



INNOVATION CLIMATE IN THE NOVOSIBIRSK REGION

KEY FINDINGS, 2020

PREFACE



**Vladislav
ONISHCHENKO**

Center for Strategic
Research, President

Accounting for substantial academic resources and an innovation ecosystem, the Novosibirsk region (NSR) is one of the most innovative areas in Russia. The Center for Strategic Research (CSR) run a short term initiative in 2019 in order to explore the region's innovation climate to identify the primary characteristics of innovative companies and infrastructure and outline some topics for further in-depth studies. We are glad that this has been of much use and has enabled the NSR Ministry of Science and Innovation to conduct a comprehensive innovation monitoring in the NSR, including all stakeholders.

High-tech companies are generally acknowledged as being rather resilient and flexible to survive through game-changing transformation, and we have had a good opportunity to reality test such assumptions in 2020. Our studies show that indeed while the entire global economy is facing the coronavirus pandemic and a sharp deterioration in business conditions, technology and innovative companies have been proved to stay more optimistic than others. The NSR is no exception. The vast majority of innovative players in the NSR do not expect their financial and operational performance to worsen in 2020, whereas other sectors account for only about one fourth of such businesses. This trend definitely strengthens the truth that high-tech companies and their innovative solutions (including new approaches to doing business) can be helpful for restoring businesses in other sectors and, consequently, can create a large incentive to prop up and drive growth of the Russian economy as a whole. It should be noted that development of the region's innovation capacity is not limited to the fiscal condition of the target business segment, but entails a wide range of beneficial social and economic effects, e.g., increased productivity, higher living standards, lower risk of migration, more accessible services for people, growing innovative attraction of the region, etc., which in turn are the priorities for the government.



**Aleksey
VASILIEV**

**Minister of Science
and Innovation Policy,
Novosibirsk Region**

The NSR has long been seen as a region of big science and innovation both in this country and abroad. The powerful potential that developed here in the Soviet era is now a foundation stone for the Akademgorodok 2.0 Program as a new large-scale project of scientific and technological breakthrough. In response to the Scientific and Technological Development Strategy within the National Project for Science, it is home to world-class mathematics and genomic research centers and is also seeing the erection of an unprecedented mega-science facility, known as the Siberian Ring Source of Photons (SKIF).

Furthermore, large innovative infrastructure facilities have been built in this region in only a decade and a half to provide a strong impetus to high-tech businesses and a modern environment for technology entrepreneurship. The synergistic effect resulted from cooperative efforts that multiple actors of the region's academic and innovation landscape make could be significantly enhanced through prompt and welcomed regional support, but this requires good understanding of how innovative businesses are doing and what impediments scholars and entrepreneurs are faced with.

This is an extensive study of our colleagues at the Center for Strategic Research, which relies on hundreds of interviews with the region's innovation sector, experts, and young scholars. I am confident that its insights will be valuable not only to the regional authorities, but also to academia, innovation community, support funds, and development institutions to give revamp to the regional science and innovation policy, introduce new initiatives and projects and help to quickly and effectively achieve the ambitious goals of the Akademgorodok 2.0 Program.

PROJECT ARCHITECTURE AND METHODOLOGY

Goal: A comprehensive social and economic research on innovative development of the NSR, including current status, innovation growth points, and the path of transformation until 2023.

Objectives:

1. Review the innovation framework in the NSR;
2. Benchmark the attitudes of NSR innovation stakeholders (i.e., their quality of life, the region's business climate and growth-enabling infrastructure);
3. Benchmark the attitudes of NSR innovation stakeholders against the nationwide trends, including assessment of impacts that have been caused by the pandemic and the devaluation of the Russian ruble;
4. Identify hidden drivers of and impediments to improving the region's infrastructure;
5. Build a risk map for innovative development of the NSR over 2019-2023;
6. Provide a comprehensive effectiveness evaluation of the NSR innovation framework;
7. Give an extensive assessment of what impacts the 2020 downturn has produced on the innovation segment in the NSR;
8. Identify growth points in the innovation-related labor market in the NSR and discuss how they change;
9. Identify needs/resources for development among innovative companies, both in short and medium term, including their transformations;
10. Develop and test necessary tools to enhance innovative development in the NSR in light of the identified characteristics.

Data Collection Method

In order to achieve the objectives, we have used the following qualitative and quantitative methods of data collection:

- Online survey among executives and existing employees of innovative companies, engineering students, graduates 2019-2020, postgraduates and young scholars who intend to find an innovation job/launch own innovative business within the next two years. The sample size is 550 people.
- Online survey among customers of small and medium-sized innovative companies in the NSR. The sample size is 50 respondents.
- In-depth interviews with major innovative companies, development institutions, innovation infrastructure, and top universities that offer innovation and technology programs. The sample size is 14 key experts.

Data analysis method:

Social and economic data, econometrics.



