Approved by the Board of Trustees
(Minutes dd. November 10, 2025 № 62)

STRATEGY 2030

Skolkovo Institute of Science and Technology

I. General

Skoltech was established in 2011 as a new model international institute of science and technology in Russia, to transfer and enhance competencies that are either absent or insufficient in Russia, yet critical for the national economy advancement.

Being a part of the project for establishing the Skolkovo modern technology center, Skoltech was founded in the strategic partnership with the Massachusetts Institute of Technology (MIT), a globally recognized leader in science, technology, education and innovation.

In accordance with the Charter, Skoltech is engaged in research and development, forms project teams, implements innovation projects, designs and delivers educational programs, including professional training. The target outcome is national technological leadership and human capital sovereignty in select Target Domains.

Strategy 2030 is designed to further develop Skoltech as a world-class institute and reinforce its leadership position. Emphasis is placed on expanding technology development and transfer, and strengthening key partnerships.

Compared to the strategies of the previous periods, Strategy 2030 differs by a shared vision with the Skolkovo Foundation and VEB.RF regarding key challenges, strategic goals and priorities. Aimed to achieve synergetic outcomes, a joint 'umbrella' Strategy of the Skolkovo Foundation and Skoltech for the period up to 2030 is developed[1]. Strategy 2030 also defines Skoltech competitive position, scenarios, risks and mitigation measures.

The Strategy is based on the following principles:

- Focus: resources are concentrated on the areas that have the greatest impact on national development goals.
- Continuity: The Strategy builds on the outcomes of recent years, incorporating lessons learnt from both successes and challenges.

[1] This is a separate document outlining joint goals of the Skolkovo Foundation and Skoltech. It defines the role of each organization in reaching the goals and estimates on resources.

- Balance: The Strategy provides Skoltech harmonized development on all key areas of university 3.0. model.
- Openness: Skoltech is open to new approaches and practices, changes that drive development. Skoltech learns and adapts the practices of top world universities and research centers, sharing best practices in industry and universities cooperation, and by doing this Skoltech goes to 4.0. model.

The Strategy is aligned with the Decree of the President of the Russian Federation No. 474 dated July 21, 2020, "On the National Goals for Development of the Russian Federation for the period until 2030", Federal Law No. 523-FZ dated December 28, 2024, "On the Technology Policy in the Russian Federation", Decree of the President of the Russian Federation dated July 05, 2024 No. 309 "On the National Development Goals of the Russian Federation for the period up to 2030 and for the future up to 2036", Strategy of Scientific and Technological Development of the Russian Federation, Foreign Policy Concept of the Russian Federation, approved by Presidential Decree No. 229 dated March 31, 2025, Federal project "Technologies", and the Unified Plan for Achieving National Development Goals of the Russian Federation for the Period until 2030 and Further until 2036, as well as methodological recommendations of the Government of the Russian Federation on developing strategies.

The Strategy serves as a central planning document outlining Skoltech focus areas, strategic programs, resources, scenarios, as well as target indicators. The Strategy is developed based on the concept 2030 concept approved by the Board of Trustees[2]. The Strategy 2030 incorporates recommendations from both the Board of Trustees and the Academic Council.

Abbreviations and definitions used in this document:

- Centers – structural units of the Institute, conducting development programs in the chosen areas for research, innovation and education,
- Endowment – Skoltech endowment fund,

[2] Meeting of March 13, 2025

- National goals – national development goals of the Russian Federation for the period up to 2030 and up to 2036, defined by Decree of the President of the Russian Federation dated May 7, 2024 No. 309,
- Own technology lines – technology line as defined in the Federal Law dated 28.12.2024 No. 523-FZ «On technology policy in the Russian Federation and amendments of select legislative acts»,
- Skoltech (Institute) – Skolkovo Institute of Science and Technology,
- Skoltech startups – legal entities founded by Skoltech, students, graduates, faculty, researchers, and (or) other researchers[3],
- Strategy 2025 – Skolkovo Institute of Science and Technology Strategy for the period 2021 – 2025,
- Technology leader – a Russian company that meets criteria set by the joint Strategy of the Skolkovo Foundation and Skoltech for the period up to 2030
- TRL – Technology Readiness Level,
- VEB.RF Group – VEB.RF and development institutes.

II. Target Domains

Skoltech research, technology and education programs are conducted in six target domains:

- Artificial Intelligence,
- Life Sciences and Health, Agrotechnology,
- Advanced Materials and Engineering,
- Energy Efficiency and Energy Transition,
- Telecommunication and Photonics,
- Advanced Studies.

Each domain has priority areas which are the basis for the Centers' programs.

[3] one or several categories applied

Target domains and priority areas

ARTIFICIAL INTELLIGENCE

AI Center

Elements of AGI
Fundamental and Generative AI
Control, Decisions, Reasoning, Agent/Multi-Agent Systems
Architectures, ML algorithms, Optimization and Mathematics

LIFE SCIENCES AND HEALTH, AGROTECHNOLOGY

Bio-and medical Technologies Center

Molecular Biology
Biomaterials
Cell culture
Microbiology and Virology
RNA tech
Neurotechnology and bionics
Brain structure and activity
Computational biology
Immunology
Agrotechnology
Omics Technologies

ADVANCED MATERIALS AND ENGINEERING

Materials Center

Integrated composite structures
Additive manufacturing and new materials
Coatings and repair technologies
Lattice & honeycomb structures
Material oriented design
Accelerated environmental testing methods
PIML modelling for life-cycle prediction

Petroleum Center

Frontier basins (East Siberia, Arctic, Far East)
Stable Production in Traditional Regions
Low-cost petroleum production
Geothermal Energy Production
Underground Hydrogen Production
Arctic region: climate change and geological risk mitigation
Nuclear Waste Disposal in Geological Formations

Engineering Center

Engineering Design Science

ENERGY EFFICIENCY AND ENERGY TRANSITION

Energy Center

Energy storage and conversion
Energy Systems

TELECOMMUNICATION AND PHOTONICS

Wireless Center

Exploratory research for 5GA and 6G systems
Development & Delivery of critical 5GA/6G technologies

Applied Photonics Center

Optical communication and sensing systems for aerospace, oil & gas, transport
Time-frequency coordination, synchronization, and navigation; gravitational field measurements
Integrated optics for telecom, computations, sensing & quantum technologies

ADVANCED STUDIES

Krichever School

Algebraic geometry
Integrable systems
Mathematical physics
Probability theory
Representation theory

Autonomous Systems & Robotics
Cyber-Physical Systems and PLM
Aerospace & Space Exploration
Energy Conversion Physics and Technology
Micromaterials Engineering & Smart Manufacturing
Automatic Control & AI-driven Automation
Intelligent Systems & IoT
Systems Optimization

Scientific & analytical instrumentation

Photonics Center

Biophotonics
Hybrid Photonics
Nanomaterials
SPARQ Lab[4]

Physics Center

Plasmonics and photonic integrated circuits technology
Superconducting Materials and Quantum Technologies
Advanced Electronics Devices
Nanophotonics theory
Wave Physics
DNA-origami
2-D Materials

[4] Short from [S]pectroscopy, [P]hotonic metamaterials and plasmonics, [A]dvanced [R]esearch in electrodynamics, [Q]uantum optics and nanophotonics

III. Skoltech today

1. Role and positioning in the system of national development goals

Skoltech was founded as a world class institute of a new model in Russia, which is based on the integration of education, research and innovation (known as the 3.0 or the Triple Helix model). With development of competencies and infrastructure, Skoltech rapidly shifted to the 4.0 model, which assumes transfer of world level competencies to Russian universities and industry through deep integration in research, education, technology and business cooperation.

Today, the 4.0 model keeps relevant for Skoltech, as Russia comes into a new stage of development, targeting technology leadership and independence of human capital. In sight of this, Skoltech role is educating new generation of leaders, development of own technologies and their advancement to the national and international markets to ensure a global competitiveness of the Russian Federation.

Despite a small size and reputation of a ‘boutique’ research institute, Skoltech already makes a quantitative and qualitative contribution to the national goals. In the context of the Federal Law on the technology policy in the Russian Federation, Skoltech jointly with high-tech partner companies forms own technology development lines through activities to develop human resources, R&D programs, growth of IP portfolio, and creating new companies (startups).

These activities are implemented within the Federal project "Technologies" (National project ‘Effective and competitive economy’)[5]. Skoltech is a contractor in key projects of the national initiatives for technology leadership ("Digital Economy", "Unmanned aircraft systems", "New nuclear and energy technologies", "Development of space activities of the Russian Federation until 2030 and further until 2036", "Science and universities"). Skoltech is

[5] Federal project line "Creation and development of the Skolkovo Institute of Science and Technology"

also presented in expert groups involved in development of technology roadmaps.

