

SK

SK Energy

**Skolkovo Tech** 

Skolkovo Institute of Science and Technology

Skolkovo

ANNUAL REPORT 2011

SI Biomedical

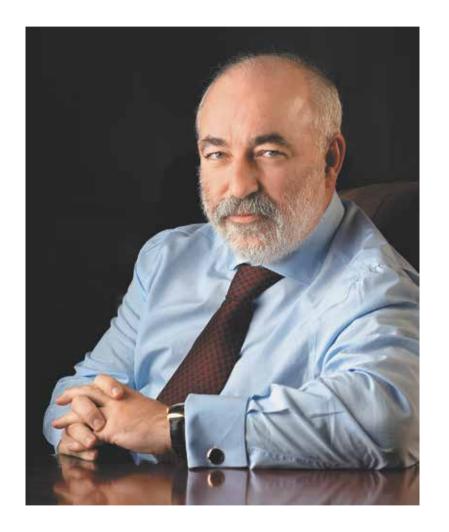
TEXHOΠΑΡΚ TECHNOPARK SK Nuclear





### Official Address of the Foundation's President

Dear Colleagues, I am pleased to announce the publication of the Skolkovo Foundation first Annual Report







Our history dates back to the beginning of 2010, and today we are summarizing the results of our work for this whole period. Undoubtedly, we are at the beginning of our long path, since the Foundation is building from scratch an innovation centre with global impact. However, the main achievements of 2011 make it possible for us to assert that we have succeeded in laving a foundation, setting up a platform for realizing our mission, which is creation of the ecosystem favorable for promotion of entrepreneurship and research. First, this applies to development and implementation of all necessary procedures for awarding the status of a Skolkovo Project participant; by the end of 2011. the number of innovative companies that received the status of Project participants exceeded 330. This is by far more than we expected. Today, 1,600 applicants are awaiting this status. The amount of applications for participation in the Project is snowballing.

In 2011, we developed and introduced grant procedure, which made it possible for 70 companies working in Skolkovo to receive grants for implementation of their innovative projects. In 2012, we expect the amount of grantees to double. The total value of grant financing that we are planning to distribute in 2012 will amount to 6 billion rubles.

Besides developing processes and mechanisms that ensure the efficient functioning of the Skolkovo Project, in 2011, we also set up the main institutes of the innovation ecosystem. In the end of October of 2011, the Skolkovo Institute of Science and Technology was incorporated (SkTech). Technopark Skolkovo was founded and started operating. The Intellectual Property Center was established; it assists the Project participants in protecting their intellectual property rights. In July 2011, the Customs and Finance Company (TFK Skolkovo) was founded. Its main task is to provide a customs representative's services to the Project participants. The amount of investments into the Project is an important achievement of 2011. The Foundation received almost 3.5 billion rubles from private sources; out of them almost 2 billion rubles were invested into development of the participants' projects and 1.5 billion rubles were spent on SkTech funding.

Large business companies came to believe in Skolkovo's success; among them are the world's industrial giants Siemens, IBM, Nokia, Ericsson, EADS, Cisco, and many others. In 2011, we signed agreements with 13 major Russian and Western companies with the purpose of setting up R&D centers in the precincts of the Skolkovo Centre, with the total budget of over 13 billion rubles and estimated staff of 1,100 people.

We have attracted venture investments into the project: in 2011, accreditation with Skolkovo was obtained by 24 venture funds with the total amount of obligations exceeding 10 billion rubles.

Late 2011 - early 2012 have confirmed the viability and efficiency of the innovation ecosystem we are creating: the first stories of Skolkovo's success have begun to be born. Skolkovo's participant Rock Flow Dynamics signed an agreement with one of the largest American independent oil companies on selling licenses to its latest product — software for oil and gas fields simulation in the USA. Another Skolkovo participant, Vist Group, is planning on IPO on the Innovations and Investments Market at MICEX (MICEX MII). Parallels, another Skolkovo participant, has embarked on marketing its solution - Parallels Automation for Cloud Infrastructure (PACI) - which was developed with the help of the Foundation's grant. On April 27 of 2012, Skolkovo's participant Center of Innovative Development STM (involved in designing hybrid locomotives of the new generation) successfully launched its first locomotive at the Riga Railway Station in Moscow, In April, Skolkovo's participant GazokhimTekhno signed a joint-venture agreement with Oil Company Rosneft OJSC. The joint venture will be involved in designing and constructing a plant for processing natural and oil-well gas into a synthetic hydrocarbon blend. Skolkovo's participant DisplAir signed an agreement with a Skolkovo-accredited investor that is going to invest USD 1 million in setting up production of the interactive air screen, a device that can project high-resolution 3D images in the air.

The results of the past year and, first and foremost, the specific examples of commercialization of research results of various companies that have been Project participants for a short time, inspire in me confidence that we are able to resolve the task set before us. I am confident that we can create the innovation ecosystem that will comprise hundreds of most advanced and promising innovative technologies, ensure their development, and allow us to promote new and absolutely unique products on the Russian and international markets. Although the Innovation Centre has been operating fully for only 3-4 years, the trends of its operations that we see today are encouraging! May we all succeed in this endeavor!

Victor Vekselberg President Skolkovo Foundation







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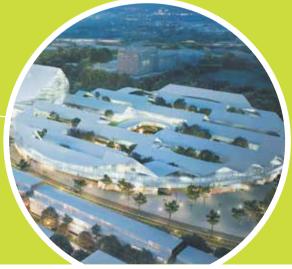
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# Skolkovo Is a Capital

Russia is building a new city where scholars, designers, engineers, and businessmen together with young researchers will develop and implement innovative projects with global impact.

### Skolkovo Is Knowledge-Based Economy

Construction of new cities and towns always involved a qualitative leap in the national culture's development. Skolkovo is a breakthrough into the future. The main asset of this city is not its geographic location or its vicinity to the raw material resources, but its unique innovation ecosystem capable of attracting scientists, engineers, students, and investors.

The Skolkovo Project comprises development of Technopark, a university complex, and the city itself. Technopark will provide the innovators with all the necessary services and utilities needed for their technological assets and corporate structures. The

scientific and educational unit consisting of the Skolkovo Institute of Science and Technology, the Open University and the Skolkovo School will ensure integration of education, science, and research, while engaging young scholars and engineers into innovation activity aimed at yielding economic results.

Technologies developed in Skolkovo are called to modernize the industry in its most promising sectors. Information, medicine, energy-efficiency, nuclear and space technologies were singled out as the priority technologies of today. The Innovation City itself will be born as a result high technologies application.

# of innovations

The Skolkovo Foundation is aimed at creating a state-of-the-art scientific and technological complex operating on the 4E principles: energy efficiency, ecological compatibility, ergonomics, and economic efficiency. The city infrastructure will provide maximum convenience with the minimum resources spent. Finally, the urban environment will create conditions for development and commercialization of innovative technologies. Creation of the urban environment that is attractive to investors and innovators is a very ambitious city-planning task. Such environment should have attractive technical conditions and amenities, as well as stimulating intellectual atmosphere.

### Skolkovo Is Where Innovations Meet With Investments

Any talent needs support and the environment where talents are in demand. Innovators need funding, and investors look for promising projects. The market offers venture-financing mechanisms aimed to search for innovative technologies. Skolkovo's advantage lies in its complex cumulative approach. It is an incubator of technologies where appropriate conditions for development and implementation of innovations are created.

Despite the fact that it has been only two years since President Dmitry Medvedev unveiled the Innocity initiative, today, the Skolkovo

Foundation provides comprehensive financial and organizational support to hundreds of advanced innovative projects.

The Innovation City is still under construction, but it is already operating. Naturally, this is a long-term project. Although it is at its initial stage, it has proven to be viable. It is already attracting investors, scientists, and implementers who are eager to grasp new opportunities. In Skolkovo, renowned high-tech companies set up their representative offices; professors of the world's major technological institutes find work; and venture investors look for investment projects.



EXECUTIVE SUMMARY

# Chronicle of Main Events

Like a drop of water reflecting the whole world in all its dimensions, the short history of the Skolkovo Project mirrors a large amount of work that has been completed. Key decisions taken have made it possible to transfer the creation of the unparalleled domestic complex from the dimension of beautiful dreams to the dimension of reality and work. Leading Russian and foreign scientists, respectable scientific organizations, internationally recognized leaders of the high-tech market are engaged in the Project today. The number of Project participants is growing. Skolkovo's educational institutions are admitting new students. The future Innograd is gradually taking shape.

However, this is just the beginning, the initial steps, but the two-year history of Skolkovo shows that these steps have been taken in the right direction. These have been firm and energetic steps. At this point, the main achievement has already been made: the Project has united thousands of people from all corners and regions of the world. It has brought together scholars, politicians, businessmen, teachers and instructors, doctors, art workers, architects, and the intellectual elite of humankind. The vigor of these talented people, their enormous intellectual potential, and genuine enthusiasm about the Project are a guarantee of Skolkovo's long and glorious history.

In his annual address to the Federal Assembly of the Russian Federation, Russian President Dmitry Medvedev spoke about creation of a Russian modern and powerful hub for research and development that will be similar to Silicon Valley in the USA and other hubs abroad. The President emphasized that the new hub was going to create attractive work conditions for leading scholars, engineers, designers, programmers, managers, and financiers.



"We cannot delay this any longer. We must embark on modernization and technological reequipment of the industrial sector as a whole. I believe, for our country it is a matter of survival in the modern world."

Dmitry Medvedev



#### THE CHOICE IS MADE!

18.03

During his meeting with the students – winners of various student contests – Dmitry Medvedev declared that the new scientific and technological complex for development and commercialization of new technologies would be set up in Skolkovo.

We will build this hub at the place where we have good available resources to do it swiftly. Speed is of special significance here. That's why we will build it in Skolkovo.

Dmitry Medvedev

12.11 **2**009

31.12



Russian President Dmitry Medvedev issued an order "On the working group for development of the project for creation of a territorially isolated complex for promoting R&D and commercialization of their results." Vladislav Surkov was appointed head of the working group; at the time, he was First Deputy of the Chief of the Russian Presidential Administration, Deputy Chairman of the Commission for Modernisation, today he is Deputy Prime Minister of the Russian Federation

**2010** 15.02

In his interview to the "Vedomosti" Newspaper, Vladislav Surkov shared where and for what reasons Russia would be creating a domestic analog of Silicon Valley. Among the regions where the Russian innovation hub could be built were named Tomsk, Novosibirsk, St. Petersburg, Obninsk and a few areas near Moscow.



The state can only serve as a stimulating element, a means of enforcing innovations. Companies should not take it as gavel work or tithe. Let them do what they consider good for themselves primarily... Each large company should choose its own line of business and set up a cluster. There, relationships will spring up and give birth to an innovative product and result in its commercialization. In the meantime, the complex is going to be built.

Vladislav Surkov, from the article "A Miracle Is Possible", "Vedomosti"



When answering a question in live broadcast about possible timeline for creation of the new hub. Vladislav Surkov noted that the construction work might take from three to seven years. According to him, "first, the core of the city, its central part, will be built; after that it will grow and expand mostly on its own, without the government's participation." In his opinion, development of the scientific environment as part of the project will take 10-15 years.

Russian President Dmitry Medvedey signed the Federal Law "On the Skolkovo Innovation Centre" passed by the State Duma on September 21 and approved by the Council of the Federation on September 22. The Federal Law governs relations connected with activities aimed at setting up the Skolkovo Innovation Centre and ensuring its operation, as well as providing working and living conditions in its territory.

### NOKIA

The Skolkovo Foundation and Nokia signed a memorandum of understanding. According to the agreement reached by the two companies, Nokia will set up a science and research center that will operate at the Skolkovo Innovation Centre and will become part of the company's global innovation network

The Skolkovo Foundation Council approved the Regulation on Conferral and Withdrawal of Status of the Project Participant for Creation and Provision of Functioning of the Skolkovo Innovation Centre.

The Skolkovo Foundation and the Intel Corporation signed an agreement on cooperation on a number of special-purpose areas relating to R&D, expert support for forming effective institutes and international promotion of Skolkovo.

06.12



28.09

19.06

Commission for Modernisation and Technological Development of Russia's Economy approved the candidacies of the management bodies of the Foundation for Development of the Center for Development and Commercialization of New Technologies. Russian President Dmitry Medvedev became head of the Board of Trustees of the Skolkovo Foundation.

The former CEO of the Intel Corporation Craig Barrett became co-chairman of the Skolkovo Foundation Council together with Victor Vekselberg, the Skolkovo Foundation's President and Chairman of the Supervisory Committee of the Renova Group of Companies.

Outstanding scientists, Nobel Prize laureates, Academician of the Russian Academy of Sciences Zhores Alferov and Professor of Stanford University Roger David Kornberg were appointed Co-Chairmen of the specially established expert body - The Foundation's Scientific Advisory Council.



>>> Skolkovo is not just a territory; Skolkovo is an ideology.

Zhores Alferov



R. Kornberg – about the Skolkovo Project, September 2011

### 01.11

**Microsoft** 

The Skolkovo Foundation and Microsoft reached an agreement on cooperation. For the purpose of cooperation, Microsoft Corporation is going to develop five lines of business at the Innovation Centre: Microsoft R&D Center in Skolkovo, scientific research in cooperation with Russian universities and research institutes, further development of the program for assistance to Russian innovative start-ups, creation of the Common Use Center for access to IT-technologies, participation in establishing the Skolkovo Institute of Science and Technology.

### 22.11

42/4/

The Skolkovo Foundation and the Cisco Company announced the launching of the contest for the Skolkovo Innovation Prize powered by Cisco I-Prize. The main purpose of the contest is to attract talented specialists and their ideas that in the future can become start-ups at the Skolkovo Innovation Centre.

CISCO

Construction of Skolkovo has received a jump-start! President Dmitry Medvedev determined the first fixed point on the coordinate system of the Skolkovo Innovation Centre. Using the coordinates of the first fixed point, the architects and constructors will

be able to use the second fixed point for positioning buildings according to the cardinal points and create an accurate plan of the Skolkovo Innovation Centre.

On the same day, the Skolkovo Foundation announced its first participants – the Project's residents. 15 companies became winners from among the compa-

nies that had submitted their projects. Among the winners are such projects as "Development of Original Medicines for Treating Infections of Viral Etiology and Methods for Diagnosing Viral Diseases", "Photo Biological Microbial Fuel Cells", "International Center of Quantum Optics and Quantum Technologies", "Three-Dimensional Rendering with Application of Cloud Computing". "Superconductors Industry", and others. Innograd Pushchino, LLC became Skolkovo's first resident.





EXECUTIVE SUMMARY



The Skolkovo Foundation and the Russian Academy of Sciences and its institutes signed a cooperation agreement.



### Open Univercity Skolkovo

21.04

Open University Skolkovo started its work.

The First Scientific
Conference of the Skolkovo
Foundation took place
in St. Petersburg. The
Information Technologies
Cluster and Energy Efficient
Technologies Cluster
organized the event. It
was attended by over 300
specialists from major
scientific centers, Russian
and foreign companies.

26.05



The Skolkovo Foundation and DowChemical (represented by DowEuropeGmbH) signed an agreement of intent that provides for joint work on determining the pattern of participation for Dow in the Skolkovo Project. The document was signed during the St. Petersburg Economic Forum. The parties determined the main areas of joint activities. According to the agreement and within the framework of the Foundation's energy efficiency program, Dow is going to conduct R&D in enhancing energy-efficiency of buildings and structures.

16.06

22.03

2011

26.01

The Skolkovo Innovation Centre held its official presentation at the World Economic Forum in Davos (Switzerland). 23.03

Skolkovo, Russian Venture Company and ROSNANO opened a joint office in Silicon Valley, California.



16.05

#### FIRST VIC-TORY!

Winners of the Skolkovo Innovation Prize powered by Cisco I-Prize are announced. The First Prize Winner is the author of the project for creating the first-generation

toys: motorized toy cars, animals and robots capable of imitating social behavior – to unite into groups and act synchronously with each other. The Main Prize of the contest, 3 million rubles, the author intends to spend on the project development.

20.06

Siemens and the Skolkovo Foundation signed an agreement setting forth key terms and conditions for cooperation on establishing the Siemens R&D Center in Skolkovo. The Siemens R&D Center is expected to start operating by 2015. Around 150 employees will work there. The total amount of investments into the project will reach almost 60 million rubles, out of which Siemens will invest almost EUR 40 million; EUR 20 million will come through the Skolkovo Foundation grants.



30.06



The Skolkovo Foundation and GE signed an agreement on establishing a R&D center in Skolkovo. The R&D center will create 50 jobs.



The Skolkovo Foundation signed an agreement with Nokia Siemens Networks. According to the agreement, NSN will open a "Smart Lab" laboratory in Skolkovo. In 2014, the Competency Center for wireless technologies will move to Skolkovo as well.

It became known that OAO RSC "Energia" and the Skolkovo Foundation would establish the International Space Center at the Skolkovo Innovation Centre. The Space Center will comprise the Scientific Research Institute of Space Technologies (NII KT, International Module of the International Space Center) that is conducting advanced space-rocket research in cooperation with international and Russian participants; laboratory, manufacturing and academic facilities (the main module of the International Space Station) where academic and research activities are conducted

РАКЕТНО КОСШИЧЕСКАЯ КОРПОРАЦИЯ

ЗНЕВЕТА С

ИЛЕНИ С.П. КОРОЛЕВА



The Eurasian Economic Community (EurAsEC) and the Skolkovo Foundation signed a cooperation agreement. Secretary General of EurAsEC Tair Mansurov and the Skolkovo Foundation's President Viktor Vekselberg signed the memo.

#### **SECOND HUNDRED!**

The Sixth Ceremony for Granting the Status of the Skolkovo Innovation Centre's resident took place in Moscow. The company Apikont became the 200th participant of the Project.



Its main business is solutions in the area of high-density recording of information in nano-scale magnetic junctions and development of principles of spin-injection terahertz radiation in magnetic junctions.

01.07

12.08

on a regular basis.

30.08

08.11

03.08

The Skolkovo Foundation and Ericsson Company signed a cooperation agreement that provides for establishment of the company "Ericsson Innovations – Russia." The new company will manage the scientific research conducted by Ericsson in Skolkovo.



17.08



#### **FIRST HUNDRED!**

Skolkovo welcomed its 100<sup>th</sup> resident. It is the "AgentPlus" company. Its Director General Sergey Gudyrin received an invitation for a two-week applied training course in Silicon Valley and a certificate granting him the right to select the best office in Skolkovo.

26.10

The Skolkovo Foundation and the Massachusetts Institute of Technology (MIT), a global leader in science and technology, innovator in robotics and artificial intelligence, signed a definitive three-year agreement on collaboration within the framework of the program for establishing the Skolkovo Institute of Science and Technology (SkTech).

The Skolkovo Foundation's President Viktor Vekselberg and President of the Massachusetts Institute of Technology Susan Hockfield signed the agreement. 200 professors, 300 scientific officers and researchers from Russia and abroad will be employed by SkTech.

Scientists from the MIT, Harvard, Stanford, and other internationally recognized educational institutions will be teaching at SkTech.

The pilot educational program is set to launch in the fall of 2013. The full-scale educational and research program will be implemented in 2014.

SkTech build-up should be complete by 2020.



Expansion of cooperation between the Skolkovo Foundation and the MIT will be profitable not to Russia alone. We are convinced that the world's educational, research and innovation community will gain from it, too.

Victor Vekselberg

07.12



The Skolkovo
Foundation and
IBM Corporation
signed a cooperation
agreement that
provides for
establishment of the
IBM R&D Center in
the Russian Innograd.





### Mission

The Foundation's mission is to create an ecosystem that will facilitate development of entrepreneurship and research in such areas as energy efficiency and energy saving, nuclear technologies, space technologies, medical technologies, strategic computer technologies, and soft-

ware. The uniqueness, complexity, and grandiosity of this mission do not lie in the fact alone that the project involves development of an elite high-tech community for scientists and businessmen on the bare land. On one hand, it aims to create in Russia most favorable condi-

tions for present-day research and its subsequent practical, cost-effective implementation. On the other hand, it will shape a new ideology in the scientific and business community, which in its essence is the ideology of innovative constructive endeavor. Based on such everlasting

values as knowledge, labor, and purposefulness, this ideology declares innovative workmanship in Russia prestigious, profitable, and important to the nation as a whole. This type of workmanship is the destiny of talented, energetic, business-minded, and overall successful people.

#### MAIN COMPONENTS OF THE FOUNDATION'S MISSION:

- Within the framework of the Project, to create
   a self-reproducing system "knowledge man –
   knowledge," that will bridge the gap between new
   knowledge, technologies, products, and services;
- To consolidate advanced scientific ideas and globally competitive R&D, intellectual and creative resources with a focus on development of technologies in the five key areas of the Innocenter's research activity;
- To develop at the Skolkovo Centre a full-cycle innovation process that comprises education, R&D, and subsequent commercialization of their results.
- To ensure fast implementation of the new technologies developed by Project participants in the real sectors of economy;
- To provide for the Center's participation in the process of development of global technological platforms;
- To provide centralized services related to organization and funding of the innovation process;
- To ensure access to present-day knowledge and the world's best practices for talented young people in Russia;
- To develop infrastructure that will offer excellent self-realization opportunities to people with innovation gifts and talents.

I would like for Skolkovo not only to become a good brand, because I believe that we have all the chances in that sense; but I would like for Skolkovo to become an ideology that will penetrate our society's life and will be understandable to both senior citizens and very young people. If we do achieve that, Skolkovo will have a tremendous impact."



From the Closing Speech of Russian President Dmitry Medvedev at the Joint Meeting of the Commission for Modernisation and Technological Development of Russia's Economy and the Skolkovo Foundation's Board of Trustees on April 25, 2011

Skolkovo is an open project with a clear-cut mission – to create an innovation environment; but it has a very flexible strategy that will be defined not only by functionaries, but by renowned scholars, engineers, and entrepreneurs engaged in the Project



Vladislav Surkov, Deputy Prime Minister of the Russian Federation "Vzglyad" Business Newspaper



EXECUTIVE SUMMARY



The Foundation's strategic goals arise from its mission and correspond with elements of the Skolkovo's innovation ecosystem. The clear definition of the tasks set in each given case ensures their successful and timely achievement.



### Skolkovo Education and Research System

THE FOUNDATION'S GOAL: to develop the science & research infrastructure and tools for development of the creative potential in students, entrepreneurs, researchers and their involvement into the innovation system.

This objective involves creation of the educational environment of the

Innocenter on the basis of the Skolkovo Institute of Science and Technology (as an educational building block of the project), the Skolkovo Open University, and the Skolkovo School; development of the system for buildup, accumulation and dissemination of modern scientific and technological knowledge and solutions for the key scientific, technological and innovation tasks within the framework of the Project.



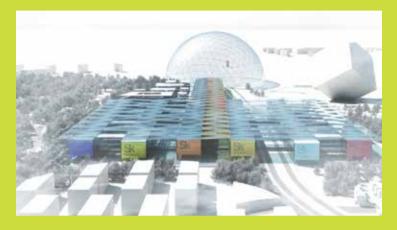
### **Project Participants**

THE FOUNDATION'S GOAL: form a portfolio of Participant's innovation projects and ensure their interaction and collaboration with the innovation systems key subjects Resolving this task requires development of mechanisms for attraction to the Skolkovo Centre of leading and promising companies offering innovative solutions to the most urgent scientific, economic and social issues that this country faces; it also requires support for research activities of the Project's participants through grants and investments.



The Skolkovo
Project should
further a new outlook,
a new approach to the
idea of an innovative
product, innovative
process and Russia's
true potential.

V.F. Vekselberg President Skolkovo Foundation Business FM



One of the priority tasks for cooperation between the Russian Academy of Sciences' institutes and the Foundation is to shape the new generation of top-notch specialists in priority areas of technological development. I am sure that the scientists that in the past left this country will come back. It's possible to stem the brain drain of our specialists moving abroad.

Yury Osipov President of the Russian Academy of Sciences (RAN)

### Technopark

THE FOUNDATION'S GOAL: to provide necessary support to the Project Participants for the successful development of their ideas turning them into the leaders of Russian and global markets.. This objective involves provision of the participants with basic and auxiliary services focused on development of innovation companies.



### R&D Centers in Skolkovo

THE FOUNDATION'S GOAL to develop a partner's network, to support research and commercialization, while learning from their experience to support the development of the Project Participants' R&D activities and extend their access to the distribution channels.

This objective requires project-based establishment of a network of R&D centers of major Russian and international innovation companies.



### Social and Urban Environment

THE FOUNDATION'S GOAL: to create a unique culture of commercialization of technological innovations and attractive living environment for Skolkovo's target communities.

This objective requires open communication and service lines for efficient collaboration of the Project's participants, development of venues and events for their intercommunication, best-quality amenities of the urban environment at the Innocenter, as compared to the urban environment in other Russian and foreign technology towns, by applying the best architectural,

engineering, communication, environmental, and social practices; equal access to the centers and services of public and shared use available at the Innocenter.

### **Innovation City**

**THE FOUNDATION'S GOAL:** to build an innovation city.

This objective involves creation of a state-of-the-art scientific and technological complex based on the 4E principles: energy efficiency, ecological compatibility, ergonomics, and economic efficiency; provision of the maximum convenience with the minimum resources used; operation and development of the Innovation City as a platform for continuous development and commercialization of innovative technologies.

### Governance

**THE FOUNDATION'S GOAL**: to ensure that the Foundation meets its strategic goals.

# System of Public Relations, Marketing, and Social Networks

THE FOUNDATION'S GOAL: Create the positive image of the Skolkovo innovation center to attract target groups into the innovative ecosystem.

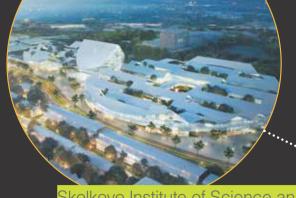




**EXECUTIVE SUMMARY** 

# Skolkovo Territory

Skolkovo is not just a land plot circumscribed by MKAD, the Minsk and Skolkovo Highways and situated near the village with the same name in Odintsovo District of Moscow Region. Skolkovo is a national and even global scale project. It involves hundreds of participating companies from all over this country and corporate partners from all over the world. Their amount is growing steadily, thus broadening the boundaries of Skolkovo and turning it into a project of truly unlimited possibilities. The key parameters of the innovation ecosystem were defined by the Foundation's Council, and they serve as a benchmark for the Foundation's strategic and operational planning.



