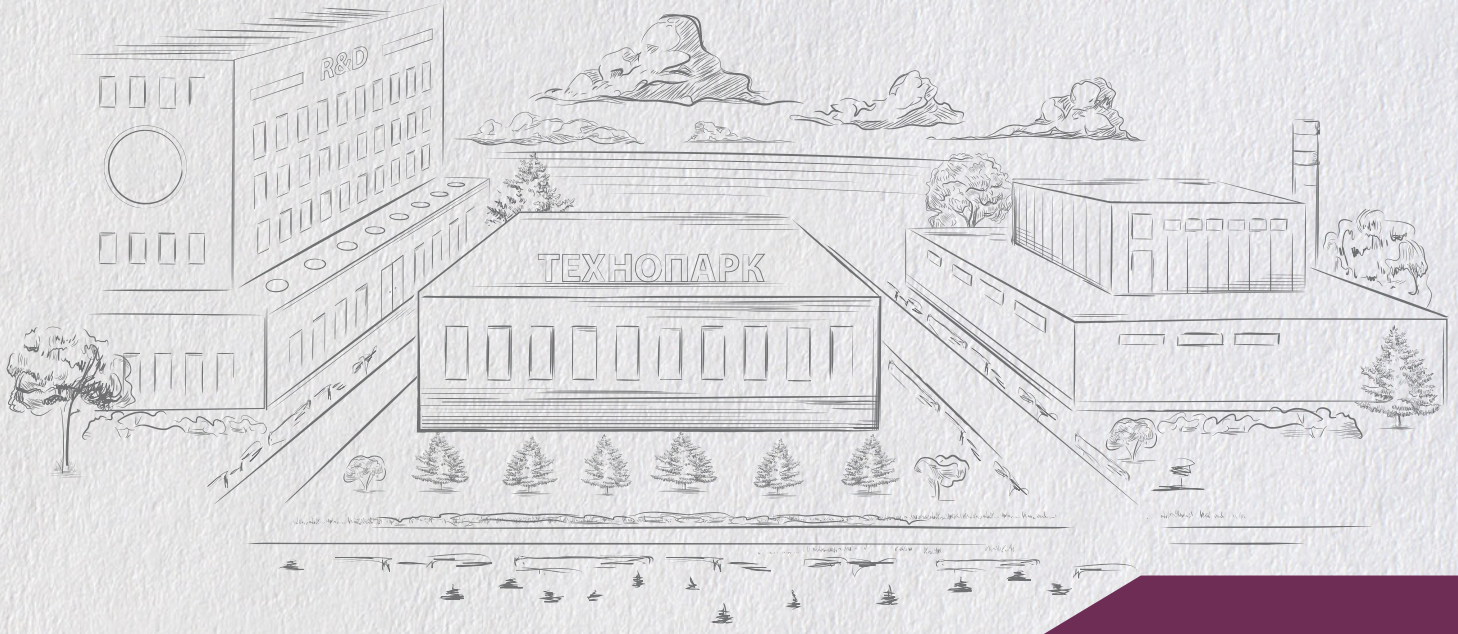
ASSOCIATION FOR THE DEVELOPMENT OF CLUSTERS AND TECHNOLOGY PARKS OF RUSSIA



V ANNUAL REVIEW "RUSSIAN TECHNOLOGY PARKS" 2019

With support of

MINISTRY OF INDUSTRY AND TRADE OF RUSSIA

The Ministry of Economic Development of the Russian Federation

UDK 332.14

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Annual Review "Russian Technology Parks - 2019" was prepared by the authors of the Association for the Development of Clusters and Technology Parks of Russia. It is dedicated to the specific features of technology parks development in Russia and abroad as well as benchmarking Russian technology parks' operation efficiency.

This issue presents a comprehensive research of current technology park development level, specific features of their development, their managing companies' operational efficiency and legislation on technology parks. This information allows technological enterprises and investors to find their way through the variety of sites bearing in mind projects in progress while the regional authorities and development institutions can find there the best practices of technology parks operation to disseminate.

Annual review "Russian Technology Parks - 2019" is intended for a wide range of readers interested in the issues of innovation activity, regional economy development and investment attraction, strategic planning and socioeconomic development. It can be used by the members of technology park managing companies and residents, federal, regional and local authorities and expert society.

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Creation of new industries and improvement of technological level of the real sector of the economy are impossible without modern infrastructure. Industrial technology parks in the regions contribute to the growth of investment attractiveness of projects for the development of high-tech products. The infrastructure of technology parks allows enterprises to reduce the costs of research and development, as well as the placement of production facilities.

Despite the novelty of this industrial policy tool, 47 industrial technology parks are successfully operating today in Russia and 13 more are created. Russian regions express their desire to create such sites on their territory.

The Ministry of industry and trade of the Russian Federation has been providing financial support for industrial technology parks since 2015. The main support measures include reimbursement of regional budget expenses on creation of the infrastructure for industrial technology parks through the refund of taxes and customs fees paid by residents, as well as subsidies for the managing companies of industrial technology parks to compensate part of the cost of interest on loans.

The Ministry is interested in the development of industrial technology parks in the regions. We will continue to provide support measures and improve them, taking into account the needs of investors and managing companies of industrial technology parks, as well as the opinion of the expert community.

Denis
MANTUROV

Minister of industry and trade
of the Russian Federation

"CREATION OF INDUSTRIAL TECHNOLOGY PARKS IN THE REGIONS CONTRIBUTES TO THE GROWTH OF INVESTMENT ATTRACTIVENESS OF PROJECTS FOR THE DEVELOPMENT OF HIGH-TECH PRODUCTS"

Today, technology parks are among the most effective tools of the national project " Small and medium-sized businesses and support for individual entrepreneurial initiative», which solves the most important task of creating favorable environment for the development of high-tech businesses in the regions.

The Ministry of economic development of the Russian Federation plans to provide financial support to 129 objects of specialized infrastructure, including technology parks, until 2024. This year, 7 applications of technology parks were approved and will be supported by 2.56 billion rubles of budget funds in 2020-2021.

It is important to note that most of the supported projects are initiated by private investors. For the Ministry it confirms that technology parks can be created with effective business models and reach self-sufficiency within 5-7 years.

This year, in order to further develop technology parks, the Ministry of economic development of the Russian Federation signed a cooperation agreement with the Association of clusters and technology parks of Russia. We highly appreciate the quality of the Association's work and hope that our joint efforts will give a powerful impetus to further development and improvement of the efficiency of technology parks and the formation of favorable environment for the growth of small and medium-sized high-tech businesses in the regions.

Maxim
ORESHKIN

Aide to the President
of the Russian Federation

“TECHNOLOGY PARKS ARE AMONG THE MOST EFFECTIVE TOOLS OF THE NATIONAL PROJECT «SMALL AND MEDIUM-SIZED BUSINESSES AND SUPPORT FOR INDIVIDUAL ENTREPRENEURIAL INITIATIVE”

An important result of the work of the State Duma Committee on economic policy, industry, innovative development and entrepreneurship in 2018 is the adoption of amendments which fix the term "industrial technology park" in Russian legislation and determine the legal norms of their state support. This law is particularly important due to the constant increase in the number of industrial technology parks. It also contributes to the implementation of the "May decree" of the President of Russia and the increase in the number of employees in the sphere of small and medium-sized businesses.

Industrial technology parks as one of the most effective tools of industrial policy contribute to the solution of such strategically important tasks as import substitution, increasing the volume of non-resource exports of high-tech products, diversification of enterprises of the military-industrial complex.

The United Russia project “Locomotives of growth” played an important role in the development of industrial technology parks. This project is aimed at creating conditions for progressive development of Russian modern economy, assisting in the creation of new enterprises and industries, developing public-private partnerships, and supporting SME infrastructure.

The party project "Locomotives of growth" will continue to provide comprehensive support to industrial technology parks in order to solve the tasks set by the President on stimulating diversification of Russian economy, improving legislation, business development mechanisms and practices and creation of industrial infrastructure.

Denis KRAVCHENKO

Deputy of the State Duma,
Deputy Chairman of the Committee on economic policy, industry, and innovative development and entrepreneurship

“INDUSTRIAL TECHNOLOGY PARKS CONTRIBUTE TO THE SOLUTION OF SUCH STRATEGICALLY IMPORTANT TASKS AS IMPORT SUBSTITUTION, INCREASING THE VOLUME OF NON-RESOURCE EXPORTS OF HIGH-TECH PRODUCTS, DIVERSIFICATION OF ENTERPRISES OF THE MILITARY-INDUSTRIAL COMPLEX”

Technology parks have been developed in Russia for more than 25 years. Despite the fact that the first "wave" of creating technology parks in the 1990s did not bring tangible results, it was a period of invaluable experience of trial and error that allowed the state to develop approaches for the creation and financing of technology parks in the mid-2000s. Technology parks that were created in the period from 2006 to 2014, mainly with the participation of the state, have generally shown their effectiveness and currently make a significant contribution to the technological development of the regions.

Since 2015, there has been a steady tendency to harmonize the legal framework for the creation and development of technology parks. Also, due to limited public funding opportunities, the importance of the role of private companies and investors in creating new technology parks increased significantly.

For several years, key efforts to develop technology parks have been focused on developing a commercially effective model of a private technology park with a payback period of 5-7 years. Also a lot of effort has been made in improving and increasing the availability of state support measures for technology parks. The result of this work was the creation of dozens of private technology parks and providing support for them from the Ministry of economic development and the Ministry of industry and trade of the Russian Federation. Thus in 2018-2019 technology parks received state support amounting to more than 5 billion rubles.

The Association for the Development of Clusters and Technology Parks of Russia provides comprehensive assistance in the development of technology parks in Russia, systematically working on the formation of a regulatory framework for their operation and support, as well as identifying and disseminating the best domestic and international practices for the development of technology parks and the activities of their managing companies. This review, already the 5th in a row, clearly demonstrates positive development dynamics of technology parks in Russia and reflects the results of the efforts of the government, business and expert community.

Andrey SHPILENKO

Director of the Association for the Development of Clusters and Technology Parks of Russia

“TECHNOLOGY PARKS REVIEW DEMONSTRATES POSITIVE DEVELOPMENT DYNAMICS OF TECHNOLOGY PARKS IN RUSSIA AND REFLECTS THE RESULTS OF THE EFFORTS OF THE GOVERNMENT, BUSINESS AND EXPERT COMMUNITY”

INTERVIEW

WITH THE DIRECTOR OF THE ASSOCIATION FOR THE DEVELOPMENT OF CLUSTERS AND TECHNOLOGY PARKS OF RUSSIA ANDREY SHPILENKO

Director of the Association for the Development of Clusters and Technology Parks of Russia
ANDREY SHPILENKO

Andrey, in recent years the list of support measures for Russian technology parks expanded significantly. What are the general trends in the development of technology parks in Russia?

Today, the Russian technology parks market is already close to saturation, but their number continues to grow by about 10-15 sites per year. In general, their growth is caused by private technology parks created by commercial structures for profit. In this regard, the main trend in the development of technology parks is the increasing number of highly specialized technology parks compared to technology parks with multiple specializations. In addition, an increasing number of Russian regions provide their own support measures to managing companies and residents of technology parks showing the growth of interest of regional authorities in the development of this kind of infrastructure at local level.

How do technology parks affect the country, regions and enterprises?

The creation and development of technology parks positively affects the socio-economic development of any region. New jobs are created in resident companies and the volume of tax deductions is growing. Also, technology parks' formation increases the number of SMEs provided with preferential access to production facilities. It also leads to launching new production lines, including import-substituting and export-oriented production.

Technology parks are effective tools for creating and developing innovative companies all over the world/ They are created to transform scientific developments into new technologies, experimental and serial samples of products and to develop high-tech industries. Such infrastructure is especially important in the context of the tasks of import substitution and increasing non-resource exports, since their implementation involves substantial R&D costs.

How hard is it to create a technology park today?

The main difficulty in implementing technology park projects is associated with long periods of reaching their design capacity, usually about 7-10 years due to the need to create a developed technological infrastructure on technology park's territory that meets the needs of residents. Infrastructure development significantly increases costs. However, at present, with existing technology parks' creation support measures of provided by the Ministry of Economic Development of Russia as part of the national project "SMEs and support for individual entrepreneurial initiative", which cover up to 80% of project costs, the payback period for an investor can be reduced to 4-5 years.

What investors may be interested in technology park projects? What are the advantages of technology park model for an enterprise?

Today the most promising projects in Russia are those that imply attracting SMEs as tenants to the sites of existing large industrial plants ("cooperative" technology park model). It allows the company to fill the extra empty spaces, get rid off non-core activities and reduce costs. For SMEs, in turn, this model not only allows to receive stable long-term orders from large enterprises, but also provides access to fully-equipped office, laboratory and production facilities. This significantly reduces their capital and operating costs.

What are the main obstacles to the development of technology parks in Russia and how to eliminate them?

One of the key issues related to the functioning of technology parks and the implementation of state support measures for them is that the Ministry of Industry and Trade of Russia does not provide sufficient state support for industrial technology parks. The measures established in the Decree of the Government of the Russian Federation of October 30, 2014 №1119 are more suitable for state technology parks projects and private investors are not able to use them. Another mechanism established in the Decree of the Government of the Russian Federation of August 11, 2015 №831 was cancelled in 2017 and it is unknown whether it will be resumed in the nearest future.

In addition, today in the National projects of the Russian Federation and their respective state programs there are no measures aimed at improving the quality and ensuring the operation efficiency of technology parks, as well as no target indicators for their development. Furthermore, the coverage of regional support measures for managing companies and residents of technology parks is insufficient.

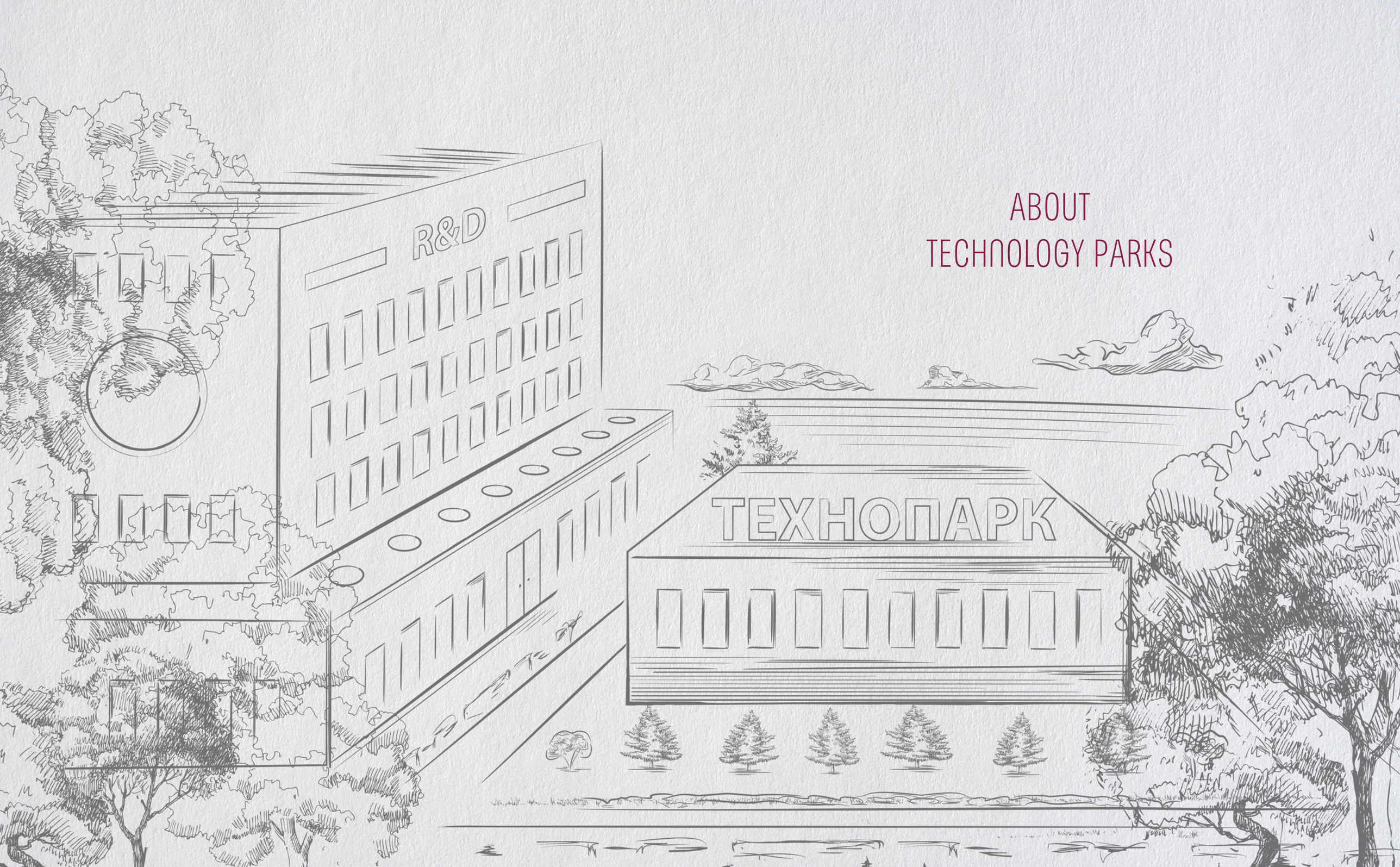
What is the Association doing for technology parks development? What are your plans for next year?

Today the main goal of the Association is the promotion of necessary measures for solving the aforementioned problems. Firstly, it implies introducing amendments to the Decree of the Government of the Russian Federation of October 30, 2014 №1119 or developing a new regulatory act to provide subsidies for the creation of industrial and technological infrastructure of private industrial technology parks. Another important task is related to the renewal of support for managing companies of private industrial technology parks provided by Decree of the Government of the Russian Federation of August 11, 2015 №831 until the end of 2022. These proposals were approved at meetings of the working subgroups of the State Council of the Russian Federation ("Technological Entrepreneurship" subgroup of "Small and Medium Enterprises" working group; "Industrial Export Support and Entering New Markets" and "Regional Policy and Infrastructure Support" subgroups of "Industry" working group).

The Association is actively working to inform regional authorities and private investors interested in developing industrial sites according to the industrial technology park model about the characteristics, development trajectories and support measures. Representatives of the Association participate on a regular basis in the events held by government authorities, conduct field training sessions in Russian regions on the creation and development of technology parks.

Since 2019 the Association is holding an advanced full-time distance education program for management teams of technology parks (for representatives of public authorities, managers and specialists of technology park managing companies and potential investors). The purpose of this program is the development of practical competencies in the creation and management of industrial technology parks, it is based on a synthesis of best Russian and international practices. Two groups of participants have already been trained under this program. In the coming year, it is planned to organize at least two program streams, one of which will be launched in January 2020.

ABOUT
TECHNOLOGY PARKS



INTERNATIONAL EXPERIENCE IN THE DEVELOPMENT AND OPERATION OF TECHNOLOGY PARKS

Different countries have different concepts and definitions for technology parks, since there is no universal concept. The equivalent concepts are considered: "technology park", "technopolis", "research park", "science park". Over the past 10 years the number of technology parks in the world was steadily increasing and the existing technology parks were expanding due to their significant role in the development of science, technology and entrepreneurship. Currently, most technology parks are based on the sites of universities and research centers. However, it is also common when several parties become the founders of a technology park. It is an effective model in terms of financing and risk sharing. As a rule, the organizations that found technology parks include: universities or research centers providing scientific support and personnel; city and (or) regional administration providing land and infrastructure; regional development organization providing funding and buildings and (or) land to a science park. In world practice the share of specialized technology parks is increasing accompanied by a decrease in the number of diversified ones. The dominant areas of technology parks activity nowadays are IT and biotechnology. More than a half of technology parks in the world are primarily state-owned, but over the past decade private investment in technology parks has grown significantly (up to 40%).

Today there are more than 150 (300) technology parks in the United States. The first technology park in the world was created in the Stanford University and from the very beginning of its activity in 1951 it became an accumulating center of commercial research activities. Many of its startups transformed over time into large international corporations. US technology parks have special tax conditions. For example, for every $ 100 of property valuation no more than 10 cents are taxed. However, in recent years the creation of new technology parks in the United States has noticeably decelerated, since the state now pays more attention to the support of existing technology parks.

Creation of technology parks in the EU is the key component of the universal science and technology policy aimed at stimulating innovation and accelerating the structural adjustment of member economies. One of the features of the modern European technology park model is the presence of several founders. Such a mechanism of management is more complicated than a single founder mechanism, but much more effective in terms of access to financing and risk diversification. Technology parks and technopolises financing in the EU takes forms of state orders, soft loans, direct investment, financial guarantees. In addition, fiscal preferences and non-financial services and support measures are used.

The Japanese technology park model implies construction of new innovative cities – "technopolises" where universities and high-tech industrial production facilities are concentrated based on their cooperation and specialization. Technopolises allowed Japan to rebuild the national economy and develop knowledge-intensive and highly profitable industries. Technopolises also play crucial role in the Japanese regional development strategy in the context of the transition to a high-tech industry structure and acceleration of scientific and technological progress. The state and the prefecture have a substantial influence on the creation and development of technopolises providing a significant share of their financing, supporting their residents in the form of tax incentives, subsidies, low interest loans, and preferential rental rates.

The first Chinese technology park was opened in Shenzhen in 1985. Today 133 technology parks (53 national, 50 provincial and 30 university-based) are operating in the country. The key goal of technology parks' development in China was the government's intention to create the most favorable conditions for attracting foreign investment in the economy, resulting in significant tax incentives and other support measures provided by the government to stimulate innovation. Residents of local technology parks are exempt from taxes for the first few years. Also, a distinctive feature of Chinese technology parks is that they are created and managed by state authorities.

AMERICAN MODEL

Present in: USA, Canada, UK, South America.

Based on: universities and research centers.

Purpose of creation: ксommercialization of scientific developments, acceleration of startups in high-tech sectors of the economy.

State involvement: low (provision of support measures).

Priority industries: IT, computer technology, electronics.

Example: Stanford University Technology park (USA).

JAPANESE MODEL

Present in: Япония.

Based on: large industrial enterprises of priority high-tech industries and universities.

Purpose of creation: leveling the level of development of prefectures.

State involvement: high (initiation, management, support measures, financing).

Priority industries: IT, electronics, high technology industry.

Example: Research Technology park in Yokosuka (Japan).

CHINESE MODEL

Present in: China, Taiwan, Singapore, South Korea, Hong Kong.

Based on: universities and (or) high-tech enterprises.

Purpose of creation: attracting foreign investment.

State involvement: high (initiation, management, support measures, financing).

Priority industries: microelectronics, telecommunications, biotechnology.

Example: Zhongguancun Technology park (China).

MIXED MODEL

Present in: Europe, CIS countries.

Based on: universities and (or) high-tech enterprises.

Purpose of creation: stimulation of innovative activity of high-tech enterprises.

State involvement: low / high.

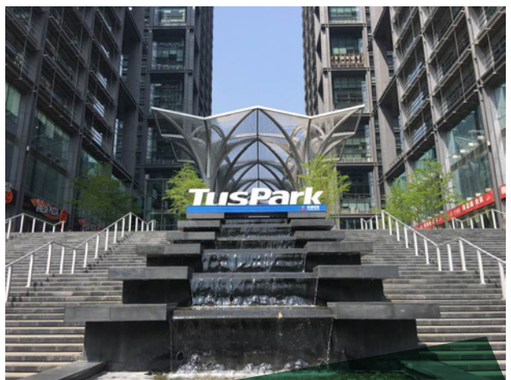
Приоритетные отрасли: depends on the priorities of the country's economy.

Example: Technology park "Ideon" (Sweden).

TECHNOLOGY PARK "IDEON" (Sweden)

Ideon Technology park (Sweden) is the first Swedish technology park created in Lund in 1983 (Lund is a traditional educational, scientific and innovative center) as a means of resolving a difficult economic situation when local enterprises have lost markets due to competition with Southeast Asia resulting in massive unemployment. Technology park was opened on the basis of Lund University and promoted job creation in high-tech industries. About 400 companies and 4 business incubators are working in the technology park creating more than 9,000 jobs and registration of 3,400 patents. The main residents' specializations are biotechnology, pharmaceuticals, information technology and electronics. Among the residents of the technology park are Axis Communications (first printer), Ericsson, Storytel, Tetra Pak, Gambro (first artificial kidney). A feature of the Ideon Technology park is that it is mostly an open-space which enhances cooperation between residents.

In addition, an early-stage fund for start-ups operates on the basis of the technology park, and the managing company independently supports investments attraction in the technology park, due to which the survival rate of startups is 80%.



TECHNOLOGY PARK "TUSPARK" (China)

TusPark (China) is the fastest-growing technology park in the world. TusPark was established at Tsinghua University and is situated in the southeastern part of Beijing in the Zhongguancun Innovation Zone. Technology park covers an area of 770,000 square meters accommodating more than 1,500 companies on its territory, including Microsoft, Google, Sun Microsystems, MSN, Schlumberger, P&G, Toyota, NEC. The main technological branches of the technology park include biotechnology, energy, ICT and software development.

The managing company of the technology park "TusHoldings Co." specializes in the construction, development and management of technology parks, technopolises and business incubators not only in China but throughout the world. Thanks to its successful activities, the technology park has a wide network of branches throughout China (more than 30) and has become a recognizable brand. The significant role of state support is also worth mentioning, namely tax incentives for residents, regulatory exemptions, as well as direct state and municipal investments in innovative projects of technology park residents.

The research and development technology park in the city of Yokosuka (Japan) opened in 1997 is one of the most successful technology parks not only in Japan, but also in the world. The main specialization of the technology park is ICT (mobile communications, satellite communications, optical wireless communications, radio communications, telecommunications, etc.). At the beginning of its operation the management of the technology park was rapidly developing applied research in the field of telecommunications and mobile communications, also using its the territorial proximity to the Japanese telecommunications giant, the Nippon Telegraph and Telephone Corporation. Due to the growth of the mobile industry, start-up projects, small companies and branches of the largest telecommunication companies like NEC, ZTE, NTT are successfully operating in the technology park. Today, 56 residents work in the technology park.

In order to minimize capital costs and develop the industry, as well as taking advantage of the concentration of research laboratories in the technology park, equipment is provided for collective usage for R&D, seminars, exhibitions, etc. with the participation of representatives of the scientific community, state and municipal bodies, venture funds.

SCIENTIFIC RESEARCH PARK IN YOKOSUKA (Japan)

Belarus High-Tech Park (Belarus) was founded in Minsk in 2005, its main specialization is IT (micro-, opto- and nanoelectronics, mechatronics, data transfer, radar, radio navigation, radio communications, blockchain, etc.). However, the most successful activity of the technology park falls on the period from 2018 and is associated with substantial state support to the ICT sector and the adoption of significant preferences for residents of the technology park. In particular, cryptocurrency exchanges, cryptocurrency exchange operators, cryptomining, smart contracting, blockchain, tokens, etc. were legalized. Residents of Belarus High Tech Park are exempt from most taxes, including income tax and VAT. In addition, companies and individual entrepreneurs registered in the technology park can use the preferences provided to them regardless of the location of their Belarusian office.

In May 2019, 505 residents were registered in the technology park including such IT giants as EPAM Systems, IBA Group, Ciklum, Itransition, Intetics, Bell Integrator. The software developed in the technology park is delivered to customers from 67 foreign countries.

BELARUS HIGH TECHNOLOGY PARK (The Republic of Belarus)

FEATURES OF THE FUNCTIONING OF TECHNOLOGY PARKS IN RUSSIA

185 organizations with certain technology park features were identified as a result of the 2018 study.

169 technology parks that best meet current requirements and recommendations are selected for further study.

THE RESEARCH METHODOLOGY

This overview of Russian technology parks was prepared by the Association for the Development of Clusters and Technology Parks of Russia with the participation of industry experts, as well as with information support from the Ministry of Industry and Trade of the Russian Federation.

Preparation of the review involved sending information requests to all the regions of the Russian Federation and Russian technology parks. The Association was provided with official letters from the executive authorities of all 85 regions of Russia with completed questionnaires on technology parks.