KEY FINDINGS

STATISTICS ABOUT SCIENCE AND INNOVATION IN THE REGION

Investment grade ratings for the NSR are medium or higher. In the Russia's Innovative Regions Ranking provided by the Association of Innovative Regions of Russia (AIRR), the NSR is among **the strong innovators** and clearly ranks fifth or sixth, whereas the HSE Institute for Statistical Studies and Economics of Knowledge rates it eighth among **the top regions** in its Russian Regional Innovation Development Ranking 2017.

Accounting for 31% of overall expenses in the Siberian Federal District, the NSR is its leader in terms of internal R&D expenditures; they amounted to **RUB 24 billion** in 2018, which was a 20% growth over two years.

The NSR is characterized by a high share of basic research spending (**55%**), with the national average of only 18%.

The share of innovative goods, works and services in their total level in the NSR has been decreasing over the past five years (from 10.0% in 2014-2015 down to **2.9%** in 2019). Given that this trend is generally prevailing in Russia, a delayed but sharper decline has become a characteristic of the NSR.

Key Areas for Innovation Spending:

- R&D (47%);
- Purchases of machinery and equipment (27%).

In 2019, the region's enterprises applied more than **3,500** advanced manufacturing techniques, and this is most often the case with manufacturing, processing and assembly (**37%**), or communications and management (**34%**).

The NSR is a net exporter of technology and engineering services, with **\$74.8 million** of the foreign trade balance. Its exports of technology and engineering services were **\$87.4 million** in 2019 and almost half of the amount (**46%**) was spent on research and development for foreign customers, with a total of **278 transactions** made to export technology.

5% of Russian academic degree holder researchers concentrate in the NSR to account for **48%** in the Siberian Federal District, which makes NSR a major driver of science in Siberia.

INNOVATIVE COMPANY PROFILE



31% innovative business representatives in NSR, this is the first experience in the innovation/technology segment.



61% of innovative companies in the region are created from scratch to implement innovation.



69% NSR innovative companies have reached their mature stage and are at least operating businesses with stable revenues.

The average revenue of innovative companies in the NSR has increased by

↑ **28%**

y-o-y from RUB 39 million up to RUB 50 million.

Founder



35

Founder's average age at the moment of a company setup

Executive



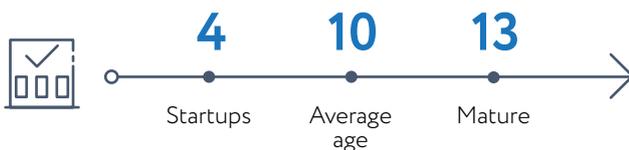
36

Current average age of executives with no experience

49

Current average age of experienced executives

The average age of NSR innovative companies is 10 years.



"There are very few companies that have ambitions to become global players and this is due to an archaic attitude with making money as the main aim. Once an innovator reaches a suitable income level, they stop seeking to further grow their business."

Mikhail Losev,
Medical Biological Union, Director

LEVEL OF PRODUCT INNOVATION



82% innovative companies in the region create manufacturing/technological innovation, i.e., new products or processes for introducing new technology, equipment or materials.



For **71%** companies, their innovation is a core product that accounts for more than 60% of their earnings.

The product innovation index* has increased by

5 points

to make up 0.65 out of 1 possible.



47% companies describe their product as 'improving innovation', meaning that it represents a significant improvement of existing products or techniques.

18% companies describe their product as 'radical innovation', meaning that their product offers a breakthrough and a fundamentally new solution or need satisfaction.



15% innovative companies say that their product is the state of the art in the Russian market.

41% innovative companies say that their product is globally brand new.

"Generally, in Russia and, in particular, in Novosibirsk, innovation is more often viewed in terms of supply or potential for technology deployment, but it is more correct to judge by demand and current business needs. This approach is only applied in Moscow and Tatarstan."

Alexander Novikov,
Novosibirsk State University of Economics and Management (NSUEM), Rector

*The product innovation index is a weighted average indicator on a scale of -1 (useful niche product) to 1 (drastic innovation) where 1 point equals 0.01.

LEVEL OF PRODUCT INNOVATION

Half or more of NSR innovative companies have the following intellectual property items:



“Science at academic institutions functions according to its fundamental research programs, which are generated within the Academy of Sciences and are rather poorly linked to the needs of industry. It’s a wrong attitude. They should be aligned with the market, and the research agenda should be long-term and focused not on individual orders, but on entire markets at once, so that, when doing research, we understand the prospects for scaling and can develop competencies and attract young people for this end.”

Sergey Golovin,
 Doctor of Physical and Mathematical Sciences, Professor
 at the Russian Academy of Sciences, Siberian Branch of the Russian Academy of Sciences,
 Deputy Chairman for Integrated Development

CUSTOMERS OF INNOVATIVE COMPANIES



92% NSR innovative companies are focused on cooperation with the business environment (B2B sales).



29% NSR innovative companies are focused on cooperation with individual end users (B2C).



38% NSR innovative companies cooperate with the government (B2G sales).



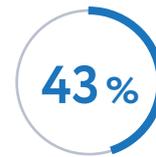
Customers of innovative companies in the NSR demonstrate a high level of satisfaction with their products and services, with **95%** of customers being satisfied or rather satisfied.