Skolkovo Institute of Science and Technology (SkTech): development area — 134 thou sq m,

1,200 students, 200 professors.

300 postdoctoral scholars

15 research centers

### Innocenter's Territory

project participants, over 100 intellectual property objects registered every year





The number of residents and specialists working at the Innocenter

### †††††††

21 000 residents of the Innovation City

### 'n'n'n'n'n'n'n'n'n'n'n

31 000 employees

PROPERTY AND

Moscow Territory

Corporate partners: at least 40 R&D centers in Skolkovo

Besides focusing on the key parameters of the innovation ecosystem, the Foundation is striving to better understand and elaborate the principles and laws that govern the innovation environment. Once they become clear, the objectives and indicators oriented on the process (e.g. the number of participants) will be replaced with the indicators oriented on the result (e.g. value added indices).

thou sq m total development area

Technopark: total development area – 146 thou sq m 400 Project participants involved around 9,000 employees 10 Common Use Centers



**EXECUTIVE SUMMARY** 

The

amount of participating companies

reached

200 08.09

companies from more than 30 Russian regions are 🛮 Project participants at this



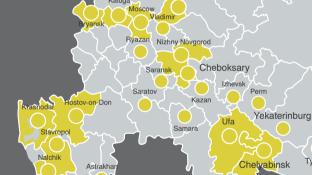
Tyumen

Novosibirsk

Kemerovo

Krasnoyarsk

SKOLKOVO PROJECT PARTICIPANTS



17.08 amount of participant companies reached

100

31.12 As of December 31. 2011, there were 332

companies among Skolkovo participants

By the end of 2012, the amount of participant companies should reach 500

By 2014, there should be 1,000 (thousand) participants



Regions where Skolkovo participants operate



Cities where Skolkovo participants operate

### Geography of Project Partners. World.



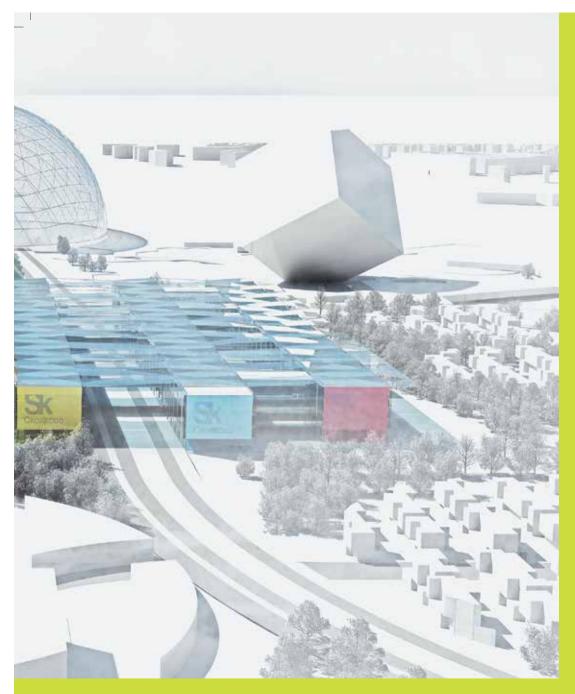


**EXECUTIVE** SUMMARY

# Technopark

Technopark Skolkovo aspires to create the infrastructure for successful development of innovation business and commercialization of the technologies of participant companies. Imagine that you come to your new place of employment where everything is new to you. Your experience tells you that it will take you a lot of your valuable time to organize your work and to understand the ins and outs of it. However, luckily, you find out that everything has been taken care of: your computer is connected and running, your printer has paper in it, you have all handbooks and manuals handy, and even the accounting department has no questions to you because they have all your documents and files. All you need to do is to get down to work. This is exactly the way it is going to be at Technopark: it has all the conditions for creative innovative activity, from cloud IT services to cleaning services.





**Technopark's mission** is to create the infrastructure for successful development of innovation business and commercialization of the technologies of participant companies.

Technopark's goals set for the year 2011 have been achieved in full. The organizational structure is set up, Technopark's service proposal is developed, and the model for shared facilities center (SFC) operation is created. The system of provision of Technopark's core services to the participants is set up and implemented. These services are aimed at developing innovation companies. Statements of work for the shared facilities center (SFC) and center of exellence (CoE) are developed, the first common use center is being created. Key specialists are employed; various procedures, regulations, and job descriptions are developed. A lease agreement for Technopark's temporary facilities is signed. Technopark has established relations with other major techno parks, research centers, incubators, and technology transfer centers in Russia and abroad. A system for organization and holding of science conferences and theme events is created and implemented.



### SHARED FACILITIES CENTER AND CENTER OF EXCELLENCE

Technopark Skolkovo is setting up shared facilities centers (SFC) and centers of excellence (CoE) that are part of the research infrastructure development. SFC is a complex of scientific equipment for participant companies. CoE is a center established in partnership with research and commercial organizations for solving applied science problems. Services for participants are provided at reduced prices in the most convenient manner suitable to a client. The list of the common use centers specified by the Foundation's development plan and the budget includes: SFC Metrology (analytical and measurement instrumentation), SFC Microanalysis (scientific visualization: microscopy for visualization and morphology studies), SFC Prototyping (clean rooms and shops), SFC Cytology and Histology. According to surveys, participant companies need additional centers, among which is CoE Preclinical Studies (Vivarium). The Scientific and Technical Center of Thin-Film Technologies in Power Energy at the loffe Physical Technical Institute (established in St. Petersburg on February 2, 2012) became the first CoE at Technopark. Technopark Skolkovo supplied equipment for prototyping and analytical work for improving the technology of solar cells production. The technology is based on application of micromorphic coatings - siliconbased "thin films." Among the key areas of the SFC's work is increased efficiency (from 9% to 13%) of photoelectric modules, cutting the costs of production with the help of alternative raw materials.

The SFC equipment is intended for applied work on prototyping for increasing

the efficiency of thin-film sola modules and cutting the cost of products, as well as for a wide range of innovation activities of participant companies in St. Petersburg. The equipment includes modules for trying-out the production technology that can be used by other participants for applying high-quality coatings of amorphous silicon and zinc oxide. The analytical equipment has 29 items. It is used by 11 participants from St. Petersburg. High-quality measurement is conducted by skilled specialists of the Scientific and Technical Center and the Physical Technical Institute (PhTI). At present, 136.5 million rubles have been paid under supply agreements. The equipment is built according to the principle of a full-cycle research at a single site, which saves participants' resources.

In order to facilitate swift completion of R&D, participant companies are offered reduced rates developed specifically for analytical services. Plans are made for marketing measures. They will be taken in order to increase the amount of participants through start-ups and preferential access to additional services that are in high demand and used in innovative activities. X-ray structural analysis and microanalysis are among such services.

The FTI and NAVI CapitalManagement (BVI) Inc. signed an agreement according to which the Center will prepare and select the young scientists' works in various nominations. NAVI will be responsible for financing awards and grants for winners. Cooperation between SFC Skolkovo for Thin-Film Technologies, the loffe PhTI, the Skolkovo Foundation, the venture capital, and large companies creates a well functioning chain – from fundamental research to industrial manufacturing of high-tech products.



### **SFC MICROANALYSIS**

SFC Microanalysis will be created at the temporary office of Technopark with participation of Microanalysis Systems, LLC, which is a leader of the Russian analytical services market.

#### List of Works To be Performed:

- 1. Nanoprototyping. Creation of 3D-objects. Manufacturing of microsections. 3D reconstruction of objects.
- 2. Samples preparation for transmission electron microscopy at a given spot on the sample.
- 3. Studies of morphology in the SEM. Obtaining highresolution images in the high, low vacuum modes as well as in the natural environment (ESEM mode) of various types of samples (microelectronics, solid conductors, insulators, films, polymers, biological objects). The maximum sample size is over 200 mm.
- Analytical studies of the samples, including quantitative determination of the ultimate composition, obtaining the maps of the elements distribution on a given section of the sample (chemical mapping).
- 5. Examination of the structure and morphology of objects in the TEM. The works involve electron-diffraction studies, studies with high-resolution and microanalysis.
- 6. Analysis and processing of images obtained by TEM. Computation of high-resolution images.
- 7. Study of the samples in the optical range, "on-line" results elaboration.
- 8. Morphometric analysis.
- Detailed report with the results of the study (upon client's request).
- 10. Equipment use training.

All work is conducted on a top-notch equipment of the world's leading manufacturers that is similar to that of Stanford and the MIT

In particular, the SFC has double-beam analysis system FEI, Helios 650, universal optical light microscope Leica DM, laser particle analyzer AmbivalueEyeTech, scanning electron microscope FEI Phenom, system of sample preparation for scanning microscopy SPI, system of sample preparation for transmission microscopy Fischione, transmission electron microscope FEI Tecnai G2 20 FEG (200kV).

### **DATA CENTER**

Data Center Skolkovo (DC) is being designed and built according to the memorandum signed by the Skolkovo Foundation and Sberbank of Russia, By January of 2014, Sberbank should build for the DC a complex of computer rooms of Tire-3 category with the usable area of 7,000 sq m. The DC complex will be located in the south of the Skolkovo Innovation Centre. Sberbank made a commitment to carry put the design and construction of the DC complex, including its power supply and engineering support, with subsequent operation and maintenance of the whole complex of buildings, networks, and public utility mains.

The DC will have a computer room with a total area of 2,000 m, which will be accommodated in a separate module. In this room, equipment for IT services is planned to be set up and used for providing services to all of the Skolkovo ecosystem's participants: innovators in start-ups, key partners, students, and SkTech instructors. Models for provision of services may range from SaaS (Software as a Service) to PaaS (Platform as a Service).

It should be noted that the DC will not only provide centralized services, but it will be a place for test items of the equipment of innovators and key partners. Clients will be able to create test areas for presenting their solutions to prospective customers.

The DC has another important task – to reserve IT systems located at the "Smart City" Control Center. All the communication systems will be backed up through fiberoptic communication lines. This way, even a minor interruption in operation of the networks of the "Smart City" Control Center will not affect the quality of services.



### **SFC PROTOTYPING**

SFC Prototyping is a unique design division that has high-skilled staff to perform design works; it also has efficient management, and advanced engineering survey techniques. It facilitates development of the innovation environment within the framework of the Project's realization that involves creation and operation of the Skolkovo Innovation Centre; it provides services to Project participants, while relying on its expertise and personnel.

SFC provides engineering consulting services, carries out pilot production, designing and subsequent manufacturing of participants' products, as well as parts and components manufacturing at its production facilities.

#### Main functional capabilities:

- Machine shops:
- Joinery shops;
- Plastic and composite processing;
- Blowing shops;
- 3 D-prototyping;
- Electronic shops.

### Unique and promising functional capabilities:

- Laser welding:
- Assembly and testing of electronics boards and devices;
- · Computer designing and modeling.



EXECUTIVE SUMMARY

### Technopark Services

#### **CONSULTING CENTER**

In 2011, the Consulting Center was established as part of the structure of Technopark Skolkovo. Its main tasks are as follows:

- Informational support to prospective applicants before filing an application for the status of a Project participant, which includes clarifications on the process of application assessment.
- 2. Organization of meetings with the clusters' specialists.
- Consulting assistance in preparing a set of documents for obtaining the status of a Project participant and assistance in application execution (completeness/ compliance).
- 4. Initial consultation on the matters related to receiving grants.
- Consulting on the matters of a new legal entity's registration, amendments to the entity's Articles of Association according to the provisions of the Law "On the Skolkovo Innovation Centre."
- 6. Consultations on the benefits of the status of a Project participant (tax benefits, etc).
- 7. Informing an applicant about the stages of the application assessment.
- 8. Informational support to clients after they obtain the status of Project participants.
- Informational support and acceptance of requests for Technopark services from the Skolkovo Project participants, development of new Technopark services based on requests.
- Holding webinars on the procedures established for obtaining the status of a Skolkovo Project participant
- Organization of webinars on provision of Technopark services.

The Consulting Center works closely with the applicants and participants of the Skolkovo Project during the whole process of the status award. For example, the Accounting Center is a division of Technopark Skolkovo, LLC that organizes bookkeeping and grants accounting. The main task of the Accounting Center is to assist Project participants in competent selection of service providers. While organizing provision of services to Project participants through third parties, Technopark Skolkovo, LLL selects and trains service providers.

Today, the Consulting Center processes almost 100 requests from applicants each day. It provides all services free of charge. By the end of 2011, it rendered support to 332 participants and over 700 applicants for the status of a Skolkovo Project participant.

Procedure for organization and provision of services to participants

Participant files request for service provision.

### PRINCIPLES FOR THE SERVICES PROVISION BY TECHNOPARK SKOLKOVO, LLC

- 1. To act as an organizer of bookkeeping and grant accounting service to the participants.
- 2. To establish liaison between the participants and service providers.
- To act as a service organizer, to allow participants and service providers freedom of choice in order to facilitate mutually beneficial cooperation.
- 4. To monitor the quality of the services of service providers, as well as the pricing policy of service providers.
- 5. To analyze the market of similar services on a regular basis in order to enhance the quality of service and lower the prices for services, to advise the selected service providers on the methods of enhancing efficiency of their work with Project participants.

Technopark
Skolkovo organizes
selection of a
service provider
for Participant and
trains them.

Technopark Skolkovo suggests that Participant choose a service provider from the list of selected companies and provides Participant with exhaustive information about service providers, conditions for provision of services and their cost.

Information about the service providers that were selected,

providers that were selected, received training and service provider's certificates is posted at www.sk.ru.

### **TECHNOPARK SKOLKOVO:**

- provides the service provider with information about the Participant:
- if necessary, it draws up a model contract between the Participant and the service provider and ensures contract conclusion;
- monitors the quality of the services rendered by the service provider and the pricing policy through periodical field checks and surveys among participants, holds regular advanced training sessions (consulting seminars) for specialists of service providers;
- in case of inadequate services and incompliance with the requirement, it is entitled to inform the Participant about that and to remove the service provider from the list of selected companies.

Participant chooses a service provider.

#### **ACCOUNTING SERVICES**

In 2011, 12 companies were selected as service providers. According to the plan for 2012, up to 20 companies will be selected. Service providers received training; special training sessions, conferences, and seminars were organized (training sessions were held at least four times a year).

Service providers received informational support, Project participants were assisted in choosing a service provider from the list of selected companies (in 2011, 17 agreements on provision of bookkeeping and grant accounting services were made between Project participants and companies selected by the Accounting Center).

A model contract between a participant and a service provider was developed. Monitoring of the quality of the services of a service provider and the pricing policy is performed through field checks and surveys (rating).

In 2011, draft guidelines for grant reporting were developed in cooperation with PWC. Starting in 2012, systematic revision of this document will be performed at least once a year.

Consultations on bookkeeping, tax and grant accounting are provided on a regular basis (daily consulting in the written and oral form at the request of participants, free of charge, powers stipulated by Federal Law # 244). Legal entities receive assistance with their registration in order to be granted the status of a Skolkovo Project participant (with the foreign capital as well). Voluntary certification according to the Federal Law "On Technical Regulation" is under way. Technopark develops and registers with Rosstandart (Federal Agency for Technical Regulation and Metrology) a system of voluntary certification of services of its service providers. The Foundation provides assistance with the registration with Rosstandart.

### **VISA AND MIGRATION SUPPORT**

The Visa and Migration Department was set up as part of the Skolkovo Project implementation and as a response to numerous requests from participants. It is a division of Technopark Skolkovo that deals with visa and migration support. The Department was created in order to assist participants in resolving their visa and migration issues, when employing foreign specialists. Among them are official registration of work permits and invitations for entering the Russian Federation, notification of state authorities, consultations on the migration legislation, TIN for foreign employees.

The Visa and Migration Department also provides such services as development of an information resource with necessary information, organization of interactive communication (forum), training sessions, conferences and seminars (with a teaching session), development of guidelines and instructions, consultations for participants. In 2011, 12 participants made service agreements with the Department.





EXECUTIVE SUMMARY

### RECRUITMENT CENTER

Technopark Skolkovo carries out development of the concept of the Recruitment Center and establishes liaison with the world's most successful techno parks and research centers. In 2011, it signed a cooperation agreement with Technopark Zurich. As part of the agreement, a group of Swiss experts together with the design team developed an operational model based on its best techniques. Technopark Zurich also conducted introductory training for the main specialists of Technopark Skolkovo.



Relations with one of the largest European polytechnic universities, EPFL, in Lausanne, Switzerland, and the technology transfer company ISIS at Oxford University have been established and are going strong.



### **BUSINESS TRAINER SERVICE**

Innovators' start-ups all over the world usually get assistance from business trainers and mentors who render comprehensive support to the companies' leaders in developing their business. Relying on the best international practices, Technopark set up and launched this service for Project participants. A business trainer is a professional with many years of expertise and his stories of personal success. He is selected on a competitive basis and receives certification from Technopark. As a rule, a business trainer systematically works with the company, facilitating its success. In some given aspects of the business development, he can engage all the other services of

Technopark and act as a sales agent. A business trainer is a capital asset in promoting Technopark services.

Today, a close-knit team of business trainers provides services to 27 companies that are Project participants. A business trainer does not make any decisions for company management, just like in sports a coach will not set any records for a sportsman. A business coach only helps, assesses, gives direction, and inspires participants in such matters as business case creation, project development strategy, product marketing, company positioning, corporate development, and venture financing attraction.



To relieve the scientists and engeneers of administrative issues — such is the main purpose for creating Technopark Skolkovo.

Sergey Kurilov, Director General of Technopark Skolkovo, LLC ("Rosbalt," September 14, 2011)

### **CONFERENCE ACTIVITY**

Conferences and other business events are the most important tool in building the innovation community and promoting an innovative product of a participant company on the Russian and international markets. In 2011, three conferences with over 600 people were held for the Skolkovo community. Technopark signed a three-year lease contract with Management Company Skolkovo Management, LLC on leasing office premises for Project participants. The total area of the premises is over 6,800 sq m, the rate is USD 300 per 1 sq m per annum (VAT exclusive). Technopark is planning to provide Project participants with office premises of class B+, rooms for negotiations and conferences, TelePresence rooms, and server rooms. Participants will be able to keep their equipment there, have a landline, furnished work place, and free transportation from Moscow Metro station "Slavyansky Bulvar." They will also have a possibility to obtain a domicile for their company.



EXECUTIVE SUMMARY

### **CUSTOMS BROKER: BENEFITS, APPROVAL PROCESS**

One of the benefits granted to Project participants is refund of customs import duty. The Customs and Finance Company of the Skolkovo Innovation Centre (TFK Skolkovo) was set up in order to provide Skolkovo Project participants with the services of a customs representative.

Besides providing the services of a customs representative, TFK Skolkovo was imposed a responsibility of refunding customs duties paid by participants of the project involving creation and operation of the Skolkovo Innovation Centre. It also monitors the appropriate use of goods that were subject to refund.

Today, TFK carries out customs operations related to goods declaration and provides other services needed for international economic activity. The company assists in execution of documents requested by customs authorities, provides legal assistance in the matters regarding import and customs clearance of goods that Project participants need for their research activity.

In 2011, the company signed agreements on customs representative services with three Project participants: FarmaBio, RRT, and FM Lab. According to the agreement signed, FarmaBiomed imported goods for implementation of the project "Development of the New-Generation Original Medicines."



### INTELLECTUAL PROPERTY CENTER

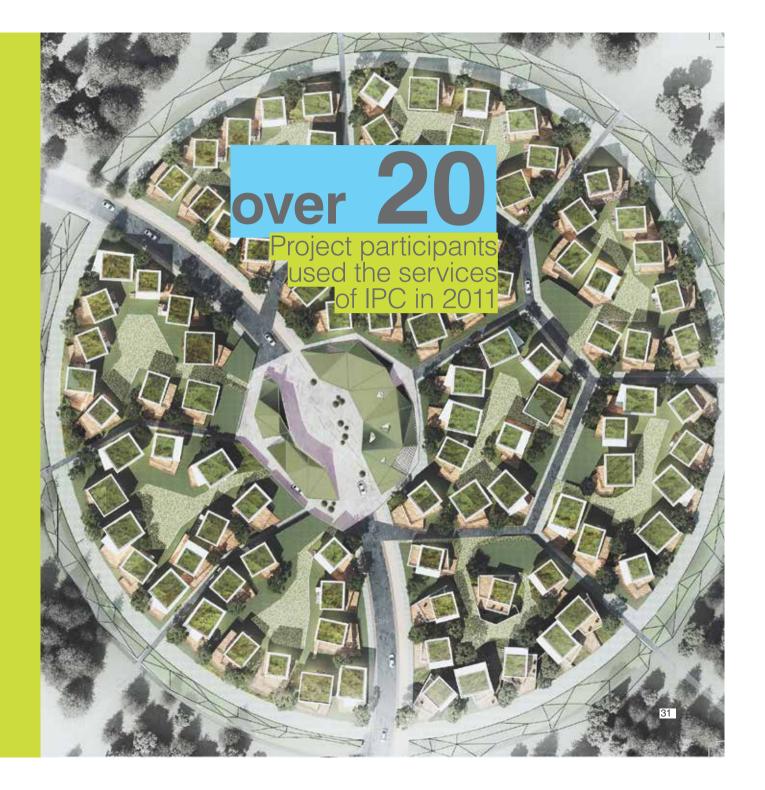
The Skolkovo Intellectual Property Center (IPC, Skolkovo IP) was incorporated on September 21, 2011. It was established in order to provide services in the area of intellectual property protection. Its main activities include consultations on the matters related to intellectual property, services related to state registration of the results of intellectual activity during research, mediator services in case of disputes involving intellectual property.

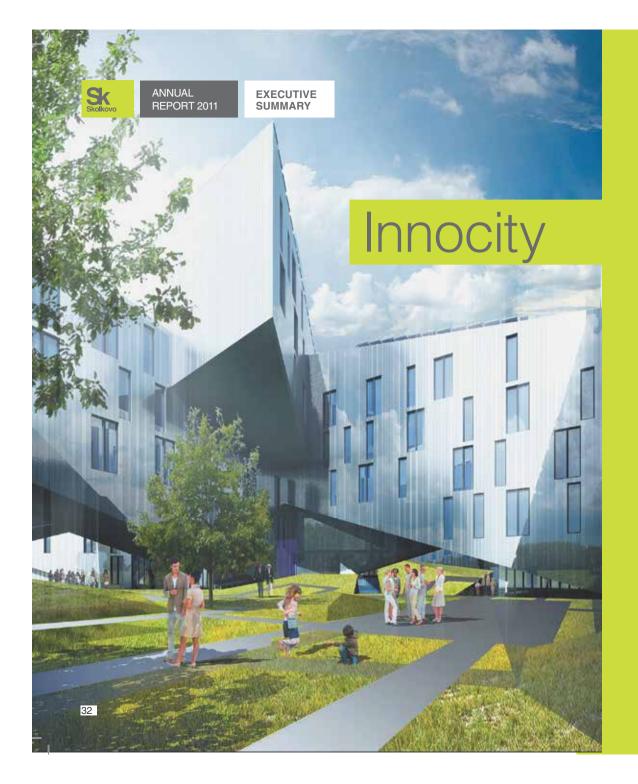
Skolkovo IP provides services to Project participants without engaging third parties. It relies on its own specialists – patent attorneys, lawyers in the area of intellectual property, legal experts in research. The services include consulting on patenting technologies in the territory of Russia and other countries, preparation and submission of Russian and international patent applications.

Some of the services provided by the IPC are unique in their nature because they focus on commercialization of the research results of Project participants. For instance, development of patent landscapes, examination of the market participants' patent portfolios, study of the patent market situation, search of counteragents based on the market research and facilitation of conclusion of license agreements, monitoring of the market participants' patent activity.

The IPC serves Project participants from the very beginning of their research work till the very commercialization of its results. Over 50 participants made use of the services of the IPC last year. IBM and Cambridge IP are among Skolkovo IP key partners.

One of the priority areas of activity for the IPC is to represent the interests of Project participants in other countries. For this purpose, Skolkovo IP cooperates with foreign patent attorneys, and through them, it will represent the interests of Project participants at patent agencies of foreign states.





Innocity is a neologism of the modern Russian language. It means "an innovation city." Even the term "innovation" is not quite clear to many people in this country. For instance, one might say that even though people have been improving the TV set, only transition to digital broadcasting can be considered an innovation; perhaps, the remote control can be counted as one, too. Innovations are radical changes that totally transform life in a given area. Today, such radical changes happen more and more often. Unfortunately, Russia by far too seldom becomes the cradle of innovations. However, the good news is, the Skolkovo Innovation Centre, or Skolkovo Innocity, was created to help Russian science, and this way the Russian state and economy as well, reach the forefront of innovations. Russia witnessed that in the time past: it made gigantic strides forward after establishment of the research centers near Novosibirsk, in Obninsk, Dubna, and Sarov. Now is the time for Skolkovo. The country pins many hopes on Innocity and is making large investments into its development. Oftentimes, it is noted humorously that even downtown Moscow will move closer to Skolkovo.



### **CONCEPT AND UNDELYING PRINCIPLES**

The Skolkovo Innovation Centre is situated not far from the boundaries of Moscow. Its total area is 389 ha. It is designed as a large cluster capable of attracting scientists and their family members, students, instructors, and business people. It will promote innovations by uniting a university, scientific research, and business. The concept of Innocity, the Skolkovo Innovation Centre, is founded on the following principles:

- Maximum use of the site's features and landscape as a natural frame for the city;
- Fruitful interaction between people, knowledge, research and business community, which is the matrix of innovations;
- High quality of life and sustainable development that make the site attractive.

The goal for the development of the Skolkovo Innovation Centre's territory is to create the most comfortable ecosystem: the urban environment (material and service infrastructure, public events and processes) for the activity of innovators, development and commercialization of new technologies.

The following factors should facilitate the achievement of the stated goal:

- Open communication that presupposes efficient collaboration between all parties involved in implementation of the Project. Mechanism: creation of venues and events for interaction;
- An image of the city as a laboratory. The city is going to become
  the "sixth cluster" of the Skolkovo Foundation, a platform for
  continuous development and commercialization of new energyefficient, information, communication, medical, educational and
  other technologies. Mechanism: reserves for transformation,
  introduction of new technologies.
- Provision of the best urban amenities at the Innocenter on a par with other Russian and international technology towns.
   Mechanism: adaptation of the best architectural, engineering, communication, environmental and social practices;
- Guarantee for equal access to the Innocenter's resources and their efficient use (the Innocenter should become a model for comfortable and sustainable urban environment). Mechanism: equal access to the public and common use centers.