As part of the study the dynamics of the creation of Russian technology parks and nanotechnology centers in the period from 1990 to 2019 was investigated and analyzed.

RUSSIAN REGIONS SURVEY

- Regional laws and other regulatory acts on technology parks
- Benefits and preferences for technology park managing companies
- Benefits and preferences for technology park residents
- The list of Russian technology parks

TECHNOLOGY PARKS SURVEY

- General information about the technology park
- The territory and infrastructure of the technology park
- Technology park specialization
- Volumes and sources of technology park financing
- Performance indicators of residents and managing companies of the technology park
- Technology park investment indicators
- Business model and services of technology park managing companies.

THE TECHNOLOGY PARK

Technology park is a specialized complex of buildings and structures, including the necessary industrial and technological infrastructure, providing favorable conditions for the conduct of scientific, industrial and innovative activities for its residents.

Technological infrastructure is a combination of real estate and equipment that are necessary for the implementation of scientific, technical or innovative activities.

Industrial technology park is a technology park that is equipped with production and (or) technological equipment. Residents of such an industrial park specialize in manufacturing industrial products, providing specialized services, research and development.

STAGE I: THE BEGINNING OF 90S

First technology parks in Russia appeared in the early 1990s. In 1990, the first technology park in Tomsk was created by the name of Tomsk Science and Technology Park. In the early 1990s there was a rapid increase in the number of organized and registered Russian technology parks (2 technology parks in 1990, 8 in 1991, 24 in 1992, 43 in 1993). In the mid-1990s their development continued, technology parks were organized on the basis of state scientific centers, academic towns, science cities.

90% of the technology parks created during this period were closed due to the absence of state policy and ineffective management.

The second stage of the large-scale creation and development of technology parks in Russia (from 2006 to present) started with the formulation of a focused national innovation system state policy. At the federal level, the implementation of targeted programs for the development of technology parks in the country was launched. In order to ensure the acceleration and modernization of high-tech sectors and their transformation into one of the main driving force of the country's economic growth in accordance with current priorities, a comprehensive program "Creation of high technology parks in the Russian Federation" was approved by the Decree of the Government of the Russian Federation of March 10, 2006 №328-R.

STAGE II: 2006-2014

Since 2007, the coordination of this program has been carried out by the Federal Agency for Information Technologies, later by the Ministry of Communications of the Russian Federation. The comprehensive program providing financial support for the construction of technology parks from the federal budget was finished in 2014. As a result of this program 12 high technology parks were created with a total area of more than 450 thousand m2 and tens of thousands of high-performance jobs. However, most of them require constant financial support from the state.

Since 2013, there has been a steady trend towards harmonization of Russian legislation including formulation of common requirements and criteria as well as state support measures for these facilities. These requirements apply to technology parks and their managing companies. In 2013, the President of the Russian Federation instructed the Government of the Russian Federation to promote the development of a network of technology parks throughout Russia, to create an effective innovation ecosystem for the development of entrepreneurship (order of the President of the Russian Federation V.V. Putin dated December 27, 2013 № 3086 for the implementation of the Message to the Federal Assembly). In 2014, the Association of Clusters and Technology Parks of Russia developed the National Standard (GOST R 56425-2015 Technology parks. Requirements).

STAGE III: SINCE 2015

At the end of the second quarter of 2018, Federal Law №160-FZ of June 27, 2018 amended the Federal Law of December 31, 2014 N 488FZ on Industrial Policy in the Russian Federation. These changes provide for legislative consolidation of the concept of "industrial technology park" as well as the legal basis for the activities of industrial technology parks.

In case of limited access to budget funds, a request was made to improve the efficiency of technology parks with the participation of private businesses.

THE MAIN TECHNOLOGY PARK MODELS IN RUSSIA

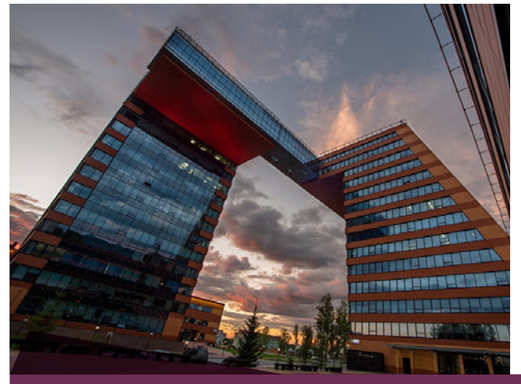
UNIVERSITY MODEL
(14% of technology parks)

- Created as structural units of universities
- State-owned (if the University is state-owned)
- Special feature: interaction with students and university staff
- As a rule, University Technology parks are non-profit. They can provide technology services to third-party organizations
- The goal: developing entrepreneurial competencies among scientists and students, commercializing scientific research results

Infrastructure model
(11% of technology parks)

- Created to use extra resources and free space to accommodate high-tech enterprises
- State-owned, private-owned or mixed
- Special feature: a range of services for medium or large high-tech enterprises
- Sources of income: rental and basic services
- The goal: creating conditions for medium and large high-tech businesses

- Created at major research centers or near them
- State-owned or mixed
- Special feature: unique technological infrastructure for the development and commercialization of R&D
- Sources of income: rental, basic and technological services
- The goal: creating and accelerating technological SMEs



INNOVATIVE MODEL
(35% of technology parks)

- Created on the basis of a large industrial enterprise with free industrial spaces interested in bringing together its partners
- Private-owned or mixed
- Special feature: infrastructure for new product development for inclusion in the supply chain of the head company
- Sources of income: rental and technology services, project management
- The goal: creating conditions for high-tech products localization

COOPERATIVE MODEL
(40% of technology parks)

TECHNOLOGY PARKS OF RUSSIA

169 TECHNOLOGY PARKS

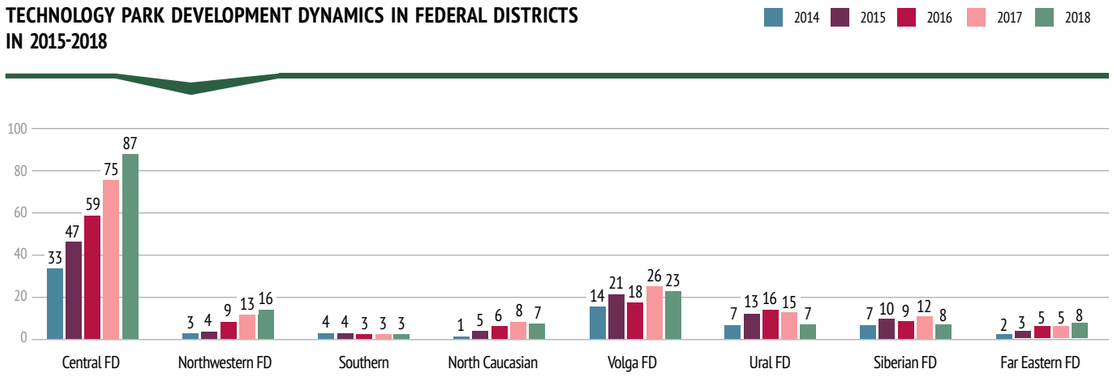
54 REGIONS

INCLUDING **63** INDUSTRIAL TECHNOLOGY PARKS

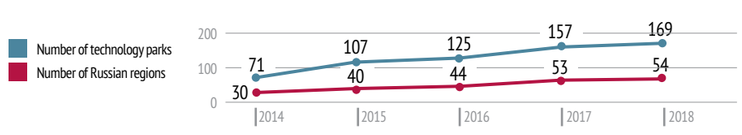
OF WHICH **50** EXISTING
13 IN CREATION

RUSSIAN TECHNOLOGY PARKS INDICATORS

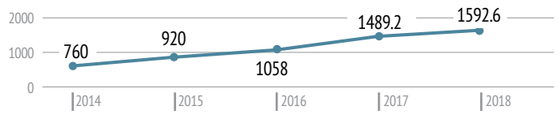
TECHNOLOGY PARK DEVELOPMENT DYNAMICS IN FEDERAL DISTRICTS IN 2015-2018



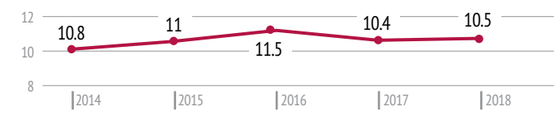
DYNAMICS OF TECHNOLOGY PARK DEVELOPMENT IN RUSSIA, UNITS



TOTAL TECHNOLOGY PARK AREA, HA



AVERAGE TECHNOLOGY PARK AREA, HA

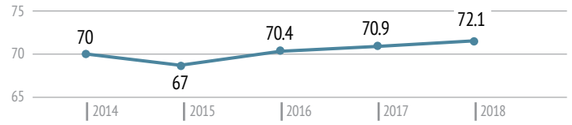


TECHNOLOGY PARK RESIDENTS' PERFORMANCE INDICATORS

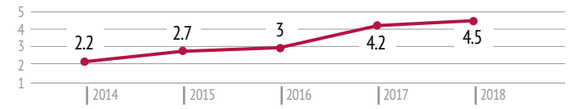
Total technology park residents' revenue in 2018	$4.3* billion
Total import substitution production output in 2018	$570 million
Number of IP objects registered by technology park residents	1172 units
Average R&D costs per one resident in 2018	$39.7 thousand
One resident's R&D costs per 1 employee in 2018	$2.38 thousand

* The values are given in US dollars here and throughout the Annual Review "Russian Technology Parks - 2019" according to the official annual average exchange rate of the Central Bank of the Russian Federation in 2018 (US$ 1 = ₽ 62.93)

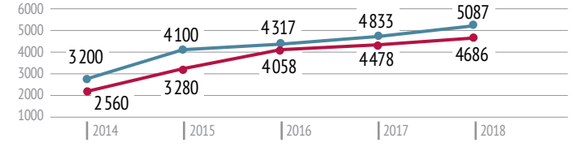
TECHNOLOGY PARK SPACES OCCUPANCY LEVEL, %



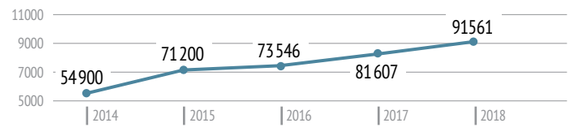
TOTAL AREA OF PREMISES PUT INTO OPERATION, MILLION M²



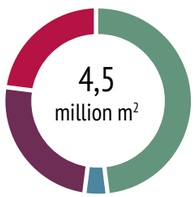
NUMBER OF RESIDENTS, UNITS



TOTAL NUMBER OF RESIDENTS' EMPLOYEES, PERSONS

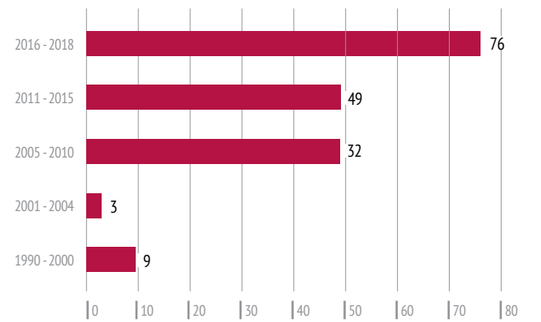


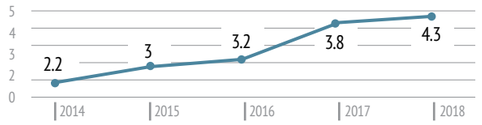
TYPES OF TECHNOLOGY PARKS PREMISES



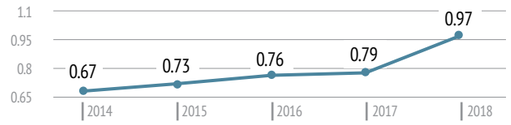
23.3%	Offices	1053.3
24.8%	Other premises	1120.7
4.1%	Laboratories	185.3
47.8%	Industrial premises	2156.7

YEARS OF TECHNOLOGY PARK CREATION





Total residents revenue, $ million



Average revenue per 1 technology park resident, $ million

INVESTMENT INDICATORS

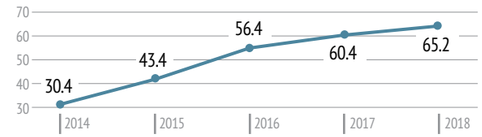
Accumulated total investments in technology park infrastructure — $1.56 million

Total technology park residents' investments in 2018 — $0.29 million

Average investment in technology park infrastructure — $0.98 million/ha

Relative technology park residents' investment in 2018 — $0.18 million/ha

INDICATORS OF TECHNOLOGY PARKS' BUDGETARY EFFICIENCY



Total amount of technology park residents' tax duties

Residents' investments attracted per 1 $ of budget investments in technology parks in 2018 — $9.3

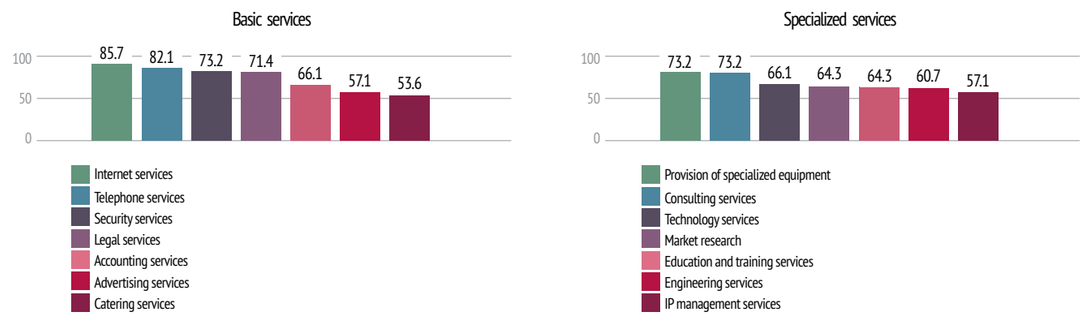
Amount of residents' tax duties in 2018 per 1 $ of total budget investments in infrastructure — $1.5

INDICATORS OF AVAILABILITY OF TECHNOLOGY PARKS' INFRASTRUCTURE

Average technology park territory construction density — 2835.5 m²/ha

Average area of technology park buildings and constructions — 27.1 thousand m²

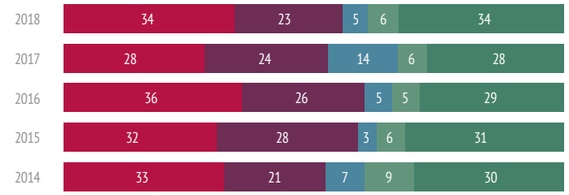
Average electric power — 0.68 mW/ha



The most widespread services provided by technology park managing companies, %

INDICATORS OF MANAGING COMPANIES' OPERATION

Average revenue of a managing company — $3.1 million



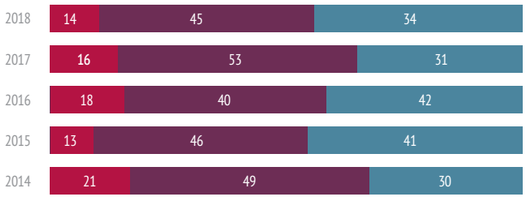
Composition of technology park managing companies' revenue, %

Joint-stock company
State (municipal) enterprise or institution
Autonomous institution
Non-commercial organization
Limited liability company

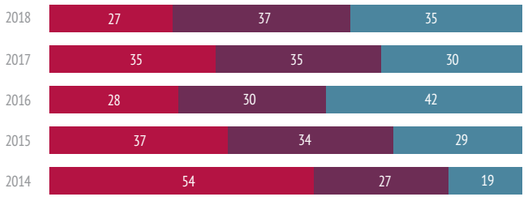
Organization forms of technology park managing companies by type, %

AVERAGE RENTAL COSTS PER 1 M² OF PREMISES IN A YEAR

	Average for Russian technology parks	Excluding Moscow technology parks' rental rates
Office premises	$99.3	$83.6
Laboratory premises	$84.1	$61.2
Industrial premises	$63.4	$49.3



Forms of ownership of technology park managing companies, %



Managing companies' funding sources, %

MEASURES FOR STATE SUPPORT OF TECHNOLOGY PARKS' CREATION AND DEVELOPMENT

NATIONAL STANDARD GOST R 56425 – 2015 "TECHNOLOGY PARKS. REQUIREMENTS"

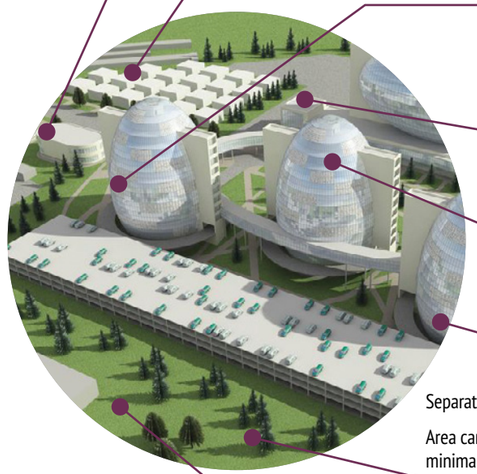
TECHNOLOGY PARK

a complex of utilities, transport and technological infrastructure objects managed by a managing company providing full-cycle services for placement and development to residents of the technology park

INDUSTRIAL TECHNOLOGY PARK

A technology park whose complex of objects, buildings, constructions and equipment is designed for development of industrial production.

MAIN REQUIREMENTS OF THE NATIONAL STANDARD



- Availability of technological infrastructure
- Availabiliy of connection to the central water supply, sanitation, gas and heating systems
- Not less than **20%** of the area is allocated for SMEs residents
- Availability of the site of connection to electricity networks in the territory of a technology park with a power of at least **2 mW** or with a power density of at least **0.2 mW** per hectare of the territory of the technology park
- Total technology park premises' space not less than **5000 m²**
- Technology park must have a managing company
- Separate territory with an area not less than **3.5 ha**

  Area can be less than 3.5 ha if construction density on the technology park territory is higher than the minimal value set by Russian regional authorities for technology parks
- Land plots should be categorized as industrial and (or) lands for settlement where industrial objects can be located

STATE SUPPORT MEASURES OF THE MINISTRY OF INDUSTRY AND TRADE OF THE RUSSIAN FEDERATION

MINISTRY OF INDUSTRY AND TRADE OF RUSSIA

Decree N 831 of 11.08.2015

SUBSIDIZING INTEREST RATES ON LOANS TAKEN BY MANAGING COMPANIES FOR TECHNOLOGY PARK INFRASTRUCTURE CREATION*

Compensating managing company's expenditures on interest loans for creating:

- Utilities infrastructure
- Technological infrastructure
- Transport infrastructure
- Buildings for residents

Agreement on compensation of expenses is concluded for the whole period of project implementation but not later than 2020

Decree N 1119 of 30.10.2014

COMPENSATION OF REGIONAL EXPENSES FOR TECNOLOGY PARK INFRASTRUCTURE CREATION

Compensation of expenses for creating:

- Utilities infrastructure
- Technological infrastructure
- Transport infrastructure
- Buildings for residents

Types of compensated regional expenses:

- Subsidies and contributions to MC's fixed assets
- Expenses for subsidizing MC's payments of the principal debt and (or) interest loans
- Direct expenses for tecnology park infrastructure creation

Maximal compensation

Implementation of technology park creation projects
$1 thousand per 1 m²
of total area of real estate objects

Technology park creation as part of reindustrialization projects
$1.2 thousand per 1 m²
of total area of real estate objects

First subsidy application deadline
up to 15 years
from project start date

*Continuation of this support measure is currently under consideration

LEGISLATION BASIS OF RUSSIAN TECHNOLOGY PARKS

STATE SUPPORT MEASURES OF THE MINISTRY OF ECONOMIC DEVELOPMENT OF THE RUSSIAN FEDERATION

The Ministry of Economic Development of the Russian Federation

Decree N 110 of 10.02.2019

Decree N 316 of 15.04.2014

State support measures are provided within the framework of the National project "SMEs and support for individual entrepreneurial initiative"

Subsidies are provided to regional budgets for state support of SMEs in order to provide them preferential access to industrial premises of technology parks. The Ministry of Economic Development of the Russian Federation is supporting technology parks and industrial technology parks (including private-owned).

- Utilities infrastructure
- Connection to utilities infrastructure
- Premises for residents (office, laboratory and industrial)
- Office, laboratory and industrial equipment
- Computers and software
- Office furniture
- Paying credit interest rates and (or) principal debt

APPLICATIONS SELECTION CRITERIA

1. Application quality (explanatory note, bisness-plan, master-plan, financial model)
2. Availability of similar infrastructure in the region (regions lacking industrial technology parks and priority territories have preference)
3. Share of private investments (projects with private investment share exceeding 25% are prioritized)
4. Confirmed demand for created premises (projects with letters of intent with residents on renting more than 30% of spaces are prioritized)
5. Project implementation period (projects with term of commisioning of all objects within 2 years are prioritized)

APPLICATION REQUIREMENTS

- Meeting the key requirements of the National standard GOST R 56425 – 2015 "Technology parks. Requirements" (or obligation to bring it into accordance within 2 years)
- Availability of design construction documents and obligation to conduct state expert appraisal for it before the financing starts
- Not less than 20% of investment in the project is from non-budgetary sources (private or loaned)
- Commisioning of industrial technology park not later than the first quarted of the third year of project implementation
- Official confirmation that regional authorities wil co-finance the project from regional budget (coefficient of regional co-financing for most regions is 1-4%)

CREATION AND DEVELOPMENT

MAXIMAL COMPENSATION:

$8 million for 2 years (not more than $4 million per year)

№	NAME OF TECHNOLOGY PARK	REGION	SUBSIDY AMOUNT, $ MILLION
	Tecnology park creation (develoment) projects approved by the Ministry of Economic Development of the Russian Federation in 2018		
1	Industrial technology park "Electropolis"	Pskov Region	8
2	Industrial Technology Park "Yuzhnaya Promzona"	Republic of Karelia	3.8
3	High Tech Park in the Republic of Mordovia	Republic of Mordovia	8
4	Industrial Technology Park "Monokristal"	Stavropol Territory	6.3
5	Technology park "Technocampus 2.0"	Ulyanovsk Region	8

TOTAL: 33.9

	Tecnology park creation (develoment) projects approved by the Ministry of Economic Development of the Russian Federation in 2019		
1	Industrial technology park "IKSEl"	Vladimir Region	8
2	Industrial technology park "Mashinostroenie"	Nizhny Novgorod Region	7.6
3	Technology park "Sarov"	Nizhny Novgorod Region	1.3
4	Industrial Technology Park of the GAZ Group	Nizhny Novgorod Region	8
5	Industrial Technology Park "Soyuz"	Penza Region	7.9
6	Industrial Technology Park "Magas"	Republic of Ingushetia	4.7
7	Industrial technology park "KSK"	Tver Region	7.9

TOTAL: 45.5

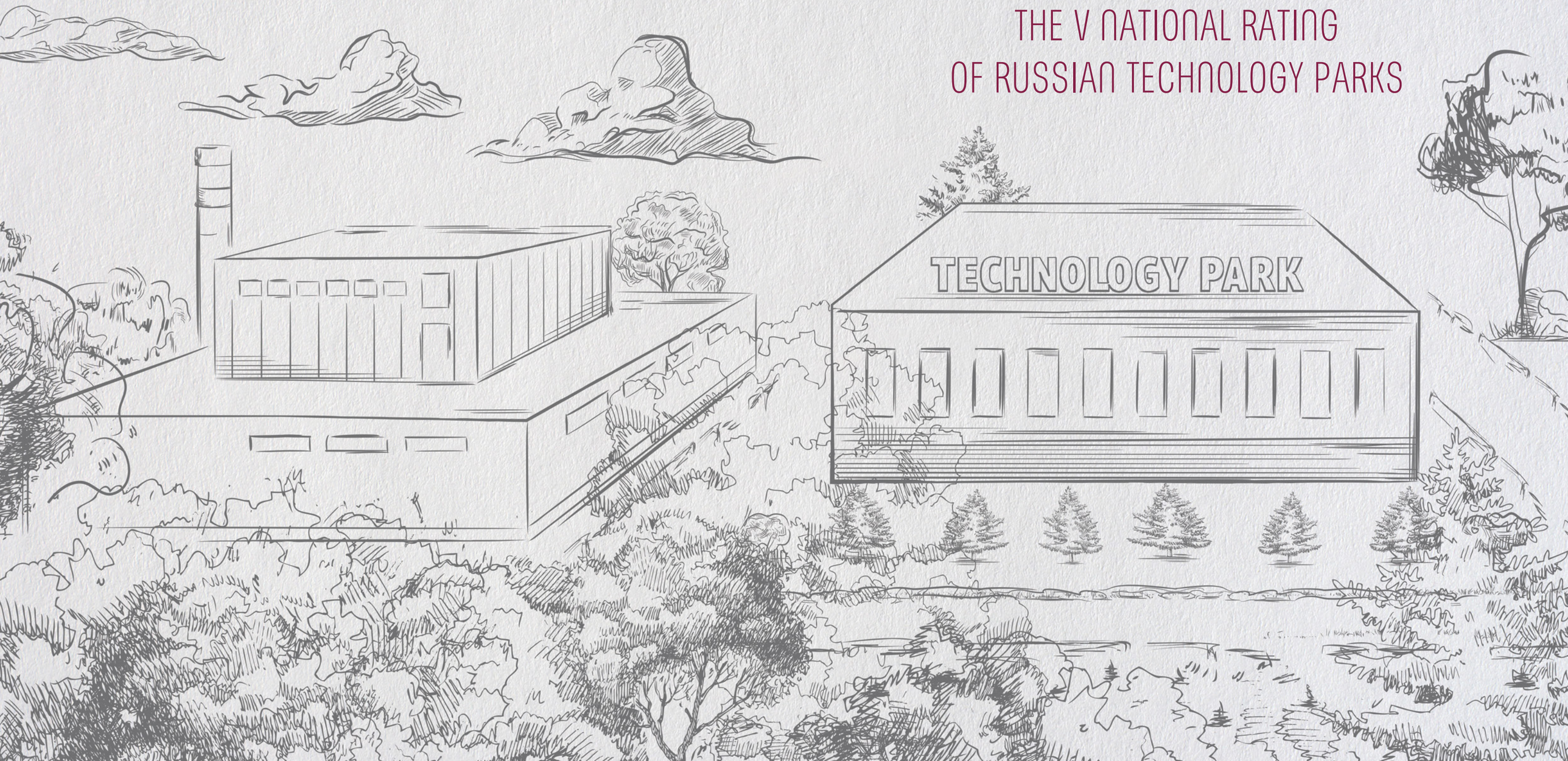
SUPPORT MEASURES FOR RUSSIAN TECHNOLOGY PARK MANAGING COMPANIES

Region	Income tax	Property tax	Land tax	Other regional support measures
Moscow	13.5%	0%	0.7%	Land plot rental rate - 0.01% of cadastral value
Kemerovo Region	13.5%	0%	-	5% for companies using simplified tax system
Moscow Region	13.5%	-	-	Provision of land plots for rent without bidding
Novgorod Region	13.5% for 5 years	0% for 5 years	-	-
Novosibirsk Region	-	0%	-	-
Perm Territory	12.5%	0%	-	-
Republic of Bashkortostan	-	0%	-	-
Republic of Buryatiya	12.5%	0%	-	-
Republic of Dagestan	-	-	-	Information and consultancy support
Komi Republic	-	-	-	Information and consultancy support
Republic of Tatarstan	-	0.5%	0%	-
Saratov Region	13.5%	0.1%	-	-
Sakhalin Region	-	-		Subsidies for expenditures compensation
Sverdlovsk Region	-	-		Subsidies
Stavropol Territory	-	0%		Lowering 95% of the rental rate for using state-owned industrial and office premises, buildings, equipment and other resources
Ulyanovsk Region	-	0%	-	Transport tax - 0%
Yamalo-Nenets Autonomous Okrug	-	-		Compensation of 50% of expenses related to providing preferential access to industrial premises to innovative companies
Vladimir Region	-	-		Subsidies Provision of land plots for rent without bidding
St.-Petersburg	-	0%	0%	-
Kaluga Region	-	0%	-	-
Republic of Karelia	-	-	-	Subsidies
Samara Region	-	0%	-	-

SUPPORT MEASURES FOR RUSSIAN TECHNOLOGY PARK RESIDENTS

Region	Income tax	Property tax	Rental rates	Other regional support measures
Moscow	13.5%	0%	-	-
Kemerovo Region	13.5%	0%	-	5% for companies using simplified tax system
Moscow region	13.5%	0%	-	-
Novgorod Region	13.5% for 5 years	0% for 5 years	-	2% for companies using simplified tax system for 5 years
Novosibirsk Region	13.5%	0% for IT-sector companies	-	Subsidies for innovative companies
Perm Territory	12.5%	1.1%	-	-
Republic of Bashkortostan	-	0%	-	-
Republic of Buryatiya	12.5%	0%	-	Subsidies for innovative projects of the residents
Republic of Dagestan	-	-	-	Information and consultancy support
Komi Republic	-	-	-	Information and consultancy support
Republic of Tatarstan	-	-	Reduced rates	-
Saratov Region	13.5%	0.1%	-	Information and consultancy support
Sakhalin Region	-	-	-	Reimbursement of expenses under industrial premises rental contracts
Sverdlovsk Region	-	-	-	Subsidies
Stavropol Territory	-	0%	-	-
Ulyanovsk Region	-	0%	-	Transport tax - 0%
Yamalo-Nenets Autonomous Okrug	-	-	-	Grants for innovative companies
Belgorod Region	-	-	50 % of the market value of rental rates for IT-companies	-
Nizhny Novgorod Region	-	-	60 % of the market value of rental rates for office premises	-
Republic of Mordovia	13.5% if the income share from innovation production sales is not less than 50%	0%	-	5% for companies using simplified tax system
Republic of Sakha (Yakutia)	-	-	10-50% for 5 years	-
Tambov Region	-	0%	-	-

ABOUT
THE V NATIONAL RATING
OF RUSSIAN TECHNOLOGY PARKS



ABOUT THE V NATIONAL RATING OF RUSSIAN TECHNOLOGY PARKS

GOAL

to determine the most efficient managing companies of technology parks, the most equipped sites for the placement and development of high-tech companies as well as distribution of best practices and success stories of technology park residents in Russia.