64% customers, it is important or rather important to use innovative products or services offered by enterprises in the NSR.



73% customers intend to continue using innovative products or services by NSR technology companies in the near future, while 13% do not even consider alternatives.



43% customers would like to have information about NSR innovative companies and products or services they offer.

“A key challenge faced by young startappers is that they cannot fairly assess the market needs for their product outside the university and tailor their idea to satisfy a wide range of consumers.”

Daria Pashko,
Startup Studio, Executive Manager, Novosibirsk, Garage Business Incubator, NSTU, Manager

INNOVATION ENVIRONMENT



0,38 – the level of uncertainty* in the innovation segment in NSR, which indicates a fairly high level of uncertainty in terms of strategic decision-making.

[on a scale from -1 (absolute certainty) up to 1 (absolute uncertainty)]

-0,08 – risk appetite* in the innovation segment in NSR, with 46% of companies believing that this is a good time to make risky decisions.

[on a scale from -1 (not a good time to make risky decisions) up to 1 (a good time to make risky decisions)]

“It would be very good to start a business park for technology companies to base in close proximity to NSTU. In the first place, it will help to foster engineering and entrepreneurial spirit among students; secondly, companies will be able to avail themselves of the University’s potential in order to solve their engineering problems, thirdly, they will be able to involve engineering students as relatively cheap skilled workforce (there are 13 thousand students at NSTU), and, finally, it would be possible to forge collaborations between NSTU and technology companies to commercialize research at the University.”

Kirill Zubarev,
NSTU Boiling Point Center, Leader

*The level of uncertainty and risk appetite are weighted average indicators on a scale of -1 to 1 where 1 point equals 0.01.

INNOVATION ENVIRONMENT



76% companies say that their business has been adversely affected by the Coronavirus pandemic.



50% companies say that their business has been adversely affected by the devaluation of the Russian ruble.



Innovative businesses rate government support at a lower level than average, with **46%** companies reporting below-average or zero effectiveness; however, regional support is estimated as more effective.

The Business Support Effectiveness Index³ has risen by

9 and 5 points

y-o-y at the regional and federal levels, respectively.

“There are a lot of people who would like to make the innovation and business landscape different, but the systemic problem is that the level of formalism and pettifoggery is very high now, and, in contrast, very little attention is paid to a product as the final result.”

Anatoly Bataev,
Novosibirsk State Technical University, Rector

“A key challenge for innovative development is staff turnover, not only in business, but also in government. Departures of those who initiate innovation incentive programs from line ministries and development institutions often put an end to success of these projects.”

Alexey Nizkovsky,
Center for Cluster Development of the NSR,
Siberian Science City, Executive Manager

³Efficiency index is a weighted average indicator on a scale of 0 (not effective) to 1 (very effective) where 1 point equals 0.01.

INNOVATIVE BUSINESS PROSPECTS



CEOs of NSR based technology companies evaluate the potential of their enterprises positively, while **71%** expect to grow in the next two years, and a third mean an active growth.



46% NSR innovative companies forecast greater investment in their respective businesses.



48% NSR innovative companies expect an increase in prices of their products.



34% NSR innovative companies forecast wage increases.



52% NSR innovative companies forecast growth in income.



44% NSR innovative companies forecast growth in revenues.