Practical implementation of the 4E principles is the result of the chosen strategy of the urban environment development. These 4E principles are energy efficiency, ecological compatibility, ergonomics, and economic efficiency.

The city is going to become the "sixth cluster" of the Skolkovo Foundation, a platform for continuous development and commercialization of new energy efficient, information, communication, medical, educational and other technologies.



**EXECUTIVE** SUMMARY

PARKING

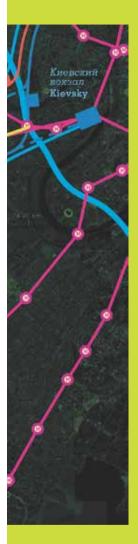




The Skolkovo Innovation Centre's guests and participants will have access to an efficient and convenient transport system connecting them to the downtown Moscow and international airports by railroad, public transportation or own vehicles.

The Skolkovo Innovation Centre's transport strategy is based on four main principles:

- no fence, possibilities for communication and interaction;
- City-Laboratory creating environment for introduction of innovative transportation solutions;
- Competitiveness reliance on advanced strategies of urban transportation that boost the environmental sustainability of the urban community;
- Egalitarian community creation of convenient and economical transportation system.



The Skolkovo Innovation Centre's territory will mainly be free of automobiles. The following system of transport priorities is planned:

- 1) pedestrians:
- 2) bicvcles:
- 3) public transport (buses running on biogas); 4) motor cars (electromobiles).

Electromobiles will be used both for getting around the Skolkovo Centre's precincts and for traveling outside its territory. The electromobile public fleet

is to be formed. Access to Skolkovo will be closed for all automobiles, except for electromobiles. There will be parking ramps for motor cars at every entrance point, with the total amount of 5 parkand-ride facilities with 10,000 parking stalls. Connection between the elements of the urban environment is determined by the concept of city transportation links, which allows for easy interrelation between Project participants, the Centre, and the world at large.

The electromobile public fleet is to be formed. Access to Skolkovo will be closed for all automobiles, except for electromobiles



The Skolkovo Innovation Centre's distinctive feature is its unique and unforgettable architectural look. The Master Plan provides for territorial zoning which makes it possible to unite in one neighborhood all housing, business, and other functions: residential property is developed as part of research neighborhoods, and vice versa - business facilities are developed as part of residential neighborhoods (units of buildings).



EXECUTIVE SUMMARY

### THE CITY IS DIVIDED INTO FOUR PLANNING DISTRICTS AND TWO PLANNING ZONES:

D1 Southern Planning District

D2 Technopark Planning District

D3 University Planning District

D4 Northern Planning District

Z1 Central (Guest) Zone and Transportation Hub

Z2 Landscape Zone





Z1 Zone makes up the central part of Skolkovo and occupies an area of around 30 ha. It plays a role of the largest communication hub of the Innovation City. Z1 Zone connects the Innovation Centre with the world at large. Two bridges – for pedestrians and automobiles – lead from the railway station to the heart of the zone – the Dome. The Skala mixed-use complex is situated here. It consists of an aparthotel, a movie theater, shops, restaurants, and an art gallery. Skala is surrounded with a hotel with a congress-hall, an apartment building, a theater, and a single-story gallery for various public needs. It is designed as an intricate combination of hexagonal and right-angled modules.

D1 Zone has a business park and Sberbank's Data Center. Sberbank's Complex with a total area of 65,000 sq m is divided into six right-angled units forming small atriums that flow into one another (the final design has not been approved yet). There is a school and a preschool in the precincts of D1. The central part of the zone is occupied by a mixed-use development comprising three- and four-story housing, offices of start-ups, and an entertainment center. Various stores and shops abound along the boulevard.





### **SOCIAL INFRASTRUCTURE**

The following organizations and institutions will be created at the Innovation Centre:

- four family health care centers (according to the districts);
- a complex comprising a polyclinic, emergency care, hospital (to be finalized);
- four family campuses (according to the districts), each of them comprising a preschool, elementary school, family center;
- middle and high schools (in one complex);
- municipal sporting facilities;
- district sporting facilities;
- fitness halls in buildings (research and residential).

The General Master Plan, design drawings of the districts, the Master Plan of the Innovation Centre, the development plans of the districts are completed. Design and construction of some buildings and systems have started.

### RESULTS OF DEVELOPMENT OF THE INNOCITY'S TERRITORY IN 2011:

In 2011, an area for the Center's construction was formed (389 ha), the Center's land property was transferred from the agricultural land use category to the land property of communities. The Center's

territory was released from incumbencies (facilities of the Russian Academy of Agricultural Sciences were removed from the inventory). Agreements on accommodation in Technopark's territory of Sberbank's DC, R&D Centers of Cisco, Renova and other key partners of the Foundation are signed.



#### URBAN ENVIRONMENT

The ideology for the city's development has been defined: the city planning concept is developed, the results of the competition for the best city planning concept are summed up; the strategy proposed by AREP (France) was chosen as the winner of the final stage of the competition. The management bodies for the city development have been formed: the City Building Council (comprised of architects, including four Pritzker Architecture Prize

Winners, designers, and city planners); the Technical Council comprised of the world's leading engineering companies, the Construction Headquarters for efficient management of design and construction, the Urban Environment Council for managing the "soft" factors of the urban environment.

The General Master Plan, the design drawings of the districts, the Master Plan of the Innovation Centre, and the development plans of the districts are completed. Design and construction of some buildings and systems have started: design documents for road junctions enabling access to the Centre from the Minsk Highway, the design options of Technopark, SkTech, the guest zone facilities, the design options of Sberbank. 500/220 kV power transmission lines in the Centre's territory have been built (FGC UES). The construction of the Cube has started. The fertile soil (270 thou cubic meters) is removed and stored for the use in further landscaping in the city.



### DEVELOPMENT OF SOCIAL INFRASTRUCTURE

Demographic research for determining the structure of families and households and a survey for defining preferences in terms of social and living conditions were conducted among Project participants. They helped make detailed plans for the social infrastructure and resulted in development of the concept of the sporting infrastructure (there were determined most popular sports with account for the future resident's characteristics, types of sporting facilities, their total area, and districts). Typologies of apartments were developed, their estimate total area and costs were calculated, and their district distribution was performed.

## In 2012, the Foundation is planning on taking the following measures aimed at social infrastructure development:

- Develop a comprehensive concept and policy for development of the urban environment and social infrastructure of the Centre;
- Design and commence the construction of the social infrastructure facilities: residential buildings, sporting facilities, healthcare and educational facilities:
- Engage investors/operators in management of sporting facilities;
- Engage operators in management of residential apartments.

### **HEALTH CARE SYSTEM**

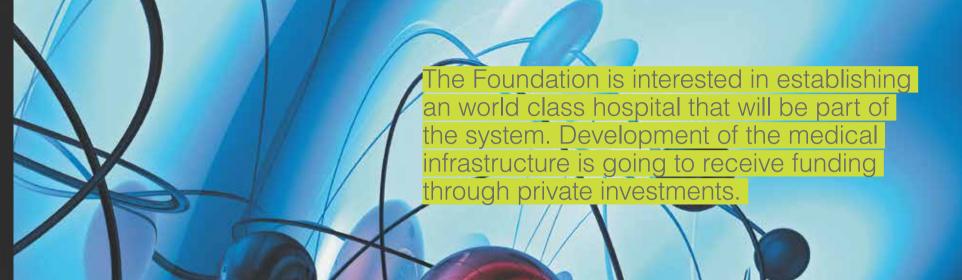
The Skolkovo Foundation strives to set up for Skolkovo's population a health care system meeting the world's best standards. The Foundation does not aspire to replicate the existing model of Russian health care system. Rather, it wants to introduce a system adopting the global best practices and the experience accumulated in other countries. Nevertheless, the chosen model, to the extent possible, should follow some of the Russian principles of health care (e.g. the concept of outpatient polyclinic) so that it can meet the

customers' needs. At the very least, this system should provide for primary care for the population organized through the family physician division in Skolkovo's districts and through polyclinics. Beside that, the Foundation is interested in establishing an international-standard hospital that will be part of the system. Development of the medical infrastructure is going to receive funding through private investments.

The Foundation intends to engage in its health care system management one of the world's leading medical operators with vast expertise in management of medical institutions.







### MAIN COMPONENTS OF THE HEALTH CARE SYSTEM TO BE DEVELOPED

- Primary care is likely to be provided based on the family physician division with the help of primary care personnel. There is no mandatory model for providing services within primary care. Nevertheless, the essential services will comprise various procedures for all strata of the populations, such as diagnostics, primary prophylaxis, and treatment, as well as outpatient care and consultations of doctors.
- 2. The need of Skolkovo's population in secondary care will be met through an international-standard medical center that is going to be built there.
- 3. The operator must ensure round-the-clock emergency services for Skolkovo's population.
- Medical institutions should be autonomous, i.e. they should be able to provide all diagnostic and auxiliary services in accordance with the best international standards of health care.
- 5. The operator must ensure provision of ambulance services to Skolkovo's population.

The operator and the investor for the health care system are going to be chosen through a qualification-based selection (investment tender). The main criterion of selection is compliance of the proposed model with the concept of medical care for the population. The partners for the health care system will be selected by late June 2012. The design work will start by that time as well.

Development of the concept for Skolkovo's health care system required setting up of the Expert Council. Among its members are representatives of public medical institutions, private business owners, and regulators. The main objective of the Expert Council is to facilitate development of the most optimal and innovative model of medical care for Skolkovo's residents and guests. Collaboration between the Expert Council, the Foundation's specialists, and independent consultants resulted in development of the concept for Skolkovo's medical infrastructure.







ANNUAL REPORT – 2011

**RESULTS** 

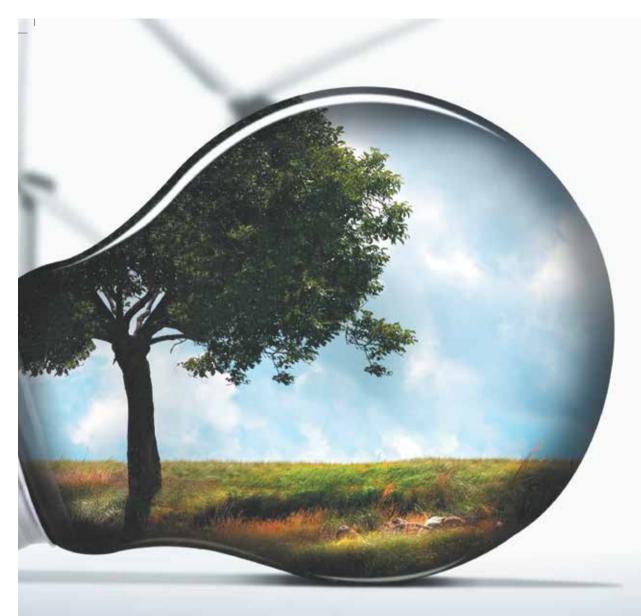
## Research

In his address to the Federal Assembly on November 12, 2009, President Dmitry Medvedev emphasized the priority areas of the Russian economy modernization. In particular, he stressed: "The domestic economy should at last be re-orientated to the real needs of people and today they are primarily connected with safety, health improvement, access to energy and information. And our choice of priorities in the economy modernization and technological development is based on meeting these needs. Our priorities are key to bringing Russia to a new technological level and ensuring leading positions in the world. They are introduction of advanced medical, energy and information technologies, development of space and telecommunication systems, radical increase of energy efficiency". Later these strategic

guidelines were documented in Federal Law No. 244FZ "On the Skolkovo Innovation Center" dated September 28, 2010. The research is carried out in the following areas:

- Energy efficiency and energy saving, including the development of innovative energy technologies
- 2) Nuclear technologies
- 3) Space technologies, primarily in the field of telecommunications and navigation systems (including the creation of the relevant ground infrastructure)
- Medical technologies in the field of equipment and medication development
- Strategic computer technologies and software (part 8 of article 10 "Features of the Project Participants' Activities" No. 244FZ.)





Applied research centers are a source of new high-tech companies or intellectual property and technologies with high commercial potential that have a significant impact on the development of one of the priority areas.

Five divisions, or **clusters**, have been created to develop each of the mentioned areas. Their goals include determining priority fields of research within the chosen areas (**foresight**) to be approved by the Scientific Advisory Council, attracting researchers, supporting start-ups in their work and promotion of research results. In the specified areas, the clusters provide support to innovative projects, starting from the moment an idea is generated up to a product development and commercialization.

A special type of the Skolkovo Project participants is **applied research centers** (ARCs). ARCs carry out research that presupposes commercialization within five-seven years from the date of applying for the status of participant and receiving financing from the Foundation. Applied research centers are a source of new high-tech companies or intellectual property and technologies with high commercial potential that have a significant impact on the development of one of the priority areas.

### The main goals of ARCs are:

- To carry out world-class R&D work that provides the basis for further commercialization of research results.
- 2. To organize international cooperation in the field of science and commercialization of developed technologies.



# Cluster of Energy Efficient Technologies

Oil extraction and gas recovery are key industries of the Russian economy, and the relevance of projects aimed at increasing efficiency of technologies applied in these industries cannot be overestimated. We find it very important that such promising projects are implemented at Skolkovo

### **GOALS:**

- to create a specific environment to support innovative developments in the fields connected with the implementation of new and breakthrough technological solutions. These solutions are primarily designed to reduce energy consumption by industrial facilities, housing and public utility facilities, as well as municipal infrastructure facilities;
- to develop those power industry fields in which Russia has competitive advantages over other countries;
- to assist in reducing the gap between Russia and developed countries in the level of energy intensity of economy;
- to support developments in the areas related to international innovative trends:
- to promote raising the investment appeal of the Russian power industry.

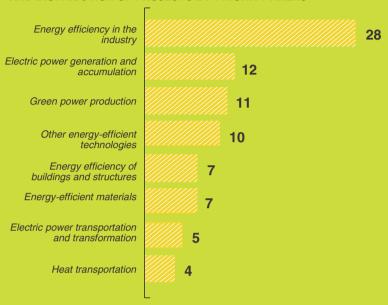
Executive Director of the Cluster of Energy Efficient Technologies is Vasily Belov, a member of the working group "Energy Efficiency" of the Committee under the President of the Russian Federation on Modernization and Technological Development of the Russian Economy. He specializes in national policy in the sphere of energy saving and energy efficiency, investments, innovations, public-private partnership.



The foresight of the Energy Efficiency Cluster comprises two basic units – "Generation" and "Consumption" and includes the following priority areas of research:

- Energy-efficient materials
- Energy efficiency of buildings and structures
- Energy efficiency in the industry
- Electric power generation and accumulation
- Heat transportation
- Electric power transportation and transformation
- Green power production (the use of alternative energy sources)
- Other energy-efficient technologies.

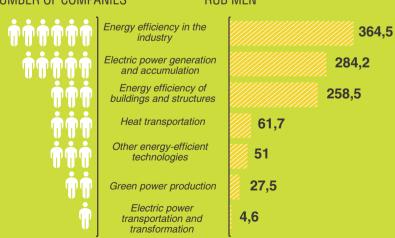
### THE NUMBER OF THE CLUSTER PROJECTS AS OF DECEMBER 31ST, 2011 AND DISTRIBUTION OF PROJECTS BY PRIORITY AREAS

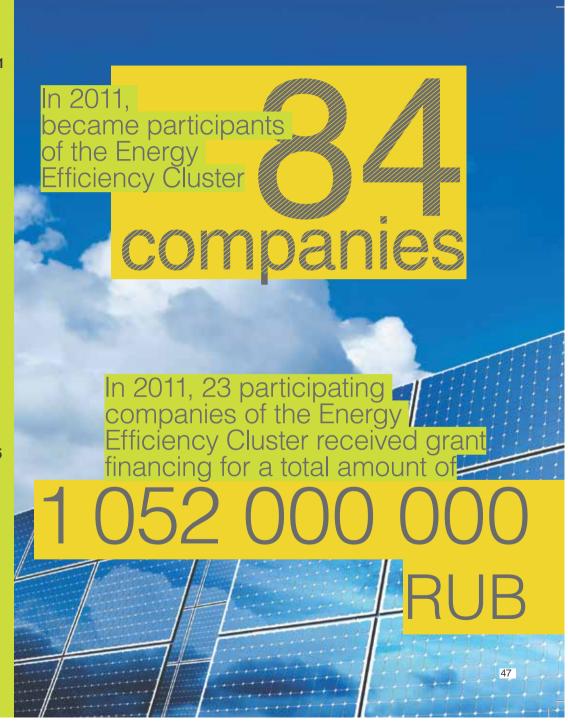


### **GRANT FINANCING OF PARTICIPANTS**

NUMBER OF COMPANIES

**RUB MLN** 







## Chronicle of key events



The energy efficiency and energy saving" direction (cluster) is very relevant to our company. This cluster is aimed at implementing the federal program on energy saving and increasing energy efficiency and promotes the development of energy-efficient technologies that we apply in our activities connected with energy surveys

> Vladimir Zinkevich, Head of Energy Audit Department of OOO "Energy Audit-Expert

The Skolkovo Foundation, jointly with the Ministry for Regional Development of the Russian Federation and the Russian Energy Agency of the Ministry of Energy of the Russian Federation, announced the start of the contest of innovative projects aimed at increasing energy efficiency in the sphere of housing and public utilities

The meeting of the Energy Efficiency Business Club "Skolkovo" took place in Moscow. Heads of innovation departments of the largest Russian companies, including RusHydro, TNK-BP, Power Machines, SUEK, ROSATOM, Bashneft, Tatneft, IES-Holding, Rosnano, Inter RAO UES, RU-COM, FGC UES, Rosneft, Transneft, Gazprom, took part in the meeting.

A scientific conference of the Energy Efficiency Cluster dedicated to the topics "Smart Grids" and "Energy-Efficient Illumination" took place in Moscow. More than 150 leading scientists, representatives of the largest companies, innovation start-ups and expert community, such as the Russian Academy of Sciences, the Moscow State University named after Lomonosov, MPEI, MIPT, MEPI, FGC UES, R&D Center for Power Engineering, Mobile GTES, Holding IDGC, Lenenergo, Siemens, General Electric, Russian Railways, Tamir Fishman, MC Leader, Hevel, Optogan, Echelon, Dow Chemical, IBM, McKinsey, Clearlink, as well as representatives of Russia's innovation development funds took part in the conference.



The first scientific conference of the Skolkovo Foundation took place in St. Petersburg. It was organized by the Energy Efficiency Cluster together with the IT Cluster. Over 300 experts from the largest scientific centers, Russian and foreign companies took part in the conference.

The Energy Efficiency Cluster together with venture funds Siemens VC, Bosch VC, Emerald, Leader, RU-COM held a venture fair, as well as a training seminar for participants together with CRDF Global. More than 15 participating companies of Skolkovo took part in the fair and gave short presentations to representatives of venture funds. The fair made it possible for the participating companies not only to present their projects to potential investors, but also to form business contacts in order to attract additional investments for the development of their projects.

With the participation of RUIE's Committee on Energy Policy and Energy Efficiency, OAO LUKOIL and the Skolkovo Foundation held a round table discussion on the development of innovative technologies for oil and gas sector. Representatives of upstream, strategy and innovation subdivisions of oil and gas companies, state bodies and scientific community took part in the round table. The Energy Efficiency Cluster participants presented a number of promising innovative projects for the oil and gas sector.

### THE CLUSTER'S APPLIED RESEARCH CENTERS

- In 2011, the Energy Efficiency Cluster started the work on establishing ARC for heat exchange processes and catalysis.
- ARC participants: Institute of Catalysis SB RAS; Novosibirsk State University; Imperial College London.

### **AREAS OF RESEARCH**

- 1. Measurement of crude oil settling in real industrial conditions.
- 2. Chemical description of oil and oil sludge with the use of advanced visualization tools.
- 3. Physical description of oil and oil sludge.
- 4. Thermodynamic modeling of phase change of crude oil and its blended crudes.
- 5. Dynamics of fluids and rheology near the border "fluid-surface".
- 6. Modeling of kinetics and sedimentation, data control, modeling and design of heat-exchange equipment and pipelines, general integration of the system and its efficiency.
- 7. High-efficiency heat utilization, reutilization and (or) conversion into energy, advanced (optical) diagnostics of fluid flows and heat exchange.
- 8. Development of catalysts and catalytic reactors for intensification of heat transmission and recovery processes in thermodynamic cycles of energy generation.
- 9. Mathematical modeling of reactions and heat transmission in petrochemical processes.
- 10. Development of catalysts and catalytic reactors for catalyticallyassisted combustion of hydrocarbon fuel to prevent residue buildup in oil-extracting and oil refining industry.
- 11. Heteroatomic chemical components of petroleum tailings: study of physicochemical properties and development of oil refining processes with the use of supercritical fluids.
- 12. Catalytically-assisted combustion of sour crude oil in a fluid-bed catalytic reactor with high heat density.





ANNUAL REPORT – 2011

**RESULTS** 

## Nuclear Technologies Cluster



- to ensure innovative development of the nuclear branch for the purpose of strengthening global technological leadership and maintaining the country's defense capability;
- to ensure the development and implementation of new breakthrough technologies and products in the sphere of nuclear technologies:
- to facilitate competitive growth of Russian products and services in the sphere of nuclear technologies on the international markets;
- to achieve diversification of nuclear technologies and products for the purpose of applying the branch know-how at the other markets

   in nuclear medicine, inspection systems, in the field of new materials creation, etc.

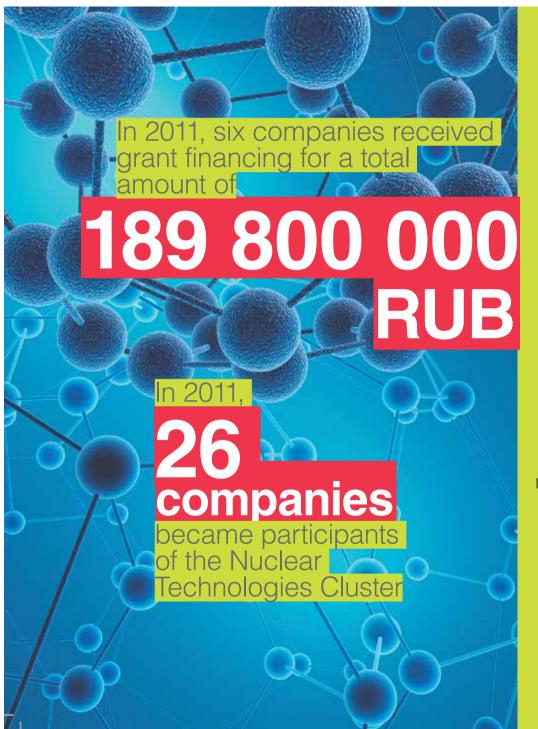


Executive Director of the Nuclear Cluster is Denis Kovalevich, a former Head of the Strategic Management Department of Rosatom State Corporation, Adviser Director General of Rosatom on issues relating to coordination of the work within the Commission for modernization and technological development of Russia under the President of the Russian Federation and implementation of the policy for the creation of innovation clusters in nuclear cities.

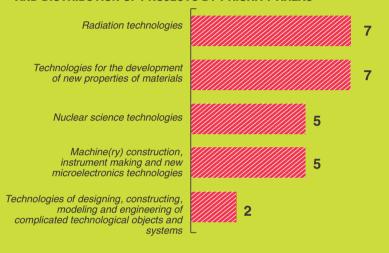
I expect that in the long term the Nuclear Cluster of Skolkovo will be able to develop and offer for implementation one or two megaprojects aimed at creating new high-tech industries in Russia, each of which will claim for 10-15% share of a corresponding world market, that is to be among five top world leaders

### The foresight of the Nuclear Technologies Cluster includes the following priority areas of research:

- 1. Nuclear science technologies (nuclear physics, chemistry, thermodynamics, etc.)
- 2. Radiation technologies (technologies on the basis of radiation), including nuclear medicine, safety systems, nondestructive inspection, application of radiation technologies in industry (production of high-force materials) and ecology (waste water purification, sterilization), in agriculture (for example, pest control)
- 3. Technologies for the development of new properties of materials, including composite materials
- 4. Technologies of designing, constructing, modeling and engineering of complicated technological objects and systems
- 5. Machine(ry) construction, instrument making and new microelectronics technologies.



### THE NUMBER OF THE CLUSTER PROJECTS AS OF DECEMBER 31, 2011 AND DISTRIBUTION OF PROJECTS BY PRIORITY AREAS



#### GRANT FINANCING OF PARTICIPANTS

NUMBER OF COMPANIES

**RUB MLN** 



Machine(ry) construction, instrument making and new microelectronics technologies

Technologies for the development of new properties of materials

Technologies of designing, constructing, modeling and engineering of complicated technological objects and systems



158,0



## Chronicle of key events

In collaboration with Rosatom State Corporation, the Nuclear Technologies Cluster of Skolkovo initiated the creation of the Foundation's project office, which aims to help innovation project starters receive the status of the Skolkovo Foundation participant that provides various benefits to companies for carrying out scientific research, as well as an opportunity to receive financing for project implementation (the office began its work on January 1st, 2012). The city of Sarov was chosen as a pilot site. This city has high innovation potential and is historically related to research work and creation of hightechnology products, it is a place of concentration of nuclear technologies and specialist competencies around one of the largest nuclear centers in Russia – the Russian Federal Nuclear Center – the All-Russian Research Institute of Experimental Physics (RFNC - VNIIEF).