KEY PRINCIPLES OF THE RATING PROCEDURE

1 **Transparency of the rating methodology:**
public discussions of the methodology with representatives of the expert community, public authorities, development institutions and public organizations (the State Duma, the Ministry of Industry and Trade of the Russian Federation, the Ministry of Economic Development of the Russian Federation, the Industrial Development Fund, the RUSNANO Fund for Infrastructure and Educational Programs, JSC "Russian Small and Medium Business Corporation", VEB.RF, the Analytical Center for the Government of the Russian Federation, the Russian Union of Industrialists and Entrepreneurs, JSC "Russian Export Center" etc.) and publication of the methodology and the key analytical calculations in the final report;

2 **Taking into account the most important factors of efficiency of technology parks:**
the methodology of the rating includes only those indicators that are the best estimates of the value of a technology park as an element of innovation system and the efficiency of its managing company;

3 **Objectivity of data used in the assessment:**
the rating is based on series of statistical data received directly from technology parks' managing companies and Russian regional public authorities. This data is verified by the experts of the Association of clusters and technology parks of Russia.

TERRITORIAL COVERAGE OF THE RATING

22 RUSSIAN REGIONS

RATING PROCEDURE IN 2019

The methodology of the rating is based on comprehensive assessment of technology park residents and managing companies by 22 composite indicators assembled into 5 indicator groups:

- INNOVATION ACTIVITY OF TECHNOLOGY PARK'S RESIDENTS
- ECONOMIC PERFORMANCE OF TECHNOLOGY PARK'S RESIDENTS
- OPERATIONAL EFFICIENCY OF TECHNOLOGY PARK'S MANAGING COMPANY
- INVESTMENT ATTRACTIVENESS OF THE TECHNOLOGY PARK
- INFORMATION TRANSPARENCY OF THE TECHNOLOGY PARK AND ITS CONTRIBUTION TO SUSTAINABLE DEVELOPMENT

EVALUATED TECHNOLOGY PARKS

24% 41 technology parks
Included in the rating sample

76% 128 technology parks
Excluded from the rating sample

METHODOLOGY OF THE RATING

Association for the Development of Clusters and Technology Parks of Russia received data on 169 technology parks from 54 regions of the Russian Federation. As a result of processing and verification of this information 41 technology parks were selected using the following criteria:

- Providing full dataset for calculations according to the survey form of the rating participant
- Separate managing company coordinating the operation of the technology park
- Availability of information on the technology park received from regional authorities
- Commisioning of technology park objects not later than 2018
- Compliance with the requirements of the National standard "Technology parks. Requirements"

Technology parks were excluded from the final sample if:

- They did not provide sufficient data (due to the low result of calculations with incomplete data)
- They started operating in 2019 (since there was no activities in the reporting period - 2018)
- They are university technology parks (due to substantial differences in their operation model)

STRUCTURE OF THE V NATIONAL RATING OF RUSSIAN TECHNOLOGY PARKS

BLOCK S1

INNOVATION ACTIVITY OF TECHNOLOGY PARK'S RESIDENTS

- Share of R&D costs in total turnover of the residents
- Average number of IP assets registered in Russia or abroad per 1 resident employee

BLOCK S2

ECONOMIC PERFORMANCE OF TECHNOLOGY PARK'S RESIDENTS

- Labor productivity in the technology park
- Residents' production export
- Average monthly wages of residents' employees compared to the regional average monthly salary
- Residents' tax and customs duties
- Residents' investments in fixed assets
- Investments or loans attracted by residents
- Rate of residents' revenue growth

BLOCK S3

OPERATIONAL EFFICIENCY OF TECHNOLOGY PARK'S MANAGING COMPANY

- Technology park's area occupany level
- Revenue from paid services of technology park's managing company
- Direct investments attracted
- Financial stability of technology park's managing company
- Share of technology park area put into operation in 2016-2018 in the total technology park area
- Ratio of private and public investments in technology park
- Share of new technology park residents registered in 2017

BLOCK S4

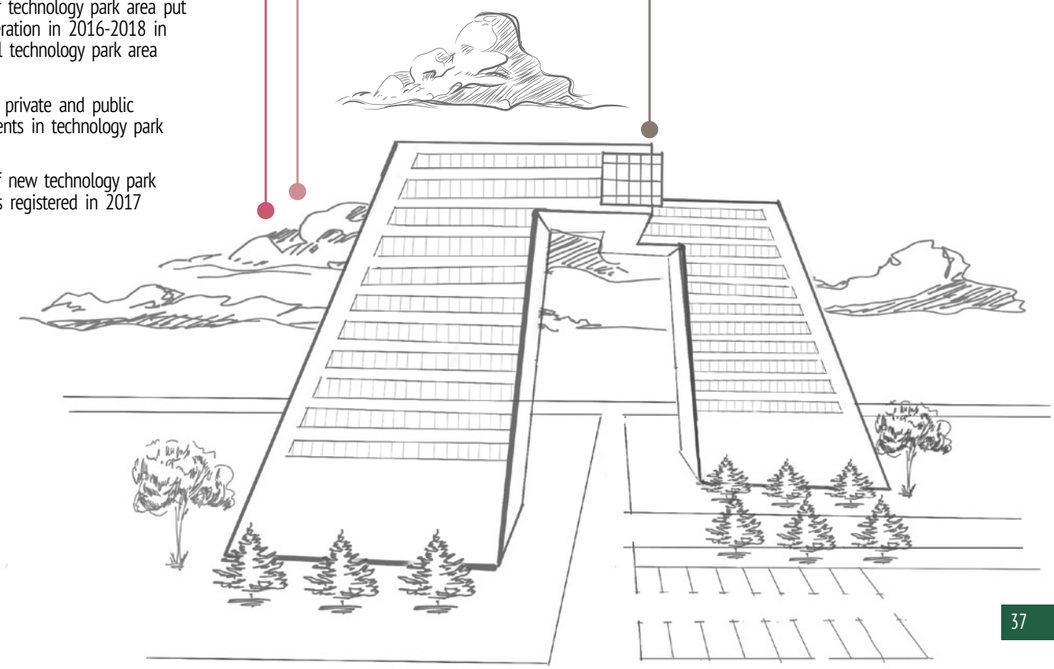
INVESTMENT ATTRACTIVENESS OF THE TECHNOLOGY PARK

- Availability of infrastructure for collective use
- Availability of services for technology park residents
- Regional tax preferences for technology park residents

BLOCK S5

INFORMATION TRANSPARENCY OF THE TECHNOLOGY PARK AND ITS CONTRIBUTION TO SUSTAINABLE DEVELOPMENT

- Information transparency of the technology park
- Availability of career guidance infrastructure and/or programs
- Preferential conditions for residents



EXPERT BOARD OF THE RATING OF TECHNOLOGY PARKS

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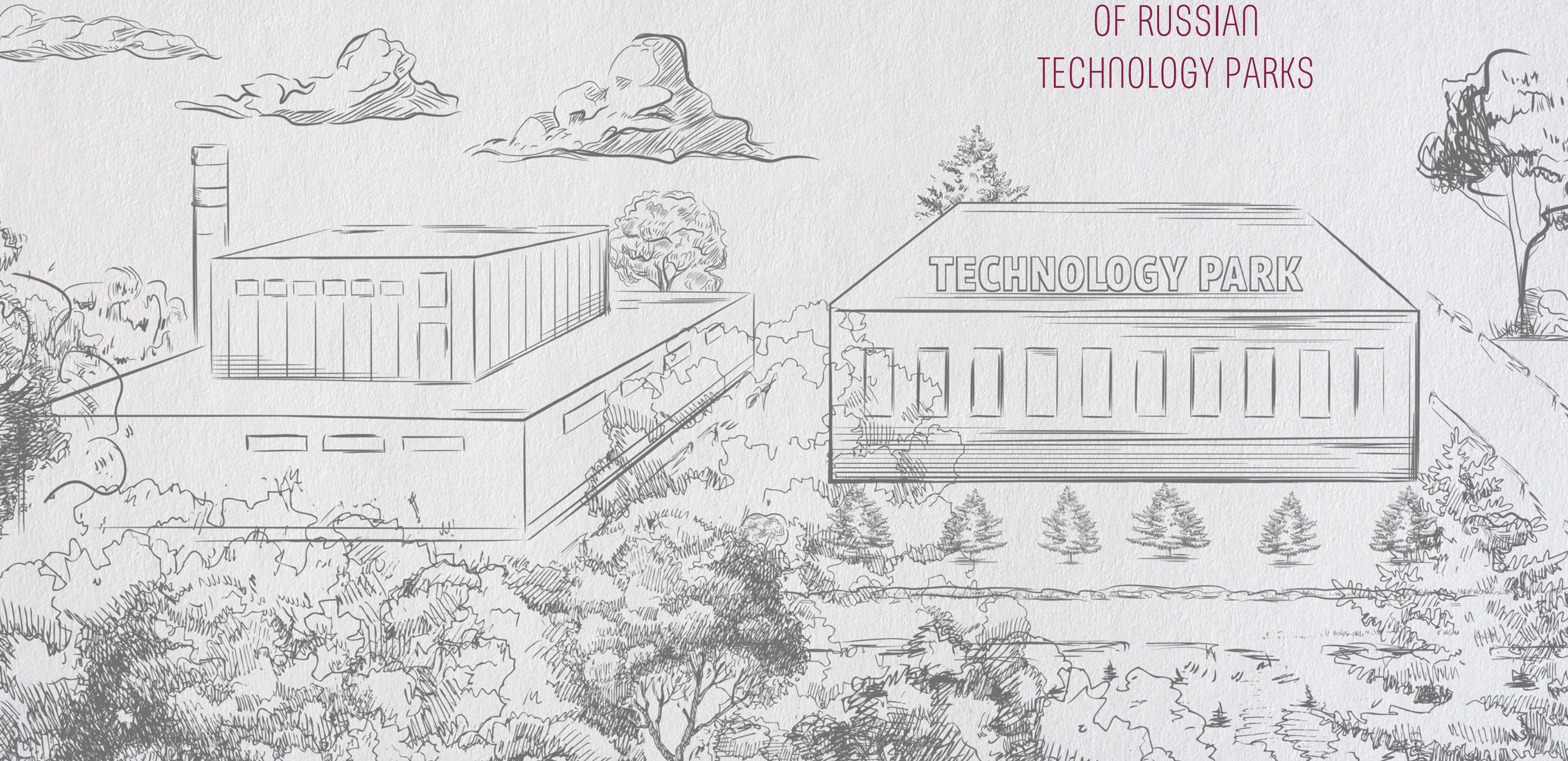
RESULTS OF THE V NATIONAL RATING OF RUSSIAN TECHNOLOGY PARKS

Name of the technology park	Region	Site type	Total score	Relative to Russian average, %	Sub -index S1	Sub -index S2	Sub -index S3	Sub -index S4	Sub -index S5
Group I (A+) – "Highest level of technology park operation efficiency" (higher than 110%)									
Nanotechnology Center "TechnoSpark"	Moscow	Greenfield	5.092	140.632	1.028	0.934	0.895	1.047	1.189
High Technology Park in the Republic of Mordovia	Republic of Mordovia	Greenfield	4.975	137.388	0.823	1.388	0.470	0.891	1.403
High Technology Park "Zhigulevskaya Dolina"	Samara Region	Greenfield	4.821	133.147	0.538	1.011	0.987	0.957	1.329
Technology park "Kalibr"	Moscow	Brownfield	4.639	128.121	0.756	0.718	0.855	0.860	1.451
Technopolis "Moscow"	Moscow	Brownfield	4.624	127.705	0.292	0.970	1.108	0.879	1.376
Technology park "Strogino"	Moscow	Brownfield	4.548	125.596	0.326	1.734	0.685	0.614	1.189
Innovative Production Technology park "Idea"	Republic of Tatarstan	Greenfield	4.516	124.725	0.297	1.156	0.910	0.888	1.266
High Technology Park of Sverdlovsk Region	Sverdlovsk Region	Greenfield	4.469	123.414	0.501	0.695	1.012	0.910	1.351
Scientific and Technological Park of the Novosibirsk Akademgorodok "Akadempark"	Novosibirsk Region	Greenfield	4.329	119.546	0.433	0.806	0.729	1.100	1.260
High Technology Park "Ankudinovka"	Nizhny Novgorod Region	Greenfield	4.186	115.606	0.383	1.541	0.697	0.417	1.148
Technology park "Slava"	Moscow	Brownfield	4.125	113.913	0.555	0.985	0.738	0.633	1.214
Technology park "Istok"	Moscow Region	Brownfield	4.076	112.569	0.252	0.756	0.910	0.729	1.430
Ulyanovsk Technology Trasfer Center (ULNANOTECH)	Ulyanovsk Region	Greenfield	4.063	112.206	0.657	0.957	0.684	0.645	1.120
Group II (A) – "High level of technology park operation efficiency" (from 100% to 109%)									
High Technology Park "IT-park"	Republic of Tatarstan	Greenfield	3.930	1.085	0.448	0.756	0.703	0.567	1.455
Technology park "Sarov"	Nizhny Novgorod Region	Greenfield	3.927	1.085	0.299	0.823	0.849	0.707	1.250
Technology park "Yakutia"	Республика Саха	Greenfield	3.900	1.077	0.457	0.488	0.816	0.935	1.204
Nanotechnology Center "SIGMA. Novosibirsk"	Novosibirsk Region	Greenfield	3.772	1.042	0.471	0.636	1.048	0.573	1.044
High Technology Park "Rameev"	Penza Region	Greenfield	3.730	1.030	0.274	0.872	0.660	0.701	1.221
Technology park "Polyus"	Moscow	Brownfield	3.712	1.025	0.454	0.728	0.664	0.683	1.183

* Average technology park efficiency level is taken as 100%

Name of the technology park	Region	Site type	Total score	Relative to Russian average, %	Sub -index S1	Sub -index S2	Sub -index S3	Sub -index S4	Sub -index S5
Group III (B) – "Moderately high level of technology park operation efficiency" (from 90% to 99%)									
"West-Siberian Innovation Center" (Tyumen Technology park)	Tyumen Region	Greenfield	3.606	0.996	0.401	0.567	0.626	0.679	1.333
High Technology Park	Khanty-Mansiysk Autonomous Okrug – Yugra	Greenfield	3.514	0.970	0.286	0.540	0.620	0.673	1.395
Technology park of Saint Petersburg	Saint Petersburg	Brownfield	3.481	0.961	0.137	0.813	1.094	0.359	1.079
Technology park "ELMA"	Moscow	Brownfield	3.445	0.951	0.559	0.743	0.674	0.196	1.273
Technology park "Kosmos-Neft-Gas"	Voronezh	Brownfield	3.426	0.946	0.360	0.848	0.706	0.401	1.112
International Innovation Nanotechnology Center (Nanotechnology Center "Dubna")	Moscow Region	Greenfield	3.393	0.937	0.742	0.507	0.814	0.380	0.950
Technology park "Mosgormash"	Moscow	Brownfield	3.344	0.923	0.214	0.750	0.615	0.514	1.250
Technology park "Podolye"	Moscow Region	Greenfield	3.315	0.916	0.242	0.414	0.775	0.754	1.131
Group IV (C) – "Sufficient level of technology park operation efficiency" (from 60% to 89%)									
Technology park "Lipetsk"	Lipetsk Region	Greenfield	3.220	0.889	0.538	0.530	0.833	0.292	1.027
Cener for Nanotechnology and Nanoma-terials of the Republic of Mordovia	Republic of Mordovia	Greenfield	3.102	0.857	0.593	0.588	0.660	0.181	1.081
Kuzbass Technology park	Kemerovo Region	Greenfield	2.988	0.825	0.192	0.538	0.518	0.539	1.200
Technology park "Perm'	Perm Territory	Greenfield	2.910	0.804	0.149	0.246	0.535	0.754	1.227
Technology park "Polymed"	Moscow Region	Greenfield	2.816	0.778	0.097	0.978	0.682	0.860	0.200
High Technology Park Morion Digital	Perm Territory	Greenfield	2.792	0.771	0.000	0.531	0.706	0.423	1.131
Industrial technology park "IKSEL"	Vladimir Region	Brownfield	2.758	0.762	0.214	0.548	0.442	0.305	1.249
Technology park "Kontakt"	Belgorod Region	Brownfield	2.733	0.755	0.274	0.522	0.665	0.270	1.002
Technology park "Yablochkov"	Penza Region	Brownfield	2.664	0.736	0.079	0.403	0.862	0.314	1.006
Industrial technology park "Idea-Yugo-Vostok"	Republic of Tatarstan	Brownfield	2.600	0.718	0.000	0.436	0.804	0.346	1.013
Technology park "Mayak"	Sevastopol	Brownfield	2.548	0.704	0.000	0.339	0.731	0.302	1.177
Technology park "Nakhabino"	Moscow Region	Brownfield	2.416	0.667	0.175	0.287	0.798	0.327	0.829
Technology park "Mozhaisky Pervy"	Moscow Region	Brownfield	2.302	0.636	0.000	0.467	0.527	0.467	0.842

PROFILES OF RUSSIAN TECHNOLOGY PARKS



technospark

NANOTECHNOLOGY CENTER TechnoSpark

Moscow | www.technospark.ru

TECHNOLOGY PARK'S SPECIALIZATION AREAS

- Optics and photonics
- New materials
- Electronic industry and instrumentation
- Biotechnology

Year of establishment
2012

Power supply facilities
4.7 MWt

Land area
2.7 ha

Space occupancy
100 %

Floor area
7.7 thousand m²

Number of residents/SMEs
110 / 110

TechnoSpark mass-builds product and contract technology companies with the goal of selling them to corporations, private entrepreneurs and foundations. The company was established in 2012 by a partnership of private entrepreneurs of Troitsk and FIOP Rusnano. All investments in new companies are returnable.

From 2012 to 2019 TechnoSpark has launched more than 120 startups. The key know-how is the twice increased speed of startup building from the global average. The infrastructure of the group of companies is hi-tech equipment for various industries: CNC for instrumentation, branding, new materials and composites, optical and industrial coatings, synthetic diamonds, genomics, microbiology, integrated electronics, integrated photovoltaics, medical devices based on additive technologies, medical lasers, industrial design.

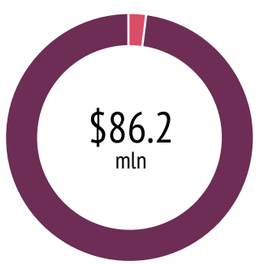
TECHNOLOGY PARK'S INFRASTRUCTURE

- Business incubator
- Co-working center
- Technology transfer center
- Laboratories
- Engineering center
- Center for youth innovation creativity
- Center for collective usage of equipment
- Acceleration center

KEY RESIDENTS:

- LLC "Polarus"
- LLC "Ronavi Robotics"
- TEN Group

TOTAL INVESTMENTS IN TECHNOLOGY PARK ACCUMULATED



2 % $ mln **1.59** Regional budget funds

98 % $ mln **84.61** Private investment

Residents' revenue, 2018	$2.53 mln
Residents' export volume, 2018	$173.2 thousand
Number of workplaces, 2018	231
Number of created and/or used IP assets, 2018	32
Residents' tax deductions, 2018	$1.12 mln
Residents' R&D expenses, 2018	$6.95 mln

Технопарк-Мордовия

HIGH TECHNOLOGY PARK IN THE REPUBLIC OF MORDOVIA

Republic of Mordovia | technopark-mordovia.ru, iclaster.ru

TECHNOLOGY PARK'S SPECIALIZATION AREAS

- Optics and photonics
- Energy saving lighting
- Nanotechnology and composite materials
- Biotechnology

Year of establishment
2011

Power supply facilities
9 MWt

Land area
2,7 ha

Space occupancy
93.1 %

Floor area
48.3 thousand m²

Number of residents/SMEs
123 / 103

High technology park Mordovia is the center of attraction of innovations of the Republic of Mordovia, which has a modern infrastructure and competencies in the field of development and commercialization of technologies. It combines scientific organizations, educational institutions and manufacturing enterprises into a single system, creates additional incentives for the development of science-intensive industries.

The most important innovative projects are being implemented on the basis of the technology park: the center for the design of innovations, the engineering center for fiber optics, the center for nanotechnology and nanomaterials, etc.

In 2018, high technology park Mordovia's Autonomous Institution (AI) entered the top 3 of the 4th National Rating of Russian technology parks out of 38 participating technology parks. AI Technology Park Mordovia received confirmation of the status of "High technology park" for a period until December 22, 2020.

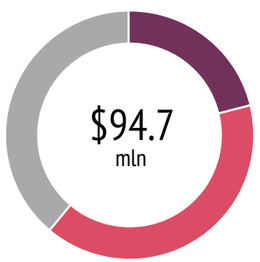
TECHNOLOGY PARK'S INFRASTRUCTURE

- Business incubator
- Prototyping center
- Innovation and technology center
- Laboratories
- Engineering center
- Center for youth innovation creativity
- Center for collective usage of equipment
- Data center

KEY RESIDENTS:

- LLC "Center for Nanotechnology and Nanomaterials of the Republic of Mordovia"
- LLC "NIIIS n. a. A.N. Lodygin"
- "Nepes Rus"

TOTAL INVESTMENTS IN TECHNOLOGY PARK ACCUMULATED



38 % $ mln **36.98** Federal budget funds

40 % $ mln **37.56** Regional budget funds:

21 % $ mln **20.16** Private investment

Residents' revenue, 2018	$194.8 mln
Residents' export volume, 2018	$30.5 mln
Number of workplaces, 2018	2043
Number of created and/or used IP assets, 2018	542
Residents' tax deductions, 2018	$1.12 mln
Residents' R&D expenses, 2018	$41.8 mln

ЖИГУЛЁВСКАЯ ДОЛИНА
ТЕХНОПАРК

HIGH TECHNOLOGY PARK

Zhigulevskaya Dolina

Samara region | dolinatlt.ru

TECHNOLOGY PARK'S SPECIALIZATION AREAS

- Automobile industry
- Electrical industry
- Aviation and space industry

Year of establishment
2013

Power supply facilities
10 MWt

Land area
28.9 ha

Space occupancy
90,2 %

Floor area
67.6 thousand m²

Number of residents/SMEs
210 / 202

The purpose of creating the technology park was to intensify the process of innovative development and modernization of the economy of the Samara region, ensuring the accelerated development of hi-tech industries. The task is to create conditions for developing high-quality innovative projects.

Zhigulevskaya Dolina is the largest of high technology parks in Russia. It is certified according to GOST R 56425-2015. Infrastructure includes office, laboratory, production facilities, a technical support center, a business incubator, a social and business center, a hotel, a restaurant, as well as services of a regional engineering center and a central heating facility. There is a regional nanotechnology center and children's technology park Quantorium - 63 Region on the territory. The project Zhigulevskaya Dolina 2 is under development: it includes construction of industrial facilities by residents at their own expense. Since 2018 - the regional operator of the Skolkovo Foundation.

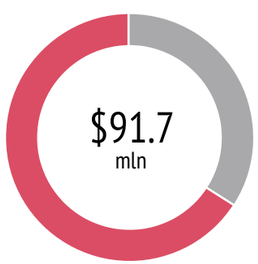
TECHNOLOGY PARK'S INFRASTRUCTURE

- Business incubator
- Prototyping center
- Technology transfer center
- Laboratories
- Engineering center
- Center for youth innovation creativity
- Center for collective usage of equipment
- Innovation and technology center

KEY RESIDENTS:

- LLC "BIA"
- LLC "Innovatsionnye Sistemy Pozharobezopasnosti"
- CJSC "INTEGRA-S"

TOTAL INVESTMENTS IN TECHNOLOGY PARK ACCUMULATED



34 % | $ mln | 31.5
Federal budget funds

66 % | $ mln | 60.2
Regional budget funds

- Residents' revenue, 2018: $128.6 mln
- Residents' export volume, 2018: $3.76 mln
- Number of workplaces, 2018: 3318
- Number of created and/or used IP assets, 2018: 123
- Residents' tax deductions, 2018: $49.4 mln
- Residents' R&D expenses, 2018: $24.7 mln

TECHNOLOGY PARK

Kalibr

Moscow | kalibroao.ru

КАЛИБР
ТЕХНОПАРК

TECHNOLOGY PARK'S SPECIALIZATION AREAS

- Aviation industry
- Automobile industry
- New materials
- Biotechnology

Year of establishment
2015

Power supply facilities
5 MWt

Land area
11,5 ha

Space occupancy
99 %

Floor area
54.6 thousand m²

Number of residents/SMEs
119 / 99

Technology park Kalibr is a platform for the development of innovative technologies and solutions, uniting more than 200 companies in one territory that form production chains consisting of 3 or more links. The territory has all the conditions for the emergence of end-to-end technologies in various industries.

The Co-working – Technology park business elevator model is effectively operating in the technology park, within which startups work on business projects together with residents. Currently, a new engineering and laboratory building with an area of almost 40 thousand m2 is reconstructed.

In September 2018, at a meeting of the Presidium of the Government of Moscow, under the chairmanship of the mayor, a decree "On assigning the status of an investment priority project of the city of Moscow" was adopted. In accordance with the decree, Technology park Kalibr received the status of an investment priority project of the city.

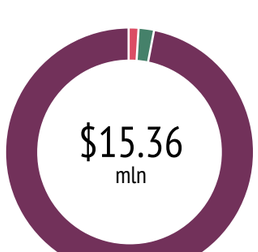
TECHNOLOGY PARK'S INFRASTRUCTURE

- Business incubator
- Co-working center
- Innovation and technology center
- Laboratories
- Engineering center
- Center for youth innovation creativity
- Center for collective usage of equipment
- Data center

KEY RESIDENTS: LLC

- LLC "Solstudio Industry"
- CJSC "Sinterra Media"
- LLC "PKF Tsifrovye Pribory"

TOTAL INVESTMENTS IN TECHNOLOGY PARK ACCUMULATED



0.4 % | $ thousand | 57
Regional budget funds

2 % | $ thousand | 227
Municipal budget funds

98 % | $ mln | 15.07
Private investment

- Residents' revenue, 2018: $342.6 mln
- Number of workplaces, 2018: 2088
- Number of created and/or used IP assets, 2018: 411
- Residents' tax deductions, 2018: $12.4 mln
- Residents' R&D expenses, 2018: $605 thousand

TECHNOPOLIS Moscow

Moscow | technomoscow.ru

TECHNOLOGY PARK'S SPECIALIZATION AREAS

- Optics and photonics
- New materials
- ICT

Year of establishment
2012

Power supply facilities
69 MWt

Land area
32.44 ha

Space occupancy
72 %

Floor area
402.6 thousand m²

Number of residents/SMEs
131 / 95

More than 130 resident companies of the russian and international sectors of the high-tech industry work in the territory of Technopolis Moscow. Residents of Technopolis are representatives of a wide range of hi-tech clusters - robotics, microelectronics, optics, nanotechnology, medical technology, biopharmaceuticals, etc.

