



SKOLKOVO OPPORTUNITIES FOR DEVELOPMENT OF TECHNOLOGIES AND BUSINESS PARTNERSHIP



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Chief Operating Officer of the Cluster of Advanced Manufacturing
Technologies "Skolkovo" Foundation

SKOLKOVO INNOVATION CENTER: 386 HA, AREA 2,6 MLN. SQ.METERS, 20 MINUTES FROM THE CENTER OF MOSCOW



Zone Z1 ("Central")

Transport hub, Hypercube, Matryoshka, Kvadrat, City Hall, the creative quarter, Student residences for Skoltekh and the teaching district

District D2 ("Technopark")

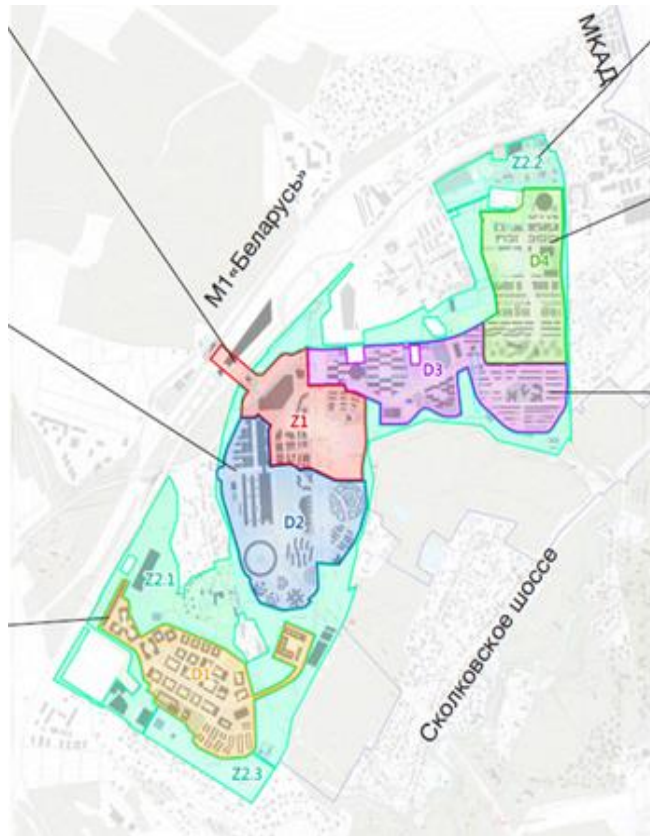
Technopark Skolkovo

The centers of key partners (TMH, CISCO) and IT cluster

Apartments, offices and social facilities

District D1 ("Southern")

Centers of key partners (Sberbank, Renova, Tatneft, Boeing), Apartments, offices, social facilities



Zone Z2 ("Landscape")

Objects of engineering, logistics, transport and city improvement

District D4 ("Northern")

The centers of key partners (TMK, FANUC, etc.)

Apartments, offices, social facilities

District D3 ("University")

