



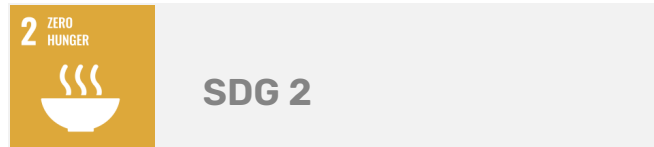
Ministry of Economic  
Development of the Russian  
Federation



# TECHNOLOGICAL SOLUTIONS OF THE RUSSIAN FEDERATION FOR SUSTAINABLE DEVELOPMENT



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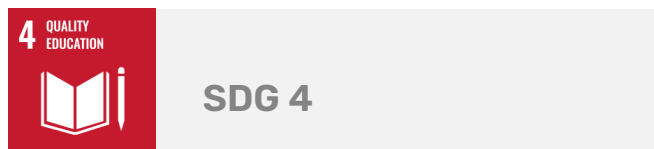


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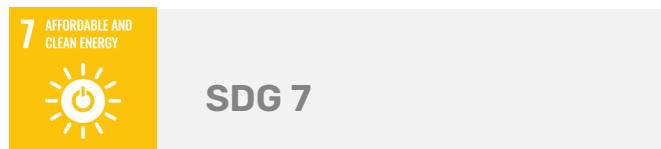


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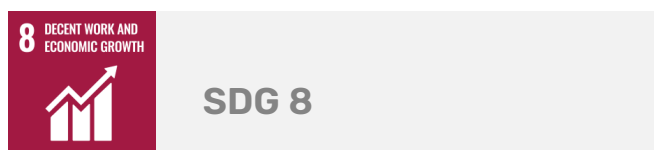
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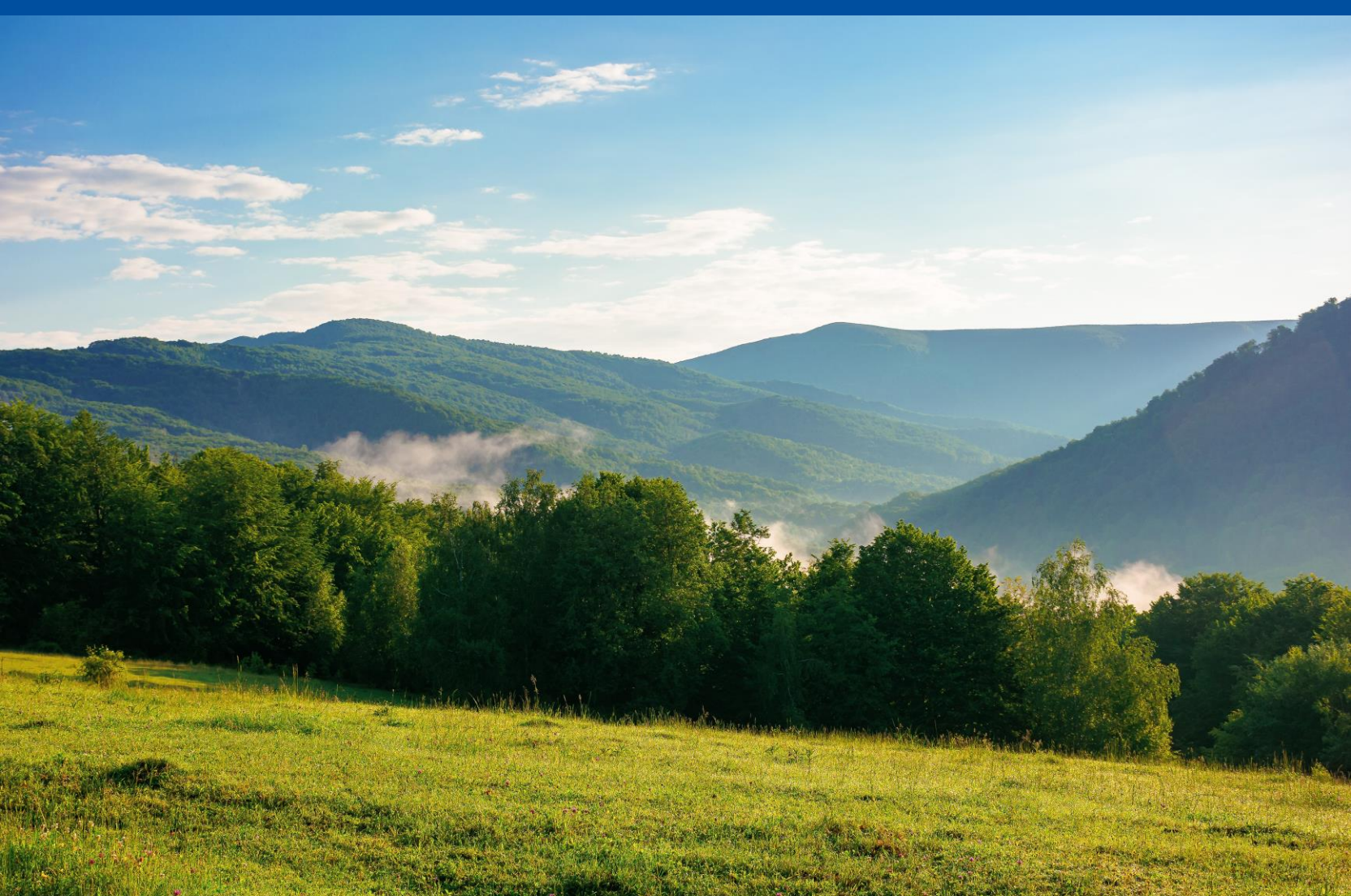


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# Foreword

Global challenges, including food security, climate change, migration crises, and technological inequality, remain urgent and even keep intensifying. They require collective efforts, as their transboundary nature precludes effective solutions within the territory of a single country.

The United Nations Sustainable Development Goals (SDGs) are a key element of a broad system of tasks and indicators necessary to ensure the well-being of all the people on our planet. The UN Sustainable Development Solutions Network monitors countries' progress in achieving these goals and publishes the results in the annual "Global Sustainable Development Index" report.

According to the 2025 report, Russia climbed 5 positions in the ranking over the year and currently holds leading positions among the BRICS countries. For almost all the SDGs there are sub-targets, the results for which have improved compared to the previous year; the greatest achievements have been demonstrated under SDG 1 ("No Poverty"), SDG 3 ("Good Health and Well-being"), and SDG 11 ("Sustainable Cities and Communities").