Currently, Technopolis Moscow includes over 400 thousand m2 of industrial and administrative premises equipped with all necessary engineering communications as well as an automated dispatch control system. Residents are provided with logistics center, congress center, clean rooms designed for companies working in the field of microelectronics and biotechnology, scientific and innovative customs post to simplify the procedures for processing export / import of innovative products and social infrastructure.

Since April 2017 it has been one of the five sites of the Technopolis Moscow Special Economic Zone.

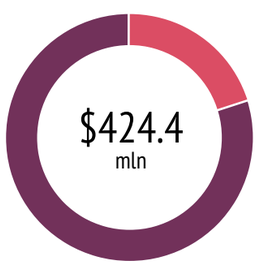
TECHNOLOGY PARK'S INFRASTRUCTURE

- Certification center
- Clean rooms
- Temporary storage warehouse and customs post
- Laboratories
- Logistic center
- Congress and exhibition center
- Center for youth innovation creativity
- Data center

KEY RESIDENTS:

- LLC "GOODWIN"
- JSC "PROFOTECH"
- LLC "NCC"

TOTAL INVESTMENTS IN TECHNOLOGY PARK ACCUMULATED



20 % | $ mln — **83.7** Regional budget funds

80 % | $ mln — **340.7** Private investment

- Residents' revenue, 2018 — **$198.3**
- Residents' export volume, 2018 — **$11.9 mln**
- Number of workplaces, 2018 — **3 063**
- Number of created and/or used IP assets, 2018 — **67**
- Residents' tax deductions, 2018 — **$20.4 mln**
- Residents' R&D expenses, 2018 — **$3.96 mln**

TECHNOLOGY PARK Strogino

Moscow | tpstrogino.ru

TECHNOLOGY PARK'S SPECIALIZATION AREAS

- Optics and photonics
- Biotechnology
- New materials
- ICT

Year of establishment
2007

Power supply facilities
3,2 MWt

Land area
2,3 ha

Space occupancy
77 %

Floor area
20,5 thousand m²

Number of residents/SMEs
36 / 36

Technology park Strogino is the first one created by the Moscow Government with the participation of the Ministry of Economic Development of Russia in 2007.

The main activities of the Technology park are property support for SMEs in Moscow, provision of services for business development, as well as PR and GR support for companies.

Technology park specialization: ICT, medicine, pharmaceuticals, energy-saving technologies, new instruments and devices. It is a full-cycle technology park from the idea to the organization of production, with all the necessary tools and material and technical means. Since 2017, the Technology park has been developing the Mosmedpark platform in the field of medicine and pharmaceuticals.

In connection with the promising areas of development of the technology park, a new building is under construction on the territory of the Strogino technology park, which will expand and accommodate the production of hi-tech companies.

TECHNOLOGY PARK'S INFRASTRUCTURE

- Business incubator
- Prototyping center
- Technology transfer center
- Co-working center
- Center for youth innovation creativity
- Center for collective usage of equipment

KEY RESIDENTS:

- LLC "AZT FARMA K.B."
- CJSC "TRINITY SOLUTIONS"
- JSC "INPC "Peptogen"

TOTAL INVESTMENTS IN TECHNOLOGY PARK ACCUMULATED

100 % | $ mln — **$9.95** Municipal budget funds

- Residents' revenue, 2018 — **$98.6 mln**
- Residents' export volume, 2018 — **$29.6 mln**
- Number of workplaces, 2018 — **815**
- Number of created and/or used IP assets, 2018 — **16**
- Residents' tax deductions, 2018 — **$35.9 mln**
- Residents' R&D expenses, 2018 — **$2.46 mln**

TECHNOLOGY PARK'S SPECIALIZATION AREAS

- New materials
- Biotechnology
- ICT

Year of establishment
2004

Power supply facilities
1.6 MWt

Land area
2 ha

Space occupancy
98,3 %

Floor area
28.7 thousand m²

Number of residents/SMEs
95 / 83

INNOVATIVE PRODUCTION TECHNOLOGY PARK
Idea

Republic of Tatarstan | tpidea.ru

Technology park Idea began work on February 5, 2004. Its business model is to localize start-up companies, graduates of a business incubator and large anchor residents under one roof. Due to the redistribution of income from commercial leases, preferential placement conditions are created for small innovative companies. Over the entire period of park's work, its total contribution to the development of innovative companies through the provision of privileges for the rental of office premises amounted to $5.14 mln.

Annually, with the participation of the technology park, about 30 new companies and 200-250 jobs are created with an average age of 28 years.

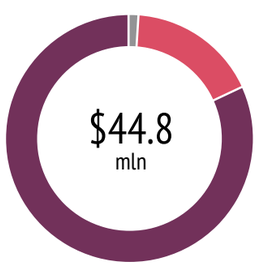
Residents of Idea carry out work for more than 100 world brands, which are included in the TOP-3 of global manufacturers of medical simulation equipment, provide engineering services for the largest oil and gas companies in the country, and develop state standards for enterprises of the Russian oil and gas chemical complex.

TECHNOLOGY PARK'S INFRASTRUCTURE

- Metrology center
- Innovation and technology center
- Center for collective usage of equipment
- Laboratories
- Business incubator
- Technology transfer center
- Center for youth innovation creativity
- Prototyping center

KEY RESIDENTS: ▼ Group of companies "Eidos" ▼ LLC "Smart Head" ▼ LLC "Digital Systems"

TOTAL INVESTMENTS IN TECHNOLOGY PARK ACCUMULATED



1 % $ thousand **570** Federal budget funds

17 % $ mln **7.5** Regional budget funds

82 % $ mln **36.73** Private investment

Residents' revenue, 2018	$229 mln
Residents' export volume, 2018	$12.6 mln
Number of workplaces, 2018	2 305
Number of created and/or used IP assets, 2018	30
Residents' tax deductions, 2018	$32.8 mln
Residents' R&D expenses, 2018	$12.4 mln

TECHNOLOGY PARK'S SPECIALIZATION AREAS

- Machine tool industry
- New materials
- Medical and pharmaceutical industry
- ICT

Year of establishment
2015

Power supply facilities
4.2 MWt

Land area
51.2 ha

Space occupancy
99 %

Floor area
27.1 thousand m²

Number of residents/SMEs
74 / 62

HIGH TECHNOLOGY PARK OF
Sverdlovsk Region

Sverdlovsk region | uralhitech.ru

High technology park of Sverdlovsk Region began operations in 2016. Currently, the technology park is the innovation center of the region; more than 80 innovative companies have the status of its residents. Technology park is a regional operator of the Skolkovo Foundation and an accredited center for the collective use of the Skolkovo technology park.

The engineering center and the regional center for regulatory and technical support for innovation - the technology park's divisions assist industrial enterprises and SMEs in solving development problems and reaching new technological levels.

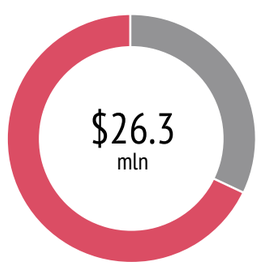
The technology park is the center of attraction for the region's innovation community, organizing forums that are significant for industries and hi-tech companies. The eco-environment created in the technology park and internal cooperation contribute to the acceleration of development and implementation of projects of resident companies.

TECHNOLOGY PARK'S INFRASTRUCTURE

- Co-working center
- Engineering center
- Center for collective usage of equipment
- Laboratories
- Business incubator
- Additive technology center
- Center for youth innovation creativity
- Prototyping center

KEY RESIDENTS: ▼ LLC "Technovisor" ▼ LLC "NPP "Structurnaya Diagnostika" ▼ LLC "KB "Aerostart"

TOTAL INVESTMENTS IN TECHNOLOGY PARK ACCUMULATED



32,5 % $ mln **9.68** Federal budget funds

67,5% $ mln **16.62** Regional budget funds

Residents' revenue, 2018	$90.6 mln
Residents' export volume, 2018	$18.9 mln
Number of workplaces, 2018	1 080
Number of created and/or used IP assets, 2018	134
Residents' tax deductions, 2018	$8.6 mln
Residents' R&D expenses, 2018	$3.1 mln

SCIENTIFIC AND TECHNOLOGICAL PARK OF THE NOVOSIBIRSK AKADEMGORODOK

Akadempark

Novosibirsk region | academpark.com

TECHNOLOGY PARK'S SPECIALIZATION AREAS

- Nuclear and radiation technologies
- New materials
- ICT
- Biotechnology

Year of establishment
2010

Power supply facilities
20.6 MWt

Land area
10.3 ha

Space occupancy
99.2 %

Floor area
188.8 thousand m²

Number of residents/SMEs
295 / 289

Akadempark is one of the 12 technology parks in Russia that carry out their activities as part of the comprehensive (state) program "Creating high technology parks in the Russian Federation". When creating the Akadempark, the region managed to achieve the highest budgetary efficiency of the project, as well as to become a leader in the number of resident companies involved, the number of jobs created and the residents' revenue.

The mission of the Akadempark is to create the best conditions for the continuous generation of new and development of existing innovative businesses.

The Akadempark has been accredited by the Association of Clusters and Technology Parks and has received a certificate on assigning the status of a high technology park. In 2017, Akadempark became the regional operator of the Skolkovo Foundation.

Technology park's infrastructure: business incubator, co-working center, technology transfer center, laboratories, engineering center, center for youth innovation creativity, center for collective usage of equipment, data center.

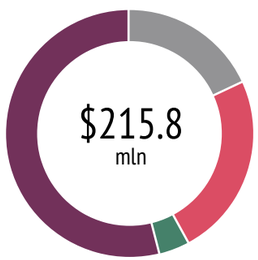
TECHNOLOGY PARK'S INFRASTRUCTURE

- Business incubator
- Co-working center
- Technology transfer center
- Laboratories
- Engineering center
- Center for youth innovation creativity
- Center for collective usage of equipment
- Data center

KEY RESIDENTS:

- LLC "OCSIAL.RU"
- LLC "MEDIKO-BIOLOGICHESKY SOYUZ"
- LLC "Angionline"

TOTAL INVESTMENTS IN TECHNOLOGY PARK ACCUMULATED



- 18 % | $ mln | 38.5 — Federal budget funds
- 24 % | $ mln | 52.9 — Regional budget funds
- 4 % | $ mln | 8.5 — Municipal budget funds
- 54 % | $ mln | 115.9 — Private investment

- Residents' revenue, 2018: $214.1 mln
- Number of workplaces, 2018: 4 739
- Number of created and/or used IP assets, 2018: 169
- Residents' R&D expenses, 2018: $9.3 mln
- Residents' export volume, 2018: $40.4 mln
- Residents' tax deductions, 2018: $59.1 mln

HIGH TECHNOLOGY PARK

Ankudinovka

Nizhny Novgorod region | itpark-nn.com

TECHNOLOGY PARK'S SPECIALIZATION AREAS

- Optics and photonics
- Medical and pharmaceutical industry
- ICT
- Mechanical engineering and treatment of materials

Year of establishment
2011

Power supply facilities
1.4 MWt

Land area
1.74 ha

Space occupancy
99 %

Floor area
17.4 thousand m²

Number of residents/SMEs
32 / 30

High technology park Ankudinovka - the organization of the infrastructure of state support for innovative business in the Nizhny Novgorod region, whose support package includes preferential rent of modern offices, project support, consulting and coaching, training.

The structure of Ankudinovka is made up of two objects: a business incubator - commissioned in 2011, and a business center - was opened in 2016. One of the main ideas of the creation and functioning of the business center of the technology park.

Ankudinovka is providing resident companies with convenient office premises, creating comfortable working conditions among like-minded people.

The advantages of the technology park are support for projects at various levels of business development - from start-ups to established companies; individual work with each resident - the principle of a "single" window; an individual range of services for different stages of the business - from training to creating the corporate identity of the project; assistance in finding markets and partners, assistance in finding financing.

Technology park's infrastructure: business incubator, congress and exhibition center, technology transfer center, subcontracting center, center for youth innovation creativity

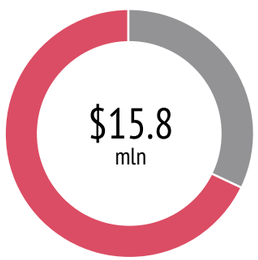
TECHNOLOGY PARK'S INFRASTRUCTURE

- Business incubator
- Congress and exhibition center
- Technology transfer center
- Subcontracting center
- Center for youth innovation creativity

KEY RESIDENTS:

- LLC "IO Insite"
- Ltd "RMT"
- JSC "ONLYOFFICE"

TOTAL INVESTMENTS IN TECHNOLOGY PARK ACCUMULATED



- 32,5 % | $ mln | 5.1 — Federal budget funds
- 67,5 % | $ mln | 10.7 — Regional budget funds

- Residents' revenue, 2018: $79.8 mln
- Number of workplaces, 2018: 1 051
- Number of created and/or used IP assets, 2018: 22
- Residents' R&D expenses, 2018: $1.5 mln
- Residents' export volume, 2018: $25.8 mln
- Residents' tax deductions, 2018: $20.7 mln

Слава технопарк

TECHNOLOGY PARK

Slava

Moscow | technopark-slava.ru

TECHNOLOGY PARK'S SPECIALIZATION AREAS

- ICT
- Electronic industry and instrumentation
- Energy technology
- Medical and pharmaceutical industry

Year of establishment
2008

Power supply facilities
6 MWt

Land area
2.8 ha

Space occupancy
100 %

Floor area
30.9 thousand m²

Number of residents/SMEs
79 / 71

Technology park Slava is one of the successful sites for the development of innovative business in Moscow. The technology park has created the conditions most favorable for the deployment of hi-tech SMEs. In the buildings of the industrial park with a total area of 31 thousand m², entrepreneurs can place research laboratories and production units. Currently, there are more than 80 enterprises operate on the territory of the Technology park Slava.

An important condition for a comfortable stay of residents in the technology park is public infrastructure: a diversified business center, a co-working center, a collective technology center in the direction of nanotechnology and nanomaterials.

Technology park's companies develop and produce innovative products that are used both in Moscow and abroad. 17 residents produce competitive export-oriented products and operate in the markets of Europe, Asia, America, and Africa.

Technology park's infrastructure: co-working center, certification center, data center, laboratories, engineering center, center for youth innovation creativity, center for collective usage of equipment.

TECHNOLOGY PARK'S INFRASTRUCTURE

- Co-working center
- Certification center
- Data center
- Laboratories
- Engineering center
- Center for youth innovation creativity
- Center for collective usage of equipment

KEY RESIDENTS:

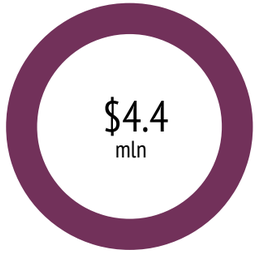
- LLC "DNK-Technologia TC"
- CJSC "SuperOks"
- LLC "Aksitech"

ДНК-ТЕХНОЛОГИЯ

СуперОкс

АКСИТЕХ

TOTAL INVESTMENTS IN TECHNOLOGY PARK ACCUMULATED



100 % $ mln **4.4**
Private investment

Residents' revenue, 2018	$99 mln
Number of workplaces, 2018	1 007
Number of created and/or used IP assets, 2018	89
Residents' R&D expenses, 2018	$4 mln
Residents' export volume, 2018	$6.7 mln
Residents' tax deductions, 2018	$8.8 mln

TECHNOLOGY PARK

Istok

Moscow region | istoksez.ru

TECHNOLOGY PARK'S SPECIALIZATION AREAS

- Optics and photonics
- ICT
- Aviation and space industry

Year of establishment
2015

Power supply facilities
39 MWt

Land area
62.65 ha

Space occupancy
95 %

Floor area
12.4 thousand m²

Number of residents/SMEs
17 / 16

A special feature of the Istok TVT Special Economic Zone is that it was created on the existing infrastructure of the Fryazino science city.

Priority areas of activity of SEZ TVT Istok: microwave electronics; photonics and laser instrumentation; design of complex technical systems.

Key changes that took place in the Istok TVT Special Economic Zone in 2018: the expansion of the Istok Special Economic Zone TVT by joining section 3 of OOO "MAY" with a total area of 3 hectares.

Technology park's infrastructure: business incubator, certification center, technology transfer center, laboratories, engineering center, center for youth innovation creativity, center for collective usage of equipment.

TECHNOLOGY PARK'S INFRASTRUCTURE

- Business incubator
- Certification center
- Technology transfer center
- Laboratories
- Engineering center
- Center for youth innovation creativity
- Center for collective usage of equipment

KEY RESIDENTS:

- JSC "NPP "Istok" named after Shokin"
- LLC MNPP "Antrax"
- LLC "NPP "MICROSISTEMA"

Istok™

АНТРАКС

TOTAL INVESTMENTS IN TECHNOLOGY PARK ACCUMULATED

100 % $ mln **2.33**
Private investment

Residents' revenue, 2018	$259 mln
Number of workplaces, 2018	6 026
Number of created and/or used IP assets, 2018	38
Residents' R&D expenses, 2018	$5.6 mln
Residents' tax deductions, 2018	$8.1 mln

ULNANOTECH®
Ulyanovsk Technology Transfer Center

ULYANOVSK TECHNOLOGY TRANSFER CENTER

ULNANOTECH

Ulyanovsk region | ulnanotech.com

TECHNOLOGY PARK'S SPECIALIZATION AREAS

- Biotechnology
- ICT
- Medical and pharmaceutical industry

Year of establishment
2013

Power supply facilities
3 MWt

Land area
3.1 ha

Space occupancy
95 %

Floor area
6.3 thousand m²

Number of residents/SMEs
82 / 75

ULNANOTECH was founded by the RUSNANO Group's Infrastructure and Educational Programs Fund, the Government of the Ulyanovsk Region and private investors with the goal of developing innovative opportunities in the region in 2011.

The main activity is the serial construction of technological startups with their subsequent sale. The board of directors of the nanotechnology center approved about 100 startups.

In 2015, the status of "High technology park" was obtained. In 2015, 2016 and 2017, he was a member of the group (A +) - "The highest level of technological park functioning efficiency" of the National ranking of technology parks of the Association of Clusters and Technology Parks of Russia. The practice of the nanotechnology center on forming an ecosystem and infrastructure for the development of technological entrepreneurship in the region is available in the collection of best regional practices (according to the Association of Innovative Regions of Russia).

TECHNOLOGY PARK'S INFRASTRUCTURE

- Co-working center
- Innovation and technology center
- Laboratories
- Business incubator
- Technology transfer center
- Center for collective usage of equipment

KEY RESIDENTS: ▼ LLC "TestGene" ▼ LLC "RUGADGET" ▼ LLC "Comberry"

TOTAL INVESTMENTS IN TECHNOLOGY PARK ACCUMULATED

100 % | $ mln **37.7**
Private investment

- Residents' revenue, 2018: **$20.9 mln**
- Number of workplaces, 2018: **184**
- Number of created and/or used IP assets, 2018: **7**
- Residents' R&D expenses, 2018: **$2.3 mln**
- Residents' export volume, 2018: **$28.6 thousand**
- Residents' tax deductions, 2018: **$1.1 mln**

HIGH TECHNOLOGY PARK

IT-park

Republic of Tatarstan | itpark.tech

TECHNOLOGY PARK'S SPECIALIZATION AREAS

- ICT

Year of establishment
2009

Power supply facilities
7 MWt

Land area
9 ha

Space occupancy
100 %

Floor area
55.5 thousand m²

Number of residents/SMEs
142 / 27

A unique platform for the development of the information and communication technology industry. The technical and business infrastructure of the IT-park in Kazan and Naberezhnye Chelny creates an ecosystem for the integrated development and maintenance of startup projects and IT companies at all stages of development. One of the largest business incubators in Russia operates in the IT-park. At the end of 2018, 40 start-up projects were residents of the IT Park Business Incubator. The IT-park data center is the main platform for deploying IT infrastructure in the Republic of Tatarstan certified for the reliability level of TIER III Uptime Institute. Since June 2018, IT-park has been the regional operator of the Skolkovo Foundation in the Republic of Tatarstan. The IT-park is actively involved in international activities and promotes the promotion of resident solutions outside the Russian Federation. In 2018, residents of the IT-park presented the IT potential of the Republic of Tatarstan at the annual largest Web Technology Summit in the world.

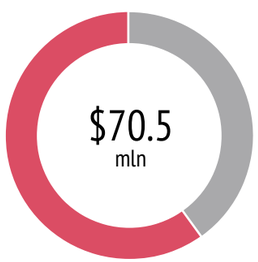
In 2019, it was planned to open an IT-park representative office in Shenzhen (China).

TECHNOLOGY PARK'S INFRASTRUCTURE

- Co-working center
- IP center
- Business incubator
- Data center

KEY RESIDENTS: ▼ LLC "Avtodoria" ▼ LLC "Informatika" ▼ LLC "AltoCar"

TOTAL INVESTMENTS IN TECHNOLOGY PARK ACCUMULATED



39,8 % | $ mln **28**
Federal budget funds

60,2 % | $ mln **42.5**
Regional budget funds

- Residents' revenue, 2018: **$224.4 mln**
- Number of workplaces, 2018: **3 337**
- Number of created and/or used IP assets, 2018: **296**
- Residents' R&D expenses, 2018: **$2.3 mln**
- Residents' export volume, 2018: **$5.7 mln**
- Residents' tax deductions, 2018: **$20.2 mln**

ТЕХНОПАРК САРОВ

TECHNOLOGY PARK

Sarov

Nizhny Novgorod region | itechnopark.ru

TECHNOLOGY PARK'S SPECIALIZATION AREAS

- Optics and photonics
- Electronic industry and instrumentation
- ICT
- Nuclear and radiation technologies

Year of establishment
2005

Power supply facilities
5 MWt

Land area
37.5 ha

Space occupancy
59 %

Floor area
24 thousand m²

Number of residents/SMEs
33 / 33

Technology park Sarov is an open platform for the creation and commercialization of innovative developments of the Federal Nuclear Center and partners in the interests of the country's backbone industries.

The development strategy of technology park Sarov currently includes the implementation of the following areas of activity: launch and development of large-scale research, production, educational and infrastructure projects.

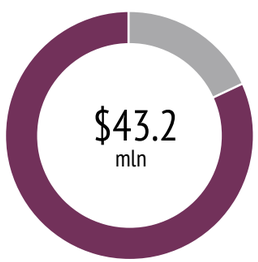
TECHNOLOGY PARK'S INFRASTRUCTURE

- Business incubator
- Co-working center
- Technology transfer center
- Laboratories
- Engineering center
- Prototyping center
- Center for collective usage of equipment
- Data center

KEY RESIDENTS:

- JSC "Zavod Energeticheskogo Oborudovaniya Energopotok"
- LLC "NPP Centr Pultruzii"
- LLC "Centr Kompetenciy i Obucheniya"

TOTAL INVESTMENTS IN TECHNOLOGY PARK ACCUMULATED



18 % | $ mln | 7.9
Federal budget funds

82 % | $ mln | 35.3
Private investment

Residents' revenue, 2018	$30.7 mln
Number of workplaces, 2018	482
Number of created and/or used IP assets, 2018	15
Residents' R&D expenses, 2018	$92 thousand
Residents' export volume, 2018	$2.3 mln
Residents' tax deductions, 2018	$3.8 mln

ТЕХНОПАРК ЯКУТИЯ

TECHNOLOGY PARK

Yakutia

Republic of Yakutia | tpykt.ru

TECHNOLOGY PARK'S SPECIALIZATION AREAS

- Machine tool industry
- Biotechnology
- ICT

Year of establishment
2011

Power supply facilities
1.5 MWt

Land area
2.5 ha

Space occupancy
85 %

Floor area
20.8 thousand m²

Number of residents/SMEs
90 / 90

Technology park Yakutia was created by Order of the President of the Republic of Sakha (Yakutia) in 2011. The aim of the activity is to support start-up innovative resident companies, their development and transfer of new technologies to the economy of the republic.

Today, 90 companies are residents of the Technopark. During its existence, the Technopark has passed over 150 companies through its acceleration programs. According to the rating of the RBK magazine technology park Yakutia is included in the TOP-10 technology parks in Russia. According to the results of the IV National rating, AKIT Technology park is included in the group with a high level of work efficiency.

Also in December 2018, the first and only IT-park in the Far East was opened in the city of Yakutsk. Residents of a IT-park park receive services at the level of national standards and integrate into the national and international innovation ecosystem. The IT Park runs the acceleration program of the "Fund for the Development of Innovations of the Republic of Sakha (Yakutia)", aimed at supporting startups.

TECHNOLOGY PARK'S INFRASTRUCTURE

- Business incubator
- Co-working center
- Technology transfer center
- Laboratories
- Engineering center
- Center for youth innovation creativity
- Center for collective usage of equipment

KEY RESIDENTS:

- LLC "Fntastic Entertainment"
- LLC "Kaunt Technologies"
- LLC "MIP "Avtonomnye Tehnologii"

TOTAL INVESTMENTS IN TECHNOLOGY PARK ACCUMULATED

100 % | $ mln | 8.7
Regional budget funds

Residents' revenue, 2018	$6.4 mln
Number of workplaces, 2018	320
Number of created and/or used IP assets, 2018	14
Residents' R&D expenses, 2018	$496 thousand
Residents' export volume, 2018	$28.6 thousand
Residents' tax deductions, 2018	$262 thousand

NANOTECHNOLOGY CENTER

SIGMA.Novosibirsk

Novosibirsk region | sigma.ru

TECHNOLOGY PARK'S SPECIALIZATION AREAS

- Optics and photonics
- New materials
- Medical and pharmaceutical industry
- Biotechnology

Year of establishment
2010

Power supply facilities
0.1 MWt

Land area
3.9 ha

Space occupancy
90 %

Floor area
1.8 thousand m²

Number of residents/SMEs
115 / 115

In the SIGMA.Novosibirsk group of companies, technology companies are being created in series from the idea to the sale of a ready-made business.

The main task is the creation of technology businesses, their commercialization and market launch. SIGMA.Novosibirsk forms a partner network, develops a client base, launches production, and forms teams. Business financing begins at an early stage. Developing startups, the group of companies provides additional investments and the search for strategic partners. To build a working business and get out of the company's capital is our goal.

SIGMA.Novosibirsk has created over 100 startups based on accumulated competencies in the areas of microelectronics and sensors, medical biotechnology, functional materials, specialized chemistry, unmanned aerial vehicles and their applications, new energy, mechatronics and robotics, agricultural technology.

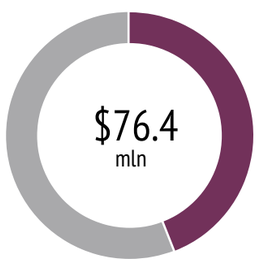
TECHNOLOGY PARK'S INFRASTRUCTURE

- Business incubator
- Technology transfer center
- Laboratories
- Innovation and technology center

KEY RESIDENTS:

- LLC "Optilane"
- LLC "Plusminus"
- LLC "R2 Robototehnika"

TOTAL INVESTMENTS IN TECHNOLOGY PARK ACCUMULATED



56 % $ mln 43
Federal budget funds

44 % $ mln 33.4
Private investment

Residents' revenue, 2018	$403 thousand
Number of workplaces, 2018	839
Number of created and/or used IP assets, 2018	18
Residents' R&D expenses, 2018	$49 thousand
Residents' tax deductions, 2018	$262 thousand

HIGH TECHNOLOGY PARK

Rameev

Penza region | technopark-rameev.ru

TECHNOLOGY PARK'S SPECIALIZATION AREAS

- ICT
- Medical and pharmaceutical industry

Year of establishment
2014

Power supply facilities
3 MWt

Land area
6.8 ha

Space occupancy
90.2 %

Floor area
45.2 thousand m²

Number of residents/SMEs
39 / 34

High technology park Rameev was created with the support of the Ministry of Communications of Russia. The main specialization is information technology, development and production of hi-tech medical devices.