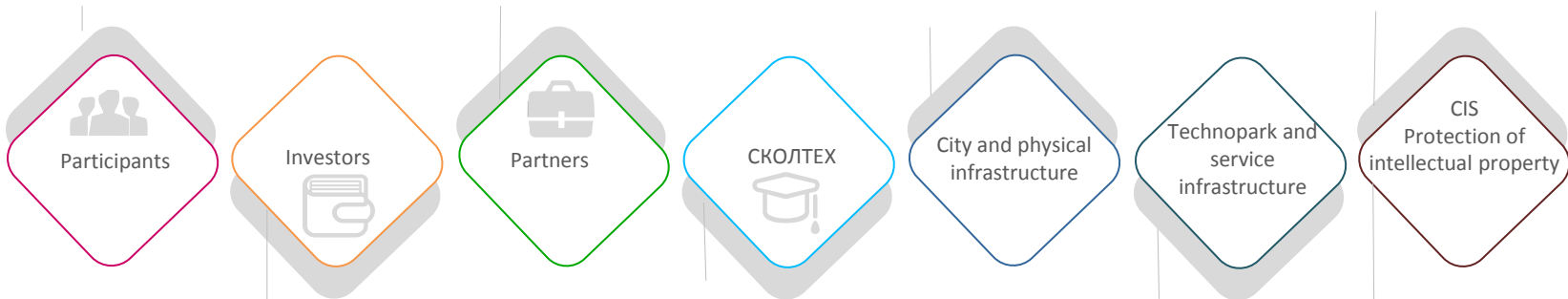
Skoltech

International Gymnasium Skolkovo

Apartments, offices, social facilities



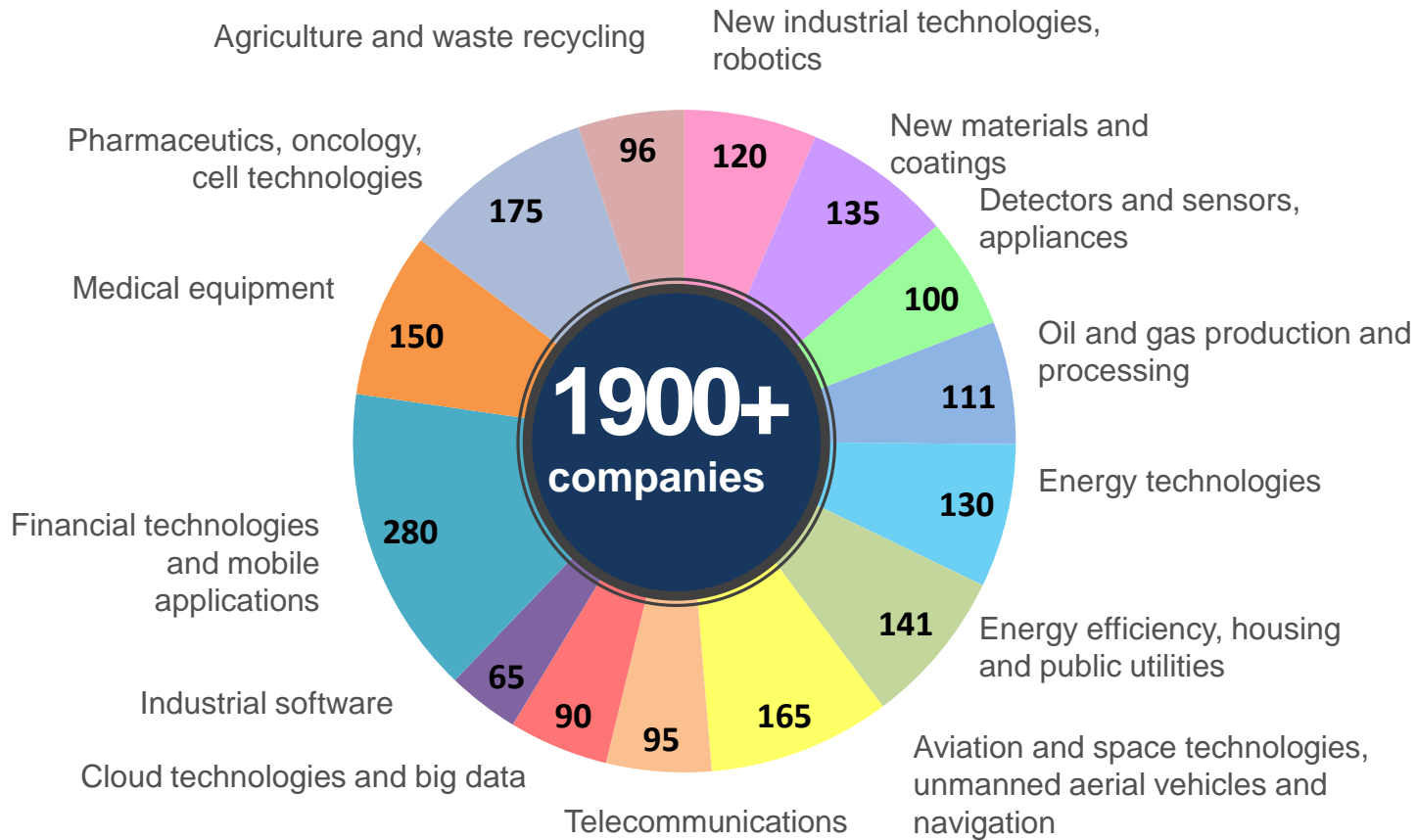
- 1'900 + participants
- 48.4 billion rubles. participants' revenue for 2017
- 8.3 billion rubles. for 2017
- 29'500 + jobs
- 1'340 + patents
- 160+ startups enter the international market
- 91 industrial partners - including leading corporations of Boeing, FANUC, Enel, Sberbank, Rosatom, Rostec, S7, Renova, TMK, MMK, Tatneft and others
- 6'300 + jobs
- 24 R & D centers
- The Big Technopark "Skolkovo" is the largest technopark in Europe,
- Residential areas commissioned
- In 2017, the Skolkovo Grammar School was commissioned.
- In 2017, the Matryoshka business center was commissioned
- over 30'000 jobs
- more than 19'000 inhabitants
- 1'700 + applications for registration of OIS, incl. 300+ international
- 120+ structured transactions of participants in 2014-2017. - cost about 3 billion rubles