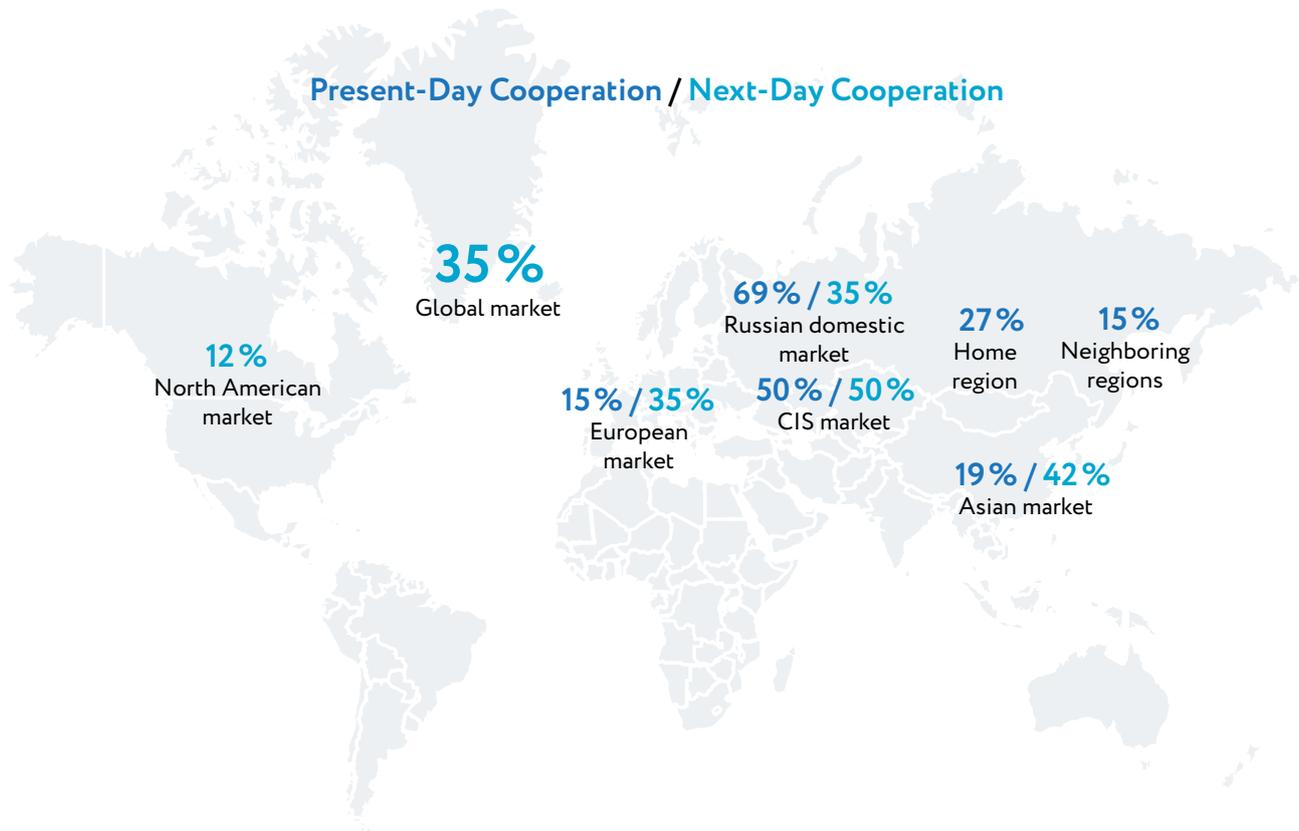
20% NSR innovative companies expect their income to go down over the next year.



24% NSR innovative companies expect their revenues to decrease over the next year.

INNOVATIVE BUSINESS PROSPECTS

Sales Markets for NSR Originated Innovations



Top 5 Resources to Accelerate Growth:

- Finance;
- Infrastructure;
- IT;
- HR and training;
- Consulting.

Top 7 Growth Incentives:

- Lower taxes for innovative companies;
- Direct grant programs for innovative companies with funds sourced from the budget;
- Increased confidence in the economy;
- Lower levels of corruption;
- An increased flow of skilled workforce;
- Effective access to public procurement;
- Simplified modalities for creating public-private partnerships for SMBs.

HR POLICIES



38% NSR innovative companies forecast an increasing number of their employees.



27% NSR innovative companies expect staff shrinkages.

88%

of innovative companies mention changes in the work environment for their employees.

85% of innovative companies have their employees working remotely, and this is a major change during the pandemic.

+4% of innovative companies expect their employees to work remotely in the near future.

31% of innovative companies have reduced their office and administrative expenses, for example, by moving to cheaper premises.

+31% of innovative companies expect to reduce their office and administrative expenses in the near future.

35% of innovative companies have optimized/compacted their office space or cut the areas they lease.

+23% of innovative companies expect their office space to be optimized/compacted in the near future.

35% of innovative companies have cut down their fit-out costs.

+23% of innovative companies expect their fit-out costs to be cut down in the near future.

27% of innovative companies have outsourced or freelanced some of their functions.

+27% of innovative companies expect some of their functions to be outsourced or freelanced in the near future.

HR POLICIES



93% innovative companies do not have enough staff.

Top 5 Understaffed Sectors:

- Science, research and data analytics;
- IT;
- Real sector;
- Promotion, sales and PR;
- Strategic management.

In most cases, this is a multidimensional problem; there are not enough professionals – both those who are adequately educated and trained and those who have adequate expertise (10% to 40% per sector).



83% innovative companies do not have enough innovation-oriented employees.

Most technology companies say they need employees who would be directly responsible for the final product, such as:

- single-function engineers;
- project managers, product managers, and team leaders.

The most effective approaches to address the issue of insufficient experience and expertise in innovative business management are as follows:

- Provide more non-formal training for managers and businessmen;
- Build up business competencies in university, college and school students;
- Create a framework for competent training and counseling entities.



50% innovative companies partially pay for training for some of their employees.

Executives argue that competencies can be improved through:

- New technology, depending on the company profile;
- IT;
- Foreign languages.

25% innovative companies have built an in-house education framework with free of charge classes for their employees.

“In Novosibirsk, we have at least two universities which expand the minds of their students towards entrepreneurship; these are NSUEM and NSTU. In these universities, students have to do business project reviews as their graduation theses.”

Anton Gusev,
Ex-Executive Initium Acceleration Program for Early Stage Innovative Ideas and Projects

PORTRAIT OF RESPONDENTS - EMPLOYEES OF NSR INNOVATIVE COMPANIES

SOCIAL AND ECONOMIC CHARACTERISTICS

Potential Employees

Existing Employees

The right bank area of the Sovetsky district and the Science City of Koltsovo have the greatest concentration of existing and potential employees with NSR based innovative companies among other NSR districts and localities.