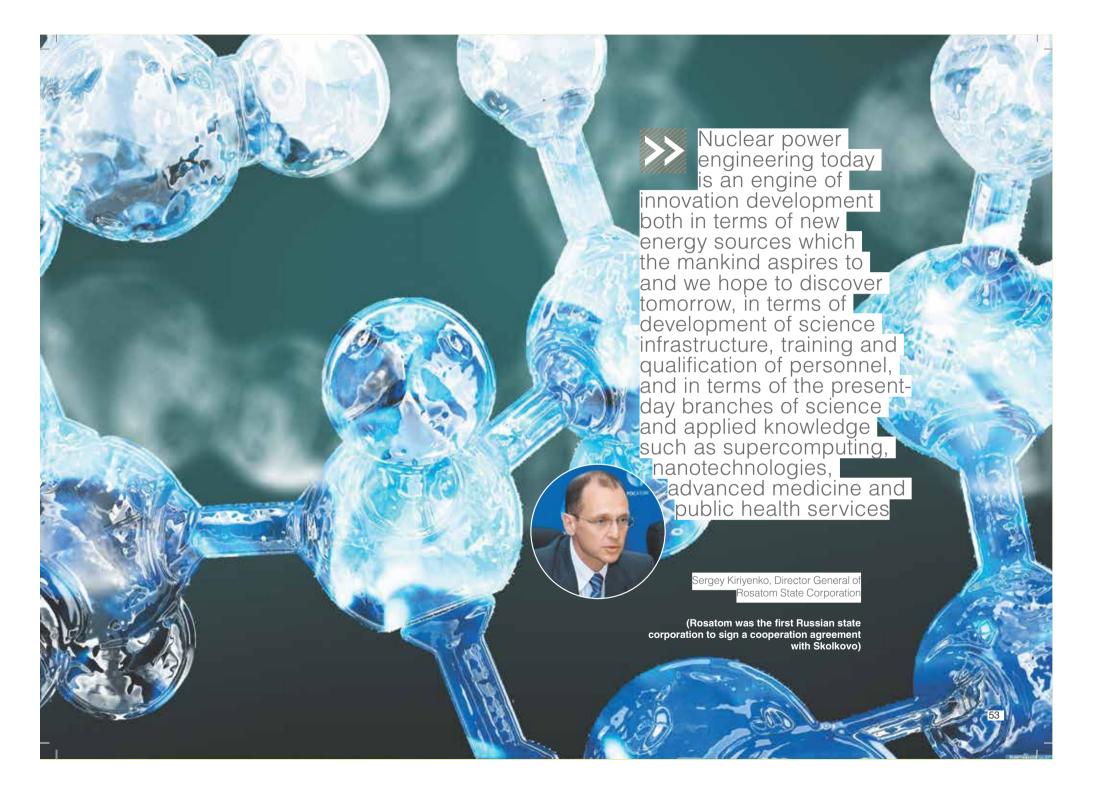
### September

### September-October

The Nuclear Technologies Cluster in partnership with Harvard Business Review-Russia, Rosatom State Corporation and NRNU MEPhI held a competition "Youth Nuclear Energy". The competition finalists were awarded in December, 2011. The winner, Herman Babin, was given an opportunity to receive international training organized by the Nuclear Technologies Cluster in research and development centers and innovation parks.









RESULTS

# Space Technologies and Telecommunications Cluster

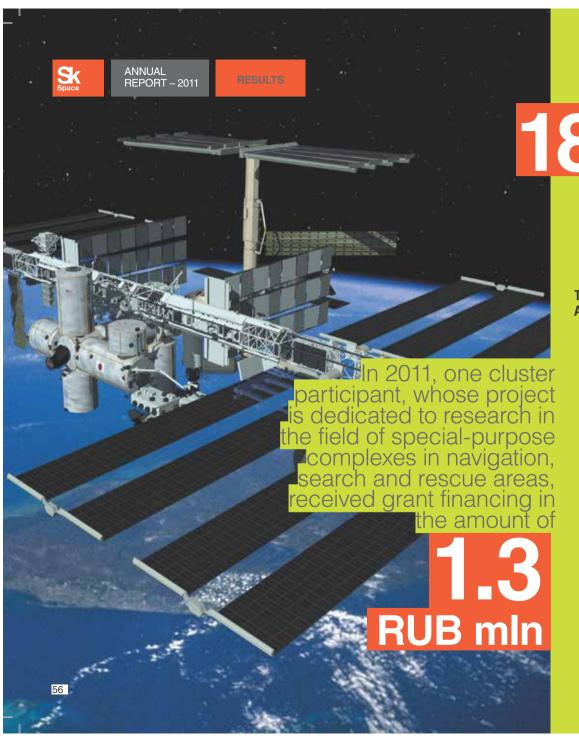
### **GOALS:**

- to ensure search, involvement and selection of potential participants of innovative process in the field of spacecraft development and target operation, and diversification of rocket-and-space industry potential;
- to ensure development and implementation of projects in the field of space technologies and telecommunications covering both Space for Earth (the use of the space systems' potential for provision of services and solution of applied problems) and Earth for Space (development of aerospace technology and space industry diversification) domains.

The foresight of the Space Technologies and Telecommunications Cluster includes the following priority areas of research:

- Space navigation, search and rescue aids
- Small-scale satellite systems
- Projects in the field of applied research with the use of fine positioning systems (including earthquake prediction)
- Projects popularizing outer space exploration and use
- Creation of advanced jet-propulsion technologies (space propulsion systems, hypersound and applications in the field of aircraft engineering)
- Functional technologies for creating ground-based elements of space systems (composite and other constructional materials, robotics technology, applications for space-launch complexes, ground-based application of traditionally "space" elements of power systems: accumulators, solar energy converters, etc.)
- Functional technologies for creating special-purpose on-board equipment for space vehicles (space electronics, optoelectronics, onboard power systems: accumulators, solar batteries, etc.)
- Special-purpose complexes in the field of navigation, search and rescue (development of ground-based equipment, navigating chip sets, other elements of fine positioning systems, including software).



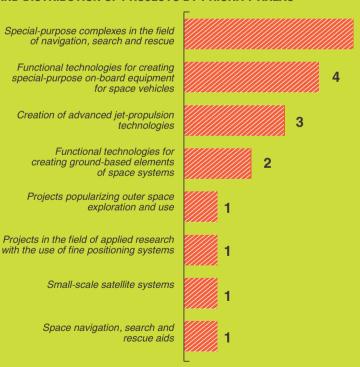


In 2011,

18 companies

became participants of the Space Technologies and Telecommunications Cluster

### THE NUMBER OF THE CLUSTER PROJECTS AS OF DECEMBER 31ST, 2011 AND DISTRIBUTION OF PROJECTS BY PRIORITY AREAS



## Chronicle of key events

During the International Aviation and Space Salon MAKS-2011 in the town of Zhukovsky, the Space Technologies and Telecommunications Cluster of the Skolkovo Foundation signed agreements with the leading enterprises of the Russian rocket and space industry – 0AO S.P. Korolev Rocket and Space Corporation Energia and JSC "Academician M.F. Reshetnev "Information Satellite Systems".

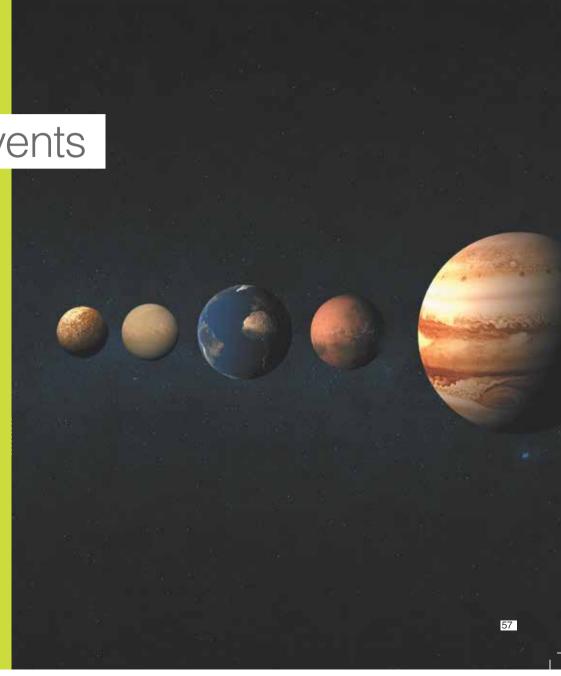
As part of the 5th International Conference "Earth from space – the most effective solutions", 000 Minerva Capital Partners" in association with the Space Technologies and Telecommunications Cluster organized and held a master class "Winning Skolkovo grants for the development of innovative projects". Dmitry Tseytlin, Director General of Minerva Capital Partners, made a presentation dedicated to the principles of interaction with the Foundation.

16-21.08

29.11-01.12

14.11

Following the results of the "Galactic business lunch" at the Spherium Spacetrade Centre in the Hague, the Space Technologies and Telecommunications Cluster signed a cooperation agreement with the International Space Transport Association (ISTA).



## Biomedical Technologies Cluster

### **GOALS:**

- to create an infrastructural ecosystem for innovations in the sphere of biomedical technologies;
- to ensure development and introduction of new technologies in the main areas of biomedicine:
- to facilitate the search of innovative solutions in the field of medical treatment of diseases:
- to promote cooperation between scientists and practitioners.



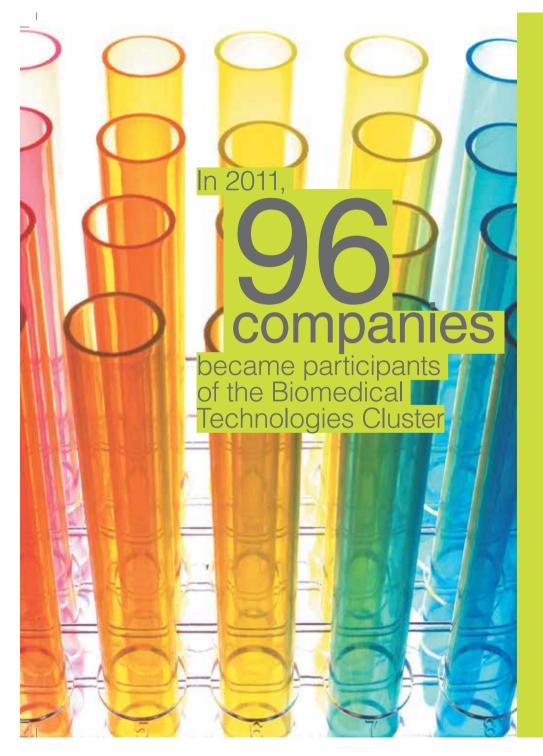
Technologies Cluster is Igor Gorvanin, Cand. Sc. (Physics and Mathematics), Professor of Edinburgh University (UK), Head of the Biosystem Laboratory of Okinawa Science and Technology Institute (Japan).

Executive Director of the Biomedical

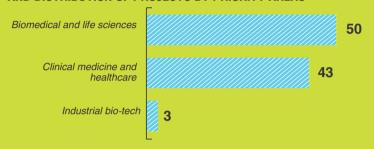
The foresight of the Biomedical Technologies Cluster includes the following priority areas of research:

- Clinical medicine and healthcare
- · Biomedical and life sciences
- Bio-informatics
- Industrial bio-tech (purification methods, ecology and industrial drugproduction technologies).

Today we give support to young companies and young people, who will create a medicine, bring it to both Russian and foreign markets, organize a successful business, and earn millions or billions. Real companies will surely be worth of billions. And when such companies invest into a young companyresident of Skolkovo, this will be an achievement. There will be millionaires and billionaires who have made money not from selling-reselling, but from innovations



## THE NUMBER OF THE CLUSTER PROJECTS AS OF DECEMBER 31ST, 2011 AND DISTRIBUTION OF PROJECTS BY PRIORITY AREAS



In 2011, ten participating companies of the cluster received grant financing for a total amount

624 500 000 RUB

### **GRANT FINANCING OF PARTICIPANTS**

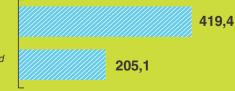
**NUMBER OF COMPANIES** 



Biomedical and life

Clinical medicine and healthcareT





## Key milestones

The conference
"Biomedical
Technologies in
Skolkovo. Challenges and
Opportunities" organized
by the Biomedical
Technologies Cluster
took place in Moscow.
The leading Russian
and foreign scientists,
including Nobel Prize
winners, took part in the
conference.

The next St. Petersburg Forum "Science and Society" took place in St. Petersburg. It was organized on the initiative and with the assistance of the Biomedical Technologies Cluster of Skolkovo, St. Petersburg Government, St. Petersburg scientific center of the Russian Academy of Sciences, St. Petersburg Academic University – Nanotechnology Research and Education Centre of the Russian Academy of Sciences, and the Foundation for Support of Education and Science ("Alferov's Foundation"). As part of the Forum, the 6th meeting of Nobel Prize winners took place. The theme of the Forum and the meeting of Nobel Prize winners was "Physiology and Medicine of the XXI Century". Outstanding scientists Zhores Alferov (Russia), Richard Roberts (USA), Roger Kornberg (USA), Avram Hershko (Israel) and Aaron Ciechanover (Israel), the leading Russian and foreign experts in the field of medicine and physiology, chemistry and physics, representatives of the teaching staff of field-specific higher education institutions, academic institutes, representatives of authorities and public organizations, students, post-graduate students, and young scientists took part in the Forum.

As part of the 6th All-Russian Science Festival, the awards ceremony to honor the winners of the first All-Russian contest "Vanguard of Knowledge" was held. The contest was organized by the international biopharmaceutical company AstraZeneca in association with the Skolkovo Foundation, Russian Venture Company and ROSNANO. Four research works in the field of oncology and four research works in the field of cardiology were recognized by the expert jury as the most scientifically advanced. The authors of these works received cash rewards from the organizers, as well as an opportunity to continue their research in partnership with the Russian development institutes.

07/10

01-02.02

03.03

As part of the Cooperation Agreement between the Skolkovo Foundation and the Fund for the Promotion of the Development of Small Forms of Enterprises in the Scientific and Technical Sphere, the first selection of nominees for the "UMNIK-Skolkovets" status was completed. The contest organizers were the Biomedical Technologies Cluster, the Energy Efficiency Cluster and the IT Cluster. The goal of the contest is to select young scientists and experts to the Skolkovo Foundation's candidates pool. The first super-final of the contest took place on March 15th, 2011. 48 winners from Moscow, St. Petersburg, Yekaterinburg, Kazan, Yaroslavl, Pushchino and Chernogolovka became the first to receive the UMNIK-Skolkovets status. Some of the UMNIKs undergo training in the participating companies of the project. In December 2011, yet another 20 contestants received the UMNIK-Skolkovets status as a result of an additional selection.

19423.09

28.09

The Biomedical Technologies Cluster of the Skolkovo Foundation in collaboration with the Swiss venture fund Nextech that specializes in investments into the most promising methods of cancer control in different countries held a conference "Global Oncology Venture Event. Innovations in Cancer Control". The conference was aimed at integrating the Russian applied research in the field of oncology into the international community, establishing contacts between Russian innovators and international venture capitalists, building the environment in which domestic developments in the field of oncology would be in demand in the world and would take a proper place among 'breakthrough' cancer control methods. As part of this event, Sir Bruce Ponder, Director and Professor of Oncology at the Cancer Research UK Cambridge Research Institute, made a speech and the participating companies of Skolkovo that develop innovative projects in the sphere of oncology made presentations.





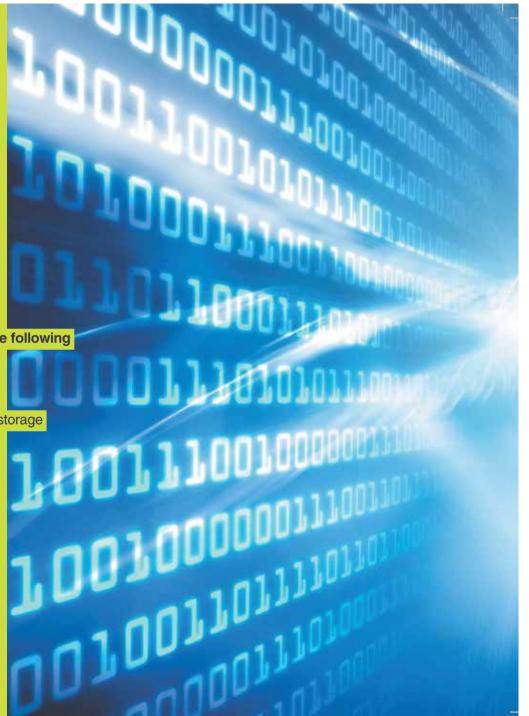
ANNUAL REPORT – 2011

**RESULTS** 

## Information Technologies Cluster

The foresight of the Information Technologies Cluster includes the following priority areas of research:

- New generation of intellectual multimedia search engines
- Recognition and processing of images, video and voice
- New technology for information storage, processing and transfer
- Development of new high-efficiency computing systems and data storage systems
- Mobile applications
- Web X.0
- Complex engineering solutions
- Software for financial and banking sectors
- Cloud computing
- Analytical software
- IT Security
- Wireless sensor networks
- Embedded control systems
- Green Information Technology
- IT in Education
- IT in Medicine and Healthcare





One of the main principles in Skolkovo is open procedures for projects review – be it nominations for grants, nominations for co-financing or nominations for the status of the Skolkovo Project participant that gives tax benefits.



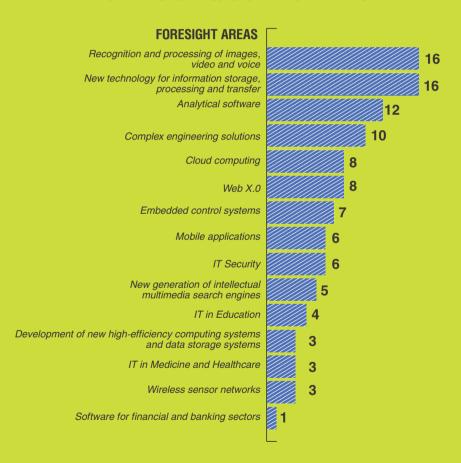
Executive Director of the IT Cluster is Alexander Turkot, Ph.D. in Economics, from 2007 to 2009 – Director General of "My Space – Russia

108

companies
became participants of the IT

Cluster

### THE NUMBER OF THE CLUSTER PROJECTS AS OF DECEMBER 31, 2011 AND DISTRIBUTION OF PROJECTS BY PRIORITY AREAS

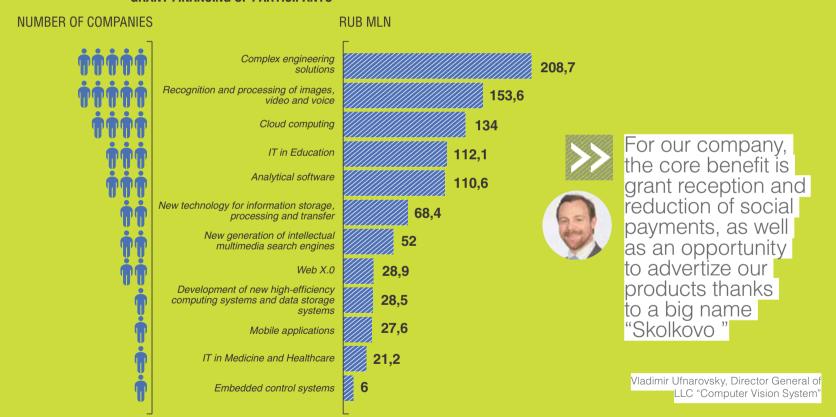




**RESULTS** 

# 30 participating companies of the cluster received grant financing for a total amount of 951 600 000 RUB

### **GRANT FINANCING OF PARTICIPANTS**





...Receiving the
Skolkovo participant
status will allow us to
significantly lower our
expenses for scientific
research and expand
our research staff.
Besides, the halo of
a "Skolkovo" brand
will make it easier
to attract talented
university graduates to
our company

Alexey Kadeyshvili, Technical Director of Vocord We have considerably improved our business model and have focused on the commercial aspect of the technology we develop. The expert analysis of our enterprise was very useful for us.

Mikhail Pogrebnyak, Director General Kuznech



Within the framework of our platform and services, we will offer principally new possibilities and expand horizons for small and medium-sized businesses. And the Skolkovo Foundation's financial support will allow us to offer our products at very moderate prices.



Dmitry Torshin, Director General of Unicloud Labs



We have been working for over seven years and we earn money on our own.
Our innovative projects have passed a serious competitive selection procedure and have become a part of the Skolkovo Innovation Foundation. If we receive grants from the Skolkovo Foundation, it will give us an additional impulse for development. And it means that we will make our software products faster and bring them to the market.



**RESULTS** 

## Chronicle of key events

The Skolkovo Foundation and the company Cisco announced the Skolkovo Innovation Award, which is supported by the Cisco I-prize. The main objective of the competition is to attract talented specialists and their ideas, which will in future become start-ups at the Skolkovo Innovation Centre. The winners were named on May 16th, 2011. The first place went to Yevgeny Smetanin, a creator of new generation toys: motorized cars, animals and robots capable of imitating social behavior – uniting in groups, acting simultaneously with each other. The winner plans to spend the main prize, RUB 3 mln., for the project development.

The IT Cluster of the Skolkovo Foundation together with TV channel "Dozhd" (Rain) announced a competition of start-ups in the field of IT "Start-up Capital". The organizers received over 300 applications. Following the results of the competition, two projects became the Skolkovo participants.

22,11 **20**10 28.04

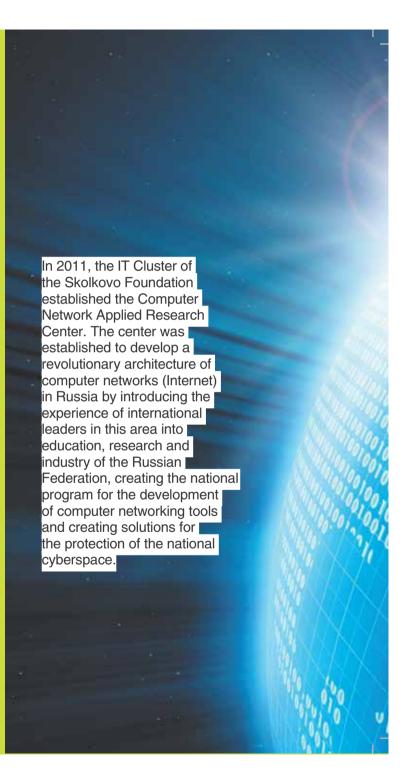
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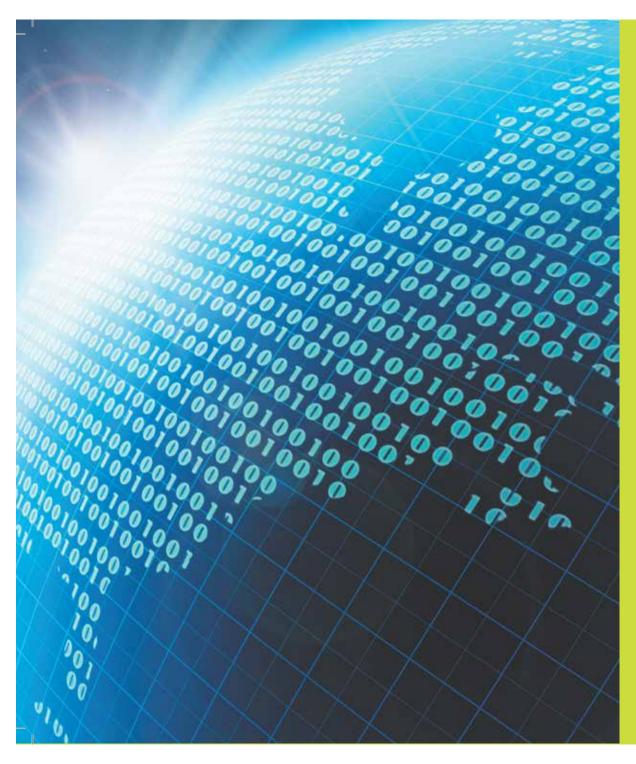
25.02
The IT Cluster in collaboration with GlavStroy held a contest "Battle of start-ups". The winners were nominated for the status of the Skolkovo participants and received an opportunity to get financing from both the Skolkovo Foundation and other investors.

03-12.10

The IT Cluster of the Skolkovo Foundation held a road-show of domestic IT start-ups in American Silicon Valley. As part of the road-show, a wide range of innovative projects – from trade automation solutions and three-dimensional visualization of movie scripts to optimization of the satellite channel use and software for modeling oil tanks – was presented. Key partners of the Foundation – the largest global high-technology companies Cisco, Microsoft, Intel, Facebook, Google – took an interest in the Russian start-ups. Some of them are considering the integration of the technologies offered by the start-ups into their own products, others are interested in making investments.

03-12,10





### THE MAIN GOALS OF THE COMPUTER NETWORK APPLIED RESEARCH CENTER ARE AS FOLLOWS:

- to develop and distribute innovative network tools and technologies;
- •to facilitate the quickest possible application of innovative network technologies in Research and Education:
- •to help researchers in the field of network technologies achieve smooth transition from the formation of concept of innovative tools and technologies to their prototyping, to expand research results from local networks to nationalscale networks;
- •to establish, support and develop international scientific and technical links with the advanced research centers in the field of network technologies.

In 2012, the Cluster together with the interested private and state organizations, research centers and universities plans to establish two more applied research centers in the branches that are of most importance to the IT industry:

- 1. Center for coordination of innovative projects and cooperation in the field of IT for the oil and gas industry.
- 2. Applied research center in the field of IT for the financial industry.



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**RESULTS** 



## Project Participants

The Project participants are a driving force of innovations. They are those companies that have already started scientific research or production activity under the auspices of the Skolkovo Foundation. Only those companies that propose innovative solutions to the most urgent scientific, social and economic problems in five key areas and undergo independent expert review can receive the status of Project participant. The priority is given to projects that are able to change the face of the market and introduce new, second-to-none products and technologies.