In the Unified plan for achieving national development goals of the Russian Federation until 2030 and further until 2036[6], Skoltech conducts frontier research, shapes competencies for technology product development and bringing it to the market, delivers student entrepreneurship programs. Skoltech also nurtures initiatives of students, faculty and project teams for creating technology spin-off projects and startups.

2. Role and positioning in the system of development institutes

Skoltech is established as an educational and R&D core of the Skolkovo project to educate new generation of leaders, develop new technologies and create business opportunities – high-tech product development projects, services and companies changing technology landscape in Russia. In turn, the Skolkovo Foundation develops business environment and ensures the growth of innovation and entrepreneurship through Skolkovo residency, grants, consulting support, development of the ecosystem urban environment.

Today, the Skolkovo project is coming into a new stage. National technology leadership and global competitiveness require synergy not only from Skoltech and Skolkovo Foundation, but all development institutions of VEB.RF. The synergy is reached through cooperation in choosing priority areas and projects, infrastructure programs, tools to support and finance projects at investment and pre-investment stages.

Expected outcome of joint efforts is establishment of companies-leaders based on own technology lines. On the horizon of 2030, the VEB.RF group, including Skoltech and Skolkovo Foundation, is expected to establish and support at least five, and in case of favorable conditions – up to twenty, of such companies, to develop new technologies and facilitate transfer to the serial production of competitive products of strategic importance for Russia.

[6] Strategic priorities of the Government of the Russian Federation for achieving national goals

Based on the own development lines and owing technologies under control, such companies will be growing together with the global market. They will be able to lead, rather than follow the others, and develop new generation of products, rather than buying available on the market technologies, often obsolete as the technology landscape changes rapidly nowadays.

3. Strategy 2025 results

Strategy 2025 targeted leadership in science, technology and education in select fields, and a favorable environment and conditions for attracting and cultivating talents will mark its' completion.

The period of 2021–2024 was characterized by unprecedented challenges. In 2022, Skoltech was included in the list of sanctioned organizations (SDN), which significantly affected the dynamics of the Strategy implementation, key personnel, as well as international partnerships. At the same time, Skoltech demonstrated sustainability of the model and commitment to the goals of the Strategy.

To achieve the strategic goals, 15 centers were established uniting 150 faculty, more than 500 researchers and highly qualified engineers, and 1000 students. More than 900 projects were completed by the centers during 2021– 2024. The results show Skoltech contribution to the national goals[7] , fully meeting strategic KPIs:

– total contribution to the national economy[8] exceeded 90 bln rubles and will exceed 100 bln rubles by the end of 2025;

– for the whole period Skoltech maintained high level of publications. 1400 publications appeared in the most reputable international scientific journals, and the number of publications will exceed 1600 by the end of 2025. This output is a clear demonstration of Skoltech standing at research and technology frontiers and reflects results achieved using Skoltech research infrastructure (~37,000 sq. m. of laboratory facilities with

[7] The goal is "Opportunities for self-realization and talent development" in accordance with the Decree of the President of the Russian Federation "On National Goals and Strategic objectives for the development of the Russian Federation for the period up to 2024"

[8] Methodology of the New Economic School (approved within Strategy 2025)

advanced equipment) with participation of national and international partners;

– the model for technology education through research and innovation and entrepreneurship activities is in place (university 3.0). Over 1,600 graduates have been trained. Skoltech graduates have most advanced knowledge and applied experience to set and solve complex research and technology tasks, participate in large projects, create teams and establish technology companies;

– about 100 technology spin-offs, including companies in Skolkovo, were established and supported through the 'seamless' mechanism of the development institutes. The total number of such companies if counted from Skoltech establishment exceeds 160, while their revenue amount to ~ 4 bln rubles during 2021 – 2024. Skoltech spin-off, LABADVANCE, has become the only company in the CIS that develops high-pressure and high-temperature microfluidics and a full range of unique components for development of microfluidics. In 2025, the startup received investments from the Russian Direct Investment Fund.

Technology development lines were organized to bring research to application. R&D contracts in 2021–2024 exceeded 10 bln. rubles, 25 projects achieved TRL 7 or higher. Technologies developed by the Wireless Center as part of the programs for creating and developing competence centers and leading research centers of the National Technology Initiative are used in 4G/5G mobile communication base stations. With Skoltech support the technology was successfully transferred to the serial production; today, under the name of IRTEYA company, these base stations are operating in a number of Russian regions.

Skoltech has started a shift towards a full-fledged university: on top of 20 MSc and PhD programs, 2 BSc programs in the network form were launched with academic partners. The portfolio of professional programs for senior engineering staff of high-tech companies was expanded – more than 2,200 participants completed Skoltech training from 2021 to 2024, in some areas Skoltech has a unique offer on the market.

Skoltech continues to keep English as a working language, since English is the global language of science and education. In a combination with high academic results, this allows to be active in the international community (conferences, publications, partnerships). Joint laboratories were opened in

AI in biomedical research with the University of Sharjah (UAE), and in photonics with Shanghai Institute of Optics and Mechanics (China). Skoltech delivers programs for international students representing 50 countries. Moreover, Skoltech keeps partnerships with a few European universities (e.g. KU Leuven, University of Insubria) providing opportunities of PhD research projects and co-advising.

Skoltech facilitates the international agenda of Russia by coordinating BRICS working groups in Photonics and Biotechnologies, heading the UN Subcommittee on Transport of Dangerous Goods, as well as working in the Committee on Ethics of Artificial Intelligence (Commission of the Russian Federation for UNESCO).

Efforts were made to promote internal and external brand. Attractive conditions were provided for world-renowned faculty, both foreigners and Russian origin faculty. Research groups lead by these faculty attract young scholars who can quickly reach their professional potential – Skoltech young scholars regularly receive most prestigious awards. The personnel loyalty surveys (eNPS) show a ‘4.0’ level of satisfaction (‘very good’), as evidenced in rankings of HeadHunter and DreamJob. Skoltech is also presented in key media and federal forums, joint events with VEB.RF and Moscow.

The results also include scaling best practices and competencies. In particular, Skoltech acted as a consulting partner on infrastructure projects, including the Center for the Development of Scientific and Educational Competencies in the Field of Climate (Ufa carbon landfill), world-class campuses in Nizhny Novgorod and Chelyabinsk, and a Research center at Murmansk Arctic University. Professors and researchers regularly share their scientific knowledge at various open venues in the country.

To create a critical mass of competencies in select areas, Skoltech forms consortia with leading universities. The example of these efforts is the Clover project in the field of Photonics, the initiative of Skoltech, MIPT, and ITMO.

At the same time, not all Strategy goals have been achieved. The planned numbers for faculty and students were reduced due to the turbulence, caused by Covid-19, geopolitics, sanctions and a continued decrease of funding. The issues which are still on the agenda include a ‘Digital university’ project, transformation of the educational portfolio, advancement of the personnel policy, increase of project management quality, operational efficiency. The problematic issue is the campus maintenance and student

dormitory, construction of laboratory facilities and the West Ring, which require significant investments.

4. Analysis of competitive position

Defining Skoltech competitive position is influenced by a relatively small size of the institute: the direct comparison with national universities and institutes would be inadequate. In this regard, a number of parameters that are unique or significantly distinguish Skoltech from others are elaborated below.

When founded, Skoltech existed in a "blue ocean": the absolute advantage was reached by the model of ‘3.0 university’, partnership with MIT, substantial resources for a rapid recruitment of top global faculty and development of lab facilities and campus.

It is worth mentioning, that Skoltech establishment by itself influenced the national university landscape. To scale the best practices, governmental programs for increasing universities competitiveness were launched (5 top-100, Priority 2030, World-class campuses, Advanced engineering schools). These programs resulted in the overall ‘level-up’ of universities.

Today Skoltech holds a sustainable competitive position as viewed by the key target audiences and is determined as follows:

- students associate Skoltech with strong faculty and international profile (education in English, global network), modern laboratories and campus;
- high-tech companies value Skoltech unique expertise, faculty with international background, in particular, in technology companies, as well as professional connections with peers at top world universities despite sanctions. In professional education, Skoltech is viewed as a partner to develop competencies for solving technology tasks and implementing innovative solutions;
- startups value Skoltech intellectual environment, opportunities to work with top researchers, access to advanced technologies, infrastructure and shared facilities, development programs, Skolkovo ecosystem as a whole;

– for Skolkovo Innovation Center, Skoltech as a key source of scientific and technology competencies, a source of startups coming to the ecosystem.