The technology park produces heart valves, coronary stents, catheters, joint endoprostheses, intervertebral disc prostheses and other medical products. In the technology park, the industry of domestic aircraft simulator revived.

A preclinical research center has been created in the technology park, which is the center for the collective use of the Skolkovo technology park. A prototyping center has been created in the technology park. The InnoMed All-Russian Forum in the field of the medical industry is held annually.

The application of the technology park for assigning the status of a regional representative office of the Skolkovo Foundation has been preliminarily approved.

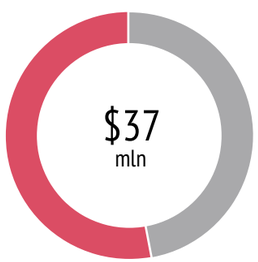
TECHNOLOGY PARK'S INFRASTRUCTURE

- Additive technology center
- Center for youth innovation creativity
- Technology transfer center
- Laboratories
- Engineering center
- Prototyping center
- Center for collective usage of equipment
- Co-working center

KEY RESIDENTS:

- LLC "ESVO"
- LLC "IBS Penza"
- CJSC NPP "MedInzh"

TOTAL INVESTMENTS IN TECHNOLOGY PARK ACCUMULATED



47 % $ mln 17.6
Federal budget funds

53 % $ mln 19.4
Regional budget funds

Residents' revenue, 2018	$224.4 mln
Number of workplaces, 2018	3 337
Number of created and/or used IP assets, 2018	296
Residents' R&D expenses, 2018	$2.3 thousand
Residents' export volume, 2018	$5.7 thousand
Residents' tax deductions, 2018	$20.2 thousand

TECHNOLOGY PARK

Polyus

Moscow | polyus.info

TECHNOLOGY PARK'S SPECIALIZATION AREAS

- Optics and photonics
- Electronic industry and instrumentation
- ICT

Year of establishment
2016

Power supply facilities
15.2 MWt

Land area
6.7 ha

Space occupancy
75 %

Floor area
74.5 thousand m²

Number of residents/SMEs
29 / 29

Technology park Polyus was created with the aim of increasing the organization of new industries, the interaction of enterprises in the field of laser and optical technologies; placement and assistance in the development of innovative small and medium-sized enterprises specializing in the development of technological innovations. Residents of the Polyus specialize in the following areas: laser rangefinders, locators, target indicators, gyroscopes; sensors of ground-based measurement systems for space-rocket complexes; semiconductor lasers and photodetectors for optical communication systems; radio photonics; metalworking; software development; production of IT, telecommunication systems; development and production of fiber optic systems; biomedicine.

It is planned to develop a center for collective usage of equipment and create various infrastructure facilities to support the activities of the technology park. In addition to the production of various laser and optical products, the Polyus technology park plans to carry out specialized training.

TECHNOLOGY PARK'S INFRASTRUCTURE

- Additive technology center
- Innovation and technology center
- Center for youth innovation creativity
- Laboratories
- Engineering center
- Prototyping center
- Center for collective usage of equipment
- Certification center

KEY RESIDENTS:

- JSC "Centr VOSPI"
- CJSC "NPF "DOLOMANT"
- LLC "JoyMechanix"
- LLC "Iteranet"

TOTAL INVESTMENTS IN TECHNOLOGY PARK ACCUMULATED

$10.6 mln

100 % | $ mln | 10.6
Private investment

Residents' revenue, 2018	$73.9 mln
Number of workplaces, 2018	847
Number of created and/or used IP assets, 2018	81
Residents' R&D expenses, 2018	$5.8 thousand
Residents' export volume, 2018	$3.2 thousand
Residents' tax deductions, 2018	$5.5 thousand

INDUSTRIAL TECHNOLOGY PARK

Electropolis

Pskov region | elektropolis.net

TECHNOLOGY PARK'S SPECIALIZATION AREAS

- Electrical industry

Year of establishment
2017

Power supply facilities
15 MWt

Land area
38.2 ha

Space occupancy
83 %

Floor area
126.9 thousand m²

Number of residents/SMEs
6 / 5

Technology park Electropolis was created in order to: develop support for innovative SMEs; effective interaction of all subjects of innovation in the region; promoting the development of new and existing hi-tech companies. Also, the technology park contributes to the creation of a favorable innovation environment in the region and the development of engineering, transport and social infrastructure. The technology park plans to develop, manufacture and introduce hi-tech products and technologies. Electropolis is the link between education, science, business and government in order to commercialize and develop the scientific and technical potential of the region.

Technology park Electropolis sees its mission: the creation of a "growth point" of innovative and small business; increasing the investment attractiveness of the region; economic modernization; the growth of hi-tech production; implementation of the import substitution program; creation of new jobs.

TECHNOLOGY PARK'S INFRASTRUCTURE

- Metrology center
- Co-working center
- Technology transfer center
- Laboratories
- Engineering center
- Subcontracting center
- Center for collective usage of equipment

KEY RESIDENTS:

- CJSC "Zavod Elektrotehnicheskogo Oborudovaniya"
- LLC "ZETO-Gazovye Tehnologii"
- LLC "Elektrograd"

TOTAL INVESTMENTS IN TECHNOLOGY PARK ACCUMULATED

$2 mln

100 % | $ mln | 2
Private investment

Residents' revenue, 2018	$224.4 mln
Number of workplaces, 2018	3 337
Number of created and/or used IP assets, 2018	296
Residents' R&D expenses, 2018	$2.3 thousand
Residents' export volume, 2018	$5.7 thousand
Residents' tax deductions, 2018	$20.2 thousand

TECHNOLOGY PARK'S SPECIALIZATION AREAS

- ICT
- Electronic industry and instrumentation
- Production of oilfield, drilling and exploration equipment

Year of establishment
2009

Power supply facilities
1 MWt

Land area
1 ha

Space occupancy
100 %

Floor area
12.1 thousand m²

Number of residents/SMEs
68 / 68

WEST-SIBERIAN INNOVATION CENTER

Tyumen Technology Park

Tyumen region | itpark-nn.com

The activity of the Tyumen Technology Park is aimed at comprehensive support of all stages of the innovation process: from formalizing ideas to introducing new technology into mass production. The technology park has established stable relations with regional authorities, leading universities, large business, and federal development institutions. Since 2010, the technology park has been a regional representative of the Innovation Promotion Fund.

Since 2018, the regional competence center in the field of labor productivity, engineering and prototyping has been operating on the basis of technology park. The export support center provides informational, analytical, consulting and organizational support to the activities of regional business entities in the field of foreign economic activity, facilitates entry into foreign markets, organizes training programs, field and foreign events, as well as coordinates regional export business support programs. In 2019, the "My Business" service center will be opened.

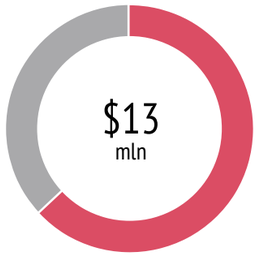
TECHNOLOGY PARK'S INFRASTRUCTURE

- Business incubator
- Co-working center
- Additive technology center
- Export support center
- Engineering center
- Center for youth innovation creativity
- Center for collective usage of equipment
- «Точка Кипения»

KEY RESIDENTS:

- LLC "Innovatsionnye Tehnologii"
- LLC "Gems Development"
- LLC "Petroleum Energy"

TOTAL INVESTMENTS IN TECHNOLOGY PARK ACCUMULATED



36,6 % | $ mln | 4.7
Federal budget funds

63,4 % | $ mln | 8.3
Regional budget funds

Residents' revenue, 2018	$31 mln
Number of workplaces, 2018	968
Number of created and/or used IP assets, 2018	76
Residents' R&D expenses, 2018	$1.6 mln
Residents' export volume, 2018	$383 thousand
Residents' tax deductions, 2018	$4.6 mln

TECHNOLOGY PARK'S SPECIALIZATION AREAS

- Production of oilfield, drilling and exploration equipment
- Biotechnology
- Electronic industry and instrumentation

Year of establishment
2009

Power supply facilities
1.26 MWt

Land area
5.4 ha

Space occupancy
90 %

Floor area
16.5 thousand m²

Number of residents/SMEs
38 / 38

HIGH TECHNOLOGY PARK

HMAO-Yugra

Khanty-Mansi Autonomous Okrug – Yugra | tp86.ru

High technology park HMAO-Yugra was created with the aim of: developing innovative technologies and creating an innovative environment for the development of the autonomous region; assisting the state authorities of the technology park in shaping the policy and making the necessary decisions for the innovative development of the economy of the technology park; promoting the development of small and medium enterprises of the technology park in the field of innovation.

In 2018, there was a mass release of resident companies due to the completion of their projects. During the year, their number decreased from 123 to 38 companies, including 10 new resident companies.

In 2018, a new structural unit, the Regional center of competencies in the field of labor productivity, was created, the main purpose of which is the promotion of new technologies in the field of labor productivity and the organization of the exchange of experience. In the prospects of development, moving to a new building with the placement of research laboratories of resident companies.

TECHNOLOGY PARK'S INFRASTRUCTURE

- Co-working center
- Prototyping center
- Center for cluster development
- Regional center of competence in the field of labor productivity
- Engineering center
- Center for youth innovation creativity
- Center for collective usage of equipment

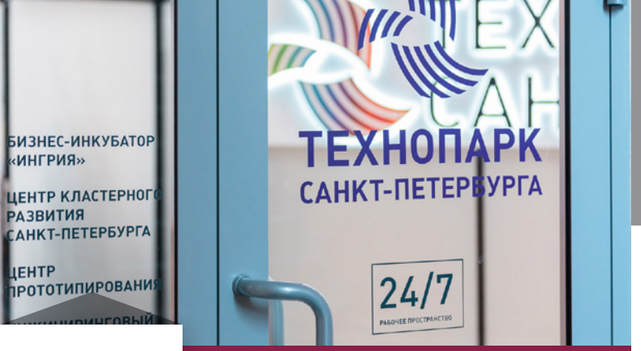
KEY RESIDENTS:

- LLC "MAS-Servis HM"
- LLC "Favorit"
- IP Virshke A.E.

TOTAL INVESTMENTS IN TECHNOLOGY PARK ACCUMULATED

100 % | $ mln | 13.7
Regional budget funds

Residents' revenue, 2018	$6.1 mln
Number of workplaces, 2018	150
Number of created and/or used IP assets, 2018	3
Residents' R&D expenses, 2018	$135 thousand
Residents' export volume, 2018	$20 thousand
Residents' tax deductions, 2018	$450 thousand



ТЕХНОПАРК
САНКТ-ПЕТЕРБУРГА

TECHNOLOGY PARK OF

Saint Petersburg

Saint Petersburg | ingria-park.ru

TECHNOLOGY PARK'S SPECIALIZATION AREAS

- Optics and photonics
- ICT
- New materials
- Medical and pharmaceutical industry

Year of establishment
2007

Power supply facilities
35.5 MWt

Land area
1.5 ha

Space occupancy
100 %

Floor area
4.1 thousand m²

Number of residents/SMEs
408 / 408

Technology park of St. Petersburg is one of the main tools for replenishing the city's economy with innovative projects, cost-effective small and medium-sized enterprises and technologies. The ultimate goal of the technology park's activities is to increase the contribution of innovative technology companies to the economy of St. Petersburg.

To date, 6 structural divisions have been created in the technology park: the Ingria business incubator, the prototyping center, the cluster development center of St. Petersburg, and the regional engineering centers in the areas of radio electronics, the synthesis of pharmaceutical substances, information security and IT technologies.

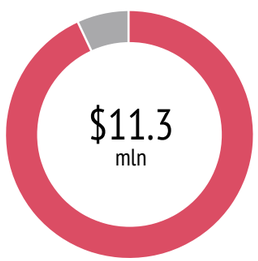
TECHNOLOGY PARK'S INFRASTRUCTURE

- Business incubator
- Co-working center
- Additive technology center
- Laboratories
- Engineering center
- Technology transfer center
- Prototyping center
- Data center

KEY RESIDENTS: ▼ Centr Klasternogo Razvitiya Sankt-Peterburga

ЦЕНТР КЛАСТЕРНОГО РАЗВИТИЯ САНКТ-ПЕТЕРБУРГА
ТЕХНОПАРК САНКТ-ПЕТЕРБУРГА

TOTAL INVESTMENTS IN TECHNOLOGY PARK ACCUMULATED



7 % | $ thousand | 780
Federal budget funds

93 % | $ mln | 10.5
Regional budget funds

Residents' revenue, 2018	$14.7 mln
Number of workplaces, 2018	2 806
Number of created and/or used IP assets, 2018	51
Residents' tax deductions, 2018	$8.1 mln

TECHNOLOGY PARK'S SPECIALIZATION AREAS

- Machine tool industry
- ICT
- Electrical industry
- Medical and pharmaceutical industry

Year of establishment
2015

Power supply facilities
8.3 MWt

Land area
6 ha

Space occupancy
96 %

Floor area
60.8 thousand m²

Number of residents/SMEs
89 / 78

Technology park ELMA was created with the aim of locating and assisting in the development of the activities of innovative enterprises of small and medium-sized businesses specializing in the development of technological innovations. The laboratories, research centers and production units are located in the technology park buildings, which makes it possible to focus the entire production process, from the idea to the release of goods and quality control checks, on one territory.

TECHNOLOGY PARK

ELMA

Moscow | elmagroup.ru

ЭЛМА
технопарк

Currently, more than 80 residents that generate about 2,000 jobs are actively operating on the territory of the Technology park ELMA.

Products and technologies of residents are used, both in Moscow and abroad, exported to countries near and far abroad.

TECHNOLOGY PARK'S INFRASTRUCTURE

- Center for youth innovation creativity

KEY RESIDENTS: ▼ JSC NPC "ELVIS" ▼ JSC "ELVIS-NEOTEK" ▼ JSC "EKSIS" ▼ LLC "MKS"

ЭЛВИС | ЭЛВИС Неотек | ЭКСИС | MEDICAL COMPUTER SYSTEMS

TOTAL INVESTMENTS IN TECHNOLOGY PARK ACCUMULATED

100 % | $ mln | 6.5
Private investment

Residents' revenue, 2018	$111.3 mln
Number of workplaces, 2018	1 318
Number of created and/or used IP assets, 2018	122
Residents' R&D expenses, 2018	$3.6 $350
Residents' tax deductions, 2018	$33.3 mln

КОСМОС-НЕФТЬ-ГАЗ

TECHNOLOGY PARK

Kosmos-Neft-Gaz

Voronezh region | kng.ru

TECHNOLOGY PARK'S SPECIALIZATION AREAS

- Production of oilfield, drilling and exploration equipment

Year of establishment
2008

Power supply facilities
1 MWt

Land area
19.2 ha

Space occupancy
46 %

Floor area
84.7 thousand m²

Number of residents/SMEs
6 / 5

Currently, 6 residents are located in the technology park. Residents specialize in the development and production of innovative equipment for the petrochemical industry.

The prospects of the technology park for its residents are the conduct of scientific research, the creation and development of new hi-tech technologies, the implementation of the results of scientific activities in production, the organization of the production of import-substituting products. So in 2015, 27 R&D was carried out, in 2016 - 35, in 2017 - 27, in 2018 - 24.

The plans for the development of the technology park for the coming years are the development of innovative projects of its residents; organization of market launch of new products; creating sustainable links with development institutions and business support infrastructure.

TECHNOLOGY PARK'S INFRASTRUCTURE

- Laboratories

KEY RESIDENTS: ▼ LLC FPK "Kosmos-Neft-Gaz" ▼ LLC "Proizvodstvennyi Kompleks "KNG" ▼ LLC "Neftehimproekt KNG"

TOTAL INVESTMENTS IN TECHNOLOGY PARK ACCUMULATED

$31.8 mln

100 % | $ mln | 31.8
Private investment

Residents' revenue, 2018	$69 mln
Number of workplaces, 2018	1 067
Number of created and/or used IP assets, 2018	5
Residents' R&D expenses, 2018	$12.5 mln
Residents' tax deductions, 2018	$11.5 mln

INTERNATIONAL INNOVATION NANOTECHNOLOGY CENTER

Dubna

Moscow region | nc-dubna.ru

НАНОЦЕНТР ДУБНА

TECHNOLOGY PARK'S SPECIALIZATION AREAS

- Optics and photonics
- Biotechnology
- New materials

Year of establishment
2010

Power supply facilities
75 %

Land area
0.7 ha

Number of residents/SMEs
66 / 22

Floor area
0.6 thousand m²

The Dubna nanotechnology center was established in 2010 based on the results of an open competition of the RUSNANO Fund for Infrastructure and Educational Programs for the implementation of a full cycle of services for the development of startups in the field of nanotechnology.

The total budget of the project is $32 mln, while from RUSNANO, investments in the project amount to $17.5 mln. The project's investors were also the Joint Institute for Nuclear Research, Concern "RTI Systems" and JSC "IT Co. Information Technology".

The main specializations of the Dubna Nanocenter include: fine chemicals, glass technologies, new energy, metals, cosmeceuticals. The nanocenter is based on the territory of the Special Economic Zone Dubna and has a number of specialized technological sites outside it.

TECHNOLOGY PARK'S INFRASTRUCTURE

- Business incubator
- Laboratories

KEY RESIDENTS: ▼ LLC "Diamant Gold" ▼ LLC "Zaschitnye pokrytiya" ▼ LLC "Kosmecevtichesky incubator"

TOTAL INVESTMENTS IN TECHNOLOGY PARK ACCUMULATED

$350 mln

5 % | $ mln | 17
Federal budget funds

95 % | $ mln | 333
Regional budget funds

Residents' revenue, 2018	$175 thousand
Number of workplaces, 2018	71
Number of created and/or used IP assets, 2018	17
Residents' R&D expenses, 2018	$11 thousand
Residents' tax deductions, 2018	$48 thousand

Мосгормаш
ТЕХНОПАРК

TECHNOLOGY PARK
Mosgormash
Moscow | tpmgm.ru

TECHNOLOGY PARK'S SPECIALIZATION AREAS

- Machine tool industry
- Medical and pharmaceutical industry
- Metallurgy and metal working
- Light industry

Year of establishment
2013

Power supply facilities
4 MWt

Land area
6.4 ha

Space occupancy
95 %

Floor area
33.4 thousand m²

Number of residents/SMEs
60 / 59

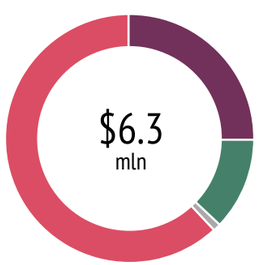
Technology park Mosgormash is an infrastructure complex integrated into the innovative ecosystem of the city of Moscow. The technology park has 60 scientific and technical production enterprises operating in areas such as medicine, energy, and machine building.

TECHNOLOGY PARK'S INFRASTRUCTURE

- Additive technology center
- Subcontracting center
- Center for youth innovation creativity
- Co-working center
- Engineering center
- Prototyping center
- Center for collective usage of equipment

KEY RESIDENTS: ▼ LLC "LED-effect" ▼ LLC "Bolear" ▼ CJSC "SKF"

TOTAL INVESTMENTS IN TECHNOLOGY PARK ACCUMULATED



- 0,3 % / $ thousand — $15 — Federal budget funds
- 61,9 % / $ mln — 3.8 — Regional budget funds
- 13 % / $ thousand — 800 — Municipal budget funds
- 25 % / $ mln — 1.6 — Private investment

- Residents' revenue, 2018 — $116 mln
- Number of workplaces, 2018 — 1 100
- Number of created and/or used IP assets, 2018 — 13
- Residents' R&D expenses, 2018 — $650 thousand
- Residents' export volume, 2018 — $7.9 mln
- Residents' tax deductions, 2018 — $6.4 mln

TECHNOLOGY PARK
Podolye
Moscow region | tp-podolie.ru

TECHNOLOGY PARK'S SPECIALIZATION AREAS

- Production of oilfield, drilling and exploration equipment
- Biotechnology
- Electronic industry and instrumentation

Year of establishment
2016

Power supply facilities
1.2 MWt

Land area
3.5 ha

Space occupancy
93.7 %

Floor area
8.9 thousand m²

Number of residents/SMEs
32 / 31

In October 2016, on the basis of the property complex owned by the management company OOO Stroybaza, the Podolye technology park was formed to develop and maintain the material, technical, energy-technological and social infrastructure for providing quality services to residents, which would allow them focus on developing and improving your business; facilitating the participation of SMEs in federal, regional and municipal business support programs.

In 2017-18. A new building with an area of 1495 m² was built using modern technology. Since 2018, the Podillia technology park has included an additional production site in Chekhov: the land area is 18,485.7 m², the total area of capital buildings are 3 338.8 m².

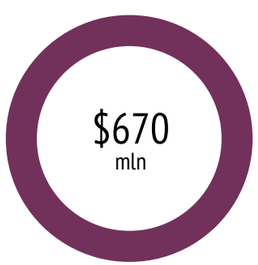
In the short term, 2017-25. Planned: reconstruction of all buildings of the additional production site in the city of Chekhov; construction of the Trade and Exhibition Building 5 928.8 m² (developed by AGO and agreed with the Ministry of Construction of the Ministry of Defense).

TECHNOLOGY PARK'S INFRASTRUCTURE

- Data center
- Innovation and technology center
- Center for youth innovation creativity
- Laboratories
- Engineering center
- Technology transfer center
- Center for collective usage of equipment

KEY RESIDENTS: ▼ LLC "IBEKO SYSTEMS" ▼ LLC "Termionika"

TOTAL INVESTMENTS IN TECHNOLOGY PARK ACCUMULATED



- 100 % / $ thousand — 670 — Private investment

- Residents' revenue, 2018 — $10.2 mln
- Number of workplaces, 2018 — 248
- Number of created and/or used IP assets, 2018 — 5
- Residents' R&D expenses, 2018 — $41 thousand
- Residents' export volume, 2018 — $35 thousand
- Residents' tax deductions, 2018 — $86 thousand

TECHNOLOGY PARK

Lipetsk

Lipetsk region | technopark48.ru

TECHNOLOGY PARK'S SPECIALIZATION AREAS

- Electrical industry
- New materials
- ICT

Year of establishment
2012

Power supply facilities
2 MWt

Land area
5 ha

Space occupancy
99 %

Floor area
7.9 thousand m²

Number of residents/SMEs
29 / 29

The activities of the technology park are aimed at creating an effective system for supporting and promoting science-intensive, innovative projects from the moment a scientific idea was born to the organization of small-scale production output.

With co-financing from all budget levels by the institution for the period from 2014 - 2018. A wide range of engineering and reconstruction work was carried out to develop the property complex of the technology park Lipetsk. Funds were received from the municipal budget for the development of design estimates for four capital construction facilities.

The number of residents increased by 60%, 14 SMEs increased, the total number was 29 companies in all four areas of the technology park. Three companies lost their resident status due to the lack of technology and innovation activities in the territory of the technology park.

Since 2018, work has been ongoing to obtain the status of a regional operator of the Skolkovo Foundation.

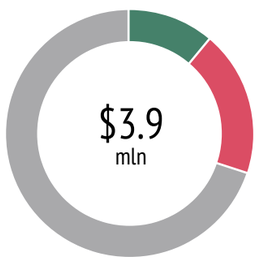
TECHNOLOGY PARK'S INFRASTRUCTURE

- Innovation and technology center

KEY RESIDENTS:

- LLC "GSKS "Profi"
- LLC "Medsoft"
- LLC "Zavod Sovremennoy Produkcii"

TOTAL INVESTMENTS IN TECHNOLOGY PARK ACCUMULATED



70 % | $ mln | 2.8 — Federal budget funds

19 % | $ mln | 0.75 — Regional budget funds

11 % | $ thousand | 0.35 — Municipal budget funds

- Residents' revenue, 2018: $11.6 mln
- Number of workplaces, 2018: 429
- Number of created and/or used IP assets, 2018: 21
- Residents' R&D expenses, 2018: $145 thousand
- Residents' export volume, 2018: $79 thousand
- Residents' tax deductions, 2018: $1 mln

CENTER FOR NANOTECHNOLOGY AND NANOMATERIALS OF THE

Republic of Mordovia

Republic of Mordovia | cnnrm.ru

TECHNOLOGY PARK'S SPECIALIZATION AREAS

- Shipbuilding industry
- Chemical industry
- New materials
- Aviation industry

Year of establishment
2012

Power supply facilities
2.5 MWt

Land area
0.3 ha

Space occupancy
100 %

Floor area
8.7 thousand m²

Number of residents/SMEs
77 / 77

Center for the development of nanotechnology and nanomaterials of the Republic of Mordovia (CNN) was founded on March 13, 2012. The decision to create a nanotechnology center in the Republic of Mordovia was made following the results of the victory in the third open selection competition projects to create nanotechnology centers in the regions of Russia, carried out by the RUSNANO Fund for Infrastructure and Educational Programs in 2011.

From the moment the CNN was founded until the end of 2018, a total of 78 investment projects were approved for financing by the Board of Directors of CNN.

CNN is in active communication with foreign companies, universities and research centers. As a result of this focused work, many areas are implemented with foreign partners, which has a positive effect on the technological atmosphere, and most of the projects are managed by managers and entrepreneurs from the Republic of Mordovia.

TECHNOLOGY PARK'S INFRASTRUCTURE

- Business incubator
- Technology transfer center
- Laboratories

KEY RESIDENTS:

- LLC "Proizvodstvennyi centr "ElementPro"
- LLC "Tehnologicheskaya kompaniya "Bioteh"
- LLC "Tehnologicheskaya kompaniya "Pechatnye tehnologii"

TOTAL INVESTMENTS IN TECHNOLOGY PARK ACCUMULATED

35 % | $ mln | 11 — Regional budget funds

65 % | $ mln | 20.3 — Private investment

- Residents' revenue, 2018: $1.2 mln
- Number of workplaces, 2018: 152
- Number of created and/or used IP assets, 2018: 12
- Residents' R&D expenses, 2018: $95 thousand
- Residents' tax deductions, 2018: $150 thousand

КУЗБАССКИЙ ТЕХНОПАРК

Kuzbass technology park

Kemerovo region | technopark42.ru

TECHNOLOGY PARK'S SPECIALIZATION AREAS

- Electronic industry and instrumentation
- Mining industry
- Medical and pharmaceutical industry
- Transport engineering

Year of establishment
2011

Power supply facilities
9 MWt

Land area
23.3 ha

Space occupancy
76 %

Floor area
16.1 thousand m²

Number of residents/SMEs
68 / 64

The Kuzbass technology park was built in 2011 under the program "Creating high technology parks". Located in the Rudnichny district of Kemerovo on the right bank of the Tom river, within the streets of Tereshkova, Institute and Sosnovy Boulevard. The total area of real estate is 16 070 m².

TECHNOLOGY PARK'S INFRASTRUCTURE

- Business incubator
- Co-working center
- Center for collective usage of equipment
- Engineering center
- Center for youth innovation creativity

KEY RESIDENTS: ▼ LLC "ASProK" ▼ Group of Companies LLC "VostEKO" – OOO "Gorny-COT" ▼ JSC "Vist Grupp"

TOTAL INVESTMENTS IN TECHNOLOGY PARK ACCUMULATED

59 % | $ mln | 7.8 Federal budget funds

51 % | $ mln | 8.1 Private investment

- Residents' revenue, 2018: $35.9 mln
- Number of workplaces, 2018: 801
- Number of created and/or used IP assets, 2018: 3
- Residents' R&D expenses, 2018: $16 thousand
- Residents' export volume, 2018: $4.1 mln
- Residents' tax deductions, 2018: $8.8 mln

TECHNOLOGY PARK

Perm

Perm region | techperm.ru

ТЕХНОПАРКПЕРМЬ

TECHNOLOGY PARK'S SPECIALIZATION AREAS

- ICT

Year of establishment
2016

Power supply facilities
45.4 %

Land area
1.7 ha

Number of residents/SMEs
25 / 0

Floor area
16.9 thousand m²

Technology park Perm is a platform for businesses and startups that are developing in key digital Russian and global economies. On November 19, 2018, the technology park was given the status of a high technology park; regional tax benefits for residents of technology park Perm were legislatively fixed.