This confirms that the expertise, experience, and technological solutions developed by the Russian Federation in the field of poverty eradication, strengthening healthcare systems, development of sustainable urban spaces, economic growth, industrialization, and innovation are effective and can form project proposals that are practically applicable in various regions of the world, primarily in friendly countries of the Global South. Such solutions can be comprehensive, platform-based in nature, or segmented to address specific tasks in achieving strategic sustainable development goals.

The solutions proposed by Russia make it possible to achieve significant results across social, economic, and environmental dimensions in a balanced way. The set of technological solutions that the Russian Federation is ready to offer takes into account the full scope of differences of the countries' realities, their capacities and levels of development, and respect for national strategies and priorities.

In the vast majority of cases, the formulated proposals not only enable the implementation of practical solutions to achieve individual SDGs, but can also be used for their integrated achievement.

This compendium presents initiatives by Russian companies that help to ensure food and energy security, provide access to clean water and quality education, protect natural ecosystems and contribute to addressing climate change, enable the digital transformation of society, improve the comfort of urban environments, and create new jobs.

We hope that the presented initiatives will be of interest for a broad spectrum of foreign partners, enabling us to provide even greater support towards the achievement of the SDGs abroad.



# SDG 2

## Zero Hunger



Hunger is one of the most serious global challenges to sustainable development. In 2022, more than 735 million people – 9.2% of the world’s population – suffered from hunger, and over 2.4 billion people experienced food insecurity. According to estimates, by 2030 the number of people suffering from hunger will exceed 600 million. Climate change, inflation, declines in food production, and other factors exacerbate the issue of hunger. Solving the global food problem is impossible without a cross-sectoral approach and international cooperation. Transforming food systems, applying innovation, and developing trade are among the key measures to ensure food security.

### **Russian achievements:**

Russia is one of the world’s major food producers. By 2030, the country plans to increase the export volume of its agro-industrial products by at least 1.5 times compared to 2021 – up to 47 billion dollars – through the establishment of efficient logistics chains and the development of new export destinations, including developing nations in priority regions of the CIS, the Middle East, Africa, Southeast Asia, as well as China and India. In the Global Food Security Index (GFSI 2022), Russia ranks 43rd out of 113 countries. As the largest grain exporter and one of the largest fertilizer exporters, Russia makes a significant contribution to eliminating hunger and ensuring food security in developing countries. The volume of exports of food products and agricultural raw materials in 2024 exceeded 108 million tons, amounting to more than 524 mln USD<sup>1</sup> (42.5 billion rubles) in value.

Russia offers comprehensive solutions to improve crop yields and soil fertility through innovative technologies, and is also ready to leverage its production capacity to support the development of resilient crop varieties and the adaptation of agricultural crops to climatic conditions in various countries around the world, contributing to global efforts to eradicate hunger.

<sup>1</sup> Hereinafter the US dollar equivalent of the price in Russian rubles is used, based on the exchange rate of Bank of Russia as of November 1, 2025 (1 USD = 80,9756 RUB)



## Improving Crop Yields and Soil Fertility

In the context of a growing global population, increasing crop yields and enhancing soil fertility play a crucial role in addressing food security. It is essential to monitor the mineral composition of soils and apply advanced, sustainable practices to ensure food security on a global scale. Russia is actively developing its fertilizer industry. In 2024, Russia produced 63 million tons of fertilizers, 42 million tons of which were exported, making the country the world's largest supplier of these products. Companies such as PJSC "PhosAgro", JSC "EuroChem", PJSC "Uralkali", OJSC "Tatagrokhim", and PJSC "Acron" are among the leading fertilizer producers in Russia and major exporters of these products to other countries. In addition, the Russian Federation is actively developing and implementing technological and innovative solutions that enhance the efficiency of agriculture and livestock production, creating a reliable foundation for the sustainable development of nations.



## Technologies and services

- Production of eco-friendly mineral fertilizers;
- Introduction and use of yield-boosting services;
- Breeding and seed production activities;
- Introduction of AI and robotic equipment in agriculture.

## Organizations



## Calculation of Fertilizer Application using PhosAgro’s Agro Calculator (AgroResult)

The “Agro Calculator” helps to calculate nutrient requirements, taking into account soil and climate characteristics of the crop, and provides recommendations on methods and timing for applying mineral fertilizers.

The application uses algorithms to calculate nutrient element doses, accounting for virtually all factors related to soil fertility and crop nutrient needs.

In 2024, over 300,000 calculations were performed.



Also contributing to SDGs



For more information scan here:



### Technical Specifications

Available on desktop devices as well as via the AgroResult mobile app. The app’s functionality is expanding to provide greater support to farmers. It complements other PhosAgro services, including agronomic support.

This flexible software product is capable of integrating with various external data sources (weather services, satellite monitoring systems, etc.). A support function enables integration with other technological services.



### Uniqueness

Algorithms have been developed to select the most suitable and popular grades of mineral fertilizers.

The calculator supports 38 main crops and 47 predecessor crops important for agribusiness. Nutrient system recommendations are based on a wide range of products. Calculations consider not only yield parameters and nutrient removal, but also individual soil characteristics.

The database is regularly updated.



### Cost

Free of charge

## Production and Introduction of Nitrogen- and Phosphorus-Enriched Mineral Fertilizers

PhosAgro offers more than 50 brands of granular and liquid mineral fertilizers. These eco-friendly fertilizers support successful crop management and actively help preserve soil fertility and health in various regions.

The mineral fertilizers do not contain any harmful concentrations of cadmium or other dangerous impurities for human health and the environment, ensuring safe use.



### Cost

Upon request



### Also contributing to SDGs



For more information scan here:



### Technical Specifications

Fertilizers undergo mandatory state registration as agrochemicals and required expert evaluations, and have all necessary certifications.

PhosAgro was the first in Russia to be certified under the national standard for enhanced products and received a certificate of conformity to GOST R 58658-2019 (limits on heavy metal and arsenic content), meeting all global requirements, including those of the Brazilian Association of Technical Standards (ABNT).



### Uniqueness

More than 50 fertilizer brands, including liquid and water-soluble mineral fertilizers; fertilizers with microelements for comprehensive plant growth and development; the ApaSil adaptogen helps plants better endure adverse periods related to climate change and increases disease resistance.

PhosAgro's fertilizers are among the safest phosphorus-containing fertilizers in the world, with an average cadmium content of 0.2 mg/kg, which exceeds the requirements of the European Union for this type of product (i.e., they are much cleaner than EU standards).