Skoltech competitive position in the paradigm of the university 3.0 is diverse and defined by a number of factors:

1) Education

Today Skoltech is placed mostly in a ‘red ocean’, competing for top talented students with top Russian universities – e.g. MIPT, ITMO, HSE, MSU. To provide students wide opportunities, Skoltech also targets cooperation with such universities through network programs.

The highest level of competition is in the areas of Artificial Intelligence, Advanced Materials, and Engineering. Also, new universities and programs are rapidly advancing on the market, e.g. Central university (a T-Bank project) or programs of companies.

As for international students, Skoltech maintains a sustainable competitive advantage, primarily due to the visible international brand, programs in English, competitive scholarships, and zero tuition fee. Starting from foundation, Skoltech maintains the share of international students as approximately 20%, attracting talented students from around the world on a competitive basis. Major share of internationals comes from BRICS+ countries.

The core of the educational model is made in line with the best educational practices of world-class research universities (MIT, Caltech, KAIST) and world young universities of 3.0 model (e.g. OIST). The benchmark with the row model group shows that Skoltech, in general, has more competitive indicators than Russian universities, and is comparable with international universities in terms of faculty load and a share of graduate students. At the same time, international universities tend to have a larger share of foreign students than Skoltech (and even larger than Russian universities).

Students to faculty ratio		% of international students		% of PhD students	
Caltech	3	OIST	78%	OIST	100%
OIST	3,2	KAUST	60%	KAUST	60%
Skoltech	9,3	MIT	33%	Caltech	58%
KAUST	9,5	Caltech	32%	Skoltech	51%
KAIST	11,2	Skoltech	17%	KAIST	37%
MIT	10,9	KAIST	11%	MIT	35%
MIPT	30,9	MIPT	10%	MIPT	11,6%
ITMO	34	ITMO	16%	ITMO	6%
HSE	27,7	HSE	11%	HSE	2,50%

Data as of 01.09.2025 based on open sources. Data for Russian universities extracted from monitoring N1 2024.

2) Research and technologies

Skoltech maintains a status of the ‘boutique’ research institute, characterized by high standards in recruiting scholars and students, a system of KPIs which sets high requirements for the quality of publications.

Skoltech has the international research personnel, also due to the strong organizational capacities to recruit from the global market. More than 85% of faculty have significant experience (education, work) in international universities, research centers and companies in Europe, USA, China, Japan and other countries. 20% of faculty are included in the list of top-2% of world scientists[9]. This makes it possible to attract young scholars, establish strong scientific schools, train young specialists involved in advanced research and R&D. Young talents are Skoltech competitive advantage, almost 74% of academic staff are young scholars. Strengthening leadership by revealing their potential is one of the Strategy goals.

As a research intense institute Skoltech has a lower faculty teaching load compared with standard universities – this gives faculty more time for research.

As of today, Skoltech maintains top positions in international rankings, such as Nature Index and Research.com. In Nature Index, Skoltech is number

[9] Stanford University Ranking (2025)

one[10] among Russian universities if counting by a share of university authorship per academic staff.

The structure of Skoltech funding allows to have a unique advantage – to invest into technology groundwork. The indicators of competitive advantage (leadership) include participation in complex governmental programs, programs with high tech companies, unique project teams. Among the successful examples are the Wireless Center team and development of 4G/5G technology, the AI Center team, which is a leader for the number of publications at top prestigious A* conferences in Russia, the Energy Center team which developed own technology line for cathode materials based on lithium-ion and sodium-ion compounds, which are on par with the best world analogues.

Due to the sanctions in 2022, Skoltech lost a significant share of core faculty. This influenced research and innovation domains.

3) Technology entrepreneurship

The foundation of the technology entrepreneurship program was shaped by the strategic partner MIT, making the program unique in Russia in the ramp-up stage. More than 14 years, Skoltech has been refining the MIT methodology, adapting it to the needs of the institute and Russian economy as a whole. The ‘Startup Funnel’ includes activities for identification of consumer problems and consumers, design of quick prototypes and scientific experiments, feedback and refinement of the prototypes. After the Innovation Workshop flagship course, about a third of students decide to develop a startup project. As the result, approximately a half of Skoltech startups in Skolkovo have been created by students and alumni. Skoltech is sharing the methodology by inviting students from partner universities for courses and launching joint programs in technology entrepreneurship.

The activities include not only the educational program which remains unique, but also development of a startup ‘belt’ of technology companies, scholarship and mentoring support for startup teams, Skolkovo ecosystem opportunities, support mechanisms from VEB.RF institutes for development.

[10] https://www.nature.com/nature-index/institution-outputs/generate/all/countries-Russia/academic

The program is implemented at a high level, though it is not unique in Russia: top universities and innovation clusters offer similar opportunities. Strengthening Skoltech competitive advantage is one of Strategy goals.

5. Key challenges

The Strategy will be implemented under external and internal challenges.

External challenges include ongoing sanctions, which influence recruitment of international specialists and students, maintenance of foreign equipment and access to new equipment, technologies and materials.

The personnel policy is implemented in a shortage of highly qualified specialists on the market (researchers, engineers) and strong competition with business. It is important to note that the maximum amount of grant funding that a successful faculty can expect in Russia is 3-4 times less than in the USA and Europe. The competition for strong students is predicted to increase also influenced by the reduction of target audience due to the demographic gap and a brain drain.

The global technology trends such as a growing demand for energy, climate change, development of quantum technologies, life sciences, bioethics and ethics of AI are viewed as opportunities and drivers for growth (new research tasks, projects, technology and educational cooperation).

The new challenge is Russia’s transition to a new system, which affects the demand for MSc education among students in Russia, and as a result, concept of Skoltech education in general.

Internal challenges are caused by a need to balance three key areas (research and technology, education, innovation) in context of stakeholders’ expectations and redistribution of financial resources considering these expectations. The most critical challenges will be a need to attract significant funding already in 2026, structural changes to focus on priority areas, accelerating automation and digitalization of business processes. Development of a corporate culture will require consistency and readiness at all levels.

Considering the joint Strategy with Skolkovo Foundation, several joint challenges can be identified on the horizon up to 2030:

1) reaching the joint position for priority areas for collaboration, including consolidation of efforts to support projects which will target own development lines in light of resources shortage,

2) a pace for investment and focus of companies on creating own technologies. The change in technology landscape due to obsolescence of solutions already at the stage when the solution enters the market,

3) stabilization (guarantee) of support conditions for a period sufficient for development of own technology stack, introduction of a tool for effective replenishment of equity and instruments of venture funds. Targeted financing programs for advanced (groundwork) applied R&D in most relevant areas are also needed – starting from applied research up to establishment of flexible production facilities.

IV. Mission, vision, strategic pillars and target competencies

We are committed to contributing to development of the economy and society by academic and technology excellence, development of technologies and increase of entrepreneurial spirit.

Skoltech implements the Triple Helix model of technology education via scientific research, innovation and entrepreneurship – university 3.0 model.

On top of that, following the principle of Openness, Skoltech learns and adapts the experience of world best research institutes and universities, transferring advanced practices of education, research and innovation activities to universities and industries of Russia. In addition, Skoltech exerts significant influence on the formation of national science and technology policy, not only by responding to state priorities, but also by contributing proactively to their formulation. By doing that, Skoltech implements a new university 4.0 model.

Within Russia’s educational and research ecosystem, Skoltech is a driver for development of modern high-tech economy and industry. The Strategy 2030 highlights Skoltech role in developing own technologies and supervising their

implementation in serial production, emphasizing flexibility of organizational approaches to speed up the development.

To scale the effect, Skoltech identifies frontier areas at early stage and creates a critical mass of technology competencies, to show a precedent of successful technology development and implementation. The precedent attracts attention and involves other universities and high-tech companies in the work in the areas chosen by Skoltech. This, in turn, create a multiplier effect.

By doing so, Skoltech transforms existing industries and creates new ones, serving in the role of a technology icebreaker.

Such activities are enabled by Skoltech unique organizational model and special funding mechanisms, which allow the Institute to rapidly react to external challenges, allocating resources efficiently and flexibly for maximum impact.

Skoltech is structured around flexible organizational units – centers capable of implementing diverse interdisciplinary initiatives in research, technology, and education.

Research centers develop basis for own technology lines: accumulate and advance research and technology competencies and human resources, provides core expertise, state-of-the-art laboratory facilities and educational programs in particular areas. The project centers further develop and transfer technologies, including cross-cut and critical technologies, facilitating serial production of high-tech products based on these technologies in close collaboration with big industry and financial partners, as well as spin-off companies.