Technology park Perm provides residents with all the necessary support so that they can successfully develop their technological assets and corporate structure.

We create infrastructure, attract resources and provide other opportunities for the project and its partners, turning them into a set of effective services that fully meet the needs of the participating companies of the project.

Developing areas of the project: development of a service center; commercialization of developments of residents and partners; placing of federal and international residents in the Perm region; regional office of Skolkovo.

TECHNOLOGY PARK'S INFRASTRUCTURE

- Co-working center
- Additive technology center

KEY RESIDENTS: ▼ LLC "FDS" ▼ LLC "INNFOCUS" ▼ LLC "Carrot quest"

TOTAL INVESTMENTS IN TECHNOLOGY PARK ACCUMULATED

100 % | $ thousand | 238 Private investment

- Residents' revenue, 2018: $23.8 mln
- Number of workplaces, 2018: 489
- Number of created and/or used IP assets, 2018: 17

INDUSTRIAL TECHNOLOGY PARK

IKSEl

Vladimir region

TECHNOLOGY PARK'S SPECIALIZATION AREAS

Production of HVAC equipment, engineering systems, electronic devices and household appliances

Year of establishment
2014

Power supply facilities
6 MWt

Land area
18.1 ha

Space occupancy
97 %

Floor area
91.4 thousand m²

Number of residents/SMEs
5 / 1

Residents of the industrial technology park IKSEl are the leaders of the HVAC market in Russia. All premises of the technology park were completely reconstructed, and roads and parking lots in the inner territory of the park were restored or built.

The industrial technology park IKSEl is currently in the operational stage, almost all areas have been leased and agreements have been concluded with tenants on which they launched their production. The main advantages of the IKSEl industrial technology park are its favorable location and good transport accessibility, the availability of a sufficient number of qualified personnel in the region and the availability of professional higher and secondary educational institutions, as well as a good ratio of rental rates of the technology park premises with the listed advantages.

TECHNOLOGY PARK'S INFRASTRUCTURE

- Business incubator
- Innovation and technology center
- Technology transfer center
- Laboratories
- Engineering center
- Co-working center
- Center for collective usage of equipment
- Subcontracting center

KEY RESIDENTS:

- LLC "Izhevsky Zavod Teplovoy Tehniki"
- LLC "Royal Thermo RUS"
- LLC "Rusklimat"
- PO "VentInzhMash"

TOTAL INVESTMENTS IN TECHNOLOGY PARK ACCUMULATED

$28.6 mln

92,2 % $ mln 26.4 Private investment

7,8 % $ mln 2.2 Federal budget funds

- Residents' revenue, 2018: $66.6 mln
- Number of workplaces, 2018: 1 243
- Number of created and/or used IP assets, 2018: 10
- Residents' R&D expenses, 2018: $60 thousand
- Residents' tax deductions, 2018: $18.9 mln

TECHNOLOGY PARK'S SPECIALIZATION AREAS

- Metallurgy and metal working
- New materials
- Aviation industry

Year of establishment
2016

Power supply facilities
0.4 MWt

Land area
1.3 ha

Space occupancy
87 %

Floor area
5.5 thousand m²

Number of residents/SMEs
7 / 7

Technology park Polymed provides a place and the necessary service for small enterprises in the field of industrial processing of plastics and the production of medical products, high-precision metal processing, so that they successfully develop their technological assets and use the cooperation and competence of all residents.

TECHNOLOGY PARK

Polymed

Moscow region | tppolimed.ru

TECHNOLOGY PARK'S INFRASTRUCTURE

- Business incubator
- Laboratories

KEY RESIDENTS:

- LLC "Polipak"
- LLC "Tehnovostok"
- LLC "TPA-Trade"

TOTAL INVESTMENTS IN TECHNOLOGY PARK ACCUMULATED

$127 thousand

100 % $ thousand 127 Private investment

- Residents' revenue, 2018: $6.8 mln
- Number of workplaces, 2018: 180
- Residents' tax deductions, 2018: $950 thousand

ТЕХНОПАРК В СФЕРЕ ВЫСОКИХ ТЕХНОЛОГИЙ

Morion Digital

Perm region | morion.digital

TECHNOLOGY PARK'S SPECIALIZATION AREAS

- Electronic industry and instrumentation
- Electrical industry
- ICT

Year of establishment
2018

Power supply facilities
11 MWt

Land area
6.8 ha

Space occupancy
80 %

Floor area
71.8 thousand m²

Number of residents/SMEs
14

The area of Morion Digital is 71.8 thousand m² - this is the country's largest private high technology park. The volume of investments planned for the development of the territory is $11.1 mln. Key specialization areas of the technology park: telecommunications, cloud services, the Internet of things, smart home, industrial digitalization, smart city, robotics, artificial intelligence, information security.

The technology park currently hosts more than 80 companies, including large resident enterprises such as AO "ER-Telecom Holding", the leading telecom services operator, and PAO "Morion", the manufacturer of unique telecommunication equipment. Among other residents of the technology park are OOO "Promobot", OOO "AIBOX TECHNOLOGIES", OOO "Billingovye Systemy", OOO "Vector".

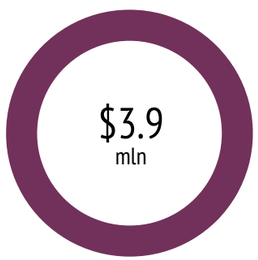
By 2020, the total technology park area will be 95.8 thousand m², 450 companies and 8,000 additional jobs will be attracted. The revenue of residents for the next two years will amount to $15.9 mln.

TECHNOLOGY PARK'S INFRASTRUCTURE

- Co-working center

KEY RESIDENTS: ▼ JSC "ER-Telecom Holding" ▼ PJSC "Morion" ▼ LLC "Promobot"

TOTAL INVESTMENTS IN TECHNOLOGY PARK ACCUMULATED



100 % | $ mln | $3.9
Private investment

- Residents' revenue, 2018: $53.3 mln
- Number of workplaces, 2018: 810
- Number of created and/or used IP assets, 2018: 4
- Residents' R&D expenses, 2018: $887 thousand

TECHNOLOGY PARK

Kontakt

Belgorod region | kontaktspace.ru

TECHNOLOGY PARK'S SPECIALIZATION AREAS

- ICT

Year of establishment
2015

Power supply facilities
1.6 MWt

Land area
0.6 ha

Space occupancy
95.5 %

Floor area
7.5 thousand m²

Number of residents/SMEs
13 / 12

Technology park Kontakt is an infrastructure support object for SMEs operating in the field of high technologies.

Residents of the technology park are companies engaged in the development of promising types of products and technologies, and providing vocational guidance education services for children. Among the residents of the technology park, 7 companies implementing projects in the field of IT technologies are members of the IT technology cluster of the Belgorod region.

As part of the technology park, the children's technology park BelRobot is operating, where more than 300 children aged 5 to 18 years are engaged in laboratories for design and modeling, robotics, prototyping, and electronics under continuing education programs of an engineering focus.

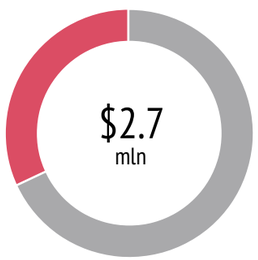
The Kontakt business space operates on the basis of the technology park, including a communications platform, co-working, and infrastructure facilities to support SMEs. It provides information services, project support, and the exchange of experience.

TECHNOLOGY PARK'S INFRASTRUCTURE

- Co-working center

KEY RESIDENTS: ▼ LLC "Fabrika Informacionnykh Tehnologii" ▼ LLC "Gorodskie parkovki" ▼ LLC "SofTrust"

TOTAL INVESTMENTS IN TECHNOLOGY PARK ACCUMULATED



31,5 % | $ mln | 0.85
Regional budget funds

68,5 % | $ mln | 1.85
Federal budget funds

- Residents' revenue, 2018: $9.2 mln
- Number of workplaces, 2018: 351
- Number of created and/or used IP assets, 2018: 38
- Residents' export volume, 2018: $477
- Residents' tax deductions, 2018: $920 thousand

ТЕХНОПАРК ЯБЛОЧКОВ

TECHNOLOGY PARK

Yablochkov

Penza region | biznes-penza.ru

TECHNOLOGY PARK'S SPECIALIZATION AREAS

- New materials
- Electronic industry and instrumentation
- ICT

Year of establishment
2011

Power supply facilities
0.6 MWt

Land area
0.21 ha

Space occupancy
96.2 %

Floor area
5 thousand m²

Number of residents/SMEs
16 / 16

Technology park "Yablochkov" was created with the aim of creating favorable conditions for the development of SMEs involved in the development and implementation of scientific and innovative projects. The presence of developed infrastructure allows us to provide innovative enterprises located on the territory of the Yablochkov technology park with a full range of services necessary for the establishment and development of a knowledge-based business. Residents have access to unique hi-tech equipment, which allows for research and testing at the most modern level. During the existence of the technology park, 44 companies were or are its residents.

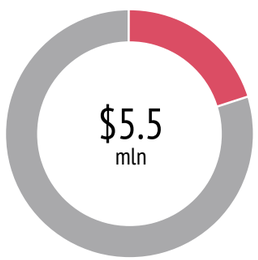
TECHNOLOGY PARK'S INFRASTRUCTURE

- Laboratories

KEY RESIDENTS:

- ▼ GK "INKOM"
- ▼ LLC "Modul Avtomatika"
- ▼ LLC NTC "Sura"

TOTAL INVESTMENTS IN TECHNOLOGY PARK ACCUMULATED



20,3 % | $ mln | 1,1
Regional budget funds

79,7 % | $ mln | 4,4
Private investment

- Residents' revenue, 2018: $1.75 mln
- Number of workplaces, 2018: 161
- Residents' export volume, 2018: $89 thousand
- Residents' tax deductions, 2018: $162 thousand

ИННОВАЦИОННЫЙ ТЕХНОПАРК ИДЕЯ Юго-восток

INDUSTRIAL TECHNOLOGY PARK

Ideya Yugo-Vostok

Republic of Tatarstan | tehnopark-rt.ru

TECHNOLOGY PARK'S SPECIALIZATION AREAS

- Furniture manufacture
- Metallurgy and metal working
- Agricultural engineering

Year of establishment
2004

Power supply facilities
2 MWt

Land area
16 ha

Space occupancy
70 %

Floor area
33.8 thousand m²

Number of residents/SMEs
51 / 51

IPT Ideya Yugo Vostok was established on June 24, 2004 in Leninogorsk in order to promote the development of small and medium-sized businesses in the southeast of the Republic of Tatarstan. In 2017, the industrial technology park Ideya Yugo-Vostok received state accreditation in the Republic of Tatarstan.

Advantages of the technology park: offices equipped with furniture and office equipment, production and storage facilities; business is accompanied by legal, accounting consulting services; flexible pricing allows you to significantly save on rental payments; transport and logistics accessibility of the industrial park (production sites are located directly in the city of Leninogorsk); in the territory of the industrial technology park there are parking lots for specialized equipment; prototyping center services.

TECHNOLOGY PARK'S INFRASTRUCTURE

- Business incubator
- Prototyping center
- Center for youth innovation creativity

KEY RESIDENTS:

- ▼ LLC "Agroidea"
- ▼ LLC "Modul"
- ▼ LLC "Technopark-Technology"

TOTAL INVESTMENTS IN TECHNOLOGY PARK ACCUMULATED

100 % | $ thousand | 985
Private investment

- Residents' revenue, 2018: $8.7 mln
- Number of workplaces, 2018: 494
- Residents' tax deductions, 2018: $890 thousand

TECHNOLOGY PARK

Mayak

Sevastopol | technoparkmayak.ru

TECHNOLOGY PARK'S SPECIALIZATION AREAS

- Shipbuilding industry
- Electrical industry
- Electronic industry and instrumentation

Year of establishment
2015

Power supply facilities
2.4 MWt

Land area
13 ha

Space occupancy
80 %

Floor area
41 thousand m²

Number of residents/SMEs
124 / 124

The Mayak technology park Association was created with the aim of combining efforts to develop engineering, transport, production and other infrastructure that provides conditions for stable industrial growth, the integration of science, education and production in the form of a union of scientific organizations, design bureaus, educational institutions, production facilities enterprises or their divisions in order to accelerate the development and application of scientific, technical and technological achievements thanks to highly qualified specialists, operating on the territory of the technology park, as well as the use of equipped production, experimental, information base.

The Mayak technology park Association is a dynamically developing organization hosting new members and continuously expanding production capacities. On the territory of the technology park, enterprises participating in the free economic zone operate.

TECHNOLOGY PARK'S INFRASTRUCTURE

- Co-working center
- Innovation and technology center

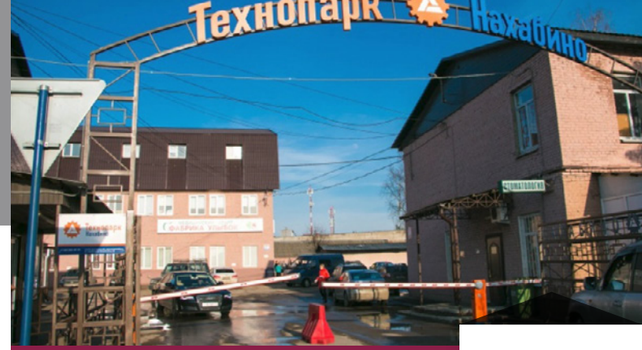
KEY RESIDENTS:

▼ LLC "Zavod sudovoy svetotehniki "Mayak"

TOTAL INVESTMENTS IN TECHNOLOGY PARK ACCUMULATED

100 % $thousand **364**
Private investment

- Residents' revenue, 2018 — **$5 mln**
- Number of workplaces, 2018 — **482**
- Residents' tax deductions, 2018 — **$297 thousand**



TECHNOLOGY PARK

Nakhabino

Moscow region | tp-nakhabino.ru

TECHNOLOGY PARK'S SPECIALIZATION AREAS

- Optics and photonics
- Medical and pharmaceutical industry
- Automobile industry
- Electronic industry and instrumentation

Year of establishment
2012

Power supply facilities
4 MWt

Land area
2.1 ha

Space occupancy
95 %

Floor area
7.5 thousand m²

Number of residents/SMEs
73 / 73

The development of small businesses of various kinds, the provision of better conditions for the economic activity of small enterprises, the creation of new jobs. Currently, 73 organizations are registered and operate in the territory. Created more than 400 jobs.

The technology park, in accordance with the goals and subject of activity, forms its innovative infrastructure, the basis of which are business incubators.

The technology park provides production facilities and offices to small incubated firms, equips premises in accordance with their specialization, assists in finding sources of financing, organizes business meetings and seminars, assists in the establishment and registration of small firms, represents their interests at all levels, protects their intellectual property.

TECHNOLOGY PARK'S INFRASTRUCTURE

- Business incubator

KEY RESIDENTS:

▼ LLC "Solartek"
▼ LLC "Ronavi Robotics"
▼ LLC "TEN.MedPrint"

TOTAL INVESTMENTS IN TECHNOLOGY PARK ACCUMULATED

7 % $thousand **65**
Municipal budget funds

93 % $thousand **890**
Private investment

- Residents' revenue, 2018 — **$4.1 mln**
- Number of workplaces, 2018 — **500**
- Residents' R&D expenses, 2018 — **$79 thousand**
- Residents' tax deductions, 2018 — **$1.4 mln**

МОЖАЙСКИЙ ПЕРВЫЙ
ТЕХНОПАРК

TECHNOLOGY PARK

Mozhaisky Pervy

Moscow region | можайский-первый.рф, m1tp.ru

TECHNOLOGY PARK'S SPECIALIZATION AREAS

Light industry

Year of establishment
2018

Power supply facilities
1 MWt

Land area
6.94 ha

Space occupancy
90 %

Floor area
14.3 thousand m²

Number of residents/SMEs
13 / 13

The existing industrial technology park was created on the territory of the Mozhaisk urban district to attract investment, advanced production technologies, increase the stability of the budget system, improve working conditions and employment, and develop municipal and regional industries. Advantages of the technology park include: convenient geographic location, highway for freight transport, proximity of railway lines, well-developed engineering networks, rooms of various areas and destinations, an active hostel, 24-hour security, and a developed industrial zone of the city district.

TECHNOLOGY PARK'S INFRASTRUCTURE

Co-working center

Data center

KEY RESIDENTS:

▼ LLC «БУДИ БАСА»

▼ LLC «МПП»

▼ LLC «Трейд лайн»

TOTAL INVESTMENTS IN TECHNOLOGY PARK ACCUMULATED

$556 thousand

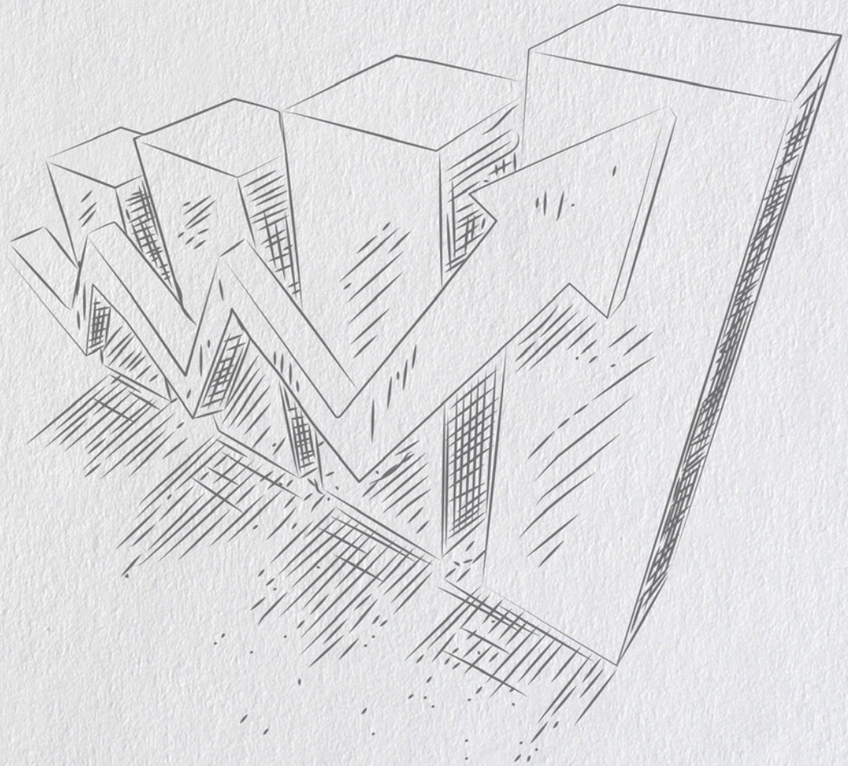
100 % $thousand 556
Private investment

Residents' revenue, 2018 — $12 mln

Number of workplaces, 2018 — 300

Residents' tax deductions, 2018 — $731 thousand

ANALYSIS OF THE RESULTS AND METHODOLOGY OF THE V NATIONAL RATING OF RUSSIAN TECHNOLOGY PARKS



ANALYSIS OF RESULTS OF THE RATING

In 2019, the Association of clusters and technology parks of Russia conducted the V National rating of Russian technology parks. As a result of public discussions, the research methodology has significantly changed in terms of the number and composition of indicators. A new sub-index S5 "Information transparency of the technology park and its contribution to sustainable development" has been added. It includes two new indicators: "Availability of career guidance infrastructure and/or programs" and "Preferential conditions for residents". Additionally, the sub-index S3 "Operational efficiency of technology park's managing company" had been widened by including the indicator "Share of new technology park residents registered in the previous year (2018)". Apart from that, the classification of the intellectual property assets (IP assets) owned by technology park residents has been changed. In particular, IP assets assessment scale has been developed depending on both the type of IP assets and the country of IP filings (a country in which the IP assets received legal protection), the IP assets are calculated with a coefficient from 1 to 3. Also, in the new Rating methodology, the indicators of the Sub-index "Innovation activity of technology park's residents" has been calculated over a three-year period.

A specific feature of the Rating 2019 is the experiment conducted to assess the information transparency of technology park websites in the field of accessibility (simplicity) of receiving by a potential technology park resident the information on accommodation, availability of technological and engineering infrastructure facilities and services provided, operational efficiency of technology park's managing company, success stories of the residents, etc. The experiment is conducted on the basis of one of the leading universities in management education in Russia - State University of Management (SUM). In particular, 40 students in both Management and Innovation Management evaluated technology park websites according to 16 criteria.

In the V National rating of Russian technology parks (as well as in the Rating 2018) it has been decided to refuse to assign a particular rank to the technology parks depending on the value of the integral index. Special indexes are assigned to the technology parks instead.

The integral index is calculated on the basis of the assessment of 22 indicators grouped into 5 sub-indexes: "Innovation activity of technology park's residents"; "Economic performance of technology park's residents", "Operational efficiency of technology park's managing company", "Investment attractiveness of the technology park", and "Information transparency of the technology park and its contribution to sustainable development". If Technology parks have similar results they are grouped based on the following scale: the Group A+ refers to the highest level of technology park operation efficiency, while the Group CC refers to the sufficient level of technology park operation efficiency.

In 2019, the comparative study involves assessment of operation efficiency of 41 Russian technology parks located in the territory of 22 regions of the Russian Federation. The Rating sample includes 5 technology parks, which have not been previously participated in the National rating of Russian technology parks. In particular, technology parks taking part in the Rating for the first time comprises 3 technology parks from the Moscow Region (i.e. International Innovation Nanotechnology Center (Nanocenter "Dubna"), technology park "Mozhaisky Pervy" and technology park "Polymed") and 2 technology parks from the Perm Territory (Technology park "Perm" and the High-Tech Technology park "Morion Digital"). The regions with the largest number of technology parks taking part in the Rating are the city of Moscow and the Moscow region (8 and 6 technology parks respectively).

In order to take into account particularities of the Russian technology parks operation efficiency, technology parks are grouped by the integral efficiency level in accordance with the following scale ensuring all the technology parks are classified into four groups:

Group I (A+) – "Highest level of technology park operation efficiency" – higher than 110% with the Russian average level taken as 100%;

Group II (A) – "High level of technology park operation efficiency" – from 100% to 109%;

Group III (B) – "Moderately high level of technology park operation efficiency" – from 90% to 99%;

Group IV (C) – "Sufficient level of technology park operation efficiency" – from 60% to 89%.

In 2019, in accordance with the scale mentioned above, as a result of applying the formula for calculating the integral index, 13 technology parks constitute the group of technology parks with the highest level of operation efficiency (exceeding the Russian average level by more than 10%) while the group with a high level of operation efficiency is consisted of 7 technology parks, a group with moderately high level of operation efficiency is consisted of 8 technology parks, 13 technology parks constitute the group with sufficient level of operation efficiency.

In 2019, among the leaders are 5 technology parks operating in the territory of Moscow and technology parks located in 8 other regions of Russia: Moscow, Nizhny Novgorod Region, Novosibirsk Region, Samara Region and Ulyanovsk Region, the Republic of Mordovia and the Republic of Tatarstan.

For the fourth year in a row **Nanothenology center "TechnoSpark" (Moscow)** becomes the leader of the rating of Russian technology parks in terms of operation efficiency and attractiveness for high-tech companies. TechnoSpark is a successful venue for launching and developing new technology startups. From 2016 till 2018 this technology park maintains a leading position among all other technology parks in the sub-index S1 "Innovation activity of technology park residents" through constantly increasing innovation activity of its residents. In 2018 the R&D expenses of residents increased by 2.5 times and exceed the total turnover by 75% on average for 3 last years (1st place among the rating participants). The technology park takes 3rd place in terms of the number of IP assets registered in Russian or abroad per 1 resident employee

NANOTHENOLOGY CENTER
"TECHNOSPARK"

Most of these high results in indicators of residents' innovation activity can be explained by the unique model of this technology park. TechnoSpark is a key site of the venture building network of nanotechnology centers of the Fund for Infrastructure and Educational Programs (FIEP RUSNANO). During its existence TechnoSpark managed to establish an efficient system for building product and contract companies from stratch - a "pipeline" of startups attractive for investors.

Technology park residents also take leadership in the investments in fixed assets: more than two million roubles of investments per one resident employee. Technology park is also one of the top three technology parks in Russia in 2018 in terms of investment attractiveness (sub-index S4) and showed strong results in several indicators of the sub-index S3 "Operational efficiency of the technology park's managing company". In particular, the technology park takes the first place in revenue from paid services of technology park's managing company (20 thousand roubles per 1m2 of total technology park area). The operation of the technology park can be characterized as highly efficient in terms of state budgetary efficiency: $53.5 of private investments is attracted per $1 of public funding.

HIGH TECHNOLOGY PARK

IN THE REPUBLIC OF MORDOVIA

For the second year **High technology park in the Republic of Mordovia (Republic of Mordovia)**. Compared to previous year, "Technology park - Mordovia" managed to improve its position in the sub-index S1 "Innovation activity of technology park residents" from 12th place to 2nd, reducing the gap from the leader by 29%. This result was achieved by showing the best in the indicator "Average number of IP assets registered in Russia or abroad per 1 resident employee". The technology park is also maintaining strong positions in the sub-index S2 "Economic performance of technology park's residents" (3rd place) and takes 4th place in the new sub-index S5 "Information transparency and contribution to sustainable development".

In 2019 the technology park celebrated its 10-year anniversary. During this period a well-developed technological infrastructure was created in the technology park enabling a wide spectre of services for residents. On 48 thousand m2 of the technology park territory all the necessary conditions for comprehensive development of projects in electronic instrument making, light engineering, fibre optics and optoelectronics, IT, biotechnology and composite materials

Managing company of the technology park is actively interacting with members of the Mordovian clusters: industrial cluster "Fibre optics and optoelectronics" and innovation cluster "Light engineering and optoelectronic instrument making" as part of providing consulting services on measures and instruments of export support implemented in Russia and international companies' operation.

Residents of the technology park in 2018 increased the level of labor productivity again (5.99 million roubles/person in 2018 compared to 5.11 million roubles/person in 2017 which is 2.7 times higher than average in the republic) and the technolgy park takes 3rd place in this indicator. The technology park also demonstrates strong performance in terms of budgetagy efficience: it takes 2nd place in residents' tax and customs duties volume (after technology park "Strogino").

HIGH TECHNOLOGY PARK

ZHIGULEVSKAYA DOLINA

For the first time **High technology park "Zhigulevskaya dolina" (Samara Region)** entered the top three in the rating. The improvement of the technology park position is related to high investment attractiveness (sub-index S4, 3rd place) and operation efficiency of the residents (sub-index S3). In 2018 the revenue of the technology park residents increased by 40% which caused the subsequent increase of R&D expences (in 1.6 times compared to 2017) (indicator 1.1.). As a result, last year the number of IP assets, registered by the technology park residents, increased by 20%.

High technology park "Zhigulevskaya dolina" has 16 technology infrastructure objects (maximum number of objects according to the National standard GOST 56425 - 2015 "Technology parks. Requirements"), that is why it has the highest possible value of the corresponding indicator of the rating. It also provides he maximum posiible variety of basic and specialized services. Absence of debt burden for managing company also allowed the technology park to achieve the highest possible level of financial stability.

Today more than 230 companies are residents of the technology park. They implement projects in such spheres as energy efficiency and energy saving, space technologies and trasport, chemistry, biotechnology and medicine, IT. Project "Zhigulevskaya Dolina-2" is currently implemented: investors construct 7 pilot production buildings for innovation production on the reserve land plot 5.3 ha.

TECHNOLOGY PARK

KALIBR

For the 3rd year **Technology park "Kalibr" (Moscow)** takes place in top-5 of the best technolgy parks in the rating. Technology park is one of the youngest (year of creation - 2015) dynamically developing private technology parks of Moscow. It is the center of innovation economy formation and point of attraction for high-tech companies.