### Implementation Experience Abroad

Over 100 countries (CIS, Middle East, Asia, Africa, Latin America)

## Application of an Integrated Microbiological Soil Assessment and Correction Methodology

Methodology includes:

- 1) Sampling with maximal preservation of soil microbiota in the field.
- 2) Inoculation on an extended range of media under aerobic, anaerobic, and microaerophilic conditions.
- 3) Counting CFU (Colony-Forming Unit) with calculation of metabolic indices.
- 4) Assessment of indicator microorganisms using mass spectrometry.
- 5) Isolation of strains to create native bioproducts



### Cost

1. Soil sample analysis by culture method: 99-123 USD per sample
2. Preservation of 1 strain: 12 USD
3. Determination of pathogenicity factors 60 USD per sample



### Also contributing to SDGs



For more information scan here:



### Technical Specifications

1. Soil samples are collected and preserved in the field using thioglycolate medium.
2. In the laboratory, samples are inoculated on an extended range of media with cultivation possible under aerobic, anaerobic, and microaerophilic conditions.
3. Counting is performed using Colony Count software for the BIOMIC V3 device.
4. Identification is carried out by MALDI-ToF mass spectrometry.
5. Assessment is performed using a patented calculator for culture analysis.



### Uniqueness

1. Allows preservation of the maximum number of viable microorganisms for analysis and cultivation.
2. The method of media selection and assessment makes it possible to identify over 1,000 species of bacteria and 300 species of fungi, approaching the accuracy of metagenomic analysis while retaining the ability to functionally evaluate specific strains.
3. CFU counts enable determination of metabolic indices.
4. Cultivation of microorganisms will allow the creation of native bioproducts.

## Deployment of a Remote Monitoring System for Agricultural Soil Quality and Greenhouse Gas Emissions for Climate Project Validation in Agriculture

Creation of remote monitoring systems for agricultural soil quality and greenhouse gas emissions to reduce the cost of validating climate projects in agriculture.

This is based on mobile analytical complexes developed under the “Agroengineering” carbon polygon project, which use in-house microfluidic gas chromatographs and hyperspectral cameras.



Also contributing to SDGs



For more information scan here:



### Technical Specifications

Capabilities include measuring greenhouse gas emissions (CO<sub>2</sub>, methane), which indicates the overall microbiological activity of aerobic and anaerobic bacteria and the impact of fertilizers and crop protection agents on soil microbiota activity.

Remote determination of NDVI indexes, soil carbon concentration, and other micronutrient levels in soil is also provided.



### Uniqueness

Gas chromatographic and hyperspectral equipment has been created to be used in validating climate projects in agriculture.



### Cost

System development: on request;  
Use of current system: free

## Using the "Carbon Footprint Calculator" Software Service to Calculate Greenhouse Gas Emissions in Crop Production

The calculator enables farmers to conduct a "climate audit" of crop production, assess the structure of the carbon footprint, and optimize the main sources of greenhouse gas emissions.



Also contributing to SDGs



For more information scan here:



### Technical Specifications

Web service (mobile application in the future). Developed on the basis of GOST R ISO 14067-2021 "Greenhouse gases. Carbon footprint of products. Requirements and guidelines for quantification."



### Uniqueness

Advantages:

- Ability for users (with administrator rights) to modify internal coefficients in accordance with the latest research data, both Russian and international (IPCC).
- Calculator available to all registered users, enabling calculations for individual crop varieties and hybrids, allowing targeted selective work for carbon-smart agriculture.



### Cost

Access from 617 USD and up, depending on enterprise size

## Scaling a System for Analyzing, Preserving and Improving Basic Soil Fertility through Replicating Precision Agriculture Practices

A system for analyzing baseline soil fertility characteristics with the capability for ongoing monitoring of crop conditions and yield management through targeted agricultural operations using prescription maps.



Also contributing to SDGs



For more information scan here:



### Technical Specifications

A global system for predicting basic soil fertility in any location on the planet. Operates by combining AI methods, remote sensing (RS), and field analytics. It contains a range of practical tools for assessing and improving soil fertility.



### Uniqueness

The system operates using data from innovative monitoring systems, including remote sensing and AI. This improves the speed and quality of fertility predictions for agricultural lands, maximizes outcomes, and makes agriculture more environmentally friendly, energy-efficient, and in some cases even improves the basic fertility of fields.



### Implementation Experience Abroad

Kazakhstan



### Cost

Calculated per project. Indicative cost: 12–37 USD/ha



## **Creating Resilient Crop Varieties and Adapting Agriculture to Climate Conditions**

Climate change is one of the main factors aggravating the global hunger problem. Rising average temperatures, shifting precipitation patterns and more frequent droughts, as well as an increase in extreme weather events, negatively affect food production. Adapting agriculture to climate change is a necessary component of ensuring sustainable development.

Russia recognizes the importance of increasing agriculture's adaptive capacity and pays great attention to this task. Russian companies actively use breeding methods and introduce new technologies to improve the ability of agricultural crops to adapt to changing climatic conditions.



## Technologies and services

- Accelerated crop variety breeding using marker-assisted and cell technologies
- Treatment of seeds and food products with safe ionizing radiation (to increase shelf life, prevent spoilage, and protect against insect pests)
- Breeding of agricultural crops accounting for changing climate conditions
- Use of satellite monitoring technologies for soil conditions

## Organizations



**INOPOLIS**



**Orient** Systems



## Accelerated Breeding of Sorghum and Sunflower Varieties Using Marker-Assisted (MAS) and Cell Technologies

Creation of a scientific and technological foundation for breeding schemes that integrate classical breeding approaches with modern marker-assisted selection (MAS) and cell technologies. Using these approaches, heterotic hybrids of grain sorghum and sunflower are developed with specified characteristics.



### Technical Specifications

A closed-loop breeding and seed production company has been established, integrating Russian traditions and the best international practices. It is currently the largest seed producer in Russia with modern technology for breeding and cultivating varieties and hybrids of vegetable and cereal crops.



### Uniqueness

High-quality seeds with high germination and yield. A wide range of crop varieties. Disease and climate stress resistance. Ecological safety of seed cultivation and treatment methods. Certified in accordance with international standards.



### Cost

From 49,5 thousand USD



### Implementation Experience Abroad

CIS countries



Also contributing to SDGs



For more information scan here:



## Establishment of Multipurpose Product Irradiation Centers

ROSATOM State Atomic Energy Corporation is the only network player in the radiation sterilization market in Russia. Treatment of products with ionizing radiation is in demand in agriculture for treating seeds and food products to increase shelf life, prevent spoilage, and protect against insect pests. In healthcare, these technologies are also used for sterilizing medical devices.



