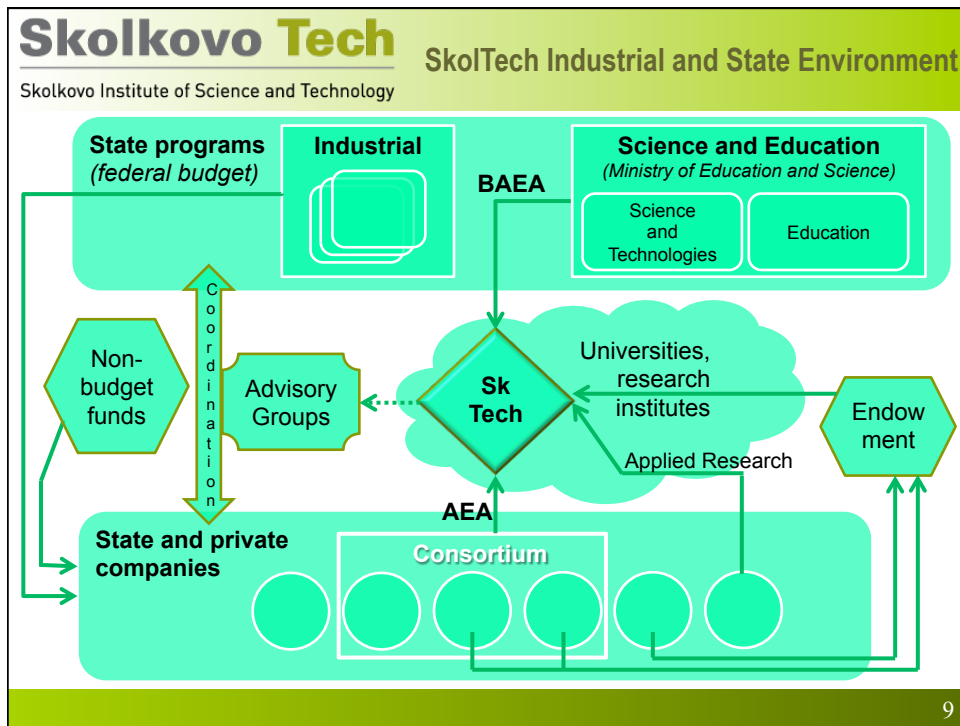
Main instruments:

1. Current funding of research in research institutes and universities
2. Grants (*including scientific foundations*)
3. Infrastructure (*including mega-science, information, etc.*)

IP mostly belongs to contractors.

- ▶ AEA research will be coordinated by Ministry of Education and Science on one side, and industrial ministries and key Russian companies on the another side.
- ▶ Grant recipients and current funding are to be working independently from the industry.

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Oil & Gas

Materials & Constructions

Energy technologies

BioMed

IT

SkolTech Advisory Groups' member-companies

Gazprom Neft Rosneft Zarubegneft
 TNK-BP Salym Petroleum Tatneft Lukoil
 Gazprom

Russian Railways United Aircraft Corporation
 United Engine Corporation Russian Highways
 Russian Helicopters Holding MRSK ApATeCh

Rosatom INTER RAO UES SO UES
 RusHydro Rocket and space corporation «ENERGIA»

R-Pharm GosNIIgenetika Biocad
 Chemrar PetrovaxPharm InterLabService
 Pharm-cluster of Kaluga BioPharm-cluster "Severnij"

ABBY Microsoft Rus Rostelekom IBS 1C
 IDC TechnoServ

Association of Software Developers "Domestic software"

...and many others

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THANK YOU FOR YOUR TIME

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