The applications for participation in the Skolkovo Project are considered by expert boards, specially created for each cluster. Both Russian and international scientists, venture investors and entrepreneurs are members

of these boards. Ten experts from the relevant cluster, which are selected from a general list in a random manner, take part in the consideration of each project. The average period of an application review for the status of participant

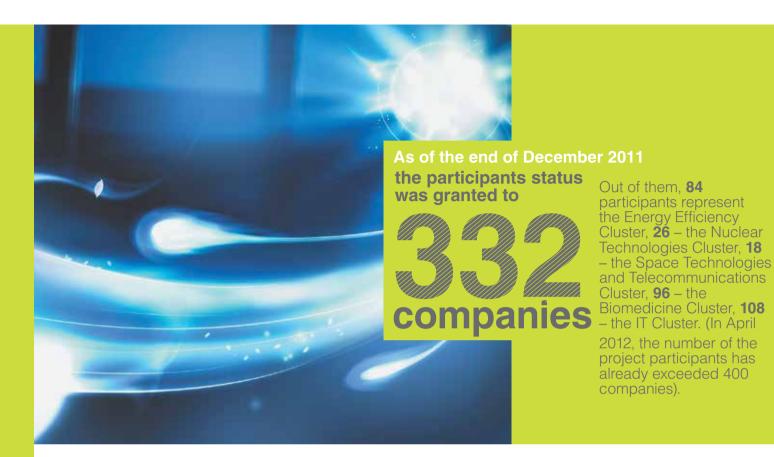
does not exceed 30 days. When a participant applies for a grant (after the status of participant is received), the expert review of a grant application takes 24 days on average. In this way, the total time needed for an expert review of



PARTICIPANT



RESIDENT



At least 100 intellectual property objects are expected to be created by the end of December 2012 in Skolkovo as a result of innovative activities.

an application is at least three times less than the time envisaged by other Russian and international development institutes.

Decisions about allocation of grants are taken by the Investment Committee, which is composed of the Skolkovo Foundation employees and independent experts.

According to the grant policy of Skolkovo, each participant can receive from RUB 1.5 to 300 mln. – depending on the stage of a project. The level

of financing varies from 100 percent financial support at the stage of idea to cofinancing in the amount of up to 25% of the total budget at the "advanced" stage.

In 2011, 70 participating companies of Skolkovo received grant financing.

around RUB 6 bln.

In 2012, grants are planned to be awarded to twice as many project participants as in 2011 – to 120 companies for a total amount of

As opposed to grants that will be awarded only to the best Skolkovo participants who submitted the most attractive and, at the same time, the least risky innovative projects, significant tax preferences are guaranteed to each and every participant. The preferences include exemption from income tax, VAT, corporate property tax, refund of customs duties and VAT with respect to goods imported for construction and equipment of real property in Skolkovo or required for the research activities in Skolkovo. as well as the reduced insurance contributions rate of 14%. Besides, the special status makes it possible to take advantage of the information and PR support, a simplified procedure for hiring foreign employees, customs privileges and beneficial services in the field of accounting, human resources records management, legal services and protection of intellectual property rights and objects.



The amount of grants that will be awarded to 120 participating companies of the project in 2012 is

RUB on

## Success story:

### Commercialization of participants' research results



The Skolkovo Project participant – the company Parallels – has started the commercial sale of the solution Parallels Automation for Cloud Infrastructure (PACI) developed on the Foundation's grant funds.

Skolkovo grant	RUB 150 mln., received in April 2011
Co-investments	RUB 150 mln. from Almaz Capital Fund
Sales of the innovative product in 2011	RUB 15 mln.
Sales plan for 2012- 2015	RUB 300 mln.
Sales geography	Japan, Kazakhstan, Europe, Hong Kong and the USA

This software allows providers to provide virtual infrastructure leasing services. With the help of this software, owners of data centers can organize the provision of cloud services to their clients. The company already has an arrangement to introduce this solution in Russia, CIS countries, Europe, and the USA.

Elton is engaged in the manufacture of asymmetric electrochemical aqueous electrolyte capacitors. In December 2010, the company became the Skolkovo participant. In 2011, the founders of the company sold 50% of shares to a strategic investor.

### **ESSENCE OF INNOVATION**

Creation of different-purpose energy storage systems based on innovative electrochemical capacitors:

- development of high-power pulse electrochemical Ni-C capacitors and systems on their basis;
- development of energy-intensive HES-capacitors and cost effective in-process storage systems on their basis.

Skolkovo grant	RUB 251 mln., received in March 2010
Results of sales in 2011	Sale of 50% of shares of the company "Elton" to Transmashholding shareholders
Potential clients	Transmashholding, Yo-auto: Yarovit Motors
Future plans	Creating jointly with Transmashholding a new hybrid maneuverable diesel locomotive and energy-storage subway cars.



Major corporations – the world's leaders in their industries are considered by the Skolkovo Foundation as an essential element necessary to launch and form the ecosystem of the Skolkovo Innovation Centre. Participating in all or several levels of the ecosystem, they provide a concentration of intellectual capital, bring their scientific and financial capital, advanced business culture, as well as form a critical mass of demand and supply in the ecosystem. Cooperation with international companies at all levels naturally integrates the Project into the international innovation environment, plays a role of a link to products and services created by global players. The key partner service of the Skolkovo Foundation is aimed at attracting the largest international and Russian corporations to place their research and/or venture profile at the Skolkovo Innovation Center.

In 2011, 25 corporations – the world's leaders in their industries showed interest in mutually beneficial cooperation. 12 of them (Siemens, EADS, Nokia, Ericsson, GE, IBM, the JSC "Academician M.F. Reshetnev "Information Satellite Systems", NSN, HK Composite, Intel, Sistema JSFC, SAP) made a decision to create corporate R&D centers in the territory of the Skolkovo Innovation Center and signed relevant agreements. The total corporate research pool as of December 31st, 2011 reached 1 100 persons, and the total budget by 2015 will be around RUB 13.2 bln.

In 2011, the Skolkovo Foundation signed two agreements for the creation of corporate venture funds (with the pharmaceutical unit of Johnson and Johnson and with the Russian holding JSFC "System") at the Skolkovo Innovation Center. The venture investments attracted to the ecosystem of the Skolkovo Innovation Center by 2015 totaled RUB 1.9 bln. Next year, the Foundation plans to attract additional RUB 1.5 bln. of venture investments from large companies to the innovation center.







We are delighted and proud to be able to start research activities in Russia, especially in "Skolkovo", thanks to signing this agreement

Marthin De Beer, Senior Vice President of Cisco, Video and Collaboration Group





Considering the attention the Russian Government and the Skolkovo Foundation pay to the project development, we are convinced that the Russian Silicon Valley will give great momentum to the development of new national economy

Esko Aho, Vice President, Corporate Relations and Responsibility, member of the Nokia Group Executive Board



Each of the five clusters carries out an active work in order to build partnership ties and attract new participants. For example, the Energy Efficiency Cluster in 2011 held five road-shows of the international applied research centers for the Russian and international participating companies, and organized presentations of the cluster as part of the exhibitions "Innoprom-2011" (Yekaterinburg), "Innovus-2011" (Tomsk), "Itera-2011" (Novosibirsk) and St. Petersburg International Innovation Forum. The Nuclear Technologies Cluster organizes meetings "Cluster's Friends Club" on a monthly basis. During 2011, the following meetings were held: "What is the Nuclear Technologies Cluster of Skolkovo?", "Commercialization of nuclear technologies – is

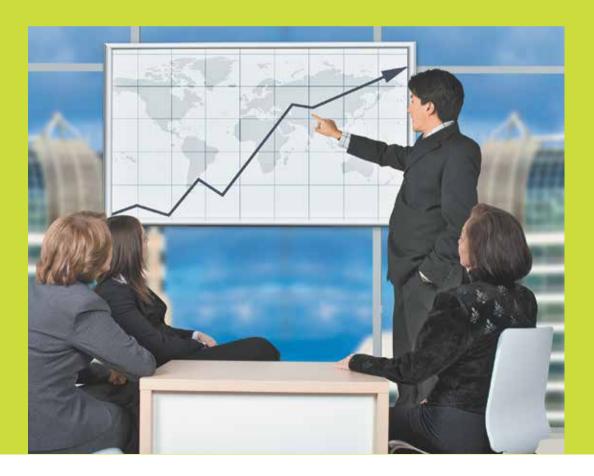
small innovation business possible in nuclear technologies?", "The risks of technological entrepreneurship in Russia and global market access risks. Skolkovo potential to attract investors", "Project monitoring, controlling and execution",

Professional venture investors are an important element of the Skolkovo ecosystem. The goal is to create the infrastructure that would allow technological start-ups to attract investments at an early stage of their development - at this stage the shortage of venture capital in Russia is most apparent. On the other hand, the goal of the Skolkovo Foundation is to make such investments as much attractive to investors as possible.



Technologies and solutions with the large intellectual potential play a big role in the development of businesses, state and society. IBM is happy to cooperate with Skolkovo and jointly develop innovations and entrepreneurial culture that are of key importance to the future of Russia.

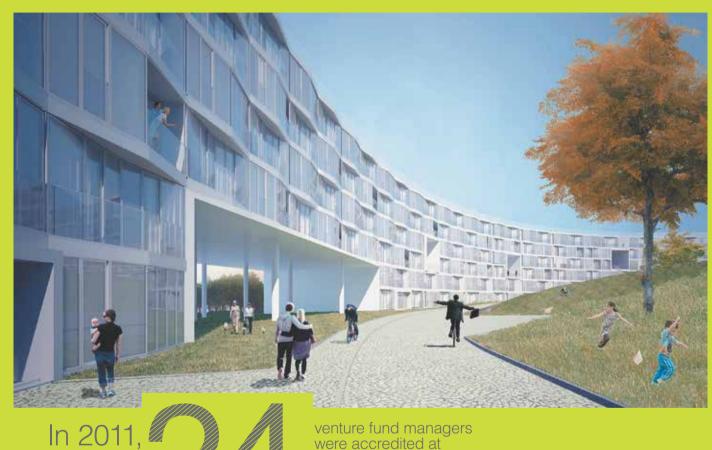
> David Stocks. Director of IBM in Central and Eastern Europe



At Skolkovo, the mechanisms of financial support and co-financing of private investments into projects/ participants have been developed, the most friendly tax environment and interaction with public authorities have been provided for innovative companies and their investors.

The accredited investor institute has been established at Skolkovo. When a company receives the status of an accredited investor of the Skolkovo Foundation, it gets access to the base of projects implemented at the innograd. Besides, portfolio companies of the accredited investors will be able to receive consultations and support while acquiring the status of the Skolkovo participant. An accredited investor, for his part, documents its intention to invest certain funds into participating companies of Skolkovo.

24 venture fund managers were accredited at Skolkovo in 2011. Investment partners intend to invest over RUB 9 bln. into Skolkovo projects. 41 participating companies of Skolkovo received support from the accredited venture investors. Out of them, 13 companies also received financing from the Skolkovo Foundation in the form of grants subject to co-financing from venture funds or affiliated companies.



venture fund managers were accredited at Skolkovo



# Education

# Skolkovo Institute of Science and Technology (SkTech)

# One of the main strategic components of the Skolkovo Innovation Center is educational environment.

The plan of the educational environment creation assumes the formation of three educational institutions:

- 1. Skolkovo Institute of Science and Technology (SkTech)
- 2. Skolkovo Open University (OpUS)
- 3. Skolkovo School

Development of these institutions will, on the one hand, allow to raise the educational level of Russian students, expand their educational base, create a new generation of researchers and, on the other hand, it will serve as a link between three pillars of the innovation center: education, research and entrepreneurship.

The backbone element of the whole ecosystem of the innovation center and the basic component of its educational segment is SkTech, which was established on October 25th, 2011. The founders of SkTech are: Moscow Institute of Physics and Technology: National Research Tomsk Polytechnic University: Moscow Business School "Skolkovo": New Economic School: **ROSNANO: OJSC Russian Venture** Company; State Corporation 'Bank for Development and Foreign Economic Activities'; Fund for the Promotion of the Development of Small Forms of Enterprises in the Scientific and Technical Sphere; Scientific Center of the Russian Academy of Sciences in Chernogolovka; the European University at St. Petersburg.

SkTech is not an ordinary educational institution – the best professors will teach there, and the best students will learn there. The Skolkovo Foundation and MIT are collaborating to create a new model of a postgraduate education institution and research center in the field of science and technology. The Skolkovo Institute of Science and Technology will provide MIT and

Science and Technology will provide MIT and other universities from around the world new opportunities to cooperate with the leading scientists and engineers from Russian higher institutions and research institutes, and its structure will provide optimal conditions for the solution of complex scientific problems within the interdisciplinary approach.

Susan Hockfield, President of the Massachusetts Institute of Technology



For us, Skolkovo is a good platform for even closer cooperation with Russian institutes and universities. We are proud to have become a partner of this high-tech flagship project. Siemens is currently engaged in organizing its own research activities in Skolkovo, and our purpose is to transform these activities into specific products that can be applied both in Russia and abroad.

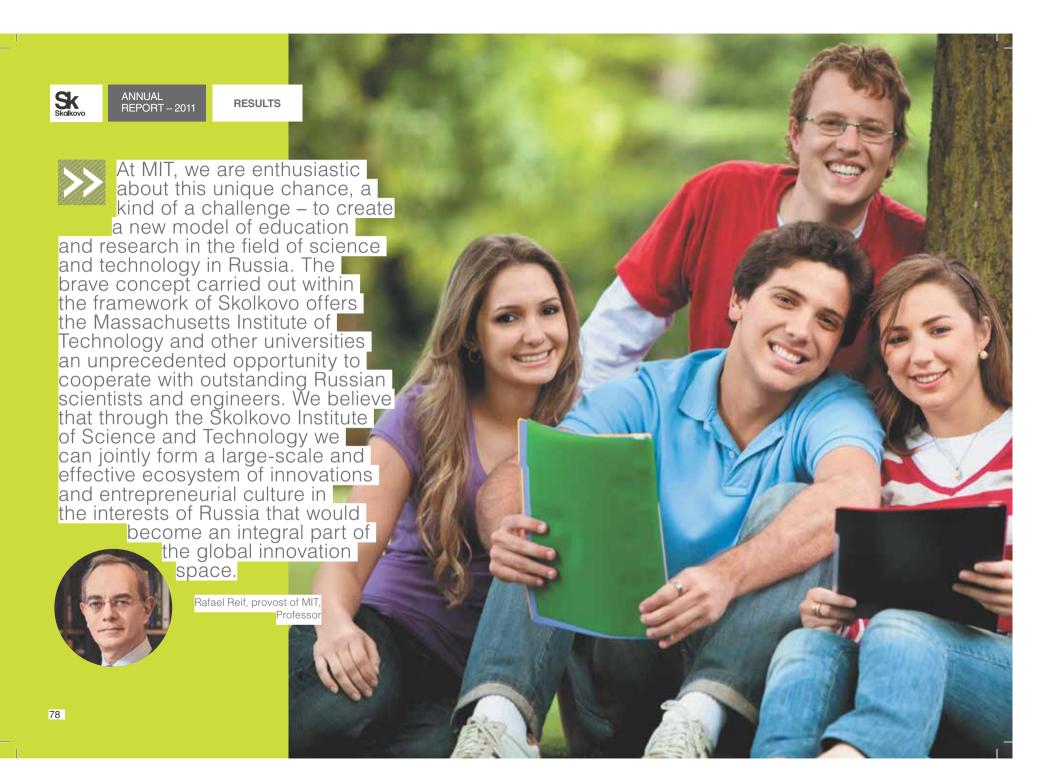
Peter Löscher, President and Chief Executive Officer of Siemens AG.

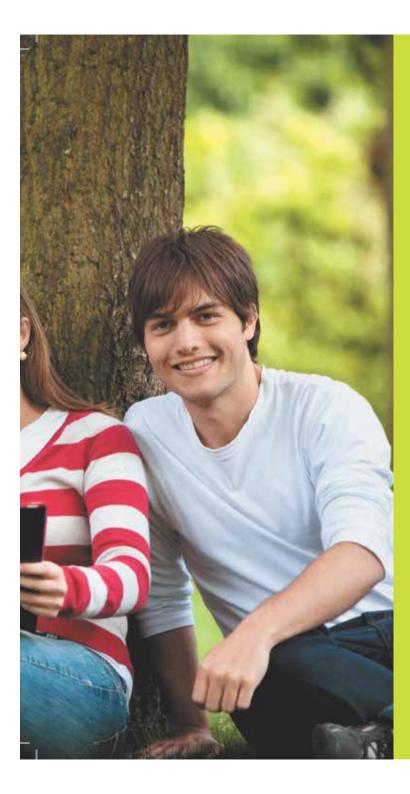
# MISSION, GOALS, MAIN PRINCIPLES OF WORK

The mission of the Skolkovo Institute of Science and Technology is to educate students, advance knowledge, and foster innovation in order to address critical scientific, technological, and innovation challenges facing Russia and the world.

On October 26, 2011 the Skolkovo Foundation and the Massachusetts Institute of Technology (MIT) signed a definitive collaboration agreement to establish the Skolkovo Institute of Science and Technology. The official - ceremony of signing the agreement took place in the presence of Russian President Dmitry Medvedev. The document was signed by Viktor Vekselberg, President of the Skolkovo Foundation, and Susan Hockfield, President of the Massachusetts Institute of Technology. The agreement was signed during the meeting of the Commission for modernization and technological development as part of the International Nanotechnology Forum "Rusnanotech". The collaboration agreement is a continuation of the preliminary agreement concluded between the Skolkovo Foundation and MIT on June 18, 2011 during the St. Petersburg International Economic Forum.

The Skolkovo Foundation's management team considers this agreement to be a very important step in creating and developing the entire innovation center. While studying and analyzing success stories of the world innovation centers, the Skolkovo leaders reached the conclusion: all similar centers have one common denominator - technological educational institution. Thus, creating the institute of technology within the framework of the Skolkovo Project becomes a powerful success factor for the entire innovation center. The agreement between the Skolkovo Foundation and MIT provides for joint preparation of academic programs, organization of SkTech-based international research centers. exchange of students and teachers between the two higher institutions under the auspices of the Skolkovo Foundation.





SkTech is planned to become a model of a Russian new generation university created on the basis of the following principles and goals:

- integration of research and education within a wide range of interdisciplinary scientific, engineering and innovative programs;
- active participation of students in research work in partnership and under the supervision of the leading researchers;
- creation of opportunities for commercialization of research results.

## FORMATION OF RESEARCH CENTERS IN SKTECH

On December 21, 2011 SkTech announced the first international competition for the development of research centers. At least 15 research centers are planned to be created in five strategic areas of the Skolkovo research activities. The volume of annual financing of each such center will be from USD 6 to 12 mln. SkTech plans to support advanced research projects aimed at the practical use of received results that stimulate the economic development and innovations. Research may be carried out within one of the strategic areas, at the boundary or at the intersection of one or more fields of research. Development of new areas and new understanding of the scope and significance of activities at each of these areas is possible.

Each research center will carry out its work in partnership with one or several foreign and Russian institutes and with the assistance of the Skolkovo employees. The work of research centers should result in a new transformational science and technologies, which, using the elements of the Skolkovo ecosystem, will turn into goods and services in demand. Each research center will carry out not only research and innovation work, but will also be engaged in educational programs for Skolkovo masters and post-graduate students by means of developing educational programs, materials and methods.



# SkTech Management Team

## SKTECH MANAGEMENT TEAM

- Edward F. Crawley (USA)
   SkTech President.
- Mikhail Myagkov Vice-President for Academic Affairs
- 3. Mats Nordlund (Sweden) Vice-President for Research.
- 4. Alexey Sitnikov Vice-President for Administration and Development.
- 5. Ivan Sherstov Director for Research.
- Bram Caplan (USA) Director of Admissions.
- Ilya Dubinsky

   Director of the Center
   for Entrepreneurship and
   Innovation.

# **FACULTY FORMATION**

In December 2011, SkTech started the search of candidates for professorial positions. SkTech plans to increase the teaching staff up to 200 professors selected according to the international standards and procedures within the next ten years. For this purpose, SkTech announces a competition to fill teaching staff vacancies.

Within the framework of the Founding Fellowship Program announced by SkTech, scholars from among professors of the leading global scientific centers will take part in establishing

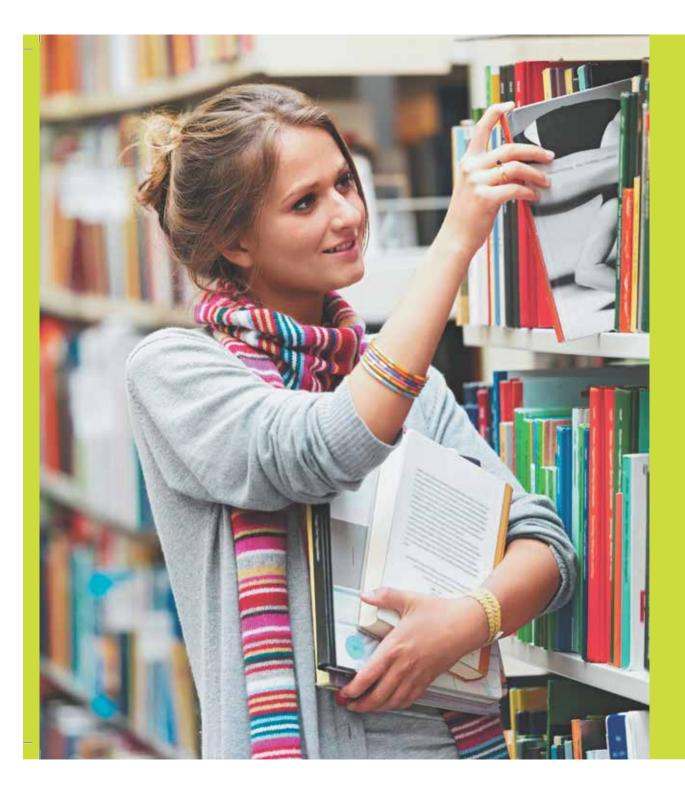
the institute, and assist in forming SkTech educational and research programs. More than 150 applications have already been received; the first scholars will soon be named.

The duties of SkTech professors include teaching, developing postgraduate education, developing research programs of the international level, and participating in innovative programs. SkTech professors will have an opportunity to spend the first year in the Massachusetts Institute of Technology, and take part in joint research, educational and innovative programs.



I was overwhelmed by the interest that the scientists who once left Russia took in innograd. We received one hundred and fifty applications within a few weeks, and almost all of them came from these Russian scientists who are ready to return and teach at this university.

Edward F. Crawley, SkTech President



# **SKTECH STUDENTS**

SkTech starts admission of the first students for participation in the master's degree program. SkTech will select 20 program finalists based on the open competition and will provide study grants to the competition winners. The pilot year of the education development in SkTech will be based on this program. The unique three-year master's degree program will give a chance to 20 best graduates of Russian universities to receive one-year training at the international research institute and then return to SkTech to complete their study and earn the master's degree in science and technology.

Before proceeding with the training at the international research institute, the students will have an opportunity, together with the selected international group of students, to get an intensive introductory course of training in leadership, entrepreneurship and innovation. In the summer of 2013, the group of 20 students will return to the Skolkovo campus and take part in planning of SkTech educational programs.

# **COMMERCIALIZATION: PROGRAMS OF THE** INNOVATION AND ENTREPRENEURSHIP **CENTER**

The Innovation Sponsorship Program (ISP) is called to help SkTech researchers reduce the gap between laboratory research and entrance to the market and to act as a catalyst for innovations and entrepreneurship in the research environment.

Many Russian research groups experience difficulties when it comes to practical application of research results (commercialization) due to the experience gap and lack of funding for early stages of commercialization. ISP will finance such transitional research, scientific and technical projects. It will help find evidence of the concept viability, and assist in promoting technologies towards commercialization. For example, it will assist in determining potential market opportunities, managing intellectual property and, if possible, developing personnel. ISP has been developed and will be implemented in close cooperation with MIT that has wide experience with similar programs (for example, Deshpande Center Innovative Research Grants).

In 2012, ISP will function in a pilot mode as SkTech research centers are not yet created. The program will focus on two or three research groups in Russian higher educational institutions. The financial aid will be given in the form of one-year grants in the amount of up to RUB 3 mln. The first grants are planned to be awarded in the summer of 2012. The data received during the work with the first grants will be used while launching commercialization programs for SkTech. The grant winners of ISP pilot stage will undergo commercialization training and receive help at all stages of their work.







# **ENDOWMENT AS A BASIS FOR SKTECH DEVELOPMENT**

On December 19, 2011 SkTech in collaboration with the Skolkovo Foundation and the Russian business newspaper Vedomosti held an international conference dedicated to financing of research universities, support of SkTech initiatives and partnership of universities and companies in Russia and abroad. Edward F. Crawley, SkTech President, presented a plan for creating the Endowment Institute. The goal of the presentation was to attract funds for a long-term sustainable development of SkTech, attract talented teachers and students, and build strong ties in Russian and international business communities. The conference was attended by representatives of authorities, business communities, non-profit organizations that are in the process of creating and developing endowment funds.

The general plan of SkTech development is aimed at increasing the institute's assets in the years of its formation, with substantial aid from the state, business entities and various communities in Russia and abroad.





### MISSION AND GOALS

The second component of the educational environment of the Skolkovo Innovation Center is Open University Skolkovo (OpUS). Its mission is to create a system of distribution of present scientific and technological knowledge and competencies, to develop a mechanism for creating and supporting a network of active and talented young people at the orbit of the Skolkovo Innovation Center. Key OpUS processes are formation and support of network interaction.

OpUS is not an ordinary educational institution; it does not award diplomas upon completion of education. OpUS is a source of prospective applicants (Masters and PhD) for SkTech, a source of interns and employees for

Skolkovo partner companies, a source of projects for the Foundation clusters. OpUS intends to achieve this by means of implementing a unique educational program and tutor support for students, and creating OpUS communication centers.

### GOALS OF THE OPUS EDUCATIONAL PROGRAM

- 1. Formation of knowledge and skills in the area of:
- a) technological entrepreneurship necessary for successful realization of either independent entrepreneurial activities or work in the entrepreneurial project;
- b) state-of-the-art technologies education programs in five priority areas (energy efficiency, nuclear

technologies, space and telecommunications, biomedicine, information technologies).

- 2. Formation of the so-called "global vision" an ability to see and understand the world in all its variety (cultural, social, technological, historical), and, as a consequence, development of a capability to make decisions that take account of the global aspect of development of modern technologies, communities and communications.
- 3. Globality. This goal is achieved by attending crosscultural courses of lectures, studying the international practice of research organization and entrepreneurial projects implementation, participating in international projects and trainings.









5.