### Cost

Upon request



### Also contributing to SDGs



For more information scan here:



### Technical Specifications

ROSATOM implements projects to build Multifunctional Irradiation Centers (MIC):

Types of installations:

- Electron accelerators of 5–7.5 MeV and 40–60 kW, with the ability to operate in X-ray mode.
- Electron accelerators of 10 MeV with beam power up to 20 kW.

Service life: over 25 years.

Infrastructure: includes an electron accelerator, transportation line, safety system, automated process control system, transport system, and dose monitoring lab.



### Uniqueness

Turnkey MIC construction: design of the center, organization of construction and installation works, equipment and materials supply, commissioning and startup of the MIC, as well as technical support and service maintenance.

Advantages of radiation treatment method: high processing speed – from a few minutes to a few hours; safety – no chemical or other reagents remain in the product; ability to treat products in sealed packaging; no downtime for degassing; possibility to treat chilled/frozen products.

## Scaling the Use of Innovative and Sustainable Biological Crop Protection Technologies with Entomophages

The project involves using drones for targeted delivery of entomophages – natural predator insects of crop pests – to agricultural lands. The solution helps reduce chemical load on soil and plants, cut greenhouse gas emissions, and increase agriculture’s resilience to climate change.



Also contributing to SDGs



For more information scan here:



### Technical Specifications

The project uses aerial platforms that ensure precise and uniform distribution of beneficial insects across fields. Dispenser designs developed for specific tasks are used to release entomophages (Trichogramma wasp for egg parasitism, Habrobracon wasp for caterpillar pests, Chrysopa (green lacewing) for spider mite and aphid control).



### Uniqueness

LLC "Letai i Smotri Agro" is a unique Russian developer of innovative technologies protected by Russian Federation patents. The technology is effective on 18 crops against more than 400 species of agricultural pests.



### Cost

Upon request

## Development of a Plant Disease Forecasting System

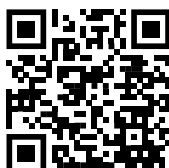
The system anticipates diseases of specific crops and allows for advance planning of protective measures. For accurate forecasts, it takes into account the host plant's susceptibility to disease, current infection area, vegetation data, soil conditions, and meteorological reports.



Also contributing to SDGs



For more information scan here:



### Technical Specifications

A machine learning model analyzes historical data on disease seasonality and cyclicity, climate changes and weather, crop rotation, and past infections to predict crop infections in a new period. The solution also processes drone imagery of plants, recognizing signs of crop infection at an early stage.



### Uniqueness

The solution prevents crop losses by a factor of three by detecting plant diseases at early stages using AI.



### Cost

Up to 62 thousand USD





# SDG 3

## Good Health and Well-being



Ensuring healthy lives and promoting well-being for all are important components of sustainable development. Despite significant progress in increasing life expectancy, combating serious diseases, and reducing child and maternal mortality, these problems remain pressing. Moreover, a substantial part of the world's population still lacks access to essential healthcare services. The COVID-19 pandemic became another negative factor, hampering the achievement of SDG 3. Health emergencies like COVID-19 are global scale risks that the world must address without delay.

### **Russian achievements:**

Russia actively contributes to achieving SDG 3 at the international level. By 2030, the country plans to nearly triple the export volume of pharmaceutical products compared to 2022, and strengthen the position of Russian pharmaceutical companies in foreign markets, including through the export of medical devices and equipment. Russia also consistently and comprehensively supports the WHO in advancing global progress in the prevention and control of non-communicable diseases. In addition, Russia develops and produces high-tech medical equipment and electronic systems, as well as advanced medicine. Russia played a key role in the fight against the COVID-19 pandemic. As of the end of 2021, Russia ranked 5th in the world for COVID-19 vaccine exports. During the pandemic, over 100 million doses of vaccines were exported to Africa and Asia. Russia also actively supplied COVID-19 test kits, personal protective equipment, and medical equipment abroad, and sent medical specialists to other countries.

Russia can offer comprehensive solutions to strengthen global health standards and ensure well-being worldwide, such as improving the availability of quality healthcare in remote and rural areas, as well as the use of advanced technologies in medicine.



## Improving Access to Quality Healthcare in Remote and Rural Areas

Creating necessary infrastructure and supporting qualified specialists in remote and rural areas are important tasks for providing accessible, high-quality medical care. Digital solutions and technologies can play a crucial role in addressing this problem by enabling consultations and initial examinations regardless of patient location. Digital technologies have also proven to be a reliable means of delivering medical services during the COVID-19 pandemic, helping save the lives and health of millions.

Due to its vast territory, Russia has significant experience in providing accessible healthcare in remote and rural areas. The COVID-19 pandemic gave new impetus to the use of digital technologies in healthcare. Russian companies have developed a number of digital solutions employing advanced technologies, including AI, for remote medical services and disease diagnostics.



## Technologies and services

- Use of remote technologies for medical consultation support
- Effective use of smart operating room systems to improve surgical quality and patient safety
- Provision of emergency medical care via ambulance aviation
- Deployment of mobile diagnostic centers based on trains and trucks

## Organizations



## Implementation of Telemedicine Technology Solutions

Deployment of secure solutions for telemedicine needs. Reliable, high-quality videoconferencing enables prompt patient care regardless of location, while multi-level protection of user data prevents leaks of confidential information. At any point in a teleconsultation, participants can share DICOM-standard images, live video from various medical devices with video output (e.g. endoscopes), or even stream an additional monitor or desktop feed to others.



Also contributing to SDGs



For more information scan here:



### Technical Specifications

Supports autonomous software operation on closed networks with encrypted data, full communication control, and support for up to 3,000 user accounts per server. Allows server access via mobile devices, PCs, smart TVs. Built-in platform for webinars, cryptographic communication security, and UltraHD quality within a secure video conferencing server. Collaboration tools: address book, PBX and cloud telephony integration, group and personal chats, conference recording, Full HD screen sharing. Supports various operating systems: Windows, Linux, macOS, Android, iOS.