- 100+ venture funds and private investment funds
- 150+ deals
- 9.0+ billion rubles firm commitments
- 34.7 billion rubles soft obligations
- 200+ business angels
- 210+ mentors
- 600+ students (more than 50% are involved in innovative projects and startups)
- 85 professors and professors (70% of them are from foreign universities)
- 10 centers of science, research and education
- Competition 100 people / place
- TOP-3 young universities by Hirsch index
- 40 centers of collective use
- over 20'000 square meters m. Office and laboratory areas for startups
- More than 150 startups work in Technopark
- The Skolkovo Foundation was granted the status of official observer of the UN intergovernmental organization - the World Intellectual Property Organization (WIPO)



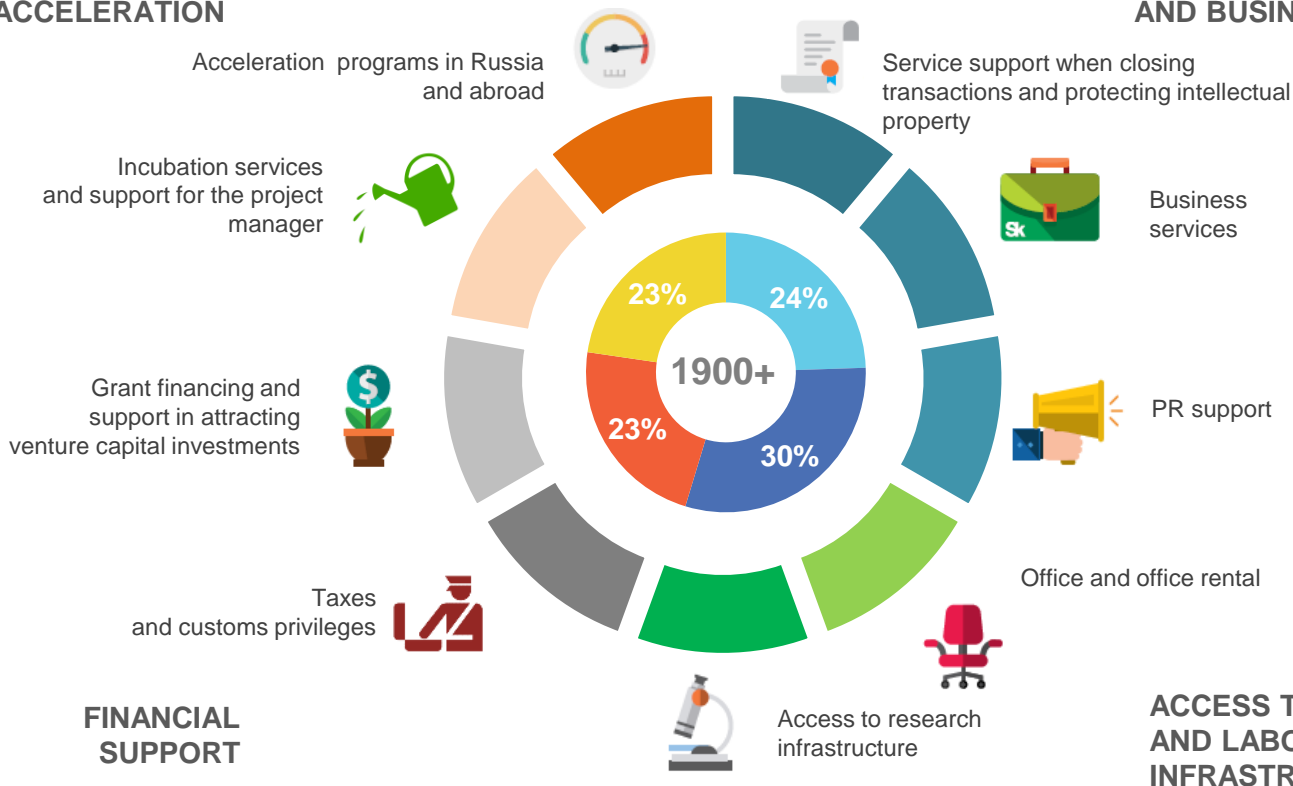
THE SKOLKOVO FOUNDATION MANAGED TO BRING TOGETHER THE BEST RUSSIAN TECHNOLOGICAL START-UPS IN THE MOST PROGRESSIVE SPHERES