# OPUS EXPERT COUNCIL COMPOSITION

- 1. Oleg Genisaretsky, Council Chairman, Chief Research Scientist of the Institute of Philosophy of the Russian Academy of Sciences, Director of the Synergetic Anthropology Center.
- 2. Oleg Alekseyev, Vice-President, Chief Managing Director for Education and Research of the Skolkovo Foundation.
- 3. Yuri Baturin, Director of the Institute for the History of Science and Technology named after S.I. Vavilov, Russian Academy of Sciences.
- 4. Vladimir Betelin, Director of the Institute of System Research of the Russian Academy of Sciences.
- 5. Alexander Galitsky, Managing Partner of Almaz Capital Partners.
- 6. Alexander Kuleshov, Director of the Institute for Information Transmission Problems named after A. Kharkevich.
- 7. Dmitri Peskov, Director of the "Young Professionals" project at the Strategic Initiatives Agency.
- 8. Alexey Ponomarev, Deputy Minister of Education and Science of the Russian Federation.
- 9. Konstantin Severinov, Laboratory Chief at the Institute of Molecular Genetics of the Russian Academy of Sciences.
- 10 Igor Fedorov, President of the Moscow State Technical University named after N.E. Bauman.



# OPUS TEAM

- 1. Andrey Egorov, Executive Director of OpUS
- 2. Ekaterina Morozova, Deputy Executive Director of OpUS
- 3. Ksenia Balitskaya, Tutor of OpUS
- 4. Elena Dmitrieva, Project Manager of OpUS
- 5. Nikolai Yakovenko, Project Manager of OpUS

# OPUS PARTICIPANTS AND THEIR PROFESSIONAL TRACKS

OpUS participants are divided into two categories: OpUS students and OpUS attendees. One must go through a special selection process to receive the status of student. Students, young scientists, employees of the Skolkovo participating companies may become attendees. There are no territorial restrictions for attendees and students as the majority of training courses and lectures are available through the Internet.

The first selection of students took place in February-March 2011. 110 students from six leading Moscow universities – partners of Skolkovo (MIPhT, HSE, MSTU, MSU, MISA, MEPhI) became OpUS students. Students represent various faculties, but mostly technical ones. Soon they will be joined by the students from Tomsk and St. Petersburg. The total

number of OpUS students is planned to reach 250.

One of the most valuable resources provided by OpUS is tutor support of students in building their individual professional tracks. Tutors are actively involved in formation and realization of the academic program. One of the goals of tutors is to organize the participation of OpUS students in discussion and development of existing and new academic programs and activities.

# **OPUS COMMUNICATION CENTERS**

Communication centers are expected to be opened in 2012 to ensure effective training classes and communication between students. The main features of such centers will be educational classrooms, co-working areas, free wi-fi, snack/drink machines, open entry to students at any time.





The main places are: Polytechnic Museum (Moscow), Tomsk Polytechnic University (Tomsk), NRU ITMO (St. Petersburg). In 2012, OpUS communication centers will start working in full mode: in Moscow - from September, in Tomsk – from June, and in St. Petersburg – from October. Each place will have a videoconferencing system that will allow students and teachers from three cities to communicate in real time and conduct training sessions with the world's leading universities. One of the primary goals of OpUS is to attract young and talented students to the innovation ecosystem. In 2011, OpUS proved that its model can solve this task: two OpUS students organized their own start-ups and received the status of the Skolkovo participant. The project Tutorion (tutoring online) is a platform for training sessions with a teacher through the Internet. The site offers different options of online training - either individually with a teacher who can be many miles away from a student, or a group webinar. Payment for training sessions is made through the Internet as well.



PrimerLife is a web site of the genetics-based personalized medicine. It uses technologies of artificial intelligence and social networks. The PrimerLife web site is intended for those who want to find people with similar genotype-specific health problems. In order to use the PrimerLife web site, one should make genome analysis or genetic typing in any laboratory, visit the site and upload the file received as a result of the analysis. The system will process it and suggest to perform one of several actions: to join a group, to find a blood relative, to state if one may conduct research of the received data, and much more.





### **KEY EVENTS**

In 2011, six courses and more than 40 lectures and seminars were held as part of the OpUS educational program. These events were attended by the globally renowned scientists and experts: Zhores Alferov, Vladimir Fortov, Stephen Wozniak, Fadi Bishara, Yoshiro Nakamatsu, Elias Zerhouni, Henry Etzkowitz, John and Doris Naisbitt. Don Zagier. Vladimir Malvavin. Olga Uskova, Mark Steinberg, Marko Torkkeli, Sergey Chernyshev, Yuri Milyukov, Sergev Pereslegin, Nikolai Yutanov, Pekka Viljakainen, Ivan Tashev, Tony Hoare. They gave lectures and delivered reports on the topics of entrepreneurship, communications, leadership, management, information technologies, biomedicine, power engineering, innovations, invention, design, mathematics, and science organization.

The residential school dedicated to information technologies for young scientists was held in collaboration with the Joint Institute for Nuclear Research and the European Organization for Nuclear Research. The scientific symposium "The Latest Achievements and Future Possibilities of Biomedicine" was held in collaboration with the American Society for Microbiology and the Federation of American Societies for Experimental Biology. Seminars "Present-Day Problems and Development Trends in IT Sector" are

You don't always need a lot of money to create innovations. Money kills creativity. Having no money makes you look for an alternative way to use common things. Knowledge is more important than big expensive offices, and the personal interest and passion of inventors is more powerful than any motivation. That's why don't hurry to take money. Develop your idea, create a prototype, and make sure everything works the way you planned. After all, you should create only that what is close to your heart,

Stephen Wozniak, computer designer and businessman, co-founder of Apple

being held jointly with the Information Technologies Cluster. Summer schools "Software Engineering and Verification", Computer Vision school and ImagineCup contest were organized jointly with Microsoft. OpUS road-shows were held as part of the Baikal Youth Forum "Engineers of the Future" (the Irkutsk Region) and TIM "Biryusa-2011" (Krasnoyarsk). The project "Students for Students" is being implemented; within the framework of this project the OpUS students give classes to other students.

### OPUS PARTNERSHIP PROJECTS

"The First International Film Festival of Up-To-Date Scientific Cinema 360°" was organized in collaboration with the Polytechnic Museum. The aim of the film festival is to popularize achievements of science, technology and innovative activities, to involve students, young scientists and businessmen in innovative activities, to increase their innovativeness, to develop innovative culture, to distribute ideas of innovations, creative thinking, and active approach to life.

The All-Russian contest "My Idea for Russia" was held in partnership with the Singularity University. In the summer of 2011, three contest winners had a ten-week program for young leaders from 35 countries of the world. In 2012, the cooperation with the Singularity University will be continued within the framework of the contest "My Idea for Russia 2012". Andrey Egorov, Executive Director of OpUS, has become an ambassador of the Singularity University in Russia.

# **OPUS CLUB**

The OpUS club was established in March 2011. It is an expert platform where the issues of the Open University Skolkovo activities, involvement of young people in innovative activities, motivation of young people to study engineering sciences, development of technological innovation culture, convergence of science and engineering are discussed. The club meetings are held in the form of discussion of agenda items with the participation of the club visitors. In 2011, six meeting of the OpUS club, including two visiting ones – in Novosibirsk and Tomsk, took place.



Oleg Genisaretsky



Yoshiro Nakamatsu





John and Doris Naisbitt



# Skolkovo School

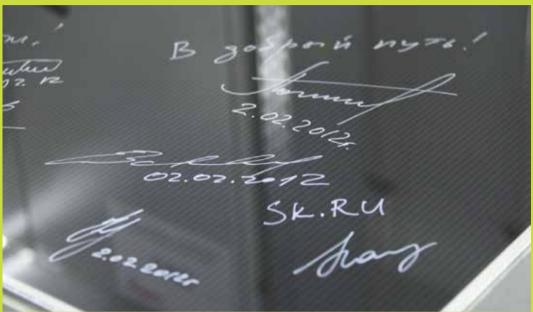
# MISSION, GOALS, MAIN PRINCIPLES

The third component of the educational environment is Skolkovo School. Based on the plan of the project authors, creating the Center of development and commercialization of new technologies "Skolkovo" also assumes the creation of a modern city where the best models of the urban environment organization and up-to-date models of social services provision will be realized. In particular, the advanced system of preschool and school education – Skolkovo School will be built in Skolkovo City.

The mission and goals of the new school have been formulated by Dmitry Medvedev as follows: "At Skolkovo School, children should have the opportunity to unlock their abilities, to prepare for life in high-tech competitive world", provided that "... it will be fascinating and interesting to study at school if the school becomes not only a center of compulsory education, but also a self-development, creativity and sports center".







Such innovation model of the preschool and school education system assumes the construction of the integrated system that includes several educational levels (early development, preschool and school levels) and education forms (formal and informal – extracurricular and family education). A characteristic feature of this model is an individualized educational process. The model created in Skolkovo can become one of the prototypes for the mass school system in Russia. The model is based on the most advanced developments in the area of:

- educational process individualization (group-centered process is transformed into learner-centered process);
- developmental education;
- organization of education space and environment;
- new information technologies.





An important feature is that we build one school for a very diverse society. It will be large and at the same time very flexible. Individualization is a fundamental feature of the concept. It is very important to remove time constraints – so that pupils could work with their own speed. There are very few jobs in adult life that require the performance of certain operations within 20 instead of, say, 40 seconds. We need to think over the matter of school load. The slogan of last years is that our children are overloaded at school. This is bad. However, underloading can be even worse. We will bring up idlers.



A. Semenov, Rector of the Moscow Institute of Open Education, Head of the writing team – the winner of the Skolkovo School concept contest



# CONCEPT

In September-December 2011 the Ministry of Education and Science of the Russian Federation and the company Microsoft held a concept contest for the creation of Skolkovo School. The organizers received 202 bids from 47 Russian regions and five other countries. By results of the first stage of the contest, 33 bids were selected. As a result of unification of writing teams, 26 developed concepts were submitted to the contest committee for review. Experts from the USA, Belarus, Lithuania, Germany, and the UK were also involved in the development of concepts.

The contest winner was the concept of an educational complex "Skolkovo School" presented by the

international writing team led by Alexey Semenov, Rector of the Moscow Institute of Open Education. The bid received the highest evaluation from both Russian and foreign experts. This concept will form the basis of the project of Skolkovo preschool and school education system.

The contest committee also recommended to use 12 concepts recognized as contest winners as a basis for developing educational projects in Russian regions. The authors of many concepts paid attention to the issue of how the school will develop and support present competencies and initiatives of students, including technological and entrepreneurial ones. The authors also note that the integrity of the technological competence formation is just the beginning of the road for the major part of children. It is important that the development of the above-mentioned competencies during the last years of schooling will be supported by higher education institutions

The idea of creating a network of innovative Skolkovo schools found wide support in the country. The contest committee received more than 40 letters evidencing the readiness of regional and municipal authorities to take part in the realization of the Skolkovo School project. There is an understanding in the country that it is possible and necessary to teach in a new way in the conditions of a rapidly changing world, that a student has the right of choice and is not obliged "to fit into the system": on the contrary, the system should take account of his educational and other needs. The learning process becomes individualized, stimulating and inspiring; it facilitates the development of creativity and responsibility.



The contest committee received more than 40 letters evidencing the readiness of regional and municipal authorities to take part in the realization of the Skolkovo School project.



# Financial results overview



To the project designers and executors the key issue is the budget implementation. The society should see the budget transparency, believe in honesty and decency of the people who make decisions on the use of funds. know that the allocated and earned funds are applied purposefully and effectively. This is one of dominants of the Skolkovo Innovation Center.

# Skolkovo Foundation Budget Structure

# **BUDGET REVENUES**

The activities of the Skolkovo Foundation in 2011 were financed mainly by subsidies from the federal budget according to the Russian Government decree and the order of the Russian Ministry of Finance (within the framework of the agreements between the Russian Ministry of Finance and the Foundation). The budget was also filled with revenues from the activities connected with the management of the Skolkovo Innovation Center, and from other sources of financing.

Out of RUB 10,258,500 ths. allocated to the Foundation from the federal budget in 2010 for the development of Innocenter, RUB 8,876,364 ths. were the balance carried forward for 2011. In 2011, the Foundation received a subsidy in the amount of RUB 15 bln. The total amount of co-financing in 2011 was RUB 3.4 bln., including

RUB 1.9 bln. as co-financing of innovative projects and RUB 1.5 bln. from off-budget sources (donations).

The volume of private investments into the Project is a very serious achievement of the year 2011. The Foundation received around RUB 3.5 bln. from private sources. Out of this total, almost RUB 2 bln. were directed for the development of projects of the participating companies and RUB 1.5 bln. were directed for support and development of SkTech. The volume of private investments in excess of the 2011 plan represents the confidence of private investors in the Skolkovo Project and the fact that the Foundation's management team is on the right track. A special emphasis should be placed on the support from venture funds - professionals who invest their money in success of one or another innovative company.



# **BUDGET EXPENDITURES**

On the whole, the implementation of the Foundation's budget in 2011 was 37%. A significant deviation was due to a number of factors connected with the peculiarities of planning and operation of the Foundation in 2010-2011. The largest deviation from the plan (78%) as per item "Financial provision of innovative projects" is connected with the low quality of prepared materials and project presentations submitted by the participants to the grant committee for review. As a consequence, a part of projects were

regularly returned for improvement. Based on the results of consultations with the grant committee members, the Foundation made a decision not to abandon high requirements that were initially put forward to the level of projects submitted by the Skolkovo participants, even if it would lead to the underfulfillment of the grant plan.

Besides, essentially larger amounts of grants were built into the budget during planning. But in the course of actual grant approval it was found out that the participants can achieve expected results with less financial expenses.

This is indirectly evidenced by the fact that the actual number of awarded grants in 2011 constitutes 78% of the plan.

The second large deviation (76%) as per item "Construction of the Skolkovo Innovation Center facilities" is first of all connected with the fact that we managed to transfer some facilities we planned to build for our own funds for realization to external organizations – FGC and Sberbank, and that allowed us to save RUB 2.8 bln. (41% of the planned annual budget for construction of the innovation city).

TYPE OF WORK	BASIS OF PLANNING	ACTUALITY
Construction of facilities	Construction of data center and substation is required.	Transferred for realization to external organizations – FGC and Sberbank
Design and construction of engineering infrastructure	Autonomy of the innovation center, with provision of all kinds of public utility services (not less than 50% of requirements), including electric power, water, and heat.	a) Calculation of future tariffs and inclusion of the Skolkovo territory to the structure of the Moscow City have shown the expediency of connecting to the centralized heat and electricity utilities of the Moscow City.
Building design	Simultaneous commencement of design of all main innovation center facilities, including districts D1 "Southern", D2 "Technopark", D3 "University", D4 "Northern", zone Z1 "Central". This task was made to lay the groundwork for the design documentation.	b) Engineering surveys have shown that it is impossible to ensure water supply from underground sources. Clarification of the sizes and sources of financing has shown the necessity to concentrate the Foundation's financial resources on the development of top-priority facilities (district D2 "Technopark", district D3 "University").
Design and construction of the Cube-House	Transformation of the Cube-House into a demonstration platform of new construction technologies. Selection and prepayment of the general contractor in the summer of 2011. Completion of monolithic work, closing of thermal contour till the end of 2011.	The functional purpose of the Cube-House has been changed. It has been suggested to use the Cube-House as a visitors' center, exhibition center and office center. As a result of the change of the building's functional purpose, selection and prepayment of the general contractor has been moved for the autumn of 2011. As a consequence, the date for completing monolithic work and closing thermal contour has been changed for the spring of 2012.





ITEMS OF	2010	2011			
ITEMS OF EXPENDITURES	Actuality	Plan Actuality Deviation			
	RUB mln.	RUB mln.	RUB mln.	RUB mln.	%
Day-to-day operations	345	2877	3288	-411	-14
Construction of the Skolkovo Innovation Center facilities	77	4557	1077	3480	76
Financial provision of innovative projects	874	5551	1214	4337	78
Financial provision of the Institute of Science and Technology	0	8791	2265	6526	74
Creation of innovative environment	79	909	365	544	60
Social costs	6	1481	717	764	51,5
Total	1381	24 166	8926	15 240	63

ITEMS OF EXPENDITURES, 2012	RUB MLN.	
Creation of the innovative ecosystem in Skolkovo	19 182	
Education and research system in Skolkovo	3734	
2. Participants	7933	
3. Business services and Technopark	7233	
4. R&D centers in the	166	
territory of Skolkovo  5. Social and urban environment	116	
Construction of the innovation city	20 948	
6. City (infrastructure)	20 948	
Creation of effective management system	2196	
7. Management	2196	
Total:	42 326	

The major costs for the financial provision of SkTech in 2011 were connected with the financing of measures aimed at establishing SkTech research centers and purchasing the necessary equipment. However, considering that SkTech was registered only on October 25th, 2011, the dates for implementing measures aimed at purchasing the equipment were shifted to 2012.

Pursuant to the resolution of the Foundation Board (put forward by the budget committee

attached to the Foundation Board), the Foundation's budget for 2012 is drawn up according to the special-purpose program.

# FOUNDATION'S PROCUREMENT POLICY

In the course of 2011, the tender committee of the Skolkovo Foundation carried out purchases to the total amount of over RUB 2.5 bln, with savings exceeding RUB 375 mln.

To ensure transparency and competitiveness of procurement, the Foundation opened a section dedicated to procurement activities on its web site www. sk.ru and started publishing all notices and reports on tenders held by the Foundation's tender committee. The Foundation's plan of procurement for 2012 has been drawn up and will be published on the official web site to let suppliers know of forthcoming purchases.



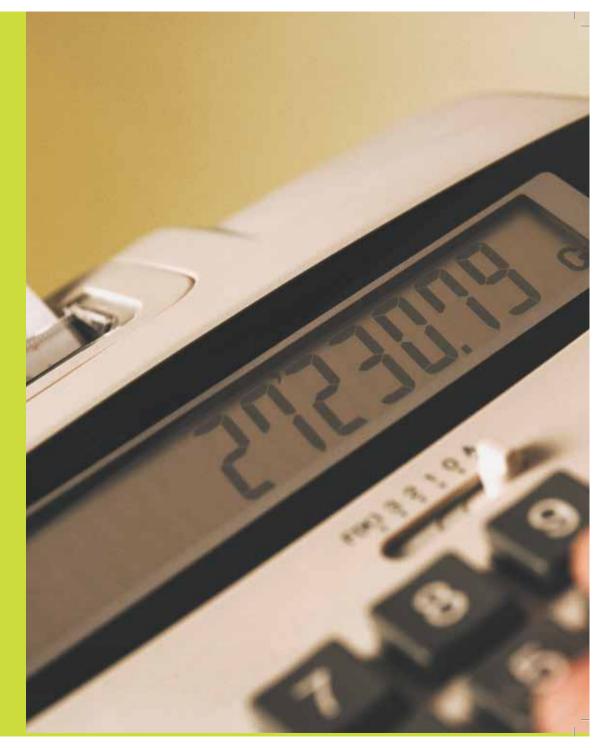
ANNUAL REPORT – 2011

**RESULTS** 

# Risk Management at the Skolkovo Innovation Center

The activity of the future Skolkovo Innovation Center, despite professionalism and authority of the people responsible for its creation and development, is, to a certain degree, a priori, connected with uncertainty and risks. To timely identify and manage risks, in 2011 the Foundation started developing and introducing the corporate risk management system (RMS). The system complies with the principles set out in the international risk management standards ISO31000:2009 and COSO:ERM and is aimed at strengthening the Foundation's risk-oriented culture.

MAIN PRINCIPLES OF RISK MANAGEMENT		
Inseparability	Risk management is an inseparable part of all processes occurring within a company, and is within the scope of staff accountability.	
Consistency and regularity	Risk management should be systematic and regular, i.e. there should be a system of risk management measures carried out on a regular basis.	
Accuracy and completeness of information	Risk management should be based on information that is accurate and complete at a specific point in time.	
Dynamism and continuity	Risk management is a continuous process, which is constantly adapting to changing conditions under the influence of various factors and affecting both risks and risk management measures.	





## **RISK CLASSIFICATION**

In 2011, the Foundation carried out identification and analysis of key strategic, operational and financial risks of the Skolkovo Innovation Center. As a result, over 130 potential risks that may affect the activities of the future innovation center were identified. The risks were grouped into nine categories.

1. Attraction and retention of talented participants: the risks connected with insufficient attraction and retention of talented researchers, entrepreneurs and experts to carry out research and innovative projects, to support and manage the innovation center.

In order to ensure effective operation of the innovation center, it is necessary to create an ecosystem that would promote attraction and retention of talented participants and students. High competition from the international innovation centers and low attractiveness of the Skolkovo Innovation Center may lead to low number of participants, including those who will be ready to move to Skolkovo at its launch in 2014.

2. Attraction and retention of key partners: the risks connected with the failure to attract and retain large Russian and international companies that are ready to open R&D centers in the Skolkovo territory and conduct research activities there.

Key partners that are ready to open R&D centers in the territory of the innovation center are one of the important success factors. Realization of this risk and low interest from large companies may significantly lower the attractiveness of the innovation center to participating innovators as access to the channels of sales and innovative projects financing will be limited.

The lack of key partners in the territory of the innovation center can also lower the rates of job creation, thus reducing the economic impact of Skolkovo.

 Construction and development of the innovation city: the risks connected with the failure to timely create the attractive and stimulating innovative environment and infrastructure that meets the needs of participants.

A timely launch of infrastructure and the innovation center facilities is one of the key factors of successful innovation center operation. A launch of facilities that do not meet the requirements of participants, partners and students, or any launch delays may lead to both financial losses and injury to reputation.

4. Financing: the risks connected with the failure to attract sufficient financing to ensure innovative activities of participants and operation of the innovation center or improper use of financing.

Reduction of state financing volumes or failure to attract external financing may lead to delays in the innovation center launch or to other restrictions that may lower the attractiveness of Skolkovo.

5. Commercialization of R&D results: the risks connected with the failure to provide quantity and quality of innovative ideas, developed and commercialized with the participation of the Skolkovo Innovation Center.

The future success of the innovation center directly depends on the quality of commercialized ideas. Realization of this risk may injure the center's reputation and may lead to a loss of attractiveness to potential participants.

6. Decrease in state support: the risks connected with the decrease in

state support of the innovation center's activities.

Potential decrease in support from the state may lead to delays of the innovation center launch, change of the Skolkovo development vector, which, in its turn, may prompt the realization of other risks.

7. Legislative risks connected with the imperfection or inflexibility of Russian legislation in the field of copyright and intellectual property rights protection and introduction of innovative developments.

The failure of Skolkovo to provide legal environment for innovative activities may lead to the decrease in the center's attractiveness to participants. Sanctions from controlling bodies may also lead to financial implications and can injure the center's reputation.

8. Interaction between the project participants: the risks connected with the absence of smooth interaction between the elements of the Skolkovo Innovation Center, including participants, R&D centers, clusters, SkTech and Technopark.

The Skolkovo ecosystem offers a balanced interaction between all the elements. The absence of such interaction may lead, inter alia, to inefficient commercialization of ideas.

 Administrative risks connected with the shortcomings in the innovation center management system and the mismatch between the management system and set goals.

The absence of well-established business processes and corporate governance may lead to failure to achieve strategic goals related to the formation of the innovation center.



ANNUAL REPORT – 2011

**RESULTS** 

# FURTHER PLANS TO IMPROVE THE RISK MANAGEMENT SYSTEM

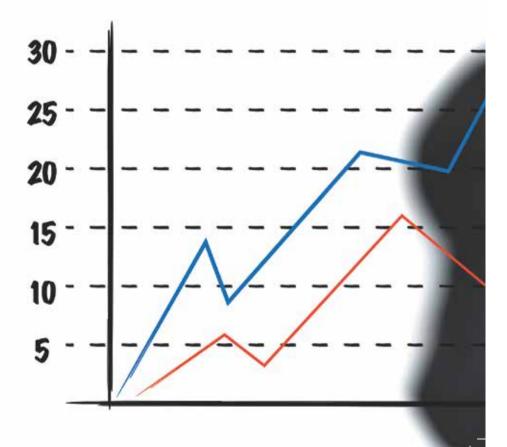
A number of measures aimed at further development of risk-oriented culture and integration of the risk management system elements into business processes of the Foundation is planned for the year 2012.

# The priority areas for the development of the Foundation's RMS are as follows:

- •training instructional seminars on risk management are planned to be held for the Foundation's management team and employees;
- •integration into work processes the risk management elements are planned to be integrated into existing work processes of the Foundation. The plans to integrate the risk analysis into the procurement process are being worked out. This will allow to better assess financial and reputational risks of counterparts and therefore cut the likelihood of working with unscrupulous suppliers;
- •update of the innovation center's risk profile the innovation center's risk profile is planned to be updated within 2012. This will allow to identify and manage risks that were not identified earlier or were insignificant;
- •formation of risk profiles for the Foundation's subsidiaries identification and analysis of risks are planned to be started in 2012. As a result, the risk profiles displaying the main risks of subsidiaries should be formulated;
- •risk reporting within 2012; both consolidated risk reports and detailed reports on individual risk management are planned to be prepared.

In 2011, the Foundation employees, as part of the All-Russian congress of the Integration Center of Economic Innovations, held a session "Risk Management as a Tool for Commercialization of Ideas".

In 2012, the Technopark employees plan to start a series of seminars and webinars on risk management for participating companies of Skolkovo.





# **RISK ANALYSIS IN THE PROCESS OF GRANT ISSUE**

The Foundation carries out the risk analysis of innovative projects. The risk analysis and the readiness of participating companies to actively manage the risks are one of the criteria used for evaluating a project applied for a grant. When applying for the status of participant, the applicant analyzes the risks of the project and documents them in the investment memorandum template, which is later submitted to the Foundation. The Foundation services and external experts analyze the risks when reviewing a project. Scientific, technical and market risks are identified by the Foundation experts. The risks of inefficient and improper use of funds, as well as the risks of double financing are identified by the Financial Department of the Foundation and the security service. The risks in the field of intellectual property protection are identified by the Intellectual Property Administration of the Foundation.

The analysis of the innovation project risks is summarized by the investment service and then included in the project's assessment sheet, which allows the grant committee to examine the project with due account for the information on risks

The cluster employees together with the representatives of participating companies work out risk management measures and include relevant information in a draft resolution of the grant committee.