24 years

The average age of engineering students or graduates who are interested in innovation is 24 years.



26 years

The average age of engineering students or graduates who are interested in innovation is 26 years in case of young scholars.



33 years

The average age of employees in NSR-based innovative companies is 33 years.

Two-thirds of the existing employees rate their economic situation as average (63%).

The economic situation of 38% of potential employees is below average, while another 33% have rated their circumstances as average.



RUB 25,900

Average monthly expenses per household member for potential employees (ex housing).

In budgets of potential employees, almost half (**48%**) falls into the following categories:

- food (19%);
- housing (16%);
- durables (13%).



RUB 27,200

Average monthly expenses per household member for existing employees (ex housing).

In budgets of existing employees, more than half (**54%**) falls into the following categories:

- food (23%);
- loans and mortgages (18%);
- housing (13%).

PORTRAIT OF RESPONDENTS - EMPLOYEES OF NSR INNOVATIVE COMPANIES

LIFE AND INFRASTRUCTURE EVALUATION FOR THE REGION

Potential Employees



43%



40%

Views of potential employees concerning satisfaction* with their lives vary as follows: 43% are satisfied with their quality of life and 40% are not (**0.00** points of the weight).

Potential employees find infrastructure in the NSR to be slightly above the average level** (**2.49 out of 4**). The worst situation is with health care facilities and services they provide, whereas things are better in case of organizations that provide public services.

Existing Employees



73%



27%

Existing employees of innovative companies are satisfied* with their quality of life (**+0.23**), which is significantly higher than the average for the NSR and Russia as a whole (**by 28 points and 36 points**, respectively).

Although existing employees are rather satisfied with their standard of living, they evaluate infrastructure in the NSR as being slightly above average (**2.15 out of 4**). The worst situation is with health care facilities and services they provide, whereas things are better in secondary education.

“We shouldn’t focus only on building technology parks to host companies, R&D centers or facilities in order to create an innovation landscape as the construction of modern kindergartens and schools with good education programs and labs, which would bring technology to children, might be no less effective. First of all, this would create a favorable environment for talents to be willing to stay there and, secondly, this would help raise a generation of innovators instilled with that culture from their childhood.”

Denis Obukhovsky,
Entrepreneurial University NSUEM, Project Leader, ASI,
Public Representative Education & Personnel in the Novosibirsk Region

*Satisfaction level is a weighted average indicator on a scale of -1 (not satisfied) to 1 (completely satisfied) where 1 point equals 0.01.

**Aggregated infrastructure assessment is a weighted average indicator on a scale of 0 to 4 where 1 point equals 0.01.

WORK ENVIRONMENT

EMPLOYMENT / CURRENT JOB EVALUATION

Potential Employees

Top 5 Employment Incentives:

- A way to earn a lot of money;
- Self-fulfillment opportunities;
- An opportunity to expand the network of contacts;
- R&D opportunities;
- Interest in innovative/technological businesses.

2% of potential employees have created their own products that will help them find a job with an innovative company or launch a startup.

Top 5 Most Exciting Sectors for Students and Graduates:

- Nanotechnologies and materials with special properties;
- Telecommunications and communication;
- Information systems and databases;
- Microelectronics, nanoelectronics and spintronics;
- AI and predictive analytics.

Top 5 Most Exciting Sectors for Young Scholars:

- Nanotechnologies and materials with special properties;
- Information systems and databases;
- AI and predictive analytics;
- Cybersecurity;
- Intellectual services, consulting.

The vast majority (**92%**) of potential employees for NSR based innovative companies share the same interests and have received similar education.

Top 5 Factors Considered When Choosing a Job:

- Wages and salaries;
- Work-life balance;
- Rapid career advancement;
- Inspiring problems;
- Corporate culture within the company/team.

Existing Employees

Top 5 Reasons Why to Work in an Innovative Company:

- A way to earn a lot of money;
- Self-fulfillment opportunities;
- An opportunity to create a functional product and bring advantage to people;
- Interest in innovative/technological businesses;
- R&D opportunities.

Pay satisfaction score* is slightly above average (**2.29 out of 4**). While they are rather satisfied with their fixed salaries and bonuses (2.42-2.54 out of 4), they tend to feel dissatisfied about their allowances and overtime pays (1.96).

Employees in innovative companies are rather unsatisfied* with the benefits and compensation they receive in their respective companies (**1.85 out of 4**).

Employees have rated their satisfaction* with the non-material incentives in their companies as average (**2.09 out of 4**). While they are rather satisfied with the corporate events (2.69), they tend to feel dissatisfied about training and recognition (1.71-1.88).

Employees in innovative companies have rated* the comfort level and the atmosphere in the office as above average (**2.66 out of 4**).

**1 hour
20 min.**



The average time employees spend commuting to/from work every day.