Compared to the previous year the technology park improved its position in the sub-index S1 "Innovation activity of technology park residents" and rose from 29th place to 3rd by substantially increasing patenting activity of the residents. In this parameter "Kalibr" is outstriping all private technolgy parks participating in the rating. The technology park takes 2nd place in the sub-index S5 "Information transparency and contribution to sustainable development".

Technology park "Kalibr" takes 2nd place in the revenue growth rate of the technology park residents (+77.7% compared to 2017).

TECHNOPOLIS

MOSCOW

Technopolis "Moscow" (Moscow) takes place in the top-5 most efficient technology parks of Group I (A+) "Highest level of technology park operation efficiency" in the rating of Russian technology parks. This year technology park took first place in the managing company operation efficiency level (sub-index S3). It also demonstrated high results in the indicators of technology park information transparency and contribution to sustainable development (sub-index S5).

Each year the technology park is increasing the number of its residents: this year their number increased by 28%. Number of IP assets registered by the residents increased in 2018 by more than 3 times. R&D expenses also grew by 11%. The technology park residents' export volume in 2018 grew by nearly 40% compared to 2017.

Technopolis "Moscow" is one of the technology parks leading in the relationship between public and private investments. In the period of in functioning the technology park attracted $4.1 of private investment per each dollar of public funding.

In 2018 the technology park managing company extended the number of services, including accounting, marketing and transportation services. Apart from the diverse infrastructure for collective use for residents there are three objects of social infrastructure in the technology park: children technology park "Quantorium", children rehabilitation center "Rodnik", fitness center "Aquastar".

Technopolis "Moscow" is a technology park with one of the highest levels of public funding (5 267 million roubles for the whole period of functioning) but each year the tax and customs duties of the residents in budgets of all levels is increasing (in 2018 the increase in the total duty volume is 12%) which means the technology park's budget efficiency is high.

TECHNOLOGY PARK

STROGINO

Technology park "Strogino" (Moscow) for the 4th year in a row enters the Group I (A+) "Highest level of technology park operation efficiency" and the top-3 "brownfield" technology parks (with technology park "Kalibr" and Technopolis "Moscow").

For the first time since 2016 the technology park takes the 1st place in the residents' operation efficiency (sub-index S2). In 2018 the technology park took leading positions in several indicators of the sub-index: the export volume, the tax and customs duties, the investments and loans attracted by the residents.

The volume of tax and customs duties of the technology park residents increased in 2018 by 4 times compared to 2017 (2 261 million roubles) which is very important for this technology park since it is developed solely on public funding.

The technology park residents provide competitive level of salaries for their employees: in 2018 the average monthly salary of the residents was 2.5 times higher than the average level of salaries in Moscow. In this indicator the technology park is behind only the Saint Petersburg technology park.

INNOVATIVE PRODUCTION TECHNOLOGY PARK

IDEA

Innovative production technology park "Idea" (Republic of Tatarstan) for the 2nd time entered the Group I (A+) "Highest level of technology park operation efficiency". In 2018 the technology park demonstrated strong performance both in the indicators of residents' activity (sub-index S2, 4th place) and in the efficiency of the managing company (sub-index S3, 7th place).

The technology park takes 4th place in the indicator of the relationship between the residents' employees salary to the average regional salary in 2018 (the level of salary in the technology park is more than 1.6 times greater than the regional average). The residents also attract a substantial amount of investments and loans: the technology park is 5th in this indicator.

The managing company is providing to its residents a huge variety of services that are in high demand: technology park takes 6th place in the revenue from paid services of technology park's managing company. The managing company also successfully attracts both public and private funding (total amount of funding - 2 819 million roubles) while the amount of private investments is 4.5 greater than public.

The residents' tax duties in 2018 increased in 2,6 times compared to 2017 which allowed the technology park to take the 7th place in this indicator. The residents also increased their investments in fixed assets by 32.6% and the revenue by 19.8%, 5.5% of which in 2018 came from residents' production export.

On the technology park premises a developed infrastructure for collective use was created, including several unique objects, including Nanotechnology center of the Republic of Tatarstan, Center for qualification assessment, LEGO Center for robototechnics and constructing. This ensures the high level of investment attractiveness for the technology park (sub-index S4, 7th place).

HIGH TECHNOLOGY PARK OF SVERDLOVSK REGION

For the first time in the years of participation in the National rating of Russian technology parks the **High technology park of the Sverdlovsk Region (Sverdlovsk Region)** has entered the Group I (A+) "Highest level of technology park operation efficiency" of the rating. This year the technology park takes 8th place in the integral index of efficiency and 5th place in the sub-indexes S3 - managing company operation efficiency and S4 - investment attractiveness.

In 2018 the technology park residents increased their revenues by more than 2 times (5 702,6 million roubles compared to 2 690 million roubles in 2017), taking 5th place in the revenue growth rate. Residents' production export volume also increased dramatically - by more than 20%. The technology park takes 3rd place in the export volume.

Last year the technology park's managing company managed to double the number of residents (from 39 in 2017 to 74 in 2019). Such a substantial growth was caused by a number of positive factors such as the favorable results of the projects from previous admissions and the creation ofa system of statuos support. High technology park of the Sverdlovsk Region is also a regional operator of Skolkovo Fund.

Today the main technology park goal is territorail expansion due to the acute shortage of new industrial and laboratory premises since today the premises available for rent are fully occupied.

SCIENTIFIC AND TECHNOLOGICAL PARK OF THE NOVOSIBIRSK AKADEMGORODOK

AKADEMPARK

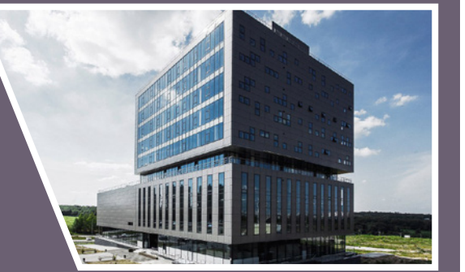
Scientifical and technological park of the Novosibirsk Akademgorodok "Akadempark" (Novosibirsk Region) was created as part of the implementation of comprehensive (state) state program "Creation of high technology parks in the Russian Federation". For almost 10 years technology park is successfully developing high-tech startups specialized in instrument making, IT, biotech, nanotech.

In 2018 Akadempark is leading in the sub-index S4 "Investment attractiveness of the technology park" due to the incessant work of the managing company on the expansion of the range of services provided to the residents (in 2018 the number of service types from the National standard GOST 56425 - 2015 "Technology parks. Requirements" increeased by 2 and the range of services not from GOST). The technology park also includes several strategic objects: "Taochka kipenia - Novosibirsk" of the Agency of the strategic initiatives, Akadempark open university, Union "Novosibirsk Neuro-Net-Center", HealthNet Infrastructure center NTI.

In 2018 the are of the technology park was increased by 66.7% which allowed to attract 95 new residents, 64 of which are young companies registered in 2018. As a result, tax and customs duties more 3 times increased (from 1 177 million roubles in 2017 to 3 721 million roubles in 2018).

HIGH TECHNOLOGY PARK

ANKUDINOVKA



High technology park "Ankudinovka" (Nizhny Novgorod Region) entered the top-10 in the Group I (A+) "Highest level of technology park operation efficiency" of the rating. This year the technology park takes 2nd place in the sub-index S2 - "Economic performance of technology park's residents" due to high results in the export of the residents' production per 1 employee (2nd place). In 2018 the export volume increased by 1.8 times compared to 2017 (from 908.4 million roubles to 1 625.72 million roubles) which implies the growing demand for the residents' production abroad.

Specialization of the technology park includes ICT, instrument making, machine building, electronic technologies, chemical and biomedical technologies as well as developing new materials. This year the number of residents increased by 40%. Due to their strong performance the technology park was able to enter the top-3 of the best technology parks in the residents' investment in fixed assets and funds attracted from external sources.

Since the development of the technology park is financed from budgetary sources (public funding of the technology park for the whole period of its functioning is 998.3 million roubles) tax and customs duties indicator is of great importance for its development. In 2018 the amount of duties increased two times and reached the level of 1 303.147 million roubles (compared to 653.1 million roubles) providing 4th place in this indicator for the technology park.

TECHNOLOGY PARK

SLAVA

Technology park "Slava" (Moscow) for the first time in the years of participation in the rating has entered the Group I (A+) "Highest level of technology park operation efficiency" of the rating. Such a substantial increase in positions was reached due to the strong performance of the residents in 2018 (sub-index S2, 6th place) and their increased innovation activity.

The technology park takes 6th place in patenting activity which was achieved by residents registering their IP assets abroad.

The technology park reached 7th place in export volume and investments in fixed assets of the residents. The residents' revenue increased by 27% compared to 2018 while the share of export was 8%

Specialization of the technology park "Slava" includes biomedicine, energy technologies, IT, instrument making, robotics. Residents of the technology park can receive all the support measures from Moscow.

TECHNOLOGY PARK

ISTOK

Technology park "Istok" (Moscow Region) for the first time achieved the values that allowed it to enter the Group I (A+) "Highest level of technology park operation efficiency" of the rating. Technology park takes 3rd place in the sub-index S5 - "Information transparency and contribution to sustainable development" and entered the top-10 in the efficiency of the managing company (sub-index S3).

Technology park was created in 2015 based on the existing science city ("naukograd") Fryazino. The important characteristic of the technology park as an instrument of public-private partnership including the funding of the technology park from non-budgetary sources. The financial stability of the technology park received the highest mark.

Respondents gave high marks for the quality and usability of the technology park's website (3rd place). The technology park also demonstrated high results in the investments in fixed assets taking 2nd place after Nanotechnology center "technoSpark"

In 2018 the territory of the technology park was expanded. One of the key goals of the managing company is to increase tax duties, this year it grew by more than 50%.

ULYANOVSK TECHNOLOGY TRANSFER CENTER

For the 4th year the **Ulyanovsk technology transfer center** enters the top-5 in the innovation efficiency of the residents (sub-index S1). Residents of the technology park maintain the high levels of R&D investment (3rd place) and patenting activity (8th place).

The technology park residents maintain high growth rates in the indicators of the sub-index S2. In 2018 the growth rate of the residents revenue was higher than in any other technology park participating in the rating. The level of labour productivity also increased substantially (2nd place after Technology park "IKSEL").

The technology park is still one of the leaders in the attracted direct investments per 1 m2 of the technology park area. The value of this indicator is higher than in all technology parks in the sample except Nanotechonology centres "TechnoSpark" and "Sigma.Novosibirsk".

The territory of the technology park accomodates several laboratories: for molecular-genetic diagnostics, for highly durable cements and construction materials, for functional thin-film coatings, metal-matrix composites, elecronic devices development.

METHODOLOGY OF THE V NATIONAL RATING OF RUSSIAN TECHNOLOGY PARKS

The Association of clusters and technology parks of Russia publishes the V National rating of Russian technology parks. The aim of the rating is to determine the most efficient managing companies of technology parks (MCs), the most equipped sites for the placement and development of high-tech companies as well as distribution of best practices and success stories of technology park residents in Russia.

To ensure maximal objectivity of the rating procedure the following principles will be observed:

Transparency of the rating methodology: public discussions of the methodology with representatives of the expert community, public authorities, development institutions and public organizations (the State Duma, the Ministry of Industry and Trade of the Russian Federation, the Ministry of Economic Development of the Russian Federation, the Industrial Development Fund, the RUSNANO Fund for Infrastructure and Educational Programs, JSC "Russian Small and Medium Business Corporation", VEB.RF, the Analytical Center for the Government of the Russian Federation, the Russian Union of Industrialists and Entrepreneurs, JSC "Russian Export Center" etc.) and publication of the methodology and the key analytical calculations in the final report;

Taking into account the most important factors of efficiency of technology parks: the methodology of the rating includes only those indicators that are the best estimates of the value of a technology park as an element of innovation system and the efficiency of its managing company;

Objectivity of data used in the assessment: the rating is based on series of statistical data received directly from technology parks' managing companies and Russian regional public authorities. This data is verified by the experts of the Association of clusters and technology parks of Russia.

Composite indicator used for quantitative assessment of operational efficiency of Russian technology parks is a relative value calculated by dividing absolute values of the statistical indicators of Russian technology parks characterizing their current state and development (acquired through questionnaire survey) by the values of indicators traditionally used in interregional benchmarking as standardizing indicators (number of technology park residents, average number of employees of technology park residents, area of technology park buildings and constructions occupied by residents etc.). It allows to compare indicator values for technology parks of different size and scale.

In order to integrate different indicators into a single composite index the values of indicators are standardized by transforming their quantitative estimates into relative level indicators (the corresponding average values for Russian technology parks are taken as a unit – 1,0). In case the distribution of values is asymmetrical (when most technology parks have low indicator values and only a few have very high) to minimize the effect of extremal values of composite indicators on the final result the values of composite indicators are calculated by the following mathematical expression:

$$\widetilde{X}_i^r = \sqrt[s]{\frac{X_i^r}{x_{avg}}}$$; where:

$\widetilde{X}_i^r$ – transformed value of indicator i in technology park *r*;
X_i^r – original value of indicator i in technology park r;
s – degree of transformation (from 2 to 4 depending on the degree of skewness);
x_{avg} – the average value of the indicator based on the information from technology parks taking part in the rating.

Therefore, the operation efficiency of a technology park is estimated as an integral index summarizing the multidirectional effect of a variety of particular factors.

The initial criterion for selecting composite indicators for quantitative assessment of certain technology parks' operational efficiency factors is the statistically significant correlation between the intensity of the estimated economic phenomenon in Russian technology parks with obligatory condition of the existence of a logically sound conceptual relationship between them.

The significance of technology parks' operational efficiency factors is not fixed and can change under the influence of changing internal and external development conditions. Thus, it is necessary to modify their composition over time. The key factor limiting the selection of composite indicators is the current state of information base that is based on data collected from managing companies of technology parks and regional public government bodies.

The methodology of the rating is based on the comprehensive performance assessment of managing companies of technology parks by 5 indicator groups (sub-indexes):

Innovation activity of technology park's residents;

Economic performance of technology park's residents;

Operational efficiency of technology park's managing company;

Investment attractiveness of the technology park;

Information transparency of the technology park and its contribution to sustainable development.

The rating includes 21 indicators calculated based on the information collected from managing companies of technology parks and regional public government bodies.

SUB-INDEX S1

INNOVATION ACTIVITY OF TECHNOLOGY PARK'S RESIDENTS

The purpose of this sub-index is to check whether the technology park meets the main goal of its creation (stimulating the creation and development of innovative companies, lowering residents' costs, creating specialized services for them).

The sub-index "Innovation activity of technology park's residents" includes 2 composite indicators:

1.1. Share of R&D costs in total turnover of the residents, %

The indicator is calculated as the ratio of the average research and development (R&D) costs in the last three years to the average turnover of technology park's residents in the last three years.

If the technology park was created less than 3 years ago, the average R&D costs and the average turnover are calculated for the entire period of technology park's existence.

The indicator is widely used for estimating the share of revenue that residents reinvest in R&D.

R&D costs include all the residents' expenditures related to R&D activities, such as

[1] The turnover is specified in monetary terms

[2] The amount of R&D costs is determined in accordance with the Accounting regulation 17/02 "Accounting the expenses on R&D works" adopted by the Order of the Ministry of Finance of the Russian Federation from 19.11.2002 №115н (in the edition from 16.05.2016).

The cost of inventory and third-party services used in R&D activities.

The expenses on wages and other payments to employees directly engaged in R&D activities under employment contract.

The social payments from wages of employees directly engaged in R&D activities under employment contract.

The cost of special equipment and auxiliaries used as objects for testing and research.

The cost of maintenance and operation of R&D equipment, installations and structures as well as other fixed assets and other property.

The general economic expenses directly related to R&D activities.

Other costs directly related to R&D activities including testing costs.

R&D costs do not include distribution charges.

1.2. Average number of intellectual property (IP) assets including the registered in Russia or abroad per 1 resident employee, unit/person.

This composite indicator is calculated as the average number of IP assets created or used by technology park residents in the last three years divided by the average number of employees of technology park residents in the last three years.

The overall number of IP assets created and/or used by technology park residents throughout the year comprises all IP assets on their balance sheets or off-balance accounts including the assets with submitted applications or rights registered in the Russian Federal Service for Intellectual Property (Rospatent) or in foreign agencies, including:

- know-how;
- objects protected by copyright, including:
- design documentation, information models, sketches etc.;
- databases;
- computer programs;
- objects protected by patent law:
- inventions;
- utility models;
- design patents;
- plant breeders' rights;
- intellectual property designations, including:
- trademarks;
- trade names;
- geographical indications.

IP assets from the group "b" that received legal protection in the Russian Federation (registered in the Russian Federal Service for Intellectual Property) are calculated with a coefficient of 3; in foreign agencies (including those filed under the PCT, the Geneva Act of the Hague Agreement) – with a coefficient of 5. IP assets from the group "c" that received legal protection in the Russian Federation or in individual foreign agencies – with a coefficient of 2, in a group of countries under international procedures – with a coefficient of 4.

The average number of employees of technology park residents in the last three years includes the number of employees de facto operating on the territory of the technology park.

The average number of employees of technology park residents in the last three years is calculated as the average value of the average headcounts of technology park residents in the reporting year and two previous years.

The average headcount of technology park residents per year is determined by summarizing the headcounts of technology park residents for all the month of the year and dividing this sum by 12[3].

If the company-resident of the technology park was operating less than a year, the average headcount per year is determined by summarizing the headcounts for all the months of the company's operation and dividing this sum by the number of months of the company's operation.

If the technology park was created less than 3 years ago, the average number of IP assets created and/or used by residents and the average number of residents' employees are calculated for the entire period of technology park's existence.

Sub-index "Innovation activity of technology park's residents" is calculated by the following mathematical expression:

$$S_1 = \left(\sqrt[s]{\frac{Q_i}{Q_{avg}}} + \sqrt[s]{\frac{E_i}{E_{avg}}} \right) / n \quad ; \text{where:}$$

S_1 – the value of the sub-index "Innovation activity of technology park's residents";

Q – share of R&D costs in total turnover of the residents (the ratio of the average R&D costs in the last three years to the average turnover of technology park's residents in the last three years), %;

E – average number of IP assets including the registered in Russia or abroad per 1 resident employee (with coefficients specified in 1.2), unit/person;

avg – average value of the indicator calculated from the data received from technology parks participating in the rating;

s – degree of transformation;

i – indicator of the evaluated technology park;

n – number of composite indicators in the sub-index.

[3] The indicator is calculated in accordance with the Order of the Russian Federal State Statistics Service from 22.11.2017 №772 "About the adoption of the Instructions on filling in forms of Federal statistical survey № П-1 "Data on the production and shipment of goods and services", № П-2 "Data on investments in non-financial assets", № П-3 "Data on the financial status of the organization", № П-4 "Data on the headcount and wages of the employees", № П-5 (м) "Basic data on the operation of the organization"

SUB-INDEX S2

ECONOMIC PERFORMANCE OF TECHNOLOGY PARK'S RESIDENTS

The purpose of this sub-index is to estimate the operation efficiency of technology park residents in terms of their development dynamics, labor productivity, implementation of foreign economic activities and their investment activity.

The sub-index includes "Economic performance of technology park's residents" includes 7 composite indicators:

2.1. Labor productivity in the technology park, million rubles/person

This composite indicator is calculated as the revenue of technology park residents divided by the average number of employees of technology park's residents in one year.

Operating on the territory of the technology park, residents can realize high-tech projects with greater value added compared to the average projects on the market. It makes it necessary to assess the labor productivity based on the relation between the total revenue of the residents and the average number of their residents.

2.2 Residents' production export per 1 resident employee, million rubles/person

This composite indicator is determined as the relation between the residents' production export volume and the average number of employees of technology park's residents in one year.

The export volume includes the cost of exported products (services) including excise duties, export duties, customs duties and transportation costs.

2.3 Average monthly wages of residents' employees in one year compared to the regional average monthly nominal accrued salary[4]:

The average monthly wages of technology park residents' employees is calculated as follows[4]

$$\text{Resident's average monthly } \textbf{wages} = \frac{\text{Sum of resident's employees' wages in one year}}{\text{Average resident's headcount in one year*12}}$$

The regional average monthly nominal accrued salary is determined using the statistical data from large, medium and small enterprises of types of economic activity and ownership forms. The indicator is calculated by dividing the sum of employees' wages by the average number of employees and by 12.

If the resident was operating less than a year, the average the average headcount per year is determined by summarizing the headcounts for all the months of the company's operation and dividing this sum by the number of months of the company's operation.

2.4 Residents' tax and customs duties per 1 resident employee, million rubles/person

This composite indicator is calculated as the sum of residents' tax and customs duties payed in budgets of all levels divided by the average number of employees of technology park's residents in one year.

[4] The calculation of average monthly wages is based on the methodology of calculation of average monthly wages of employees in organizations, individual entrepreneurs and private individuals (average monthly income from employment), adopted by the Federal State Statistic Service decree from 14.04.2016 №188

Residents' tax and customs duties include all the federal, regional, and local taxes and fees accrued during the reporting year as well as state duties and customs payments.

2.5 Residents' investments in fixed assets per 1 resident employee, million rubles/ person

This composite indicator is calculated as residents' investments in fixed assets divided by the average number of employees of technology park's residents in one year.

Residents' investments in fixed assets are the total expenses spent on the acquisition, creation and reproduction of fixed assets including new construction, reconstruction, remodeling, renovation and expansion costs that increase the original value of the objects, costs of purchasing machinery and equipment, vehicles, household equipment as well as the investments in intellectual property assets and intangible search costs incurred.

Investments in fixed assets include the cost of leased property if the leasing contract allows the resident to account for the property on its balance sheet. The cost of leased property accounted for on off-balance sheet is not included in investments in fixed assets.

2.6 Investments or loans attracted by residents per 1 resident employee, million rubles/person

This composite indicator is calculated by dividing the investments and/ or loans (bank loans, corporate loans, microloans) attracted by technology park residents by the average number of employees of technology park's residents in one year.

2.7 Rate of residents' revenue growth, %

This composite indicator is calculated by dividing resident's revenue for the reporting year by the revenue for the previous year.

Sub-index "Economic performance of technology park's residents" is calculated using the following mathematical expression:

$$S_2 = \left(\sqrt[s]{\frac{R_i}{R_{avgr}}} + \sqrt[s]{\frac{T_i}{T_{avg}}} + \sqrt[s]{\frac{L_i}{L_{avg}}} + \sqrt[s]{\frac{U_i}{U_{avgtp}}} + \sqrt[s]{\frac{I_i}{I_{avg}}} + \sqrt[s]{\frac{V_i}{V_{avg}}} + \sqrt[s]{\frac{M_i}{M_{avg}}} \right) / n \quad ; \text{where:}$$

S_2 – the value of the sub-index "Economic performance of technology park's residents";

R – labor productivity in the technology park (the revenue of technology park residents divided by the average number of employees of technology park's residents in one year), million rubles/person;

T – residents' production export per 1 resident employee (the relation between the residents' production export volume and the average number of employees of technology park's residents in one year), million rubles/ person;

L – average monthly wages of residents' employees in one year compared to the regional average monthly nominal accrued salary, %;

U – residents' tax and customs duties per 1 resident employee, million rubles/person;

I – residents' investments in fixed assets per 1 resident employee (residents' investments in fixed assets divided by the average number of employees of technology park's residents in one year), million rubles/ person;

V – investments or loans attracted by residents per 1 resident employee, million rubles/person;

M – rate of residents' revenue growth (resident's revenue for the reporting year divided by the revenue for the previous year), %;

avg – average value of the indicator calculated from the data received from technology parks participating in the rating;

avgr - average value of the indicator for the region where the technology park is situated;

avgtp - average value of the indicator depending on the type of technology park (Brownfield or Greenfield), calculated from the data received from technology parks participating in the rating;

s – degree of transformation;

i – indicator of the evaluated technology park;

n – number of composite indicators in the sub-index.

SUB-INDEX S3

OPERATIONAL EFFICIENCY OF TECHNOLOGY PARK'S MANAGING COMPANY

This sub-index is estimating the efficiency of technology park's managing company from the point of attracting residents, its development dynamics, attracting investments and infrastructure development.

The sub-index includes 7 composite indicators:

3.1 Share of technology park's area put into operation more than 1 year ago occupied by residents

This composite indicator is calculated as the share of leasable technology park area put into operation in the period before the last financial year (i.e. not later than December 31st of the previous year) that are leased in the total leasable technology park area put into operation.

The composite indicator allows to estimate the time needed to fill the area with residents not including in the calculation constructed and reconstructed objects.

3.2 Revenue from paid services of technology park's managing company per 1 m^2 of total technology park area, million rubles/m^2

This composite indicator is calculated as the revenue from paid services provided by managing company to technology park residents (including rent) to the total area of technology park spaces put into operation.

Revenue from paid services includes the income from proving all types of managing company's services in the reporting year including:

- rental services of spaces and equipment;
- utilities;
- technology services;
- instruction on using the equipment;
- marketing services;
- engineering services;
- legal services, including services in intellectual property protection;
- accounting and financial services including intellectual property assets assessment and including IP rights in the balance sheets, formation of intangible assets;
- services supporting export operations;
- personnel selection and training;
- technical consulting;
- managing IP rights;
- technological and ecological audit;
- information and communication services including providing access to various platforms and/or cloud services.

3.3 Direct investments attracted in the period since the beginning of technology park's operation per 1 m2 of total technology park area, million rubles/m^2

This composite indicator is calculated as the accumulated total investments attracted in technology park's fixed assets (i.e. for building and infrastructure objects construction and purchasing the equipment required) from budgetary and non-budgetary sources (Russian and foreign) in the period of technology park functioning per 1 m2 of total technology park area put into operation.

3.4 Financial stability of technology park's managing company, %

This composite indicator is calculated as the managing company's liabilities for loans and borrowings divided by its net worth in the reporting year.

Technology parks not using loans receive the maximal value for the indicator – 1 point – that indicates the highest level of financial stability. For technology parks using loans the following coefficients of financial stability (G) are assigned depending on the relation between the amount of managing company's liabilities and its net worth (g):

if g=0%, G=1 point;

if g∈(0; 25%), G=0,75 points;

if g∈[25%; 50%), G=0,5 points;

if g∈[50%; 75%), G=0,25 points;

if g∈[75%; +∞), G=0 points.

3.5 Share of technology park area put into operation in the last 3 years before the rating in the total technology park area, %

This composite indicator is calculated as the share of technology park area put into operation in the last 3 years before the rating in the total technology park area put into operation. The indicator allows to estimate the dynamics constructing new objects in the technology park.

3.6 Ratio of private and public investments in technology park, %

Technology parks not using budgetary funds receive the maximal value for the indicator – 1 point – indicating the highest efficiency level of technology park as the instrument of public-private partnership. For technology parks using budgetary funds the following coefficients (K) are assigned depending on the value of the ratio between private and public investment (accumulated total for the whole period of technology park functioning) (k):

if k∈[0%; 25%), K=0 points;

if k∈[25%; 50%), K=0,125 points;

if k∈[50%; 75%), K=0,25 points;

if k∈[75%; 100%), K=0,375 points;

if k∈[100%; 150%), K=0,5 points;

if k∈[150%; 200%), K=0,75 points;

if k∈[200%; +∞), K=1 point.

3.7 Share of new technology park residents registered in the previous year

This composite indicator is calculated as the share of resident companies registered in the year before the reporting year in the total number of residents.