To realize this vision, Skoltech fosters an international intellectual environment and competitive conditions designed to attract both distinguished experts and promising young talents, including members of Russia’s global scientific diaspora. Skoltech provides opportunities for professional self-realization as scholars, engineers, technology entrepreneurs, and leaders, thus contributing to the creation of human capital that will shape Russia’s future.

Four strategic pillars:

1. Frontier research as the foundation for own cutting-edge technology development lines, a prerequisite for technological leadership. Openness to the world, international recognition and cooperation expand Skoltech capacities and opportunities.

2. Own technology lines within technology cooperation. Considering market demand, aligned with national goals, based on high academic and technology capacities, Skoltech assumes responsibility for the most knowledge-intensive segments of the value chain and develops technologies, which are expected to be competitive. This helps to de-risk technological adoption for industrial partners who can focus on production and commercialization.

3. World-class international education and training specialists who are capable to succeed in a rapidly changing technology landscape – defining ambitious goals for creating and (or) implementing technology innovations and developing own technologies, managing complex projects.

4. Effective governance and management, highly competitive conditions for attracting talents and supporting research, technological innovation, education and entrepreneurship.

Quantitative targets for strategic pillars are presented in Appendix 1.

The implementation of the Strategy will be based on the target values:

- commitment: shared belief in the mission and strategic goals of the institute,
- integrity: effective organization of activities, responsibility for decisions, customer orientation,
- teamwork: open communication, value and advantage of cultural differences,
- drive: orientation towards ambitious goals and innovative solutions.

V. Programs of Strategy 2030

Strategy programs are presented in the section below.

1. Research program

The ultimate result of the Research program: Skoltech is as a globally recognized academic institution, distinguished by world-class research that is highly regarded within the international academic community. The institute boasts a powerful brand, which is instrumental in attracting top-tier talents and fostering a dynamic, intellectually stimulating environment. As a result, Skoltech has become the premier destination for both Russian-origin scholars and international experts considering Russia for their academic careers.

In each of its designated priority research areas, Skoltech is committed to achieve and sustain a leadership position amongst the world's top young universities. This ambition will be quantified through key metrics, including the quantity of publications in high-impact journals, the amount of attracted sponsored research funding, and broader academic recognition as reflected in prestigious university rankings, national awards, and international prizes.

To realize these ambitions, Skoltech will implement a series of strategic structural enhancements. This transformation will involve a reconfiguration of research centers and laboratories to address emerging trends and identify target areas for recruiting world-class scholars (including visiting scholar programs).

The program includes the following key activities:

1) Establishing new research centers and laboratories focusing on emerging academic and industrial trends, leveraging state funding programs.

2) Further developing Skoltech into a pole of attraction for high-level academics, including from the Russia diaspora, with an aim towards reversing the ‘brain drain’.

3) Launching internally funded competitive projects, including initiatives to establish joint laboratories with top international research centers.

4) Expanding and modernizing the laboratory complex to provide state-of-the-art research infrastructure.

5) Launching an academic mentoring school for young scholars, focusing on skills such as publishing in prestigious journals and preparing successful grant applications.

6) Developing further external review mechanisms for research programs.

7) Development of networks with leading universities, including international ones, and the RAS institutes (research consortia) to solve joint research and technology problems with Skoltech playing a leading role.

2. Technologies program

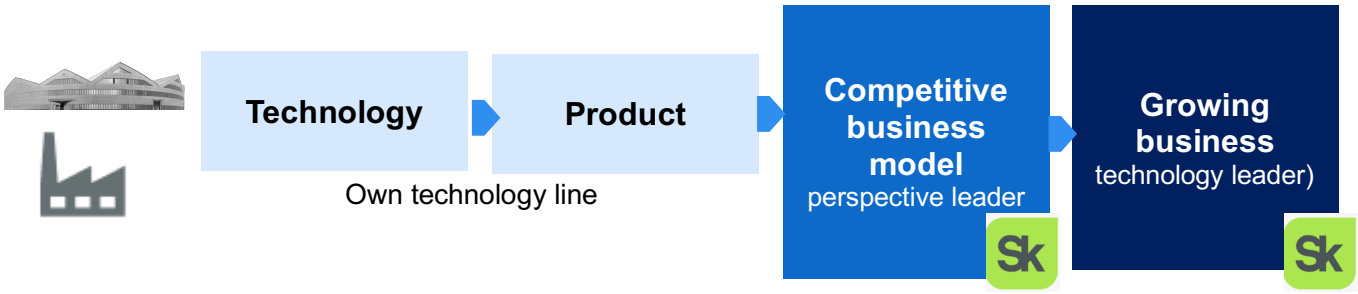
The ultimate result of the Technologies program: Skoltech develops technologies of crucial importance to Russia, advances them to high TRLs and follows serial production, as well as its modernization while integrating the next generation of technologies. Skoltech specializes in the most knowledge intensive, intellectually demanding and technologically risky areas where rapid solutions are essential, thereby mitigating risks for its industry partners and customers.

The program will be implemented through the following mechanisms:

1) development of technologies and their transfer to the market by Skoltech and Skoltech startups or with strategic partners. Strategic partners include large Russian companies and state corporations. The separate task is building systematic strategic partnerships.

2) projects for creating research and technology groundwork within the Strategy with Skolkovo Foundation, in a close cooperation with other national change agents, including National Technology Initiative Fund, Center for Support of Engineering and Innovations, as well as projects to

cultivate national technology leadership. This model is designed to yield sustainable growth-oriented businesses through close technological and industrial collaboration. Within this framework, Skoltech will drive the development of breakthrough technologies, to produce competitive products, while the Skolkovo Foundation, and other change agents, will cultivate technology leadership development, providing support tools, co-develop the infrastructure for development lines, contributing to setting technology and industry cooperation.



3) Fast track for transfer of the technology to the market through cooperation and support mechanisms of key stakeholders. In this framework, a forward-looking technological portfolio will be developed with VEB.RF, Skolkovo Foundation, Moscow and other partners. For example, the directions in pipeline with Moscow include health technologies, AI, unmanned systems.

The program includes the following key activities:

1) To form a long-term portfolio focused on complex technology tasks, Skoltech will nucleate new project centers, targeting partnerships with industrial companies who are interested in sharing the risks and benefits from streamlined development lines.

2) A Seed program will be established, funded from Federal project 'Technologies', Endowment, and other sources, to support the project centers on their early-stage phase, incorporating mechanisms to attract and host specific research groups at Skoltech.

3) The project management system will be adjusted to increase autonomy in managing large technology projects, reduce administrative barriers, increase the speed of decision-making and level of flexibility.

4) new projects for developing infrastructure of own technology lines at the Skolkovo Innovation Center, with Skolkovo Foundation, Moscow, startups, and small technology companies.

3. Education program

The ultimate result of the Education program: Skoltech implements world-class programs, and studying at Skoltech is considered prestigious. Skoltech offers a unique and transformative experience, characterized by significant flexibility for students, who develop themselves in a vibrant intellectual environment. The educational model is deeply research project-oriented, with a strong focus on student-led development of technology and its transfer to market. Admission to Skoltech is highly selective, with a rigorous, multi-stage review system ensuring that only the most talented and promising applicants are enrolled. This meticulous selection process, combined with a carefully designed system of student mentorship and support, contributes to an exceptionally high graduation rate.

Within this strategic framework, education is primarily focused on training top qualified specialists with world level of competences in areas demanded by Russia today and tomorrow, capable to develop own technology solutions required by Skoltech centers, Russian technology companies, universities and research institutes. Also, talented and ambitious students attract and retain strong faculty. Thus, education is the cornerstone of human capital development in general.