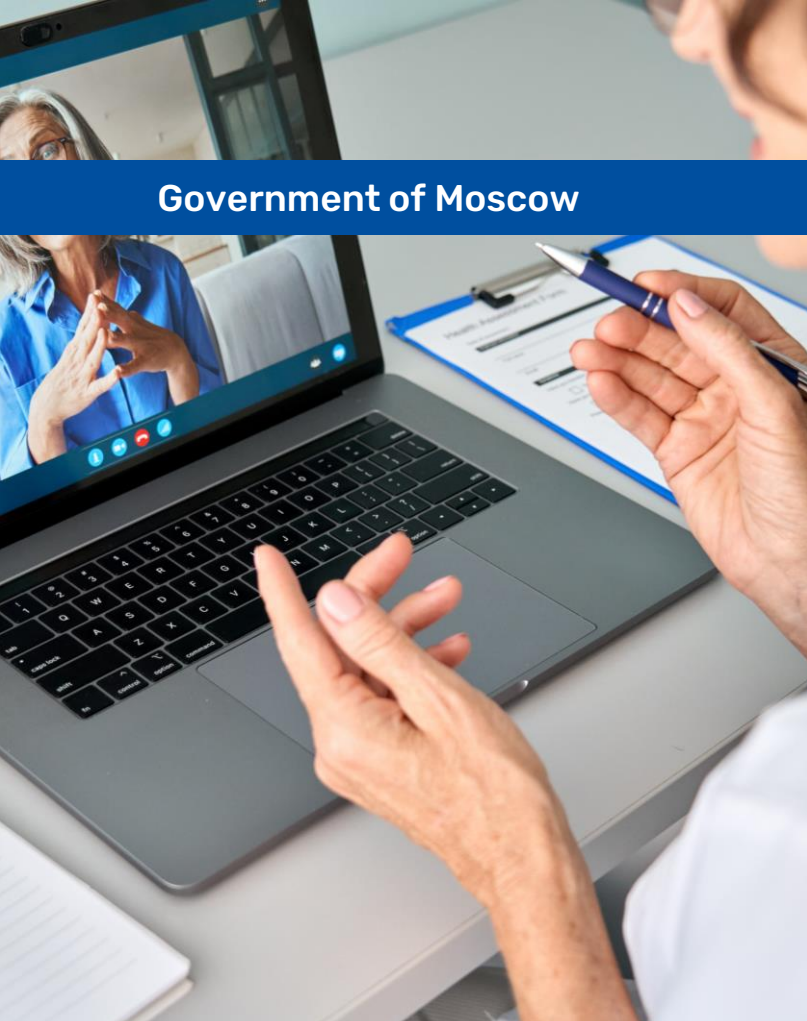
### Uniqueness

1. SDK (Software Development Kit) is available for rapid development of video-enabled mobile applications.
2. Technological independence and security.
3. Integration with medical information systems.
4. Specialized hardware solutions.
5. Cross-platform compatibility.
6. Uses a single port with TrueConf protocol.
7. Utilizes SVC (Scalable Video Coding) architecture for video conferencing.



### Cost

Annual license from \$120. Custom software modifications available per client requirements (cost determined by agreement).



## Implementation of the Electronic Application “EMIAS. Telemedicine”

An application for obtaining medical consultations. During the session, the doctor analyzes the patient’s condition, answers questions, adjusts treatment if necessary, and issues electronic prescriptions. The consultation is recorded both as an audio transcript and in the digital medical record, remaining accessible to the patient and doctors at any time.



### Technical Specifications

- Cross-platform availability: the service is accessible via the web portal as well as through a mobile application (Android and iOS).
- Functionality: online consultations with an on-duty physician, the ability to upload documents and photos for condition assessment, and receiving treatment recommendations.
- Consultation data are automatically saved in the patient’s electronic medical record within the EMIAS system.



### Uniqueness

- In the consultation chat, patients can send messages to the doctor or attach documents.
- It is possible to issue an electronic prescription with a QR code.
- The service provides medical assistance under restrictive conditions or when an in-person visit is not possible.
- The transmission and storage of medical information are carried out in full compliance with all information security requirements.



### Cost

Upon request

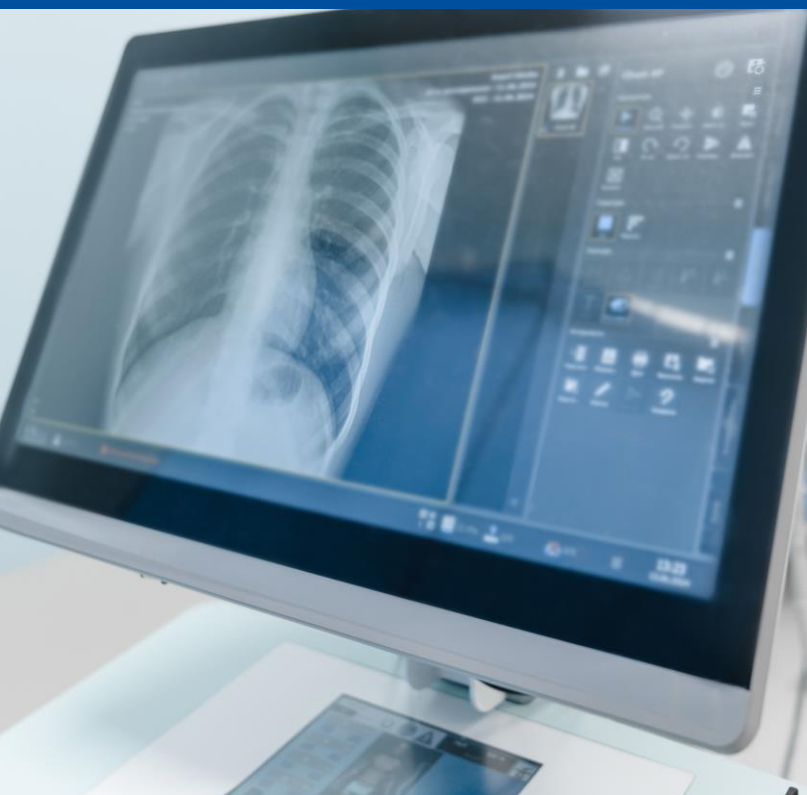


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## Implementation of the Remote Analysis System “MosMedAI”

A platform for remote analysis of radiological studies using AI services. The platform enables doctors to receive results of automatic analyses of imaging studies performed by intelligent algorithms.



### Technical Specifications

- Medical image analysis: AI algorithms are used to process and analyze radiological studies (X-ray, CT, MRI), accelerating diagnosis and improving accuracy.
- Integration with city medical institutions ensures automatic transmission and processing of study data.
- The system has the potential for expansion and implementation in other countries and regions.



### Uniqueness

- The platform is connected to 17 AI services that analyze various types of pathologies in the human body within a few minutes, with an accuracy rate of 95%.
- Intelligent algorithms highlight potential pathological areas on medical images using color markers.
- The use of AI helps reduce the workload on medical personnel.
- AI technologies contribute to more accurate and faster disease diagnosis.