In case of traveling between the Sovetsky district and the rest of Novosibirsk, it takes 1 hour and 50 minutes.

The most widely-used ways of commuting to work are cars (**42%**), urban public transport (**27%**), and subway trains (**23%**).

*Satisfaction score is a weighted average indicator on a scale of 0 (not satisfied) to 4 (completely satisfied) where 1 point equals 0.01.

STAFF COMPETENCE

EMPLOYMENT / CURRENT JOB EVALUATION

Potential Employees

The working style preferences of potential employees are divided as follows: **31%** prefer working remotely, while **28%** feel preference for an office.

RUB 104.000

Expected average salary in two years

99% of potential employees have no expertise in innovation.

The most common career goal for potential employees for the next two years is to gain expertise.

Existing Employees

On average, employees in innovative companies have a standard working week (i.e., 40 hours).

71% of existing employees do not intend to change their job.

59% of existing employees set themselves ambitious self-fulfillment goals in their companies, e.g., to become a team/project leader or a product owner*.

60% of existing employees positively evaluate the financial potential of their respective companies.

23% of existing employees buy technological products created by their companies.

STAFF COMPETENCE

Potential employees rate their innovation-related competencies at a lower-than-average level (**1.5-1.8 points out of 4**).

With existing competencies, potential employees feel the need to improve both their new tech skills in the innovation segment they are going to work in and their IT skills.

Existing employees of innovative companies rate their innovation-related competencies as lower than average (**1.2-1.7 points out of 4**) and think that they have insufficient skills.

Most employees (**73%**) are willing to take courses in different formats to improve their skills.

“Engagement of full-time company employees as professors is a big plus, since they can teach things that are of current importance and that are progressive at the moment. Today, most professors at many universities have never had non-academic jobs and most often what they teach is outdated. This needs to be changed.”

Irina Travina,
SibAkademSoft Association, Chairman of the Board

*Product Owner is an employee who is responsible for the vision of an end product, its user value, and who manages product development.

BRAIN DRAIN

PROSPECTIVE BRAIN DRAIN

Potential Employees

32% of potential employees are going to find a job outside the NSR/Russia.

Top 3 Reasons for Moving:

- Higher living standards in another Russian region/country;
- Lack of inspiring technologies or good companies in the NSR;
- Higher salaries and wages in another Russian region/country.

56% of potential employees are going to find jobs within the Novosibirsk-Akademgorodok-Koltsovo agglomeration.

Existing Employees

40% of existing employees are going to move from the NSR/Russia.

Top 4 Reasons for Moving:

- Higher living standards in another Russian region/country;
- A job offer from a different, more reputable company;
- A general dissatisfaction with salaries and wages in the region;
- Relocation of the firm to another region.

“Many graduates don’t want to take up an academic career because of instability. Postgraduate scholarships in Russia are scanty, while grants are most often for a fairly short period (2 years) and there may be significant breaks between them (up to 9 months), which makes young scholars left penniless. In such circumstances, it’s much better to go to study science in a foreign country where postgraduate programs last five years and postgraduate scholarships are higher than the average salary in Akademgorodok.”

Sergey Netyosov,

Corresponding Member of the Russian Academy of Sciences, Doctor of Biological Sciences, Professor NSU Department of Molecular Biology, Biopharm Association, Chairman of the Board, Koltsovo Biotech Park, a Board Member

Top 3 Brain Drain Reduction Changes:

- A job offer implying more exciting functions;
- A lucrative job offer;
- A job offer implying a better working environment.

Top 3 Brain Drain Reduction Changes:

- A promotion proposal, opportunities of more rapid career advancement;
- More exciting functions within the innovative company;
- More technologically advanced equipment available in the innovative company.

PERFECT SITUATION

PERFECT SITUATION

Potential Employees

- 73%** of potential employees would like to live in a big city with millions of residents.
- 59%** of potential employees wish to live within the Novosibirsk-Akademgorodok-Koltsovo agglomeration.
- 11%** of potential employees wish to live in another country.

Top 5 Welfare Criteria:

- High-quality and affordable housing;
- Health care (quality, availability);
- Modern public spaces and services;
- Education (quality, availability);
- Life safety.

Existing Employees

- 50%** of existing employees would like to live in a big city with millions of residents.
- 11%** of existing employees wish to live within the Novosibirsk-Akademgorodok-Koltsovo agglomeration.
- 29%** of existing employees wish to live in Moscow or St. Petersburg.
- 33%** of existing employees wish to live in another country.

Top 6 Welfare Criteria:

- High-quality and affordable housing;
- Life safety;
- Good climate;
- Urban infrastructure;
- Available jobs for highly skilled professionals;
- Environment.

EVALUATION OF GOVERNMENT SUPPORT FOR INNOVATIVE COMPANIES

Existing employees rate the effectiveness* of government support for NSR based innovative companies is below average (**0.42** on a scale from 0 to 1).

53% have experience in dealing with authorities and development institutions.