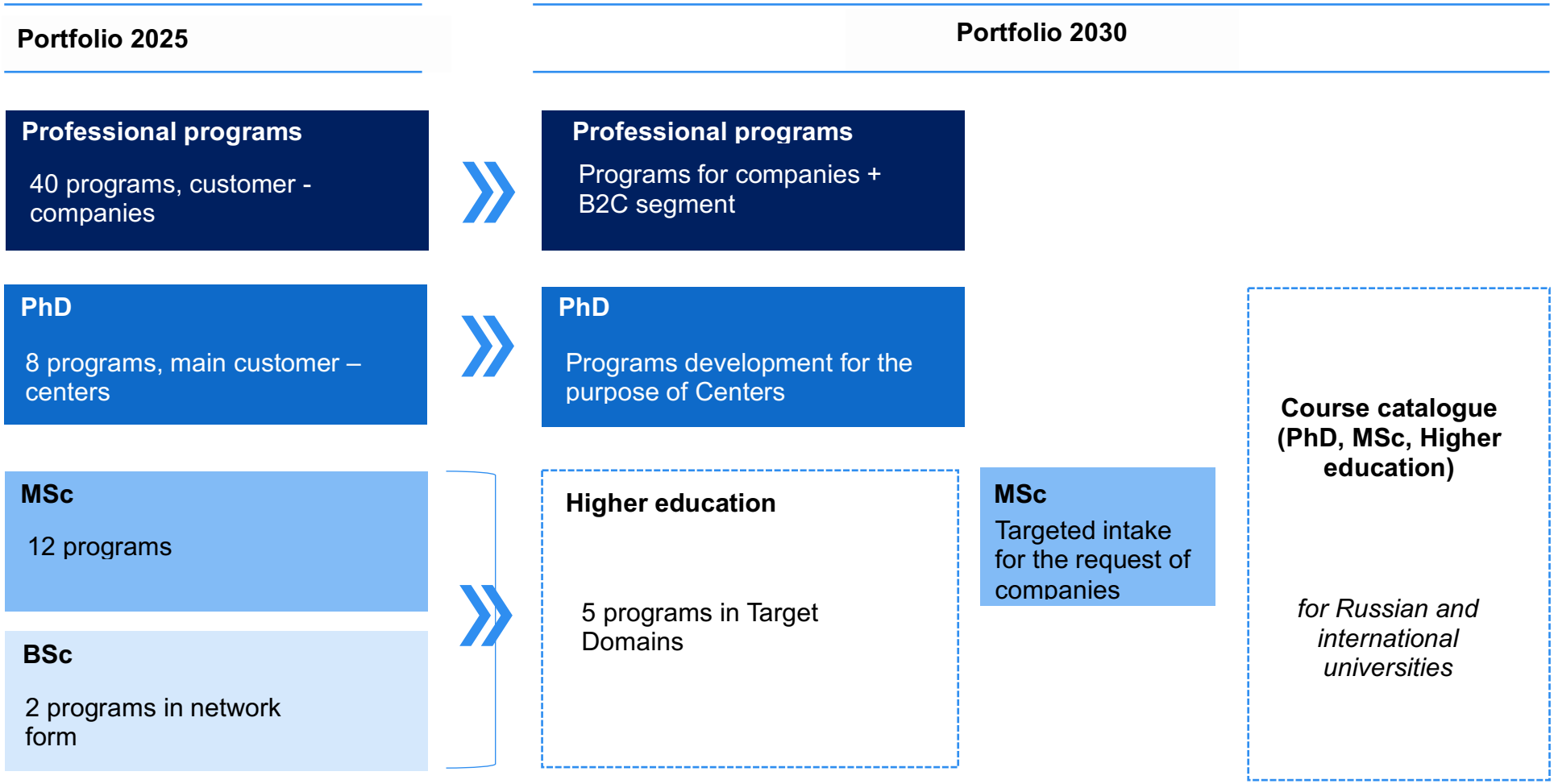
The program includes the following activities:

1) a gradual shift of the educational portfolio in light of Russia's transition to a new educational system, keeping the highest quality of education. The baseline approach is to implement integrated programs, including higher education with the annual intake of up to 50 students in five priority areas: AI, Advanced Materials, Life Sciences, Engineering, and Physics. On the horizon of Strategy 2030, such programs will be implemented with participation of partner universities. When additional resources are available, Skoltech will consider the possibility to implement

the programs on its own. In the new model, Skoltech MSc programs will be developed and delivered for high-tech companies, including targeted enrollment and in the area of technological entrepreneurship, e.g., with leading universities such as MIPT and Moscow School of Management. Development of PhD programs will continue, mostly to train staff for Skoltech centers, Russian companies, universities, and research institutes. Also, Skoltech will open a course catalog for top Russian universities and universities abroad to use within education programs.

As part of the transformation, it is planned to revise the target profiles of programs (tracks for academia, technology, entrepreneurship), focusing on programs with high-tech companies providing specially designed elements (language intensives, courses, internships, scholarships).

Educational model (baseline approach)



2) implementation of the new scholarship and tuition fee models for Russian and international students and with waivers and scholarships for exceptional students.

3) Expansion of strategic partnerships with companies on industry-oriented programs, and expansion of partnerships with leading Russian and foreign universities on network programs.

4) Advancing students' engineering competencies through industry immersion at high tech companies, additional applied courses, stronger involvement in centers' engineering projects.

5) Expansion of industrial PhD offerings in collaboration with Russian partner companies seeking to create own development lines.

6) Increase of applicant pool by language intensive courses for students who show strong results in entrance exams, however do not have advanced English. Other formats include research intensive courses, projects, scientific schools for undergraduates of Russian universities.

7) 'Digital university' project to create a standalone digital learning platform, also leveraging AI technologies, bringing all stages of student journey at the level of the best corporate practices.

8) Further advancement of the career center program and measures for employment of graduates to Russian high-tech sector, proactive work with employers, monitoring companies' requests and accounting such requests in design of programs.

In the domain of professional education, Skoltech will serve as a specialized training hub aimed at enhancing the competencies of engineers and scientists from Russian industry, with a strategic focus on fields critical to the nation's technological advancement, such as artificial intelligence, photonics, robotics, unmanned systems, and related disciplines. These programs will be delivered in collaboration with the Skolkovo Foundation. Additional plans include the broadening of the program in campus infrastructure design and laboratory facility management.

4. Technology entrepreneurship program

The ultimate result of Skoltech Technology Entrepreneurship Program (S.T.E.P.): entrepreneurship remains and will continue to be a foundational and cross-cutting competence at Skoltech, integral to our mission of translating world-class research into tangible societal and economic impact.

S.T.E.P is predicated today on four continually evolving pillars:

1. Project and team-based learning instruction;
2. Experiential learning;
3. Active immersion in the Skoltech and Skolkovo startup culture through clubs, competitions, and challenges;
4. Ongoing collaboration with leading Russian industrial partners across various sectors to accelerate the market readiness of early-stage projects.

The proliferation of S.T.E.P specific elements across other Russian universities and institutions serves as a clear endorsement of the Skoltech model's efficacy. On the horizon to 2030, S.T.E.P. will continue to evolve, ensuring that Skoltech strategic approach to entrepreneurial and innovation education remains a leading benchmark in Russia, effectively meeting the requirements of government, industry, and, most importantly, our students. This will be done through the following key activities:

1) Expanded curriculum: The Center for Entrepreneurship and Innovation will continue to expand and evolve its overall curriculum through a visiting lecturer program of academics and industry leaders. The courses offered will focus on product design, validation, faster commercialization and readiness for market.

2) Expanded cooperation and integration with key Russian partners including SK Foundation, City of Moscow, VEB, Entrepreneurship University, Bortnik Foundation, regional partners, etc.

3) Development of a commercialization infrastructure at Skoltech, including legal protection of intellectual property (IP) and licensing.

4) Establishment of reciprocal innovation programs with international innovation clusters in India, China, United Arab Emirates and select CIS countries.

5) Expanded and integrated cooperation with Russian companies that will provide a perpetual feedback loop to our early-stage start-ups, funding to the most promising start-ups and, access to launch customers.

6) Participation in development of startups of the Skolkovo project (not only Skoltech startups) through expertise, infrastructure, and commercialization services.

5. International activities program

The program's target outcome is that Skoltech has a strong brand of a world-class research institute that is visible in Russia and abroad. This brand works for attracting specialists and increase competencies through expansion of research and educational programs. Skoltech is one of the key platforms for research and technology dialogue between Russia and foreign countries in areas such as Energy, Photonics, Biotechnology, and Artificial Intelligence.

The program develops diverse and multifaceted forms of cooperation with leading research and educational organizations, with a strategic focus on the Middle East, Asia, BRICS+, Africa and South America countries. Skoltech will implement the following key activities:

1) Expand the academic cooperation network and establish new joint research centers and laboratories. These entities will serve as a resource base, providing access to complementary personnel expertise and infrastructure.

2) Establish competence centers in geopolitically aligned countries and BRICS+. This includes the launch of specialized professional development and upskilling programs for engineers to build critical human capacity.

3) Contribute to development of new university models based on Skoltech experience.

4) Increase and strengthen Skoltech presence and influence within international professional organizations dedicated to science and technology (alliances, consortia, working groups, committees, etc.).