### Cost

Upon request



Also contributing to SDGs



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## Implementation of the Operating Room Integration Platform (ORI): Management and Monitoring of Operating Room Activities Using Telemedicine Technologies

Medical Visual Systems offers a range of ready-made products in the field of integrated telemedicine systems, as well as software for operating room scheduling, creation of surgical video archives, and video management within operating units.

The company's main product is a unified surgical workspace equipped with a visualization and control system for multifunctional surgical equipment. The system ensures continuity in the delivery of medical care.



Also contributing to SDGs



For more information scan here:



### Technical Specifications

Live surgery: online broadcasts of operations with session recording and secure two-way communication.

Video management: distribution of video streams across operating room monitors for comfortable workflow, with quick access to patient data, image export capabilities, and intuitive gesture-based control.



### Uniqueness

The company's product has no analogues worldwide:

- it integrates the operating room and intensive care unit environments, as well as individual clinics and clinic networks;
- it enables the deployment of both proprietary and third-party hardware and software solutions;
- it allows integration of a wide range of Russian and international engineering systems and medical equipment;

The company manufactures its own control units for equipment management (analogous to WAGO, Siemens, and OWEN controllers used for managing engineering systems and medical equipment in operating rooms).



### Cost

The cost depends on the purpose and configuration of the equipment included in the integrated system.

## Webiomed Predictive Analytics Platform for Healthcare

The platform is designed for collecting and automatically analyzing anonymized medical data, assessing the risks of disease development and complications at both the individual and population levels.



### Uniqueness

The company's products feature an open API and can be integrated into any medical information systems, telemedicine services, and remote monitoring platforms.

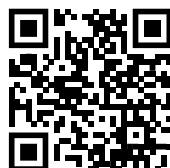
The system supports analysis of 50 of the most socially significant diseases based on 3,000 indicators that characterize a patient's health.

The company holds both international and Russian quality management system certificates under ISO 13485, is registered as an "Other Information System" (in accordance with Government Decree No. 447), and is connected to the Unified State Health Information System (EGISZ) and regional healthcare information systems.

**Also contributing to SDGs**



**For more information scan here:**



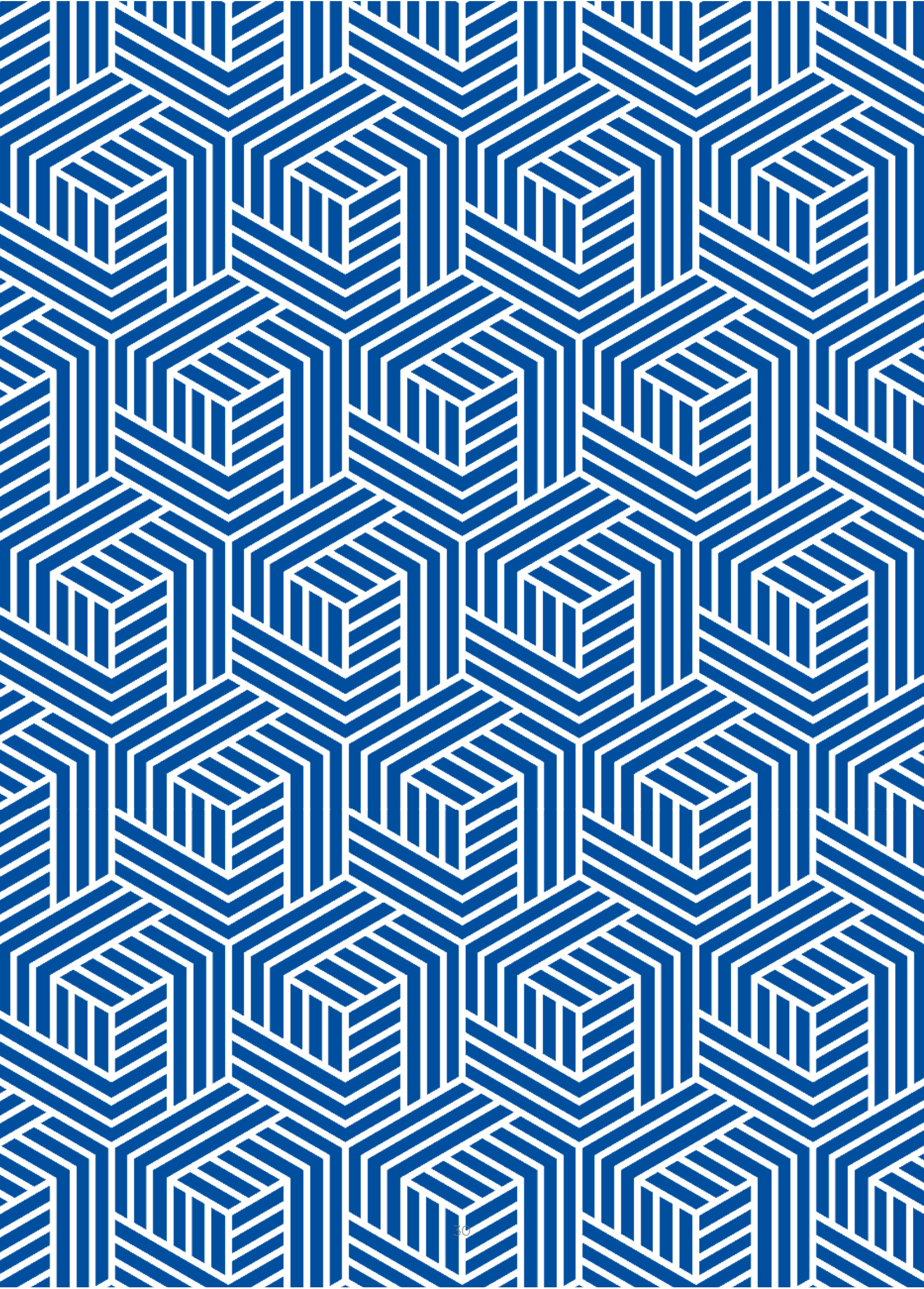
### Technical Specifications

- The platform consists of several integrated services.
- The Webiomed.DHRA clinical decision support system provides analytics and recommendations for physicians.
- The Webiomed.Analytics management analytics system presents information on morbidity rates, risk factors, and the condition of patients in risk groups, among other indicators.
- Webiomed.NLP extracts machine-readable data from medical documents.
- The Webiomed.Connect integration gateway anonymizes medical data on healthcare system servers and transfers them to Webiomed.
- Webiomed.DataSet is used to create a digital patient profile.
- "Symptom Checker" analyzes medical data, identifies symptoms, and generates a list of possible diseases.
- "Treatment Recommendation Module" compiles a list of medical prescriptions based on clinical guidelines.
- There are two connection options.
- SaaS model through access to a cloud installation hosted in a secure data center (public cloud).
- Installation within the customer's infrastructure (private cloud).