### **RISK MANAGEMENT IN PARTICIPATING COMPANIES**

The activities of the Skolkovo Innovation Center participants is also connected with a high degree of uncertainty and risks, including a number of external and internal factors:

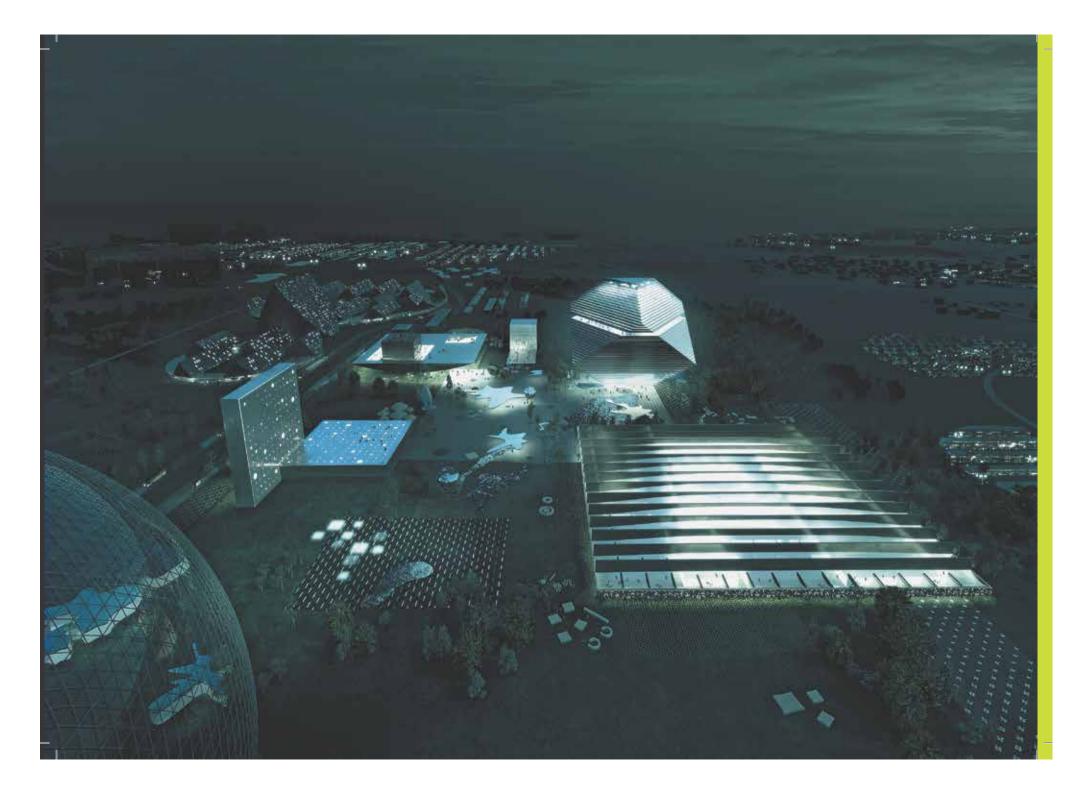
internal factors	a) invention technology	
	b) management team experience	
	c) industrial risks	
	d) attraction of financing and co- financing	
external factors	a) competition	
	b) demand for invention	
	c) IP regulation and protection	
	d) dependence on suppliers	



# **PROPERTY RISKS INSURANCE**

At the end of 2011, LLC "United Directorate for Management of Assets and Services of the Center of Development and Commercialization of New Technologies (Skolkovo Innovation Center)", the Foundation's subsidiary, developed the Skolkovo Property Insurance Policy. The policy was drawn up with the help of the consultancy firm Aon Rus – Insurance Brokers LLC.

According to the Foundation's procurement procedures, the conclusion of a contract with a company that will render insurance broker services is planned for 2012. This company will prepare tender documents to select an insurance company (insurance companies) to insure the property, and will also be engaged in supporting the process of the property insurance. Then, the subsidiary will provide insurance of the property according to the insurance policy by carrying out a tender (tenders) to select an insurance company (insurance companies).







ANNUAL REPORT 2011 REFERENCE BOOK





We think Skolkovo has got the potential to become one of the leading innovation centers.

Susan Hockfield, President of the Massachusetts Institute of Technology (MIT), "Expert: Collaboration with Skolkovo Will Help MIT Retain Leadership", Oct 26, 2011

# Skolkovo in the News



When we were starting one year ago, there were many uncertainties. But today we can point out significant results in a variety of aspects.

Nikolay Pryanishnikov, President of Microsoft in Russia, RBK Daily, "Microsoft to Support Start-Ups in Skolkovo", Nov 10, 2011





Skolkovo is an opportunity for Russia to accelerate its development – and that is a key challenge for the Russian market. A number of French enterprises and companies are already present in the Innocity. If the intellectual property protection is clearly guaranteed, it will be easier to persuade other French companies to move faster and more decisively.

Jean-Pierre Thomas, Special Representative of the President of France for development of French-Russian relations Vesti, "Jean-Pierre Thomas: We Want to Jointly Invest into

Russia",

The five key trends pointed out by the President Dmitry Medvedev for modernization of the economy are of great interest to Korean enterprises that believe them to be the next-generation growth sources. So, we are expecting to have a lot of collaboration between the two countries. Some real examples of such collaboration are the seminars and presentations held late last year and early this year with some enterprises aiming to enhance the efficiency of energy resources. In addition, the government of our country will be taking every effort to sustain the presence of Korean enterprises and R&D organizations in the creation of Russia's scientific and research center in Skolkovo.

Lee Yeon Soo, General Consul of the Republic of Korea in Saint Petersburg, "Sankt-Peterburgskie Vedomosti", Nov 3, 2011



Andrew Erskine, senior associate at Tom Fleming Creative Consultancy,
The Voice of Russia, "Andrew Erskine: at Skolkovo We
Know It Is Supported by the Arranging Institutions",
Oct 4, 2010



Anne Pringle, UK Ambassador in Russia, The Voice of Russia, Oct 4, 2010

# Коммерсанть



The young generation views "Skolkovo" quite differently than the fundamental scientists.

The young people instill the project with emotions and passionate expectations. With all the negative experience at launching, the Russia's innovators want to believe there is light at the end of the tunnel. And the skeptical "science geeks" are gradually taking their side.

Olga Goverdovskaya, "Skolkovo at the End of the Tunnel", Review Skolkovo, Supplement to The Kommersant newspaper No.70 (4855), Apr 19, 2012

# conews



I am sure that Skolkovo will be built on time, and renowned engineers,

financiers, colleges across the world will be located there.

David Yang, founder of ABBYY, "Russian IT-Companies Condemn Graft and the Notorious Vertical of Power in Poll", Oct 17 2011





Malcolm Gladwell in his book called "Outliers" mentions

five factors needed for the success for an individual, for a company, and for a nation: the right timing, revolutionary technology, right talents, a risk taking capacity, and finally, the right ecosystem. When we are looking at these dimensions for success, we see that this is exactly what we are looking at in Skolkovo. The timing for the project start-up and implementation is perfect, the revolutionary technology and developments are there (we can confirm this, as can our colleagues from other foreign companies involved). At the same time, more attention has to be given to commercializing the scientific developments, because many of them remain mere papers, even if patents are there: the talents need opportunities for self-realization. capacity to operate globally, and a possibility to use their knowledge. I believe that Skolkovo can facilitate that. Risk taking is critical, and more and more people in Russia tend to be risktakers. And finally, the ecosystem. I believe that when Russia's community gets dividends from Skolkovo, when the first results are yielded (and they will be), this model will find a widespread response also in other regions of the country, and more and more of the Russians will tend to think Skolkovo-style.

Esko Aho, Executive Vice President of Nokia Corporation,
"Rossiyskaya Biznes-Gazeta: Business and Power",
No.809 (27),
"The Three Percent Rule",
Aug 9, 2011

We continue active cooperation with the Skolkovo Foundation, As part of the activities to create an innovative and venture-based platform in Russia. Cisco is planning to secure itself some space at the Skolkovo Innovation Centre. Assumedly, after the infrastructure is complete. a research and development center will be built in Skolkovo by Cisco under the aegis of Cisco Emerging Business Group headed by its senior vice president, Marthin De Beer. To do this, by the end of calendar year 2011, Cisco would register a legal entity and then build a team of designers. We hope that in 2012 the Cisco R&D center will start working and expect its technological solutions to be in high demand in Russia as well as worldwide.



Pavel Betsis, General
Director, Cisco Systems.
THG.ru
Interview with Pavel
Betsis, General Director
of Cisco Systems,
Oct 10, 2011

# E WALL STREET JOURNAL.

One to some there the there there there there there there there there there th

One thing that is clear is that there's some

amazing technology in Russia. It's better than what I've seen stateside," said Bill Reichert, managing director of Garage Ventures.

The Wall Street Journal - about the visit of Skolkovo delegation to California, Oct 13 2011

# TORONTO STAR

It is called Skolkovo City, a bold effort by Russia's government to modernize the economy by attracting some of the world's brightest scientific minds and most inventive high-tech firms to a 21st-century center of excellence.

Paul Watson, "Russia moving from fossil fuel to fostering innovation", Toronto Star, Nov 27 2011



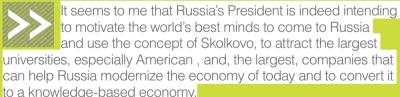
Forbes

Russia has long been known as a competent, high-tech nation with qualified scientists. Russia was the first country to send a man into space, and has a long list of Nobel Prize winners in the sciences. The winner of 2000 Nobel Prize in Physics Zhores Alferov is the scientific director of a new high-tech innovation project. The country is building a modern science park outside of Moscow called the Skolkovo Innovation Centre Project, where Alferov is just one of a host of public and private sector directors. The government expects that between 25,000 and 30,000 people will work and live in Skolkovo and develop new space and

telecommunications products, innovative medical equipment, biotech, clean and efficient energy, such as new LED light bulbs, nuclear technologies, and, of course, information technology.

Kenneth Rapoza, "Russia: The Next Silicon Valley?", Forbes, Nov 12 2011





Ellis Rubinstein, president of the New York Academy of Sciences. Infox.ru "America's business believes in Skolkovo", Sep 5 2011



German experts favor the creation of innovation clusters in Russia. They can save the retained scientific structures and spur industrial development. But the investors seek legal guarantees. German experts and business circles view the idea of creation of an innovation center in Skolkovo city near Moscow with a tranquil and pragmatic interest. "We're guessing the novelty of this project lies in the message itself: Russia is serious to form technological parks and innovation clusters," emphasizes Professor Rainer Lindner, Executive Director of the Committee on Eastern European Economic Relations. According to him, this means that the country's leadership now has the full understanding of what the most critical task for the next decades is: to quit being one-sidedly oriented toward oil and gas and to shift the focus to a knowledge-based economy model.

Andrei Gurkov, "Skolkovo Innocity: a Right Move to Knowledge-Based Economy", Deutsche Welle, Oct 7, 2010



# THE WALL STREET JOURNAL.

Russia has got a great history of education and research. The United States is well aware of that from the cold war with Russia – we know their capabilities. They have turned their expertise into the commercial area. There are tons of smart scientists and a lot of good research. What they have not done in the past is they have not commercialized their capabilities. That is what the Skolkovo project is all about. This is what the Russian President is trying to promote.

Craig Barrett, ex CEO of the Intel Corporation
CNBC, USA
"Skolkovo to Place Russia at a New Level"

Skolkovo to Place Russia at a New Level", Jul 21, 2011

Christian Science Monitor

President Medvedev is a great visionary. He had an idea to create a Silicon Valley in Skolkovo. I love places where there is an

extraordinary potential. It is almost like looking at a gold or diamond mine and saying, 'all you have to do is go in there and get it'.

Arnold Schwarzenegger, Governor of California Christian Science Monitor, USA, "Schwarzenegger Adds Muscle to Medvedev's Vision for Russian Silicon Valley", Never let it be said that Russians take half measures. The Skolkovo project is a \$4 billion endeavor to construct a new technology city of 30,000 people outside Moscow that will give rise to, as the founders hope, a new generation of innovation in a country that has seen its science and technology prowess decline.

While there is more than an air of

While there is more than an air of Soviet-style grand planning about the project, the key difference between the Soviet-era technology cities of old and Skolkovo is the degree of openness. Far from being shut off, Skolkovo is not merely open to foreign investors and workers; they are positively encouraged.

Ben Rooney, "Russian 'Silicon Valley' Aims to Be Global Science Park", The Wall Street

Feb 17, 2012





# Project Participants: Rules of Application, Benefits, Advantages



# STATUS OF A PROJECT PARTICIPANT

The participants of the Skolkovo Innovation Centre are companies that have proposed new avenues to address the most critical scientific, social, and economic problems.

All companies applying to be participants of the Skolkovo Project are distributed between clusters (Energy Efficient Technologies Cluster, Nuclear Technologies Cluster, Space Technologies and Telecommunications Cluster, Biomedical Technologies Cluster, IT Cluster). In assessment of applications, preference is given to those projects that can change the market image and present unique new products and technologies.

In 2011, the Foundation received over fifteen hundred applications for participation. In the end, 332 companies became participants of the Project.

# How to Join Skolkovo

#### REQUIREMENTS FOR APPLICANTS

The procedure for awarding of the Skolkovo Project participant status is determined by the Regulation on Conferring and Withdrawal of Status of the Project Participant developed in accordance with Federal Law 244 dated September 28, 2010 "On the Skolkovo Innovation Centre" and the Skolkovo Foundation Charter enacted on November 11, 2011 (for full text of the Regulation on Conferring and Withdrawal of Status of the Project Participant, refer to the innovation centre's website at www.sk.ru).

Pursuant to the said Regulation, the Project participant status may be acknowledged for legal entities who have applied for the same in accordance with clause 3 of the Regulation (hereinafter "the applicant") subject to the conditions set forth below.

# Status of the Skolkovo Project participant under Federal Law 244 "On the Skolkovo Innovation Centre" may be granted to an applicant meeting the following conditions:

- 1) The applicant is a legal entity incorporated in compliance with the Russian law;
- 2) The applicant's constituent documents show that it is exclusively permitted to take up research, development and commercialization of results in the areas determined in subparagraph 8 of article 10 of the Law "On the Skolkovo Innovation Centre" (five key areas of the project; hereinafter referred to as "the areas") and also other kinds of activities essential for the research, development and commercialization of results;

- 3) The applicant's business name does not include the word "Skolkovo" or any derivatives of the same
- 4) The applicant undertakes to perform research activities in conformity with the Law "On the Skolkovo Innovation Centre" and the rules adopted by the Foundation pursuant to article 7 of the Law and posted at the Foundation's website in the "Project Rules" section. The applicant also undertakes to locate its continuing executive body (or other offices or persons authorized to act on the applicant's behalf with full authority) in the Skolkovo Innovation Centre's territory before January 1, 2014;
- 5) The project presented by the applicant meets one or more of the innovation priorities within the areas stated in Appendix 1 to this Regulation (hereinafter "the innovation priorities"):
- 6) The project presented by the applicant matches the criteria set forth below (hereinafter "the criteria"):
- The product and (or) the technology to be created and (or) the results expected from its applied research (i.e. scientific studies to be commercialized within five years after an application for Project participant status (an application for prescreening) is filed by the applicant; hereinafter "the applied research") are potentially on the competitive side of the world analogs;
- The product and (or) the technology to be created by the applicant and (or) the results expected from the applied research prove

- substantially commercializable at least in Russia and, eventually, worldwide;
- The project is theoretically feasible and in no contradiction to any fundamental scientific principles:
- The project's key researchers, developers and managers (hereinafter "the project team") have the knowledge and experience required for the project to be a success and (or) for applied research to be made;
- The project team includes one or more experts internationally experienced in research, development and (or) commercialization of results.

To apply for Project participant status, the applicant must fill in the project application e-questionnaire posted by the Skolkovo Foundation at www.sk.ru.

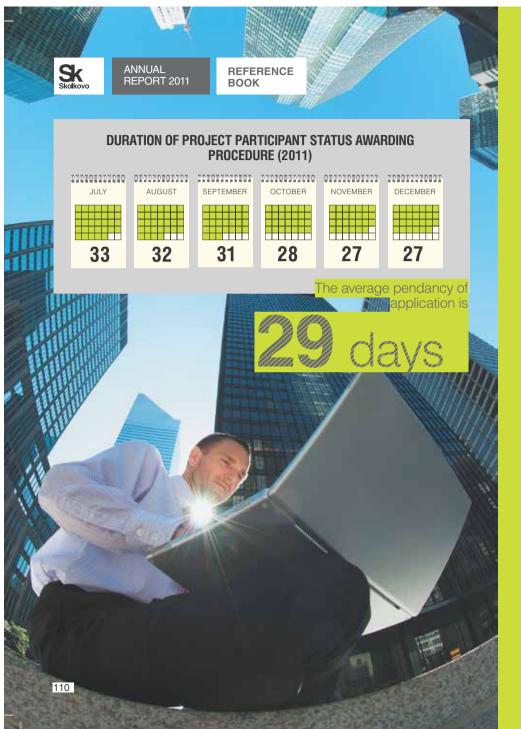
When filing an application, the applicant must furnish the following documents (scanned and saved as pdf files):

- The applicant's request to be allowed Project participant status, duly sealed and signed by the applicant's continuing body's director or other person authorized to act on the applicant's behalf with full authority or by the applicant's attorney-in-fact (enclosing a copy of the power of attorney);
- An extract from the Unified State Register of Legal Entities dated no more than three months back from the application's date;
- The applicant's constituent documents (articles of association and/or other docu-

- ments as determined by Russia's laws for the relevant form of incorporation) stamped by the registering authority:
- Written applications (to the applicant) from the project team to confirm they will (or intend to) participate in the project presented (specifying its precise name);
- Project team members' IDs.

All applications for Project participant status will be registered on the same day they are filed.

In addition, when the applicants so desire. the Foundation will prescreen the projects in order to determine if they fit the criteria. In this case, the project will undergo a comprehensive expert appraisal prior to the legal entity's registration, thus making next steps easier for potential participants of the Skolkovo project. To apply for prescreening, the applicant must fill in the relevant questionnaire posted by the Foundation at www.sk.ru. When applying for prescreening, the applicant shall furnish: written applications (to the applicant) from the project team to confirm they will (or intend to) participate in the project presented (specifying its precise name); project team members' IDs (scanned copies in pdf). The Foundation will formally consider the prescreening application within five working days. If the prescreening application is found in compliance with this Regulation, the Foundation will, within one working day upon the formal consideration, forward such application to the expert panel.



#### APPLICATION SCREENING PROCEDURE

As stated herein, the Foundation shall formally consider the application in two stages. The first stage takes place within three working days and includes, but is not limited to, checking the application for integrity and correctness and if all of the required documents are enclosed. Should the documents submitted by the applicant be incomplete or inconsistent by form or tenor with this Regulation, the Foundation will notify the applicant accordingly. If the applicant fails to present the relevant documents to the Foundation as appropriate within 30 days of the said notification, the application will be dismissed.

The second stage of formal screening takes place within two working days after the first screening stage is complete. Here the Foundation will check if the applied project is compliance with this Regulation. If it is not, the application will be returned to the applicant within five working days of its receipt. If the application satisfies all requirements, the Foundation will, within one working day after the screening, forward the application to the expert panel for substantive examination.

The substantive examination is not applicable if an applicant's project has been prescreened and found fit. Such applicant may apply for Project participant status by signing into the Foundation's website at www.sk.ru and providing, in addition to the documents listed above, the minutes of the session of the expert panel where the project was acknowledged fit, signed no more than six months before the date of the application (within six months

the qualifying applicant shall be registered as a legal entity), and the written consent to the presentation of the project with the purpose of being qualified for Project participant status. Upon completion of this formal check, the Foundation will advise such applicant to submit the following documents within 30 days of such notice:

- Original application for Project participant status in the project sealed and signed by the applicant's continuing executive body's director or other person authorized to act on the applicant's behalf with full authority or by the applicant's attorney-in-fact;
- Copy of the applicant's certificate of registration with a tax authority (duly notarized as true copy);
- Copy of the constituent documents (duly notarized or verified by tax authorities as true copy);
- Copy of the note of filing with the Unified State Register of Legal Entities (duly notarized as true copy).

These documents will be examined by the Foundation within one working day of submission. If the constituent documents submitted by the applicant are in compliance with this Regulation and the applicant has not been awarded Project participant status pursuant to previous applications, the Foundation will decide upon such awarding within three days after the documents listed herein are submitted.

The procedure of awarding Project participant status in the project, with prescreening done, will take 44 days at the very most.

# SUBSTANIVE EXAMINATION OF APPLICATIONS

For examination purposes, expert panels meet in a manner set forth by the Regulation on Conferring and Withdrawal of Status of the Project Participant, the Regulation on Expert Panels of the Foundation, and a personal agreement on expert panel membership. A regulatory system is in place to help make the examination procedure clear for all participants.

The expert panel will judge whether the applicant's project satisfies the criteria. As of December 31, 2011, the expert panels included 589 experts – leading Russian and foreign scholars, venture investors and entrepreneurs. Every project will be analyzed by ten experts randomly selected from a pool. There are 30 or more experts for each cluster.

If the expert panel finds the project fully in compliance with all of the criteria, the Foundation will notify the applicant accordingly within one working day after the minutes of session of the expert panel are signed. Within 30 days upon receipt of such notification, the applicant must furnish the following documents to the Foundation:

 Original application for Project participant status in the project sealed and signed by the applicant's continuing executive body's director or other person authorized to act on the applicant's behalf with full authority or by the applicant's attorney-in-fact;

- Copy of the applicant's certificate of registration with a tax authority (duly notarized as true copy);
- Copy of the constituent documents (duly notarized or verified by tax authorities as true copy):
- Copy of the note of filing in the Unified State Register of Legal Entities (duly notarized as true copy).

The above documents will be examined by the Foundation within one working day of submission. If the constituent documents submitted by the applicant are in compliance with this Regulation and the applicant has not been awarded participant status pursuant to previous applications, the Foundation will decide upon such awarding within three days after the documents herein listed are submitted.

The average screening time is 29 calendar days.

Below is the number of sessions the expert panels of the Foundation have held to evaluate the projects presented by applicants for Project participant status and for prescreening:

Clusters	Space	Biomed	IT	EE	NT	Total
Positive awards	26	214	101	248	19	608
Negative awards	29	79	189	127	28	453
Sessions currently pending	33	144	176	146	49	548
Total sessions	88	437	467	521	96	1609





ANNUAL REPORT 2011 REFERENCE BOOK

# SKOLKOVO FOUNDATION EXPERTS CONFERENCE

December 5, 2011 witnessed the First Russian conference of the Skolkovo Foundation experts. The conference was attended by over 150 experts and by the Foundation's Scientific Advisory Council (SAC), including the co-chairman of SAC, Nobel laureate Zhores Alferov.

The event hosted the following presentations:

- Presentation of the Skolkovo Foundation's key results in 2011
- Presentation of a new procedure of screening for Project participant status at the Skolkovo Innovation Centre
- Presentation of the procedure and the key changes in the process of screening for grants
   A panel discussion with the experts was also held at the conference.

#### **AWARDING PROJECT PARTICIPANT STATUS**

Project participant status is awarded for a ten-year period. Pursuant to the Foundation's decision to qualify an applicant for Project participant status, such applicant is listed among the Project participants and the relevant qualification record is entered in the register of Project participants. The said entry is made within one working day after the decision to award. The Project participant status is deemed awarded to the applicant as soon as the said entry is made in the register of Project participants (see the complete and continually updating list of Project participants on the Skolkovo Foundation's website at www.sk.ru). A certificate is then issued to confirm that the applicant has been awarded Project participant status and listed among the Project participants. The certificate is issued to the Project participant within 14 days of the entry.

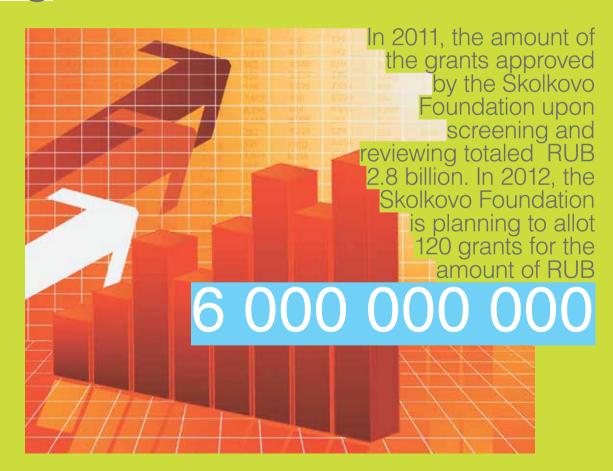






# Grant Financing

Grant financing for the Skolkovo Project participants is vital for supporting their research. Grants given to Skolkovo participants are free and non-refundable. in most cases with a third-party investor involved, in accordance with the grant policy of the Skolkovo Foundation (and the Regulation on Grants for Project participants ratified by the Foundation Council on April 25. 2012 and approved by the Board of Trustees on the same date). (For full versions of the Foundation's grant policy as a non-binding reference for the Skolkovo Foundation Grant Committee and the Regulation on Grants for Project participants setting forth the procedure for the Skolkovo Foundation to give grants to participants of the Project for the creation and maintenance of the Skolkovo Innovation Centre, for launching innovative projects, reporting on how the grants are used, and for the reports to be reviewed by the Foundation. refer to the Skolkovo Foundation's website at www.sk.ru.)



#### THE PROCEDURE AND RULES FOR GIVING GRANTS

The Skolkovo Foundation combines a multilevel examination system with a portfolio approach to the diversification of projects by stages and industries so the Foundation can select the best innovative projects while keeping the risk to the minimum.

The grant policy of the Skolkovo Foundation identifies four stages in a project: concept stage, seed stage, early stage, and advanced stage. At each stage, specific requirements are set for the projects and various regulations are applied in respect of the requested amount and the necessary share of third party financing, if any.

Grant financing may only be requested by the companies who have been qualified as Skolkovo project participants and, thus, passed the independent technical examination. Once qualified, the company may initiate a granting process by submitting a set of substantiating documents to the relevant cluster of the Foundation. Such documents include an investment memorandum, a roadmap (project fulfillment plan), project financing plan, and technical description.

Once the said documents are received and revised in conjunction with the applicant, the Skolkovo Foundation cluster represented by its executive director will decide whether to dismiss the application or to grant RUB 5 million for the preparation of upgraded materials or to advance the project to the Grant Committee, followed by the due diligence stage.