5) development of alumni community abroad (Russian and foreign graduates) as ambassadors of goodwill and promoters of advanced practices in science and technology

6. Governance and management program

This program outlines a comprehensive framework to ensure Skoltech long-term sustainability, consistent strategic decision-making, enhanced operational efficiency, and proactive engagement with its stakeholders. The program is designed to fortify the institute's foundation, enabling it to effectively execute its mission of driving innovation, economic diversification, and societal impact.

The program encompasses the following key activities:

1) refine of the organizational architecture and target models for key research units, transitioning to a program-based management approach to enhance agility, focus, and accountability in our core research endeavors.

2) development and implementation of a robust system for planning and evaluating outcomes, establishing a stable mechanism to ensure operational effectiveness. This includes creating advanced tools for the strategic alignment and coordination of human and financial resources across our primary activity areas.

3) A tailored KPI system will be established, carefully considering the specifics of our research, technological, and educational programs. This system will balance academic excellence with tangible outcomes, including the development and transfer of technology groundwork to priority sectors of the economy, and the training of specialists capable of scaling these technologies within the Russian R&D sector and industry.

4) Redesigning the academic motivation and compensation system to shift from a retention-based model (‘pay for competencies’) to a performance-based approach (‘pay for results’). This includes developing a

clear career ladder that recognizes and rewards contributions to Skoltech academic leadership, measured by criteria that extend beyond publication output.

5) A dedicated focus will be placed on advancing management and leadership competencies across the institute. This will be supported by the launch of a formal succession planning program for all levels of management positions to ensure continuity and readiness.

6) securing increased and predictable base financing, including allocations from federal and regional budgets, to ensure clear and consistent funding for key strategic activities. Targeting an aggressive expansion of other external funding sources.

7) further development of the risk management system.

8) redesign of the operational support functions. This will involve the development of sophisticated IT systems across key areas: education, HR, project management and operational activities. The focus will be on automation, digitalization, and the streamlining of cross-cutting business processes, including through the introduction of AI agents. This will be made also by means of joining to platform solutions of IT partners;

9) extending connections with our graduates, particularly those leading R&D units in high-tech companies, to leverage their expertise for mentorship, collaboration, and resource development. The program will also serve as a tool for Skoltech brand promotion via alumni as Skoltech ambassadors,

10) brand advancement.

A separate, critical task involves the optimization of our facilities maintenance costs and tax burden. This will be achieved through a strategic review and potential restructuring of the ownership model for the campus and other movable and immovable property utilized by the institute.

VI. Cross-cut and accelerated development initiatives

Initiative 1. Skoltech Atrium

This initiative involves the establishment of a new, forward-looking interdisciplinary platform dedicated to radical collaboration and invention at the intersection of technology, science, and engineering design. Modeled on the pioneering approaches of institutions like MIT (Media Lab), Stanford (d.school), TU Delft (Innovation and Impact), Tsinghua University (Future Laboratory) or Zhejiang University (Zhejiang Lab), Atrium will act as a tech incubator and central catalyst for product and system design at Skoltech.

The Atrium concept targets to provide a unique collaborative environment that leverages Skoltech existing engineering leadership to advance early-stage technology projects (TRL 0 – 3).

In the Atrium, diverse and interdisciplinary research groups specialized in areas such as natural sciences, engineering, data science, engineering design, and social sciences (as external partners), converge to invent and creatively explore new applications for technology.

The Skoltech Atrium will build on tools such as Engineering Design Science, Set-Based Concurrent Engineering, and Lean Product Development, utilizing Skoltech accumulated experience in interdisciplinary research and education. The Atrium will also serve as an experimental space where projects, including those originating from the Innovation Workshop, can continue their development under structured interdisciplinary guidance, advancing either toward start-ups or into further R&D. By focusing on TRL 0-3, the Atrium ensures that early-stage projects are placed on the right trajectory toward higher TRLs, creating a structured pipeline that can later be advanced through Skoltech full-cycle innovation initiatives, including the Technology Center and the Center for Entrepreneurship and Innovation.

The Atrium will operate on a core set of principles:

1. Interdisciplinary Research: A “creative sandbox” for ideas, operating across Skoltech Centers.
2. Sustainable Partnerships: Supported by a consortium built on collaborations with corporate, philanthropic, and state partners, the

Atrium will provide a vibrant research environment, early insight into disruptive technologies, and access to a strong talent pipeline.

3. Project-Based Exploration: Empowering small teams to pursue high-risk, high-reward projects based on visionary ideas, with the goal of advancing toward higher TRLs (from fundamental prototyping to applied research).

The benefits of this initiative will be manifold.

On the innovation front, it will generate a steady stream of projects, patentable technologies, prototypes, and startups.

On the reputational side, the Atrium's projects will enhance Skoltech visibility in Russia and globally. It will act as a visible interface with industry, the government, and alumni, fostering impactful collaborations and opening pathways to broader partnership mechanisms across the Institute.

Involving external partners, alumni and donors, its operation is designed to become cost-positive, representing a key strategic investment in the Institute's future.

Imitative 2. Technology center

The task of translating research into technology, bringing it to high TRL, and enabling pilot and serial production requires systematic, full-cycle engineering capabilities and competencies. Skoltech has already built a strong foundation through its shared facilities, such as FabLab, and a growing ecosystem of applied projects. The existing ecosystem, however, suffers from a lack of coordination, making it difficult to bridge the critical 'Valley of Death' between research and industrial deployment and limiting our abilities to translate discoveries into sovereign, competitive technologies. A transition to an integrated TRL 4 – 7 system that systematically connects research, engineering, and industry is needed.

Building on the early-stage development work within the Skoltech Atrium (Initiative 1) and the Centers, Skoltech will establish a full-service Technology Center, with an overarching goal of building full-cycle science-to-technology translation capabilities. The Center will unite the competencies

of various experts, such a faculty members, scientists, engineers, designers and manufacturing specialists, and students – providing a systematic pathway to TRL acceleration while also serving the strategic technology domains of the Technologies Program. Such an endeavor will require an increase in product development capabilities to support the transfer of technology towards TRL 7, along with the development of high Manufacturing Readiness Level (MRL) expertise to prepare technologies for real demonstrators and later for full production.

The Technology Center will operate across the full chain of projects within the Skoltech research ecosystem, from proven concepts and prototypes to demonstrators and pilot production lines, bridging the critical TRL 4 – 7 gap between fundamental research (TRL up to 3) and industrial deployment (TRL 8 – 9). This will involve creating and further developing own technology lines (such as closed-loop prototyping and demonstrator facilities) that, combined with advanced engineering and design competencies, will enable rapid technology transfer from science to industry.

Initiative 3. Networks of Excellence

Based on the international model, this initiative will establish Networks of Excellence (NoEs) to integrate Russia’s premier academic and research institutions into cohesive, mission-driven ecosystems. The NoEs will transcend traditional institutional silos, creating a distributed but unified platform for collaborative research in critical strategic domains, aligning with the national goals for development of the Russian Federation. It will centralize and share cutting-edge infrastructure, data, and expertise, enabling large-scale, interdisciplinary programs that no single entity could accomplish alone.

The Networks of Excellence core impact will be technological and economic, systematically bridging the gap between fundamental science and industrial applications. By pooling resources and aligning roadmaps, it will accelerate the development of high-TRL technologies, de-risking R&D for industry and stimulating co-investment in sovereign, competitive products and spin-off

companies. This will enhance national productivity and positions Russia as a global leader in key technology sectors.

Societally, the NoE will function as a powerful engine for talent development, cultivating a new generation of scientists and engineers skilled in collaboration and translational research.

Skoltech will establish itself at the core of this initiative by:

- Lobbying with the relevant authorities, ensuring that the initial batch of NoEs align with its strategic priorities;
- Building on established multi-institutional relationships, such as the Clover network between Skoltech, MIPT and ITMO;
- Attracting institutional peers and near-peers by allocating necessary resources, including access to its world-class campus and research facilities;
- Involving its long-terms partners from the industry, such as Sber and Gazprom Neft, for co-sponsoring and eventually co-financing.

During the initial phase (2026-2028), the primary objective will be to demonstrate the program's value to government bodies by proving its capacity for significant technological and societal impact through strategic, resource-efficient synergies. The long-term goal, targeting 2030, is to formalize this validated concept into a large-scale, government-funded research initiative.

Initiative 4. Global talent recruitment center

Due to the international focus and model, Skoltech developed indisputable competencies for working with foreign partners and target audiences — Skoltech has competencies to work with large funnels of applicants, select top talents, recruit research and engineering staff, also utilizing faculty network and partnership programs.