Those employees who have worked with authorities and development institutions are rather satisfied with what they do and rate** this as above average (**2.66**). Slightly higher scores have been given to the availability of representatives and their willingness for a dialogue (**2.77**), while solving issues has been rated comparatively lower: promptness (**2.45**) and meaningful approach (**2.32**).

*Efficiency index is a weighted average indicator on a scale of 0 (not effective) to 1 (very effective) where 1 point equals 0.01.

**Satisfaction score is a weighted average indicator on a scale of 0 (not satisfied) to 4 (completely satisfied) where 1 point equals 0.01.

IMPACT OF THE COVID-19 PANDEMIC

COVID-19 IMPACT

Potential Employees

81% of potential employees see that their lives have changed during the COVID-19 pandemic.

Top 5 Changes for Potential Employees:

- More frequent skimping (53%);
- Taking health more seriously (50%);
- Feeling depressed (48%);
- More frequently buying things to keep them for tomorrow (44%);
- More frequent online shopping (41%).

Existing Employees

96% of existing employees see that their lives have changed during the COVID-19 pandemic.

Top 5 Changes for Existing Employees:

- Taking health more seriously (76%);
- More frequent online shopping (76%);
- More frequent skimping (60%);
- More frequently buying things to keep them for tomorrow (52%);
- Feeling depressed (48%).

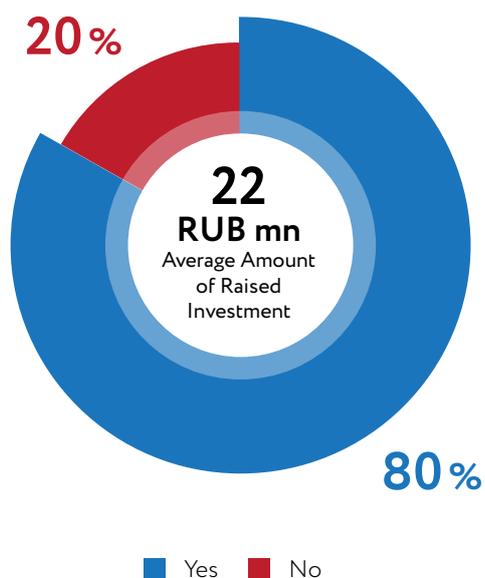
50% of existing employees say that the working style has changed in their firms.

The most popular working style before the pandemic was working in office; however, almost half of those who used to be office-based employees are working remotely or combining home office and on-site working.

64% of existing employees think that working remotely and combining home office and on-site working have had detrimental effects on the productivity.

FINANCING

Raising External Investment in 2020



Top 4 Most Used Sources:

- internal sources (92%);
- direct customer investment (40%);
- public investment (28%);
- money of friends and family members (20%).

Top 4 Most Lucrative Sources:

- public investment (65%);
- internal sources (58%);
- direct customer investment (46%);
- private investment (35%).



74% innovative companies will need funding over the next twelve months, with **57%** planning to raise external investment.

Top 5 Investment Goals:

- Staff compensation and team expansion;
- Research;
- Advertising and marketing;
- Fast business scaling;
- Product developments and improvements.

INFRASTRUCTURE



96% innovative companies have had earlier experience of cooperating with development institutions or authorities.

The principal cooperators in terms of frequency are regional authorities and infrastructure entities. Satisfaction* with cooperating with authorities or development institutions is generally above average.

Top 5 Significant Criteria for Selecting Innovation Infrastructure:

- Tax benefits;
- Convenient location;
- Standard and cost of provided premises;
- Basic industrial equipment and infrastructure;
- Basic research equipment.

Top 3 Cooperators:

- Infrastructure entities;
- Regional authorities;
- Private extra-budgetary funds.

Top 3 Cooperation Issues:

- Finance;
- Information;
- Use of infrastructure.

Top Cooperation Enhancement Criteria:

- A meaningful approach in deliberations;
- Prompt deliberations.

Top 5 Essential Infrastructure Resources:

- Industrial facilities and labs;
- Research equipment;
- Offices;
- Industrial equipment;
- Utilities and available electricity supplies.

INFORMATION AND CONSULTING RESOURCES

Top 5 Most Used Sources of Business and Investment Information:

- News websites;
- Exhibitions and fairs;
- Website of SMEs in the Novosibirsk Region;
- Business associations and chambers of industry;
- Private advisors and consulting firms.



Satisfaction with information sources used by innovative companies is 0.10 on a scale from -1 to 1, which indicates an ambiguous attitude to the sources.

Top 3 Best Information Sources:

- Private advisors and consulting firms;
- News websites;
- Exhibitions and fairs.

Top 3 Most Inadequate Information Sources:

- Business magazines and publications;
- Municipal administration;
- Website of SMEs in the Novosibirsk Region.

“An entrepreneur, that is either a businessman or an academic scholar with entrepreneurial attitudes, should be a real driver of economic innovation. This is how all the other world’s technology centers, such as Silicon Valley, have grown. Trying to build an innovative infrastructure around pure science and education is ineffective. In this country, innovation development is often initiated by government and it’s a major impediment that hampers this scheme.”