At this stage, the project is examined by the following services of the Foundation: legal department, financial department, intellectual property administration, and investment service in charge. During the due diligence process, the suggested project is evaluated by the Foundation's service units and also by independent third party experts representing their comprehensive assessment of the project by a ten-point scale with detailed comments.

Once all of the departments and experts involved in the due diligence procedure have agreed in respect of the project, the investment service of the Skolkovo Foundation will draw up a final scorecard to summarize their opinions. This document shall be enclosed with the original materials and expert opinions on the project and forwarded to the regular session of the Grant Committee of the Skolkovo Foundation.

#### **GRANT COMMITTEE**

The Grant Committee of the Skolkovo Foundation is a collective body that makes decisions on the procedures and conditions for giving grant financing to participant companies so as to assist them in the implementation of their innovative projects. (The regulation on the Grant Committee is available on the Skolkovo Foundation's website at www.sk.ru.)

The Grant Committee is appointed by the President of the Foundation and includes nine voting members.

#### As of December 31, 2011, the Grant Committee members are:



1.Viktor Vekselberg, President
 of the Skolkovo Foundation,
 chairman of the Grant
 Committee



Alexei Beltyukov, Vice
 President of the Skolkovo
 Foundation, chief
 development officer (may
 act as chairman of the grant
 committee in absentia)



 Andrei Vvedensky, director, infrastructure and regional development, RVC
 Igor Drozdov, vice president

for legal matters of

Skolkovo Foundation



5. Mikhail Kirpichnikov, chairman of the higher attestation commission (HAC) of the Ministry of Education and Science of Russia, dean, MSU faculty of biology (may act as chairman of the grant committee in absentia)



University of Science and Technology MISiS 7. Alexander Lupachev, chief investment officer, Skolkovo Foundation

6. Dmitry Livanov, deputy

chairman of HAC of the

and Science of Russia,

mathematics, professor.

Ministry of Education

Ph.D. in physics and

rector of the National



8. Vladimir Okrepilov, CEO of Federal Budgetary Institution "State Regional Center for Standardization, Metrology and Testing in St. Petersburg and Leningrad Region" ("TEST - St. Petersburg")



 Yuri Udaltsov, director for innovation-based development, member of the board of RUSNANO Sessions of the Grant Committee held in order to decide whether to provide financing for an applicant are summoned by resolution of the chairman of the Grant Committee as presented by the executive officer of the relevant cluster of the Skolkovo Foundation. The cluster's executive officer introduces such presentation provided that:

- The applicant's project is an innovative one (as established by substantive examination at the Project participant status award stage):
- Such innovative project would suit the innovative priorities of the Skolkovo Foundation.

Having examined the project-related set of materials, the Grant Committee members will interview the applicant and then make a decision by a simple majority of votes. In the context of financing for an applicant, the Grant Committee may award either of the following:

- 1. To provide the financing, subject to specific terms:
- Total amount of financing
- Terms and conditions of financing
- 2. To return the project for further development.
- 3. To deny financing.

The Grant Committee's award is deemed accepted if voted aye by more than 50% of the Grant Committee members present, including at least one independent member.

The Skolkovo Foundation will provide grants in tranches, on average six months each.

# Management of the Foundation

#### STRUCTURE AND OVERVIEW

On May 14, 2010, by ruling of the constitutional assembly of the Nonprofit Organization "The Foundation for Development of the Center for Development and Commercialization of New Technologies", decision was made to establish the following managerial bodies:

- Supervisory control body: the Board of Trustees
- Supreme control body: the Foundation Council
- Executive body: the President of the Foundation

On June 19, 2010 the Commission for Modernisation and Technological Development of Russia's Economy by the President of the Russian Federation appointed the staff of the managerial bodies of the Skolkovo Foundation for Development of the Center for Development and Commercialization of New Technologies.

The Board of Trustees of the Skolkovo Foundation was personally headed by the President of the Russian Federation, Mr. Dmitry Medvedev (today, Chairman of the Government of the Russian Federation).

#### THE BOARD OF TRUSTEES

In accordance with the Skolkovo Foundation charter, the Board of Trustees is its supervisory collegial body that monitors its activities and the use of the Foundation's property and is able and competent to:

- Revise the Foundation's charter
- Approve the project concepts (for the Foundation Council)
- Approve the governing documents (for the Foundation Council)
- At least once a year, hear the report of the Council and the President of the Foundation



Ivan Bortnik, Chairman of the Supervisory Board of the Fund for Assistance to Small Innovative Enterprises



Vladimir Dmitryev, Head of the State Corporation "Bank for Development and Foreign Economic Affairs" (Vneshekonombank)



Arkady Dvorkovich, Member of the Skolkovo Foundation Board of Trustees

Skolkovo

Foundation

Trustees



Igor Agamirzyan, CEO of Russian Venture Company

Yury
Osipov,
President of
the Russian
Academy
of Sciences
(RAS)



Elvira Nabiullina, Minister of Economic Development of the Russian Federation



Andrey

Fursenko.

Minister of

Science of

the Russian

Federation

Education and

Vyacheslav Volodin, First Deputy Chief of Staff of the Presidential Executive Office

#### THE FOUNDATION COUNCIL

The Foundation Council is the supreme control body of the Foundation that handles strategic management of its activity, defines its priorities, its doctrines, and principles of use of property, and approves the annual report and annual balance sheet, mission of the Foundation, goals and trends of its strategic development.

As resolved by the Commission for Modernisation and Technological Development of Russia's Economy under the President of the Russian Federation, the Skolkovo Foundation Council has been headed by two cochairmen: Craig Barrett, ex CEO of the Intel Corporation, and Viktor Vekselberg, President of the Skolkovo Foundation, head of the supervisory board of the Renova Group.



John Chambers,



Esko Aho,

(Finland)

Mikhail Kovalchuk, Director of Russia's Science Center Kurchatov Institute







President of LUKOIL



Sergey Sobyanin, Mayor of Moscow

Vladislav Surkov,

Deputy Chairman of

Government of the

Russian Federation



Alexander Managing Partner of Almaz



Craig Barrett, Ex CEO of Intel Corporation

Skolkovo Foundation Council

Executive Vice President

of Nokia Corporation



Anatoly Chubais, **CEO of RUSNANO** 



Anatoly Aleksandrov, Rector of Bauman MSTU



Peter Löscher. President and Chairman of the board of Siemens AG (Germany)



Executive Chairman and CEO of Google Inc. (USA)







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## **Executive Board**

comprised of first-level department heads of the Foundation



Sergey Zhukov, Executive director, Space Technologies and Communications Cluster



Oleg Alekseev, Vice President, Chief Operating Officer for Education and Research



Vasily Belov. **Executive Director of** the Energy Efficiency Cluster



Viktor Vekselberg, Chairman of the Managerial Board



Dmitry Kolosov, Vice President. Chief of Staff to the President and the Foundation Councils



Stanislav Naumov, Vice President for Government and **Public Relations** 





Alexei Beltyukov,



Igor Goryanin, Executive Director, Biomedicine Cluster



laor Drozdov. Vice President, Matters



Director for Legal



Viktor Maslakov, Vice President of the Foundation, City Manager



The major task of the Executive Board and later the Managerial Board of the Foundation is coordination of the activities of the Foundation's structural units so as to ensure the Foundation is efficient in performing its functions as the managing company of the Skolkovo Innovation.

THE PRESIDENT AND THE EXECUTIVE

managed by the sole executive body – the

executive body - the Executive Board.

President of the Foundation, and the collegial

**BOARD OF THE FOUNDATION** The Foundation's everyday activities are



Steven Lawrence Geiger (USA), Chief **Operating Officer** 



Marina Novikova. **HR** Director



Denis Kovalevich, **Executive Director** of Nuclear Cluster

Conor Lenihan

(Ireland), Vice

President for

international

development

partnership



Seda Pumpyanskaya, Vice President, International Relations and Communications



Alexander Chernov, Foundation Director, PR & Marketing Director, Press Secretary



Alexander Turkot, Executive Director, IT Cluster

#### SCIENTIFIC ADVISORY COUNCIL

In August 2010, Dmitry Medvedev appointed the staff of the Skolkovo Foundation Scientific Advisory Council (SAC). In accordance with te Skolkovo Foundation charter, the Scientific Advisory Council is a specialized expert body authorzed to:

- coordinate the scientific activities of the project;
- advise on relationships with scientific community members to engage them into the project;
- arrange conferences and seminars for project-related topics:
- advise the Foundation Council on promising trends of research and development suitable for the project:
- advise the Foundation Council on the arrangement of educational activities within the framework of the project.

#### The Scientific Advisory Council Members

- Zhores Alferov, Nobel laureate, co-chairman of the Scientific Advisory Council, Vice Rresident of RAS, academician of RAS, rector of the Saint Petersburg Academic University - Nanotechnology Research and Education Centre of RAS
- Roger David Kornberg (USA), Nobel laureate, cochairman of the Scientific Advisory Council, professor of Stanford University
- 3. Arden Bement (USA), professor, director of Global Policy Research Institute at Purdue University
- Vladimir Betelin, director of System Research Institute of the Russian Academy of Sciences, academician of RAS
- 5. Dieter Bimberg (Germany), professor, executive director of the Solid State Physics Institute, Technical University of Berlin
- Eugeniy Velikhov, president of the Kurchatov Institute, academician of RAS
- Detlev Ganten (Germany), president of the World Summit on Health, chairman of the Board of Directors of the "Charité Foundation", university hospitals of Berlin and the medical faculty
- 8. Valentin Gapontsev, CEO of NTO "IRE-Polus", president of IPG Photonics Corporation
- Yuriy Guliaev, director of Radio and Electronics Institute, academician of RAS
- 10. Siegfried Dais (Germany), deputy chairman of the Robert Bosch GmbH board of management
- Mikhail Dubina, head of the laboratory of the Academic University - scientific and education center of nanotechnologies, corresponding member of RAS
- Valeriy Kozlov, Vice President of the Russian Academy of Sciences, academician of RAS
- 13. Gennady Krasnikov, general director of JSC "Sci-entific Research Institute of molecular electronics and 'Micron' factory", academician of RAS
- Alexander Kuleshov, director of the Institute for information transmission problems (Kharkevich Institute), academician of RAS
- 15. Jean-Marie Lehn (France), Nobel laureate, pro¬fessor emeritus at the University of Strasbourg

- 16. Richard Lerner (USA), President of The Scripps Research Institute
- Yury Natochin, secretary academician of the physiology and fundamental medicine department of BAS
- Vladimir Okrepilov, director of TEST- St. Petersburg testing and certification center, corresponding member of RAS
- Vladislav Panchenko, chairman of the Russian Foundation of Fundamental Researches (RFFR), academician of RAS
- Valentin Parmon, director of the Institute of Catalysis named after G.K. Boreskov, Siberian Branch of the Russian Academy of Sciences, academician of RAS
- 21. Igor Fedorov, president of Moscow State Bau-man Technical University, academician of RAS
- 22. Vladimir Fortov, director of the Joint Institute for High Temperatures of the Russian Academy of Sciences, academician of RAS
- 23. Phillip Frost (USA), Chairman of the Board, Teva Pharmaceutical Industries, Ltd. (Israel)
- 24. Valeriy Chereshnev, academician of RAS, chairman of State Duma Committee for Science and High Technology
- 25. Vladimir Shalaev, professor at the Purdue University (USA)

#### **KEY MILESTONES**

In 2011, the Scientific Advisory Council of the Foundation held sessions to approve the strategic foresights for the energy efficient technologies cluster, nuclear technologies cluster, space technologies and telecommunications cluster, biomedical technologies cluster, and IT cluster.

The SAC held two conferences together with the energy efficiency cluster, the biomed cluster, and the IT cluster.

The SAC's working group for education made a valu-able contribution to working out the SkTech concept. Some SAC members, including two Nobel Prize winners,

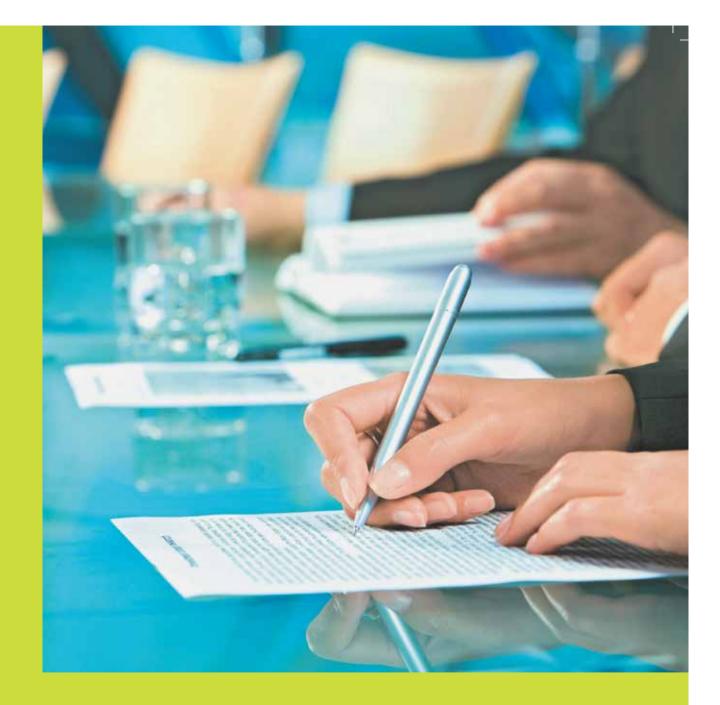
lectured for the Skolkovo Open University students.

# BUDGET COMMITTEE OF THE FOUNDATION COUNCIL

Throughout 2011, a transparent and efficient system was being created to provide corporate management over the Foundation. Among other things, by resolution of the Foundation Council a budget committee was established. The committee included not only the Foundation's officers but also some representatives of Russia's ministries, educational institutions, and blue-chip companies.

# Members of the Budget Committee of the Foundation Council

- Alexei Beltyukov, Vice President of the Foundation, chief development officer, chairman of the Foundation's budget committee
- Ruben Aganbegyan, president of the Moscow Interbank Currency Exchange
- Alexander Volodin, director of department of budget process organizing, account and reporting of the Ministry of Education and Science of the Russian Federation
- 4. Sergei Guriev, rector of the New Economic School
- 5. Igor Drozdov, vice president for legal matters of the Foundation
- Mikhail Kirpichnikov, chairman of the Higher Attestation Commission of the Ministry of Education and Science of Russia, dean, MSU faculty of biology
- Sergei Leschenko, deputy director of the innovative development and corporate management department of the Ministry of Economic Development and Trade of Bussia
- Kirill Lugovtsev, director of the Foundation finance department
- 9. Alexander Novak, deputy Minister of Finance of the Russian Federation
- 10. Vasily Popik, deputy head of the Presidential Experts' Directorate of the Russian Federation
- 11. Vladimir Reznikov, director of the Foundation for internal audits





#### **URBAN COUNCIL**

The Urban Council was established by Decree No.9 of the President of the Foundation dated July 28, 2010.

According to the regulation on the Urban Council, it is intended to provide advice for city planning and architectural designing for the Foundation departments to make the relevant decisions to ensure the implementation of the Skolkovo Innovation Centre venture, namely:

- to develop recommendations to the Foundation for city planning and architectural designing so as to create and develop the urban environment for the Foundation departments to make the relevant decisions to ensure the implementation of the project;
- to review and advise on the city planning concept of the Skolkovo Innovation Centre;
- to provide consultancy for the Foundation in its activities of city planning and architectural designing of the Skolkovo Innovation Centre;
- to work out recommendations for the competitive screening of engineering and contractual organizations to ensure the implementation of the Skolkovo project.

#### Staff of the Urban Council

- 1. Boris Bernaskoni, head of the Bernaskoni architecture bureau
- Aaron Betski (Netherlands), professor at the Netherlands Architecture Institute, director of the Cincinnati Art Museum (USA)
- 3. Mikhail Blinkin, director of Research Programs at the Transport and Road Engineering Scientific Research Institute
- 4. Vsevolod Bogdanov, chairman of the Russian Union of Journalists
- Stefano Boeri (Italy), professor of urban design at the Politecnico di Milano, editor-in-chief of the international magazine "Abitare"

- Marat Gelman, director of the Contemporary Art Gallery
- Veniamin Golubitsky, president of Renova-StroyGroup
- 8. Reinier de Graaf (Netherlands), partner of architecture and design office OMA
- Yuri Grigoryan, head of the "Project Meganom" bureau
- Alexander Kudryavtsev, president of the Russian Academy of Architecture and Building Sciences, president of the Moscow Architectural Institute
- 11. Pierre de Meuron (Switzerland), co-founder of H&DM bureau, winner of the Pritzker Prize
- 12. Mohsen Mostafavi (UK), dean of the Harvard Graduate School of Design (USA)
- 13. John Munthe (Sweden), vice-president of the Swedish Environmental Research Institute
- 14. Alexei Muratov, editor-in-chief of the magazine "Project Russia"
- 15. Jean Pistre (France), head of the architectural bureau Valode & Pistre
- 16. Grigory Revzin, editor-in-chief of the "Project Classic", an architectural columnist for "Kommersant"
- 17. Anatoly Smelyansky, rector of the Moscow Academic Art Theatre School, honored artist of Russia
- Kazuyo Sejima (Japan), head of the architectural bureau Sejima and Nishizawa and Associates, the Pritzker Prize winner
- 19. Etienne Tricaud (France), deputy director general of AREP Group
- 20. David Chipperfield (UK), head of the architectural bureau David Chipperfield Architects
- Sergey Tchoban (Germany), managing partner of architecture association SPEECH Tchoban & Kuznetsov

#### **KEY MILESTONES**

In 2011, four sessions of the Urban Council were held, resulting in the adoption of the master plan and the city planning concept presented to the public in the summer of 2011.

Based upon the Master Plan, six districts were defined, key communications and facilities were mapped, working teams of superintendent architects were appointed, involving such well-known companies as SANAA, Herzog & de Meuron, Valode & Pistre, Speech.

Following the Master Plan, main design options were drawn up for district plans to scales of 1:1000 and 1:500; project designs were prepared and options adopted for the key sites of the city, such as Technopark and the University, general common principles were agreed for the construction of residential areas, public sites, and other necessary infrastructure for the future city.

#### OTHER COMMITTEES OF THE FOUNDATION

In order to improve efficiency, harmonization and transparency in decision-making, in addition to the above, the following committees of the Foundation have also been set up and running:

- The Grant Committee
- The Tender Committee
- The Marketing Committee
- The Architecture Committee
- The Construction Headquarters
- The Steering Committees for Projects



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#### **PROJECT PARTICIPANTS**

The number of Project participants by the end of the year is expected to reach 500. GRANT FINANCING

In 2012, the Skolkovo Foundation is planning to issue 120 grants totaling about 6 billion rubles.

#### **CORPORATE COOPERATION**

In 2012, the Foundation is planning to attract to the Innovation Center around 1.5 billion rubles of additional corporate venture investments. The total amount of leverages in the Skolkovo Innovation Centre ecosystem in terms of the corporate venture investments totals 1.9 billion rubles until 2015. The aggregate budget of the corporate research park stands at approx. 13.2 billion rubles until 2015.

#### SKTECH

#### **Faculty Staff**

The year 2012 will determine the winners of the first Sk-Tech faculty hiring competition, that will join the development of the research and educational programs of SkTech and its individual units, the work of academic committees and expert panels for the screening of research centers' projects and attraction of regular employees to SkTech. The competition will host 200 applicants from the leading universities and research centers. Four winners will be nominated in April 2012, and another 11 will be named in June 2012.

#### Students

SkTech starts enrolling the first 20 students to the master degree competition program. This program will be a keystone for the pilot year of educational development at SkTech. The unique three-year master degree competition program of SkTech will allow 20 brilliant graduates of Russia's universities to study for one year (2012-2013) at a world-class international research institute and then come back to SkTech and complete the competition for the degree of master of science and technology. Through an open contest, SkTech will pick

20 finalists of the program and award scholarships to the winners.

Before starting at an international research institute in September 2012, the students will have an opportunity to work with a selected international group and go through an intense introductory training on leadership, entrepreneurship, and innovations. In the summer of 2013, the group of 20 students will return to the SkTech campus at Skolkovo and join the planning of educational programs.

#### **Research Centers**

June 2012 will be witnessing the disclosure of results of the competition announced in December 2011 for the creation of the first three research centers of SkTech. The competition collected 130 applications from 32 countries. Plans are to set up at least 15 research centers for five strategic trends of the Skolkovo Innovation Centre's research activities. The amount of annual financing for each center will be 6 to 12 million dollars.

#### **Innovation Sponsorship Program (ISP)**

The Innovation Sponsorship Program (ISP) helps SkTech researchers narrow the gap between laboratory investigations and market access, becoming promoters of innovations and entrepreneurship in the field. The ISP will be financing transient research and technological ventures at early commercialization stages, helping prove the viability of concepts, and assisting in promoting the technologies to be commercialized, for example, in regard of market opportunities, intellectual property management, and, possibly, staff development.

The ISP has been developed and will be implemented in close cooperation with the key partner of Skolkovo, the Massachusetts Institute of Technology, the world's leader in science and technology boasting a considerable experience in similar programs (e.g. Deshpande Center Innovative Research Grants). In 2012, ISP will be launched in the pilot mode: as the Skolkovo research centers are not yet created, the program will be aiming at two or three research groups at Russia's universities or other institutions of higher education.

This program will provide sponsorship and assistance in the commercialization. The sponsorship will be provided as one-year grants in the amount of up to 3 million rubles. The first grants are expected in the summer of 2012.

The data resulting from the work performed with the help of the first grants will be used for launching the commercialization programs for SkTech. The awardees of the ISP's pilot phase grants will be coached on commercialization and assisted throughout.

The structure and key figures of the Skolkovo Centre innovation system in 2020





#### SKOLKOVO OPEN UNIVERSITY (OPUS)

For the purposes of training sessions and socialization of OpUS students, communication centers will open in 2012. The main OpUS grounds will be: the Polytechnic Museum (Moscow), the Tomsk Polytechnic University (Tomsk), the National Research University of Information Technologies, Mechanics and Optics (Saint Petersburg). In 2012, the OpUS communication centers will be operating to full extent. The permanent OpUS grounds are expected to open: in April 2012 in Moscow, in June 2012 in Tomsk, in October 2012 in Saint Petersburg.

#### **APPLIED RESEARCH CENTERS (ARC)**

In 2012, the IT cluster together with the interested private and public organizations, research centers and universities is planning to create two applied research centers in the most critical IT-related areas:

 The center for coordination of innovation projects and cooperation in the IT sphere for the oil and gas industry • The center of applied research in the IT sphere for the financial industry
The first research center of the cluster – the Computer Network Applied Research Center – was established in 2011.

#### INNOCITY

For the development of the social infrastructure, in 2012, the Skolkovo Foundation is planning to:

- develop the conceptual package and the policy of development of the urban environment and social infrastructure of Skolkovo;
- design and start constructing social infrastructure units: residential buildings, sporting, medical, and educational facilities;
- attract investors/operators for the management of the sporting facilities;
- attract operators for the management of residential apartments.

By 2014, an ultra-modern building of the Skolkovo Institute of Science and Technologies (SkTech) is expected to be commissioned.





#### **TECHNOPARK**

By 2014, the Technopark building is expected to be commissioned. Pursuant to a memo signed between the Skolkovo Foundation and Sberbank, the Skolkovo Data Center (DC) is being engineered and erected at the Innovation Center. According to the memo, by January 2014 Sberbank shall build a general complex of Tier 3 computer rooms for the DC with a useful area of 7,000 sq. m.

#### THE BEST VENTURE PROJECT CONTEST

The Skolkovo Foundation is one of the major sponsors of the biannual international Business Venture Competition of innovations, held by the INSEAD business school. International student teams from INSEAD and other establishments compete for the Skolkovo Prize: EUR 25 thou and Moscow trip for the team. The winners in 2011 were: Ayoxxa in conjunction with the National University of Singapore (development of a biochip for quick blood protein analysis), Parasight in conjunction with the Harvard Medical School (development of a device for quick and efficient detection of blood parasites), Taxipedia (design of an Internet platform for taxi parks).

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In 2012, the Skolkovo Foundation is planning to share the positive experience of INSEAD innovation competitions with a few other topranked business schools.

# Contacts

Non-profit organization "The Foundation for Development of the Center for Development and Commercialization of New Technologies"

OGRN: 1107799016720

INN/KPP: 7701058410/770101001 Telephone: +7 (495) 967-01-48

Fax: +7 (495) 967-01-69

Mailing address: 123610 Moscow, Krasnopresnenskaya naberezhnaya 12,

entrance 9, floor 24

E-mail for correspondence: SKFoundation@sk.ru

## For Participants

Consultations for participants are available on weekdays from 9.30 a.m. to 6.30 p.m. by phone +7 (495) 967-01-48 (ext. 2162, 2340) E-mail for participants: technopark@sk.ru

# Space Technologies and Telecommunications Cluster

E-mail for contacting the Space & Telecommunications Cluster administration: Cluster-Space@sk.ru

Energy Efficient Technologies Cluster
E-mail for contacting the EE Cluster
administration: Cluster-Energy@sk.ru

Biomedical Technologies Cluster
E-mail for contacting the Biomedical
Cluster administration: Cluster-BMT@sk.ru

Nuclear Technologies Cluster
E-mail for contacting the NT Cluster administration: Cluster-NT@sk.ru

IT Cluster
E-mail for contacting the IT Cluster
administration: it-cluster@sk.ru

## For Technopark Residents

Telephone: +7 (495) 967-01-48 (ext. 2222)

E-mail: ural@sk.ru

### For Partners

E-mail for the info on the Skolkovo Foundation's relations with large companies: AFedorov@sk.ru

## For the Press

E-mail for the press:

RSherbakov@sk.ru (Roman Sherbakov, press service of the Skolkovo Foundation),

KBogdanova@sk.ru (Kristina Bogdanova, editorial office of sk.ru)

## For Students

E-mail for the info on the Skolkovo Open University: opus@sk.ru

## For Suppliers

Telephone: +7 (495) 967-01-48 (ext. 2385) Address: 123610 Moscow, Krasnopresnenskaya naberezhnaya 12, entrance 9, floor 24, Russia

# For general procurement: SKzakupki@sk.ru

## For complaints:

ZhalobaZakupki@sk.ru



# The Skolkovo Foundation. Annual Report 2011

Official Website: www.sk.ru