Considering the declared governmental priorities to increase the number and quality of international students (incl. PhD students) by 2030, Skoltech may become the operator to attract talents from BRICS+ and other countries if there is an easing of geopolitical constraints. Skoltech will offer Russian

universities a program for recruiting students in target regions abroad, as well as access to a pool of talents (subject to their consent) who wish to study in Russia but do not pass Skoltech selection due to the high competition. Every year, Skoltech applicant pool consists of approximately 50,000 candidates from over 130 countries, with more than half of them being from BRICS+.

Such a program will work to attract not only undergraduates and postgraduates, but also researchers on targeted topics and formats (educational programs, internships, research projects, grants, creation of technology and educational alliances with industry and other universities). As a part of the program, advanced digital solutions (application systems, AI assessment of candidate portfolios) will be implemented.

Skoltech has also strong expertise in working on foreign platforms in the ASEAN and BRICS+ regions and can become the center of expertise for Russian universities planning marketing campaigns in these regions. In this paradigm, Skoltech can operate both as a service model and to develop the independent brand of a strong Russian talent recruitment center.

Initiative 5. Expertise Export

The strategic goal: by 2030, establish Skoltech as a leading global partner for creation of educational technology institutes, strengthening its global reputation and visibility, diversifying revenues through export of intellectual capital, and expanding the global network of innovative educational ecosystems based on Skoltech proven academic and entrepreneurial model.

To achieve this goal, the initial concrete outcome will be the formalization and establishment by 2030 of at least two institutional development partnerships with international organizations in strategically important regions (the Middle East, BRICS, and Africa). Skoltech will facilitate the creation of new, independent or affiliated technology institutes by systematically transferring its innovative expertise in education, research ecosystem development, and entrepreneurship integration into the university structure. Skoltech attractiveness is based on the university's strong scientific reputation and the fact that Skoltech was created with the direct

participation of the Massachusetts Institute of Technology (MIT), which will allow MIT's expertise to be directly transferred to the new institutes.

VII. Strategy implementation

1. Scenarios

In line with the joint Strategy the Skolkovo Foundation and Skoltech 2030, two strategic scenarios have been developed. These scenarios are formulated within the following contextual framework:

(1) ongoing restrictions due to sanctions,

(2) the presence of advanced level fundamental research capabilities in the areas adjacent to the target technology domains;

(3) a commitment to active international engagement to uphold Skoltech standing as an open, globally integrated academic institution;

(4) a dedicated focus on training highly qualified personnel in strategic technological fields to meet the needs of Russian high-tech enterprises, Skoltech research centers and startups.

Solving the task on optimization of the campus maintenance costs (laboratory and office spaces, student dorms) is crucial to both scenarios.

Scenario 1 (Base) – Sharpening our focus

The base scenario mainly maintains the established operational model and quantitative attributes of the Institute, while revising the balance between research and technological activities.

A reconfiguration of the research and project centers will be executed through nucleation of new strategic programs, while retaining the core research staff. This will result in a consolidated structure of about 10 centers, supported by a faculty body not exceeding 170 members. The ‘Research’ and ‘Technologies’ strategic programs will be rigorously focused on domains critical for securing technology leadership. A key objective is to advance a

minimum of five technologies (cumulatively) from existing development lines to serial production stage with subsequent scaling through partnerships with customers

The portfolio of educational programs will be carefully balanced to align with the centers' needs, with a strong focus on the requirements of technology projects, as well as in response to high-tech companies demand. This entails a deep restructuring of the PhD portfolio, with priority given to programs involving projects of TRL 3 and above, as well as those featuring established industrial tracks.

The existing laboratory complex will be maintained. Future upgrades and development of equipment will be primarily funded through external grants and contracts. The construction and commissioning of new laboratory and office premises is not envisaged under this scenario; instead, campus development will be pursued through investments from and for the benefit of tenants and commercial partners.

Measures for optimization of management and administrative structures will be taken. Furthermore, the funding policy for strategic programs will undergo a comprehensive review to ensure alignment with the revised institutional priorities.

Scenario 2 (Optimal) – Technology leadership and new business opportunities

This scenario envisions a significant elevation of Skoltech operational scale and impact, driven by an accelerated pace of activity and implementation. The institute undergoes a profound transformation to establish itself as a sustainable hub for generating advanced technologies and transitioning them to serial production by Russian industry, while serving as a premier center for cultivating high-caliber engineering talent.

A comprehensive organizational restructuring is implemented, accompanied by a strategic revision of the financial model. This enables a multiplicative scaling of all core activities, achieved through the strategic reallocation of

internal resources and the successful attraction of substantial external funding, including significant contributions to the Endowment.

All initiatives for accelerated development will be fully executed. The portfolio of research centers is strategically balanced to achieve excellence in both advanced curiosity-based research and mission-oriented projects focused on establishing and scaling development of own technology lines. The faculty body expands to 200 members. The student population grows up to 2,000.

By 2030, Skoltech consistently transfers a minimum of two technologies annually to serial production, the total number of technologies (cumulatively) is ten. The institute achieves the number one position in the Nature Index ranking among its peer institutions. Revenue generated from professional development and executive education programs reaches 0.5 billion RUB, with the annual number of graduates from these programs reaching 1,000.

All remaining undeveloped areas of the campus are completed with state-of-the-art laboratory and office facilities. The campus ecosystem is fully consolidated, with tenancy exclusively reserved for Skoltech-affiliated startups, spin-off companies, and small technology enterprises founded on basis of own development lines.

Construction commences on the West Ring and Agora projects, establishing a foundation for new growth opportunities in the perspective beyond 2035, such as full-scale undergraduate education.

2. Strategy stages

The implementation of the Strategy will be executed in a phased manner to ensure systematic development and effective resource allocation.

The first stage (2025 – 2026), implemented following the base scenario, will be dedicated to foundational and preparatory measures. Key activities during this phase will include the strategic transformation of existing centers, their reconfiguration and the definition of new programs aligned with the 2030 objectives. This stage will also focus on establishing a target portfolio of educational programs and mechanisms to manage the portfolio as a whole,

in line with stated strategic priorities and the pending educational reform. Key elements of HR policy will be reviewed.

The second stage (2027 – 2030) will involve the systematic and full-scale implementation of measures across all programs within the chosen strategic scenario. This phase will focus on executing the defined initiatives to achieve the targeted outcomes in research, education, innovation, and commercialization.

The implementation of the initiatives aimed at accelerated growth and development is possible irrespective the stage of the Strategy if resources available.

3. Risks

The implementation of the Strategy involves risks that affect the timing and scope of program implementation. Specific risks are common to Skoltech and Skolkovo Foundation.

1) Financial risks. These risks are associated with a reduction in financial resources, mainly for the programs ‘Research’ and ‘Technology’, including a reduction of the federal subsidy, financing from companies for R&D programs, and governmental funding for the launch of large technology programs.

2) Technological risks. The risks are associated with a slowdown in the pace of modernization of laboratory equipment, limited access to foreign equipment, impossibility of maintenance or an increase in service life.

3) Personnel risks. Personnel risks are associated with inability to attract specialists due to weak competitive conditions, outflow of specialists from Skoltech (both abroad and to competing companies or universities) and, as a result, a decrease in quality of education.

4) Reputational risks. Reputational risks are associated with sanctions and status of SDN of both Skoltech and Skolkovo Foundation, which may limit access to international partners, projects, and investments. Issues of non-fulfillment (partial fulfillment) of contractual obligations and non-compliance with legal requirements are also at risk. Other sources of risk are negative publications and statements addressed to Skoltech and

the Skolkovo project as a whole. The separate risk is a change of Skoltech (Skolkovo project) value by key stakeholders.

5) Operational risks. Operational risks are associated with a slowdown or termination of digitalization and process automation projects.

6) Management risks. This category includes the risks of non-fulfillment (partial fulfillment) of Federal project KPIs, inefficient delineation of management responsibilities, bureaucratization and centralization of functions, growth of management and administration, lack of mechanisms to coordinate the Strategy.

Measures to mitigate risks are presented in the Appendix to the Strategy. Risk monitoring and updating of mitigation measures will be carried out on a regular basis over the entire Strategy period.

VIII. Resources

The financial resources for the Strategy include the funding for the Federal Project “Technologies”, competitive financing (federal and regional subsidies, grants), commercial contracts with high-tech companies, as well as income from the management of the Endowment.

In particular, funds from the Federal Project “Technologies” form the base part of the financing and will be mainly used for the implementation of the Research, Technology, and Education programs. The Endowment funds are provided for co-financing of large technological projects, formation of research "reserves", as well as student initiatives.