Oleg Fyodorov,
PhD in History, Associate Professor, Siberian Institute of Management –
RANEP Branch, Director

Top 3 Strong Points of Ongoing Information Support:

- Awareness-raising efforts;
- Accessibility level;
- Helpful content.

Top 3 Most Vulnerable Points of Ongoing Information Support:

- Cooperation with entities that are responsible for SME support;
- Sufficiency level;
- Level of concern with what businesses need.

Top 5 Hot Information Topics:

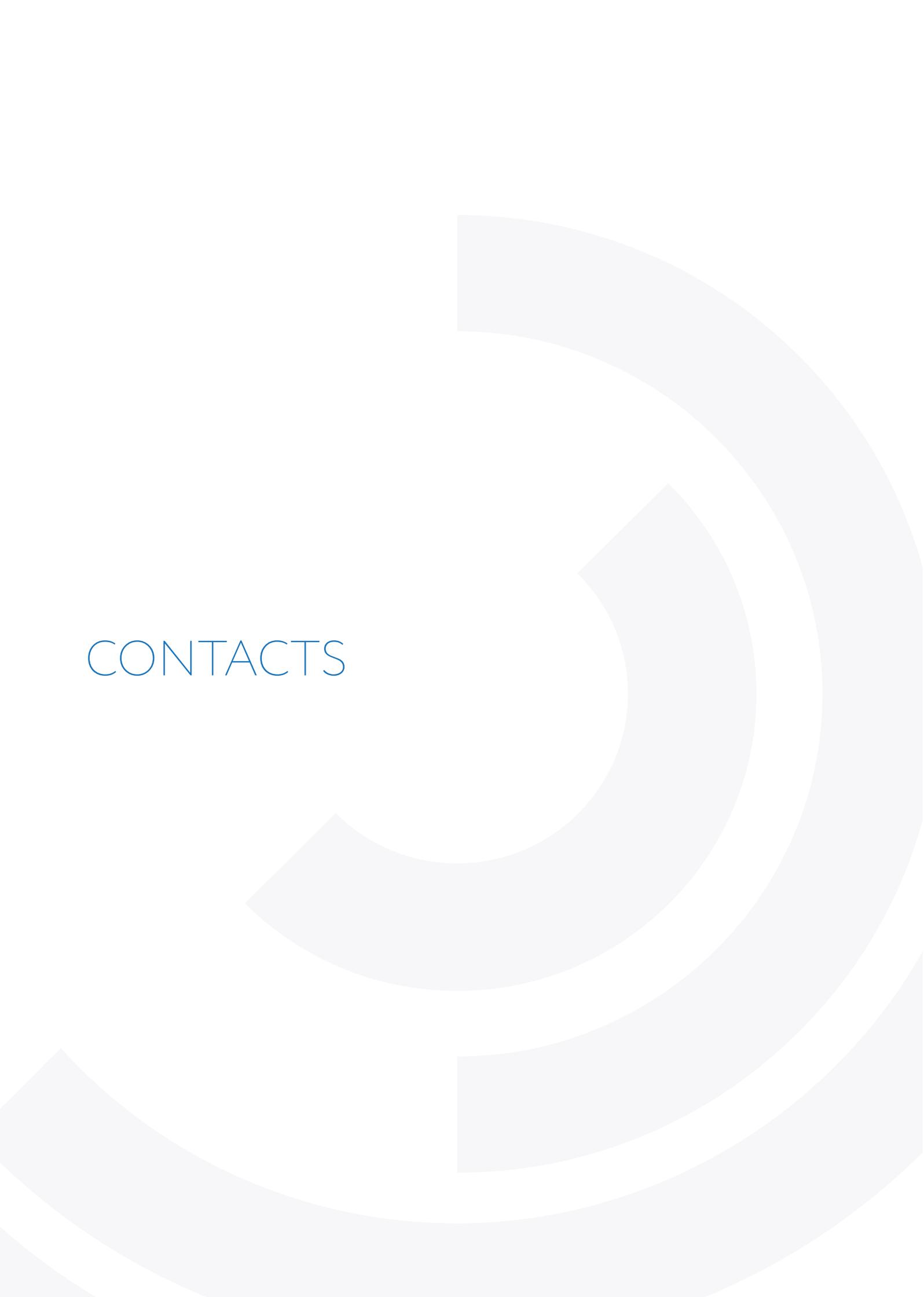
- Support from the SME Development Foundation of the Novosibirsk Region;
- Information about biddings and grants in investment and innovation segments, related application rules;
- Investment grants from the RVC Seed Fund and Support Foundation;
- Modern marketing technology tools;
- Participation in targeted programs.

Top 3 Reasons Why Innovative Companies Should Engage:

- Presentation and promotion of goods and services (52%);
- Search for new business partners (52%);
- Reputation and brand enhancement (43%).

*Satisfaction level is a weighted average indicator on a scale of -1 (not satisfied) to 1 (completely satisfied) where 1 point equals 0.01.

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