Sub-index "Operational efficiency of technology park's managing company" is calculated using the following mathematical expression:

$$S_3 = \left(\frac{O_i}{O_{avg}} + \sqrt[s]{\frac{P_i}{P_{avg}}} + \sqrt[s]{\frac{D_i}{D_{avgtp}}} + G_i + \sqrt[s]{\frac{H_i}{H_{avgtp}}} + K_i + \sqrt[s]{\frac{J_i}{J_{avgtp}}} \right) / n \text{ ; where:}$$

S_3 – the value of the sub-index "Operational efficiency of technology park's managing company";

O – share of technology park's area put into operation more than 1 year ago occupied by residents (share of leasable technology park area put into operation in the period before the last financial year (i.e. not later than December 31st of the previous year) that are leased in the total leasable technology park area put into operation), %;

P – revenue from paid services of technology park's managing company per 1 m2 of total technology park area (revenue from paid services provided by managing company to technology park residents (including rent) to the total area of technology park spaces put into operation), million rubles/m^2;

D – direct investments attracted in the period since the beginning of technology park's operation per 1 m2 of total technology park area, million rubles/m^2;

G – financial stability of technology park's managing company (managing company's liabilities for loans and borrowings divided by its net worth in the reporting year), %;

H – share of technology park area put into operation in the last 3 years before the rating in the total technology park area, %;

K – ratio of private and public investments in technology park (accumulated total for the whole period of technology park functioning), %;

J – share of new technology park residents registered in the previous year;

avg – average value of the indicator calculated from the data received from technology parks participating in the rating;

avgtp – average value of the indicator depending on the type of technology park (Brownfield or Greenfield), calculated from the data received from technology parks participating in the rating;

s – degree of transformation;

i – indicator of the evaluated technology park;

n – number of composite indicators in the sub-index.

SUB-INDEX S4

INVESTMENT ATTRACTIVENESS OF THE TECHNOLOGY PARK

This sub-index allows to estimate the conditions created by the managing company for technology park residents depending on which the resident decides whether to place itself in the technology park or not. The sub-index is increased by 0,1 if in the region where technology park is situated provides residents and managing companies with tax preferences.

The sub-index "Investment attractiveness of the technology park" includes 3 composite indicators:

4.1 Availability of infrastructure for collective use, points

The indicator determines how many objects of innovation and technology infrastructure are situated in the technology park. The list of objects is based on the National standard GOST R 56425 – 2015 "Technology parks. Requirements" and includes the following:

- Business incubator or technology incubator;
- Engineering center;
- Co-working center;
- Center for collective use of scientific equipment;
- Center for collective use of industrial equipment;
- Center for youth innovative creativity;
- Center for managing IP rights;
- Center for technology transfer (commercialization);
- Certification center;
- Laboratories (+1, if the laboratory has accreditation), including:
  - science laboratories;
  - educational laboratories;
  - medical laboratories;
- laboratories for launching raw materials into production and product expertise;
- Metrological service (metrology center);
- Center for subcontracting;
- Vivarium and biological collections;
- Innovation and technology center;
- Prototyping center;
- Data-center.

Indicator is calculated as the number of technology infrastructure objects from the list available divided by the maximum number of objects in one technology park participating in the rating. Each infrastructure object not from the list of GOST R 56425 – 2015 gives a technology park 1 point.

4.2 Availability of services for technology park residents, points

This indicator evaluates the provision of basic and specialized services to residents by technology park's managing company or other service companies (in accordance with the National standard GOST R 56425 – 2015 "Technology parks. Requirements").

Basic services include:

- Provision of land plots for rent;
- Provision of spaces for rent;
- Build-to-suit services;
- Security services;
- Telephone services;
- Internet services;
- Access to cloud services and platforms;
- Accounting services;
- Legal services;
- Advertising services;
- Postal services;
- Secretarial services;
- Catering services;
- Transportation services;
- Visa and migration support services;

Specialized services include:

- Providing specialized equipment to residents;
- Engineering services;
- Financial services, including financial mediation services;
- Managing IP rights;
- Consulting in commercial management and business management;
- GR consulting in grant funding;
- Market research;
- Education and training services;
- Technology services;
- Export services;
- Business acceleration programs for residents.

The indicator is determined by dividing the number of services from the lists above provided to residents (+1 if other services are provided) by the maximum number of services from the list provided in a technology park participating in the rating.

4.3 Regional tax preferences for technology park residents and other forms of regional support, yes/no

This indicator determines whether technology parks are supported in the region with tax preferences and other means of support according to the regional legal framework. Technology parks situated in the regions with support measures established by law receive 0,1 points, others get 0 points. Tax preferences include income tax, property tax, land tax preferences for technology park residents. This indicator does not take into account regional preferential rental rates for technology park residents.

Sub-index "Investment attractiveness of the technology park" is calculated using the following mathematical expression:

$$S_4 = \left(\sqrt[s]{\frac{F_i}{F_{avg}}} + \sqrt[s]{\frac{Z_i}{Z_{avg}}} \right) / 2 + Y_i \text{ ; where:}$$

S_4 – the value of the sub-index "Investment attractiveness of the technology park";

F – availability of infrastructure for collective use, points;

Z – availability of services for technology park residents, point;

Y – regional tax preferences for technology park residents and other forms of regional support, yes/no;

avg – average value of the indicator calculated from the data received from technology parks participating in the rating;

s – degree of transformation;

i – indicator of the evaluated technology park.

SUB-INDEX S5

INFORMATION TRANSPARENCY OF THE TECHNOLOGY PARK AND ITS CONTRIBUTION TO SUSTAINABLE DEVELOPMENT

This sub-index allows to estimate the conditions created by managing company to facilitate sustainable development of the region where the technology park is created including stimulation of small and medium enterprises, regional human capital development etc.

The sub-index "Information transparency of the technology park and its contribution to sustainable development" includes 3 composite indicators:

5.1 Information transparency of the technology park, points

In order to estimate this indicator, technology park websites are evaluated by 38 respondents according to 16 criteria. For each criteria technology parks receive points. The indicator is calculated the average value of all points received by technology park.

5.2 Availability of career guidance infrastructure and/or programs, yes/no

This indicator determines whether the territory of technology park includes objects (children technology park, career guidance center etc.) and/or programs realized by the managing company for providing career guidance to children/students/youth. If technology park has such facilities/programs it receives 0,1 points, if it has not – 0 points.

5.3 Preferential conditions for residents, yes/no

This indicator determines whether all or some of technology park residents are provided with spaces, equipment or services under preferential conditions (the cost is lower than the average for the market). In case there are such conditions in the technology park, it receives 0,1 points, if there are not – 0 points.

The sub-index "Information transparency of the technology park and its contribution to sustainable development" is calculated using the following mathematical expression:

$$S_4 = \frac{A_i}{A_{avg}} + B_i + C_i \text{ ; where:}$$

S_4 – the value of the sub-index "Information transparency of the technology park and its contribution to sustainable development";

A – information transparency of the technology park, points;

B – availability of career guidance infrastructure and/or programs, yes/no;

C – preferential conditions for residents, yes/no;

avg – average value of the indicator calculated from the data received from technology parks participating in the rating;

i – indicator of the evaluated technology park.

Integral index is calculated using the following mathematical expression:

$$I = S_1 + S_2 + S_3 + S_4 + S_5 \text{ ; where:}$$

I – integral rating index;

S_1 – the value of the sub-index "Innovation activity of technology park's residents";

S_2 – the value of the sub-index "Economic performance of technology park's residents";

S_3 – the value of the sub-index "Operational efficiency of technology park's managing company";

S_4 – the value of the sub-index "Investment attractiveness of the technology park";

Integral index of each Russian technology park is calculated as a sum of points received in each sub-index.

Interpretation of quantitative estimates of technology park's operational efficiency obtained as a result of calculations using the described methodology is to be done using technology park efficiency classification.

To consider the specificities of Russian technology parks' operation efficiency it is recommended to group technology parks by their integral efficiency level. The grouping is based on the following scale:

Group I (A+) – "Highest level of technology park operation efficiency" – higher than 110% with the Russian average level taken as 100%;

Group II (A) – "High level of technology park operation efficiency" – from 100% to 109%;

Group III (B) – "Moderately high level of technology park operation efficiency" – from 90% to 99%.

Group IV (C) – "Sufficient level of technology park operation efficiency" – from 60% to 89%.

ANNEX 1 | RUSSIAN TECHNOLOGY PARKS

№	Federal subject of Russia	Name of technology park	Status	Specialization
		CENTRAL FEDERAL DISTRICT		
1	Belgorod Region	Technology Park «Kontakt»	Existing	Information and communication technologies
2	Belgorod Region	Technology Park «High Tech Belgorod State University»	Existing	Multisectoral
3	Vladimir Region	Industrial Technology Park «IKSEL»	Existing	Development and production of climatic machinery and equipment
4	Voronezh Region	Voronezh Aviation Technology Park	Creating	Production of aviation equipment and technologies
5	Voronezh Region	Technology Park «Kosmos-Neft-Gaz»	Existing	Production of oilfield, drilling and exploration equipment
6	Voronezh Region	Technology Park Voronezh City»	Creating	Multisectoral
7	Voronezh Region	Technology Park «Sodruzhestvo»	Existing	Engineering
8	Kaluga Region	Technology Park «Obninsk»	Existing	Multisectoral
9	Lipetsk Region	Industrial Technology Park «Millenium»	Creating	Engineering
10	Lipetsk Region	Technology Park «Lipetsk»	Existing	Multisectoral
11	Lipetsk Region	Technology Park «Sokol»	Creating	Multisectoral
12	Moscow	Technology Park «NIKIET»	Existing	Nuclear and radiation technologies, research
13	Moscow	Technology Park «Radiophysika»	Existing	Aerospace industry, electrical industry, research
14	Moscow	Technology Park «Vodny Stadion»	Existing	Information and communication technology
15	Moscow	Industrial Technology Park «VIZBAS»	Creating	Multisectoral
16	Moscow	Technology Park «ITELMA»	Existing	Information and communication technologies, electronics and microelectronics, robotics, energy
17	Moscow	Technology Park of All-Russia Thermal Engineering Institute	Existing	Energy efficiency, Information and communication technologies
18	Moscow	Technology Park «Kalibr»	Existing	Multisectoral
19	Moscow	Science Park MSU	Existing	Multisectoral
20	Moscow	Technology Park «Mosgormash»	Existing	Light industry, medical and pharmaceutical industries, metallurgy and metalworking, machine tool industry
21	Moscow	Technology Park «Nagatino»	Existing	Multisectoral
22	Moscow	Technology Park «Otradnoe»	Existing	Information and communication technologies, lighting equipment, optics, photonics, microelectronics
23	Moscow	Technology Park «Pulsar»	Existing	Electronics and microelectronics, robotics, energy
24	Moscow	High Tech Center of innovations «RIKOR»	Existing	Information and communication technologies, microelectronics, energy, robotics
25	Moscow	Technology Park «Sapphire»	Existing	Biotechnology, pharmaceuticals, electronics and microelectronics, robotics, energy
26	Moscow	Technology Park «Skolkovo»	Existing	Multisectoral
27	Moscow	Technology Park «Slava»	Existing	Multisectoral
28	Moscow	Technology Park «Strogino»	Existing	Multisectoral
29	Moscow	Technology Park «Temp»	Existing	Multisectoral
30	Moscow	Nanotechnology Center TechnoSpark	Existing	Multisectoral
31	Moscow	Technology Park «TISNUM»	Existing	Electronics and microelectronics, instrument making, chemical industry, mechanical engineering, materials, robotics, energy
32	Moscow	Technology Park «Phystechpark»	Existing	Information and communication technologies
33	Moscow	Technology Park «Photonika»	Existing	Optics and photonics, electronics and microelectronics, chemical industry, materials, robotics, energy
34	Moscow	Technology Park «ELMA»	Existing	Multisectoral
35	Moscow	Technopolis Moscow	Existing	Multisectoral
36	Moscow	Technology Park «Modul»	Existing	Instrument engineering, aerospace technologies, energy efficiency, computer technologies, telecommunication technologies and navigation systems
37	Moscow	Zelenograd Nanotechnology Center	Existing	Multisectoral
38	Moscow	Nanotechnology Center «T-NANO»	Existing	Multisectoral
39	Moscow	Nanotechnology Center of composites	Existing	Multisectoral
40	Moscow	Technology Park «Svyaz Engineering»	Existing	Electronics and microelectronics, robotics, energy
41	Moscow	Technology Park «Eleron»	Creating	Development and production of security and safety systems, electronics and microelectronics, robotics, energy
42	Moscow	Technology Park «Polyus»	Existing	Multisectoral
43	Moscow	Technology Park «NIISSU»	Existing	Radio-electronic industry and instrument making, Information and communication technologies
44	Moscow	Technology Park «Kurchatov Institute»	Existing	Information and communications technology, biotechnology, pharmaceuticals
45	Moscow	Technology Park «Krasnoselsky»	Existing	Ecology, biotechnology, pharmaceuticals, food industry
46	Moscow	Technology Park «RPA «CNIITMASH»	Existing	Instrument making, mechanical engineering, materials, robotics, metalworking
47	Moscow	Technology Park «Agat»	Existing	Shipbuilding, instrument making, electronics and microelectronics
48	Moscow	Technology Park «Mosmedpark»	Existing	Pharmaceutical industry, biotechnology, information and communication technology
49	Moscow	Technology Park «Precision radar systems»	Existing	Aerospace, instrumentation, optics and photonics
50	Moscow	Technology Park «Tekon»	Existing	Information and communication technologies, electronics and microelectronics, instrument making, chemical industry, robotics, nanotechnology, materials, energy
51	Moscow	Technology Park «Moscow factory of thermal automatics (MZTA)»	Existing	Multisectoral
52	Moscow	Technology Park «Russian space technology»	Existing	Aerospace technology, instrumentation, engineering, materials
53	Moscow	Technology Park «Gorizont»	Existing	Instrument making, mechanical engineering, materials
54	Moscow Region	Technology Park «Avrora»	Existing	Multisectoral
55	Moscow Region	Technology Park «Volokolamsk textile»	Existing	Light industry
56	Moscow Region	Technology Park «Istok»	Existing	Multisectoral
57	Moscow Region	Technology Park «Metallist»	Existing	Multisectoral
58	Moscow Region	Technology Park «Skhodnya-Engineering»	Existing	Multisectoral
59	Moscow Region	Technology Park «Skhodnya-Grand»	Existing	Food industry
60	Moscow Region	Technology Park «Lakokraspokrytie»	Creating	Multisectoral
61	Moscow Region	Technology Park «Pushkino»	Existing	Information and communication technologies
62	Moscow Region	Technology Park «TECHOS»	Existing	Multisectoral
63	Moscow Region	Technology Park «Lyubertsy»	Existing	Машиностроение
64	Moscow Region	Technology Park «Dulevo porcelain»	Creating	Multisectoral
65	Moscow Region	Research and production Technology Park «Polygon VNIIST»	Creating	Multisectoral
66	Moscow Region	Technology Park «Nakhabino»	Existing	Multisectoral
67	Moscow Region	Industrial Technology Park «Lider»	Existing	Light industry
68	Moscow Region	Technology Park «Likhachevsky»	Existing	Information and communication technologies
69	Moscow Region	Industrial Technology Park «Balashikha casting and mechanical plant»	Existing	Multisectoral
70	Moscow Region	Technology Park «Podolye»	Existing	Information and communication technologies, light industry, machine tool industry, electrical industry
71	Moscow Region	Nanotechnology Center «Dubna»	Existing	Biotechnology, metallurgy and metalworking, new materials, optics and photonics, food industry
72	Moscow Region	Technology Park «Polimed»	Existing	Multisectoral
73	Moscow Region	Industrial Technology Park «Bio-Chekhov»	Creating	Biotechnology, medical and pharmaceutical industry
74	Moscow Region	Technology Park «TsAGI»	Existing	Aviation and space industry, information and communication technologies, new materials
75	Moscow Region	Technology Park «Mozhaisky the First»	Existing	Light industry
76	Moscow Region	Technology Park «PSK Chekhovsky»	Creating	Multisectoral
77	Oryol Region	Technology Park of Orel State University	Existing	Multisectoral
78	Ryazan Region	Ryazan High Tech Center of innovations	Existing	Multisectoral
79	Ryazan Region	Technology Park «Ryazan»	Creating	Multisectoral
80	Tambov Region	High Tech Park «Mielta»	Existing	Information and communication technologies, electronic instrumentation
81	Tver Region	Industrial Technology Park «KSK»	Creating	Production of electronic and electrical components, exterior and interior elements of vehicles
82	Tula Region	Technology Park «Donskoy»	Existing	Multisectoral
83	Tula Region	Technology Park «Resurs»	Existing	Multisectoral
84	Tula Region	Industrial Technology Park «Uzlovaya»	Creating	Light industry, chemical industry
85	Yaroslavl Region	Technology Park «Pereslavsky»	Existing	Multisectoral
86	Yaroslavl Region	Innovation Park «Synergy»	Existing	Multisectoral
87	Yaroslavl Region	Nanotechnology Center «Aviation and energy turbine building»	Existing	Aviation industry, metallurgy and metalworking, new materials, machine tool industry
		NORTHWESTERN FEDERAL DISTRICT		
88	Arkhangelsk Region	Technology Park of Northern (Arctic) Federal University named after M.V. Lomonosov	Existing	Multisectoral
89	Kaliningrad Region	Technopolis GS	Existing	Information and communication technologies, radio-electronic industry and instrument making, forestry
90	Republic of Karelia	Industrial Technology Park «Yuzhnaya Promzona»	Creating	Stone industry
91	Komi Republic	IT-Park of Komi Republic	Existing	Information and communication technologies, radio-electronic industry and instrument-making, electrical industry
92	Leningrad Region	Industrial Technology Park «Slantsy»	Creating	Multisectoral
93	Leningrad Region	North-West Technology Transfer Center	Existing	Multisectoral
94	Novgorod Region	NPO «Rusprom»	Existing	Multisectoral
95	Pskov Region	Technology Park «Electropolis»	Existing	Electrical industry
96	Pskov Region	Technology Park «Agropolis»	Creating	Biotechnology, Pharmaceuticals
97	Saint Petersburg	Technology Park of Saint Petersburg	Existing	Multisectoral
98	Saint Petersburg	Technology Park «Smolenka»	Existing	Multisectoral
99	Saint Petersburg	Saint Petersburg «Politekhnichesky»	Existing	Multisectoral

№	Federal subject of Russia	Name of technology park	Status	Specialization
100	Saint Petersburg	Technology Park of ITMO University	Existing	Biotechnology, information and communication technology, medical and pharmaceutical industries, optics and photonics
101	Saint Petersburg	Technology Park «Lenpoligraphmash»	Existing	Multisectoral
102	Saint Petersburg	Technology Park «Narvsky»	Existing	Multisectoral
103	Saint Petersburg	Technology Park of Saint Petersburg Electrotechnical University «LETI»	Existing	Multisectoral
		SOUTHERN FEDERAL DISTRICT		
104	Astrakhan Region	Technology Park «FABRIKA»	Existing	Multisectoral
105	Republic of Crimea	Technology Park «Modern facade systems»	Existing	Production of aluminum facade systems
106	Sevastopol	Technology Park «Mayak»	Existing	Multisectoral
		NORTH CAUCASIAN FEDERAL DISTRICT		
107	Republic of Ingushetia	Industrial Technology Park «Magas»	Creating	Multisectoral
108	Stavropol Territory	Industrial Technology Park «Monokristal»	Existing	Multisectoral
109	Stavropol Territory	Industrial Technology Park «RITM-B»	Creating	Multisectoral
110	Stavropol Territory	Industrial Technology Park «Aerosol valley»	Creating	Multisectoral
111	Chechen Republic	Technology Park of Grozny State Oil Technical University named after Academician M.D. Millionshchikov	Existing	Information and communication technologies
112	Chechen Republic	Technology Park of Chechen State University	Existing	Multisectoral
113	Chechen Republic	Innovation ConstructionTechnology Park «Kazbek»	Creating	Production of building materials
		VOLGA FEDERAL DISTRICT		
114	Republic of Bashkortostan	Scientific Production Association «Technology Park of Aviation»	Existing	Aviation and space industry, metallurgy and metalworking, new materials
115	Republic of Bashkortostan	Technology Park «The Self-Financing Creative Center of the Ufa Aviation Institute»	Existing	Aviation industry, automobile industry, metallurgy and metalworking, new materials, chemical industry
116	Republic of Bashkortostan	Technology Park «Inmash»	Existing	Metallurgy and metalworking, mechanical engineering, food industry
117	Republic of Bashkortostan	Science Technology Park of Institute of Petrolium Refining and Petrochemistry	Creating	Petrochemical refining, research
118	Republic of Bashkortostan	Technology Park of Scientific Research Technological Institute of Herbicides and Plant Growth Regulators with Pilot Production of the Academy of Sciences of the Republic of Bashkortostan	Creating	Agricultural chemistry and plant protection products
119	Republic of Bashkortostan	Technology Park «Joint service center on Kirov street»	Creating	Multisectoral
120	Republic of Mari El	Science and Technology Park «Volgatech»	Existing	Biotechnologies, information and communication technologies, forestry and woodworking, new materials, radio-electronic industry and instrument making
121	Republic of Mari El	Technology Park Mari State University	Existing	Multisectoral
122	Republic of Mordovia	High Tech Park in Republic of Mordovia	Existing	Multisectoral
123	Republic of Mordovia	Nanotechnology and Nanomaterials Center of the Republic of Mordovia	Existing	Multisectoral
124	Nizhny Novgorod Region	High Tech Park «Ankudinovka»	Existing	Multisectoral
125	Nizhny Novgorod Region	Technology Park «Sarov»	Existing	Multisectoral
126	Nizhny Novgorod Region	Technology Park «Mashinostroenie	Creating	Engineering, production of technological lines, production of crushing and screening equipment
127	Nizhny Novgorod Region	Industrial Technology Park GAZ Group	Creating	Automotive component manufacturing
128	Orenburg Region	Science Technology Park of Orenburg State University	Existing	Multisectoral
129	Penza Region	Technology Park «Yablochkov»	Existing	Information and communication technologies, new materials, electronic industry and instrument making
130	Penza Region	High Tech Park «Rameev»	Existing	Multisectoral
131	Penza Region	Industrial Technology Park «Soyuz»	Creating	Furniture manufacturing
132	Perm Territory	Technology Park «Perm»	Existing	Information and communication technologies
133	Perm Territory	IT-Park «Morion Digital»	Existing	Information and communication technologies, electronic industry and instrument making, electrical industry
134	Samara Region	High Tech Park Zhigulevskaya valley»	Existing	Multisectoral
135	Samara Region	Industrial Technology Park «AKOM-Industrial»	Creating	Multisectoral
136	Saratov Region	Science Technology Park «Volga-technika»	Existing	Multisectoral
137	Saratov Region	Innovation Center of Saratov State University	Existing	Multisectoral
138	Saratov Region	Technology Park «Volgoagrotechnika»	Existing	Agricultural industry
139	Saratov Region	Medical Research and Education Innovation Center of Saratov State Medical University named after V. I. Razumovsky	Existing	Medical and pharmaceutical industry
140	Republic of Tatarstan	Innovation Technology Park «IDEA»	Existing	Multisectoral
141	Republic of Tatarstan	Technology Park «IDEA-Southeast»	Existing	Metallurgy and metalworking, furniture manufacturing, agricultural engineering
142	Republic of Tatarstan	High Tech Park «IT-Park» (Kazan, Naberezhnye Chelny)	Existing	Information and communication technologies
143	Republic of Tatarstan	Innovation Technology Center «KNIAT»	Existing	Engineering
144	Republic of Tatarstan	Scientific and Production Nonprofit Partnership «Technology perk of Prikamye»	Existing	Multisectoral
145	Ulyanovsk Region	Ulyanovsk Nanocenter ULNANOTECH	Existing	Multisectoral
146	Ulyanovsk Region	«Technocampus 2.0»	Creating	Multisectoral
		URAL FEDERAL DISTRICT		
147	Sverdlovsk Region	Research and Development Biomedical Technology Park «Novouralskiy»	Existing	Biotechnology, medical and pharmaceutical industry
148	Sverdlovsk Region	Technology Park «Akademicheskiy»	Existing	Multisectoral
149	Sverdlovsk Region	High Tech Park «Universitetskiy»	Existing	Multisectoral
150	Sverdlovsk Region	Technology Park «1993»	Existing	Multisectoral
151	Tyumen Region	Tyumen Technology Park	Existing	Multisectoral
152	Khanty–Mansi Autonomous Area – Yugra	High Tech Park	Existing	Multisectoral
153	Chelyabinsk Region	High Tech Park «IT-Park 74»	Existing	Information and communication technologies
		SIBERIAN FEDERAL DISTRICT		
154	Irkutsk Region	Technology Park of Irkutsk National Research Technical University	Existing	Multisectoral
155	Kemerovo Region	Kuzbass Technology Park	Existing	Multisectoral
156	Krasnoyarsk Territory	Industrial Technology Park «Krastsvetmet» (R&D Park)	Existing	Multisectoral
157	Novosibirsk Region	Science and Technology Park «Akadempark»	Existing	Multisectoral
158	Novosibirsk Region	Medical Technology Park	Existing	Biotechnology, medical and pharmaceutical industry
159	Novosibirsk Region	Nanotechnology center «SIGMA. Novosibirsk»	Existing	Multisectoral
160	Omsk Region	Polytechnic Park of Omsk F. M. Dostoevsky State University	Existing	Multisectoral
161	Tomsk Region	Nanotechnology center «SIGMA. Tomsk»	Existing	Multisectoral
		FAR EASTERN FEDERAL DISTRICT		
162	Republic of Buryatia	Industrial Technology Park «Apollon»	Existing	Multisectoral
163	Republic of Buryatia	Aircraft Manufacturing Industrial Technology Park	Creating	Aviation industry
164	Trans-Baikal Territory	Technology Park of Transbaikal State University	Existing	Multisectoral
165	Primorye Territory	Technology Park «Russkiy»	Existing	Multisectoral
166	Republic of Sakha (Yakutia)	Technology Park «Yakutia»	Existing	Multisectoral
167	Republic of Sakha (Yakutia)	Innovation Technology Park of North-Eastern Federal University	Existing	Multisectoral
168	Sakhalin Region	Technology Park of Modern Building Technologies	Creating	Multisectoral
169	Khabarovsk Territory	Technology Park of Komsomolsk-on-Amur State Technical University	Existing	Multisectoral

ABOUT THE ASSOCIATION FOR THE DEVELOPMENT OF CLUSTERS AND TECHNOLOGY PARKS OF RUSSIA

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MEMBERS

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REGIONS OF THE RF

Association for the Development of Clusters and Technology Parks of Russia is a leading non-governmental business membership organisation, comprising the organisations of technological and industrial infrastructure. Its mission is to work on improvements in terms of social, economic development and fulfillment of scientific, industrial potential of Russia.

The Association was established in 2011. Nowadays the Association comprises management companies of Technology Parks, Nanotechnology Centres, Special Economic Zones, Cluster Development Centres, special organisations of Industrial Clusters, Regional Development Corporations, etc.

The Association provides a dialogue between the business community and the federal and regional authorities, Development Institutes. The experts of the Association are the members of different expert boards, working groups, and commissions to the Federal Assembly and the Government of the Russian Federation.

ASSOCIATION REPRESENTS THE INTERESTS OF

2 630
ORGANISATIONS

180 100
EMPLOYEES
constitutes the members of the Association, i.e. the residents of technology parks, special economic zones, members of clusters.

TOTAL REVENUE OF THE ASSOCIATION'S MEMBERS, INCLUDING RESIDENTS OF BOTH TECHNOLOGY PARKS AND SPECIAL ECONOMIC ZONES AS WELL AS CLUSTERS' MEMBERS

12.3
BILLION

0.8 %
OF RUSSIA'S GDP

Association's activity:

- promotion of effective implementation of state policy in the field of scientific and technological development;
- support to the authorities and private investors in creating an innovative infrastructure for high-tech industries and the development of cooperative ties;
- improvement of the regulatory and legal frameworks for the development of innovative and industrial infrastructure (Technology Parks, Clusters, Special Economic Zones);
- assistance in creating conditions for the expansion of Russian manufacturers and products into new markets;
- stimulation of international innovative cooperation;
- promotion of the image of Russia as a country actively implementing advanced technologies and pretending at the world technological leadership.

Membership benefits:

- promotion of the interests of the Association's members at the federal and regional levels, as well as the assistance in obtaining the state support;
- participation in elaboration of the key regulatory and strategic documents;
- ensuring business contacts with interested investors and customers in Russia and abroad;
- expert and analytical support for decision making on the basis of best practices of innovative and industrial infrastructure development;
- business missions to the enterprises and infrastructure objects abroad;
- expansion of the media presence in the federal and regional information fields.

ASSOCIATION FOR THE DEVELOPMENT
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