Human capital targets to support the Strategy are determined by the targets for the number of faculty, researchers and engineers.

The resource plan is indicated in Appendix 2.

IX. Implementation mechanisms, monitoring and control

The Strategy is implemented with the following mechanisms:

- annual operational plan,
- the working groups of Skoltech and Skolkovo Foundation, formed to coordinate joint activities.

The Strategy is monitored at two levels: at the Institute (the strategy working group and governance bodies) and at the external stakeholders' level (Ministry of Finance of the Russian Federation, Ministry of Economic Development of the Russian Federation, Skolkovo Foundation, VEB.RF).

The results of the Strategy implementation are indicated in interim reports and the annual report, which includes data on achievement of indicators and execution of the financial plan. When evaluating results, such factors as % completion of KPIs, meeting deadlines, resources spent and attracted, external factors are taken into account.

The Strategy is approved by the Board of Trustees. The Strategy is amended by the Board of Trustees based on proposals of the executive management.

Appendix 1. Target indicators

	Programs / scenarios	**Units**	**2026**	**2027**	**2028**	**2029**	**2030**	Connection with national goals [11]
1.	**Research**							
1.1.	Publications in prestigious international journals, and conferences							
	Scenario 1 (base)	Units	270	270	270	270	270	Section 7 of the Decree
	Scenario 2 (optimal)	Units	290	300	310	320	330	
1.2.	Ranking position in Nature Index (general universities ranking, Russian Federation)							
	Scenario 1 (base)	Units	4-6	4-6	4-6	4-6	4-6	Section 7 of the Decree
	Scenario 2 (optimal)	Units	4-3	2	2	2	1	
1.3.	Position in the ranking of research productivity of Russian universities (number of subject areas (fields) where Skoltech is ranked number 1							
	Scenario 1 (base)	Units	5	5	5	5	5	Section 7 of the Decree
	Scenario 2 (optimal)	Units	5	5-6	6-7	6-7	8-9	
1.4.	Sponsored research funding (grants)							
	Scenario 1 (base)	mln Rub	600	600	600	600	600	Section 7 of the Decree
	Scenario 2 (optimal)	mln Rub	700	700	800	800	800	
2.	**Technologies**							
2.1.	Own technologies delivered to companies for serial production (cumulative)							
	Scenario 1 (base)	Units	2	2	3	4	5	

[11] RF President's Decree dd. May 7, 2024, № 309 «On the national development goals of the Russian Federation for 2030 and perspective till 2036»

	Scenario 2 (optimal)	Units	3	4	6	8	10	Section 7 of the Decree
2.2.	Attracted funding (R&D, shared facilities), income from IP commercialization							
	Scenario 1 (base)	mln Rub	2 850	3 000	3 150	3 300	3 400	Section 7 of the Decree
	Scenario 2 (optimal)	mln Rub	3 000	3 500	4 200	5 000	6 000	
3.	**Education**							
3.1.	Annual graduation							
	Scenario 1 (base)	Persons	285	285	285	285	285	Section 6 of the Decree
	Scenario 2 (optimal)	Persons	285	285	300	330	350	
3.2.	Graduates employed in R&D Russia							
	Scenario 1-2	%	70	70	70	70	70	Section 6 of the Decree
3.3.	Attracted funding from professional education programs							
	Scenario 1 (base)	mln.Rub	110	120	130	140	150	NA
	Scenario 2 (optimal)	mln.Rub	150	200	300	400	500	
3.4.	Number of professional education programs' students							
	Scenario 1 (base)	Persons	400	500	500	500	500	Section 6 of the Decree
	Scenario 2 (optimal)	Persons	500	500	700	800	1000	
4.	**Technology entrepreneurship**							
4.1.	IP created							
	Scenario 1 (base)	Unit per year	20	20	20	20	20	NA
	Scenario 2 (optimal)		30	30	40	40	40	

4.2.	Startups and small technology companies							
	Scenario 1 (base)	Unit per year	20	20	20	20	20	Section 7 of the Decree
	Scenario 2 (optimal)	Unit per year	20	30	30	40	40	
5.	**International activities**							
5.1.	Joint laboratories (centers) with international partners (cumulative)							
	Scenario 1 (base)	Units	3	3	3	3	3	Section 7 of the Decree
	Scenario 2 (optimal)	Units	4	4	5	5	5	
5.2.	International working groups in science and technology with Skoltech leading role							
	Scenario 1-2	Units	4	4	4	5	5	
6.	**Governance and management**							
6.1.	Target financing in relations to level set by Federal project 'Technologies' for 2025[12]							
	Scenario 1 (base)	%	-23	-14	-14	-14	-14	Section 7 of the Decree
	Scenario 2 (optimal)	%	-14	+6	+14	+20	+20	
6.2.	External funding[13]							
	Scenario 1 (base)	Bln Rub	4,5	4,7	4,9	5,0	5,1	
	Scenario 2 (optimal)	Bln Rub	4,7	5,3	6,2	7,2	8,3	

[12] 5 109 312,30 thousand rubles

[13] non-budgetary revenues (revenues from performance of works/rendering of services, funds of donations, etc.), budget revenues allocated on a competitive basis (grants, subsidies, etc. except for the grant of the Skolkovo Foundation), revenues from management of endowment, other realization and non-realization revenues

Appendix 2. Resource plan

Scenario 1 (base)

No.	Direction	Financing, mln Rub				
		2026	2027	2028	2029	2030
1.	Skolkovo grant for establishment and development of Skoltech	3 941	4 379	4 379	4 379	4 379
2.	Grant for campus maintenance[14]	1 230	1 230	1 240	1 270	1 310
3.	External funding, including:	4 510	4 720	4 880	4 990	5 100
3.1	Income from work, services (R&D, shared facilities), IP commercialization	2 850	3 000	3 150	3 300	3 400
3.2	Income from grants for R&D	600	600	600	600	600
3.3	Income from professional training	110	120	130	140	150
3.4	Income from endowment	700	700	650	600	600
3.5	Other sales and non-sales income	250	300	350	350	350

Scenario 2 (optimal)

No.	Direction	Financing, mln Rub				
		2026	2027	2028	2029	2030
1.	Skolkovo grant for establishment and development of Skoltech	4 378	5 400	5 800	6 150	6 150
2.	Grant for campus maintenance	1 230	1 230	1 240	1 270	1 310
3.	External funding, including:	4 700	5 300	6 200	7 150	8 250
3.1	Income from work,services (R&D, shared facilities), IP commercialization	3 000	3 500	4 200	5 000	6 000
3.2	Income from grants for R&D	600	600	700	800	800
3.3	Income from professional training	150	200	300	400	500
3.4	Income from endowment	700	700	650	600	600
3.5	Other sales and non-sales income	250	300	350	350	350

[14] In both scenarios, sources of financing for grant for campus maintenance are not defined.

Appendix 3. Risk mitigation measures

No.	Risk	Mitigation
1	Non-fulfillment (partial fulfillment) of the federal project 'Technologies' KPIs	– development of management communication on Strategy; – ensuring full synchronization of personnel policy in all components with strategic objectives, developing a career development system based on contributions to scientific leadership; – expansion of internal competitive financing programs for scientific, technological and innovative projects; – launching a school of scientific mentoring; – proactive work with government authorities in terms of timely adaptation of KPIs due to external changes; – digitalization and automation of performance monitoring processes.
2	Outflow of specialists from Skoltech (both abroad and to competing companies or universities); inability to attract specialists required for development of selected own technology lines	– attracting, developing, motivation and retention of staff; – expansion of the network of academic cooperation, increase of joint centers (laboratories); – development of internal grant system, including for projects that have received a strong external expert assessment but have not won competitions.
3	Decrease of interest to Skoltech educational programs	– proactive promotion of the need for top personnel to ensure technological sovereignty and achieve technological leadership in Russia; – transformation of the educational portfolio;

		– expansion of strategic partnership mechanisms with companies; – increase the pool of applicants by language intensive courses; – launching a program to develop relations with alumni around the world as a tool to promote the Skoltech brand; – development of the career center program.
4	Reducing financial resources, including reducing the amount of federal subsidy, financing companies for R&D programs, and government funding for large technology programs.	– development of management communication with stakeholders (management bodies, public authorities, development institutions, partners); – prioritization of long-term partnership agreements with large industrial companies, which include commitments and/or plans to invest in technology development and create their own development lines; – proactive work with government authorities to involve Skoltech in major technology and educational programs; – improving operational efficiency: optimization, digitalization and automation of business processes, transformation of the financial model, optimization of operational and tax burden; – strengthening visibility in media.