INCUBATION AND ACCELERATION

R & D AND BUSINESS SERVICE



FINANCIAL SUPPORT

ACCESS TO RESEARCH AND LABORATORY INFRASTRUCTURE



NUCLEAR TECHNOLOGIES IN SKOLKOVO: LOCAL AND RELATED TECHNOLOGIES OF NUCLEAR / THERMO-NUCLEAR ENERGY



Sorbents, LLC



Nanostructured sorbents of radionuclides on the basis of clay-salt slurries for nuclear energy and agriculture

SPIN-Pro, LLC



Compact neutron generator based on the gyrotron

Pharm-Sintez Lab, LLC



Radiofarm drugs to detect neuroendocrine tumors and prostate cancer

AKSION-RDM, JSC



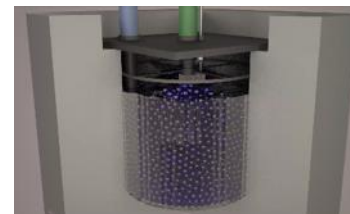
the creation of ion exchange resins for the refining of precious metals and the extraction of radionuclides.

Scientific and Technical Innovation Center, LLC



Neutron cancer therapy on the basis of a compact nuclear reactor MARS

Eksorb-Development, LLC

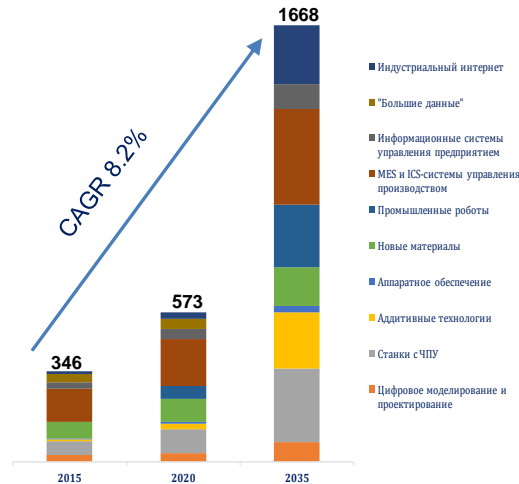


Creating a mobile unit for conditioning of liquid radioactive waste (LRW) NPP

THE WORLD IS EXPERIENCING THE 4TH INDUSTRIAL REVOLUTION WHICH IS CHANGING THE GLOBAL ECONOMIC LANDSCAPE AND THE LABOUR MARKET

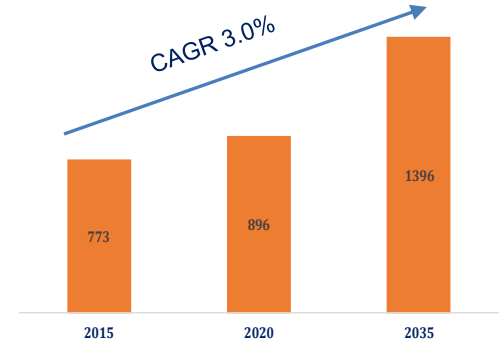
- Big Data and the development of artificial intelligence technologies;
- Widespread sensorization and development of IoT technologies;
- The emergence of new computer interfaces;
- The appearance of fundamentally new materials and the development of additive technologies;
- Gradual Intellectualization of Robotics

Global market of Smart Factory components, USD bln*



Global market of Smart Factory design and engineering services, USD bln*

(*Global Engineering Services Market Research", IBISWorld, 2016)



2016 Global Industry 4.0 Survey (PWC): 2,000+ technology companies from 26 countries

USD 907 bln

Annual investment in digital technologies (till 2020)

USD 412 bln

Expectations of the aggregate annual profit from cost optimization and efficiency raise (till 2020)

Expected ROI

- Within 2 years – 55% of the companies;
- Within 2-5 years – 37% of the companies;
- Over 5 years – 8% of the companies.

The companies' refusal of strategic investment in the advanced industrial technologies ⇔ Definite loss of a technology company global competitiveness in the mid/ long term



ADVANCED INDUSTRIAL TECHNOLOGIES IN THE SKOLKOVO



ADVANCED INDUSTRIAL TECHNOLOGIES	SKOLKOVO STARTUPS
PREDICTIVE ANALYTICS SMART NETWORKED PRODUCTS (IoT) SMART FACTORIES (IoT)	> 10 companies – the Industrial Internet technologies; > 90 companies – the Industrial Internet components (transmitters, sensors).
ADVANCED ROBOTICS	> 20 companies – industrial, utility, and educational robotics
ADDITIVE MANUFACTURING (3D PRINTING)	> 20 companies
NEW ADVANCED MATERIALS	> 100 companies
HIGH PERFORMANCE COMPUTATIONS DIGITAL DESIGN, MODELLING, AND ENGINEERING DESIGN WITH OPEN SOURCE CODE / DIRECT CLIENT INPUT	> 40 companies
AUGMENTED REALITY (TO IMPROVE QUALITY; TRAINING, EXPERT KNOWLEDGE) AUGMENTED REALITY (TO EXPAND CUSTOMER SERVICING AND EXPERIENCE)	> 20 companies



THE INDUSTRIAL INTERNET, IIoT, IN THE SKOLKOVO: 10+ COMPANIES PARTICIPATING IN THIS SEGMENT



- Remote monitoring and unmanned diagnostics of the production equipment
- Monitoring of the production facilities
- Analysis of the acquired data, and predictive simulation
- Control of the production facilities lighting
- Monitoring of the human motion at the territory of an enterprise.
- Prevention, containment of accidents, emergencies
- Adaptive control of the motive-power unit



SKOLKOVO OPPORTUNITIES FOR DEVELOPMENT OF TECHNOLOGIES AND BUSINESS PARTNERSHIP

Technology

- 1900+ start-ups, of which more than 250 start-ups housed in Skolkovo
- 90+ R & D centers of international and Russian corporations
- Skoltech - created in partnership with MIT - international scientific competencies, research equipment and students. Leading Russian Center for Additive Technologies, Digital Technologies for Industry

Infrastructure

- Urban environment oriented for comfortable work of researchers by leading international architects - international schools and clinics, residential complexes, parks.
- The international community of researchers, entrepreneurs and scientists creates a unique environment for the formation of new world-class ideas and technologies.
- Unique research equipment is concentrated in 20 shared centers, laboratories and engineering centers of corporations and startups.

Benefits and Investments

- Tax and customs benefits for Skolkovo residents: UST 14%, income tax 0%, VAT 0%, customs duties on imported research equipment 0%, property tax 0%
- Simplified hiring of foreign employees
- Government subsidies of up to 300 million rubles, available, including to foreign startups
- Special investment contracts - agreements with the state, guaranteeing the stability of tax and regulatory conditions

Market

- The most open platform for international high-tech business in Russia, where innovations are created for the whole country and the world
- Comfortable platform for deep localization of foreign technologies with financial and administrative support from the state
- New market niches and applications for innovative developments due to the diversity of technological areas of companies in Skolkovo
- Formation of state policy in the field of introduction of new technologies



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