### Cost

Upon request





## Use of Advanced Technologies in Medicine

The use of advanced technologies in medicine is a necessary condition for improving the efficiency of healthcare. The COVID-19 pandemic demonstrated the critical importance of rapidly applying innovative methods to develop effective medicine and disease prevention measures.

Russia pays special attention to the development of healthcare and the application of innovative treatment methods. One of the flagship areas is the use of nuclear technologies in the medical field. Russia ranks among the world's top five producers of isotopes, meeting 80% of its domestic demand for reactor and generator isotopes and supplying its products to 50 countries worldwide.



## Technologies and services

- Production of components for nuclear medicine (equipment, raw radioisotopes, and radiopharmaceuticals);
- Development of platforms for medical image analysis using artificial intelligence.

## Organizations



## Application of Solutions in the Field of Nuclear Medicine

Manufacture of equipment for diagnostics and therapy, as well as the design and construction of nuclear medicine centers.



### Uniqueness

This is a high-tech field of medicine in which the following are used for the diagnosis and treatment of various diseases:

- medical isotopes and radiopharmaceuticals (RPs)
- specific types of medical equipment

The Gamma Therapy Unit “Brachium” meets all current requirements of national and international standards and ensures the implementation of contact radiation therapy in accordance with the current recommendations of international professional oncology associations.



### Also contributing to SDGs



For more information scan here:



### Technical Specifications

Solutions for nuclear medicine offered by ROSATOM include the manufacture of equipment for diagnostics and therapy, raw radioisotopes for medical applications, the production of radiopharmaceuticals from the radioisotopes, as well as the design and construction of nuclear medicine centers.

Key products for cancer treatment include:

- Gamma Therapy Unit “Brachium” (Registration No. RZN 2021/16149). Designed for the treatment of cancer using high-dose brachytherapy. The ionizing radiation source located in close proximity to the lesion (tumor) or in the tumor tissue making a minimal impact on the healthy tissue.
- Iodine-125 radioactive seed strands for low-dose brachytherapy of prostate cancer (Registration No. RZN 2016/4738). Used for brachytherapy of localized stage I and II prostate cancer by introducing sealed radioactive sources containing radionuclide <sup>125</sup>I directly into the organ. These sources are naturally eliminated from the body over time. Low-dose radiation provides long-term targeted exposure to pathological areas with minimal risk of damage to healthy tissues.



### Cost

Upon request

## Production and Application of Isotopic Products

Production of raw medical radioisotopes and the manufacture of radiopharmaceuticals (RPs) from them. RPs enable effective diagnosis and treatment of oncological, cardiological, rheumatological, neurological, and endocrine diseases.

The radioisotope products of ROSATOM make it possible to perform about 2.5 million diagnostic and therapeutic procedures in Russia and abroad. Russia ranks among the world's top five isotope producers. ROSATOM meets 80% of the domestic demand for reactor and generator isotopes and supplies its products to 50 countries worldwide.



### Implementation Experience Abroad

50 countries worldwide  
(CIS, Middle East, Asia, Africa, Latin America)



### Cost

Upon request



### Also contributing to SDGs



For more information scan here:



### Technical Specifications

Cobalt-60 (Co-60) for sterilization is produced on an industrial scale in RBMK-1000 channel-type power reactors at the Leningrad, Kursk, and Smolensk nuclear power plants. The process of accumulating cobalt-60 to a specific activity level of approximately 60–70 Ci/g in an RBMK-type power reactor takes about five years.

Medical isotopes serve as a fundamental component to produce diagnostic and therapeutic radiopharmaceuticals used in nuclear medicine. Russia's RBMK-1000 channel-type power reactors are used for the production of Mo-99, I-125, I-131, Sm-153, Lu-177, and other highly demanded medical isotopes.



### Uniqueness

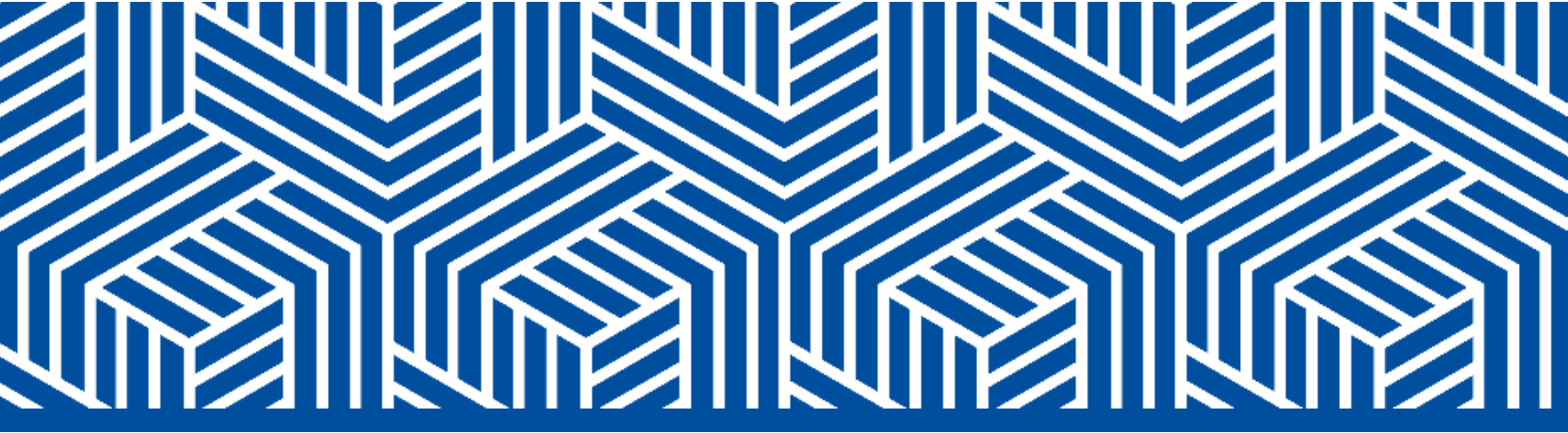
The industrial isotope Co-60 is used in the production of ionizing radiation sources for:

- sterilization of medical instruments and materials
- sterilization of food products to preserve harvests and extend shelf life
- modification of polymers
- disinfection and treatment of industrial and domestic wastewater and solid waste
- other applications (refining and strengthening of precious stones)

Medical isotopes:

- Molybdenum-99 (Mo-99) – for the production of technetium generators and for diagnosing a wide range of diseases
- Iodine-125 (I-125) – for the treatment of prostate and breast tumors
- Iodine-131 (I-131) – for thyroid cancer therapy
- Samarium-153 (Sm-153) – for palliative care: long-term pain reduction, inhibition of metastatic tissue growth in bone lesions, and relief for rheumatic patients with severe pain
- Lutetium-177 (Lu-177) – for the treatment of metastatic prostate cancer, neuroendocrine tumors, and various other oncological diseases





# SDG 4

## Quality Education



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Quality education is the basis for improving people’s socio-economic living conditions and plays a key role in eradicating poverty. Despite significant progress in providing accessible and high-quality education, it is projected that by 2030 more than 80 million children will still be unable to attend school, and around 300 million students will lack basic numeracy and literacy skills, which are essential for life. The COVID-19 pandemic caused substantial damage to education systems worldwide. Most countries announced temporary school closures, affecting more than 91% of students globally. As a result, the pandemic disrupted learning processes and jeopardized the progress in education achieved in previous years.

### **Russia’s Achievements:**

As one of the world’s leading education centers, Russia makes a significant contribution to ensuring accessible and high-quality education globally. By 2030, the country aims to be among the world’s top ten nations in terms of general education quality, and to establish more than 100 advanced modern universities, serving as centers of scientific, technological, and socio-economic development. This will further strengthen Russia’s position in education both nationally and internationally. As of 2024, the number of international students studying at Russian universities reached 414,647. This marks an important milestone toward achieving the national goal of enrolling 500,000 foreign students by 2030. According to the Shanghai-based Quacquarelli Symonds agency, Russian universities are currently ranked among the world’s top 100 in such disciplines, as arts and humanities, engineering and technology, natural sciences, and social sciences and management. Russia is also actively adopting new technologies to ensure high-quality and continuous education.

To contribute to global efforts in achieving quality education worldwide, Russian companies are ready to offer comprehensive solutions aimed at increasing the accessibility and quality of modern education.



## Improving Access to Education

Access to education is one of the key criteria for achieving SDG 4. Ensuring qualified personnel and educational infrastructure in remote and rural areas is an important factor in providing inclusive education. The use of digital technologies to organize the educational process makes a significant contribution to solving this issue.

The development and application of digital technologies in Russia during the COVID-19 period made it possible to effectively organize a high-quality educational process promptly. Today, digital solutions are being integrated into the traditional education system, creating a synergy that contributes to improving the quality of learning. Applications for organizing online lessons, educational platforms, and performance monitoring services allow for effective management of the educational process in an online format. The system of dual education is being developed to provide young people with skills directly applicable to the workplace. Local online platforms have been launched to offer courses from leading Russian and international universities.



## Technologies and services

- Development of electronic educational platforms for schools (electronic gradebook, electronic diary, library);
- Creation of integrated online school systems for foreign languages;
- Use of educational technologies for inclusive learning for children with disabilities.

## Organizations



ДЕПАРТАМЕНТ  
ОБРАЗОВАНИЯ  
И НАУКИ  
ГОРОДА МОСКВЫ



skyeng



UCHI.RU



Practicum



CONCEPT  
VIRTUAL PROTOTYPING



SMART

Skillbox

Открытое  
образование

## Implementation of the “Moscow Electronic School” Systems

A digital educational platform designed to ensure high-quality and equitable education. Students have access to a unified electronic diary and gradebook (academic performance data), a student portfolio (achievement records), a library (with educational content), and school meal services.



### Cost

Depending on functional application and the country of commercialization



### Also contributing to SDGs



For more  
information  
scan here:



### Technical Specifications

The electronic diary and gradebook allow students and their parents to monitor academic performance, while teachers can enter grades and record students' achievements online.

- 42 virtual laboratories across 7 subjects enable students to conduct experiments and model processes in an online environment.

Interactive library: more than 1.6 million units of educational content, including lesson plans, electronic textbooks, and literature.

- The “Digital Teacher” service creates an individual educational program with theoretical and practical assignments and tracks progress.



### Uniqueness

- Has no analogues among educational systems in other countries. Included in the list of the 100 most important educational projects in the world according to the HunderED Summit – 2019, 2020.

- Operates on its own “M OS” system, developed based on open-source software.

- Integrated with state and municipal information systems.

- Integrated with voice assistants

- Ensures confidentiality through user data verification and authorization for system access.

## Implementation of the Educational Platform “Uchi.ru”

Uchi.ru is an educational online platform for students, their parents, and teachers, offering online courses in school subjects for learners of different ages. Students complete interactive tasks, and the system automatically adjusts to their skill level. Depending on the speed and accuracy of task completion, the learning plan is modified – the system responds to the student’s actions: if the answer is correct, a new task is offered; if an error occurs, the system asks clarifying questions to guide the student toward the correct solution.



### Cost

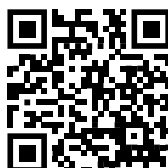
62–111 USD per year. Implementation of an integrated system upon request



### Also contributing to SDGs



For more information scan here:



### Technical Specifications

The software “Uchi.ru – Interactive Educational Online Platform” is designed for studying school subjects in an interactive format.

The software allows users to:

- solve exercises from interactive cards on school and supplementary subjects;
- receive and complete assignments from teachers;
- access the school curriculum;
- track user progress.



### Uniqueness

The platform includes unique products: “My Assignments”: helps students study new and previously covered material interactively and check the quality of their knowledge. Teachers have access to learning cards, test exercises, and functional literacy simulators. Students can participate in free online competitions.

“Lesson Preparation”: provides lesson plans, learning cards, worksheets, presentations, and assessment materials. The program is adapted to meet national educational standards. Uchi.ru Mobile App: allows teachers to track class statistics, earn points in the “Active Teacher” program, and watch webinars.

## Implementation of Virtual Reality Technology in Educational Processes

A platform for teachers and students aimed at training in the creation and integration of VR products through the organization of accelerators, courses, webinars, and hackathons.



### Cost

Localization and adaptation of programs, methodological materials, and textbooks: from 1,2 to 62 thousand USD.

Organization of an Accelerator or Hackathon: from 62 to 125 thousand USD.



### Also contributing to SDGs



For more information scan here:



### Technical Specifications

1. Supports various engineering design and modeling systems and features a multi-user mode. Integrates with simulation systems.
2. Enables the creation of VR projects without programming – users open a 3D model, put on a VR headset, and immerse themselves in a shared virtual space from their workplace, where they can see each other and their project.
3. Allows the creation of scenarios and game logic using visual programming, Python, C++, C#, or other programming languages.

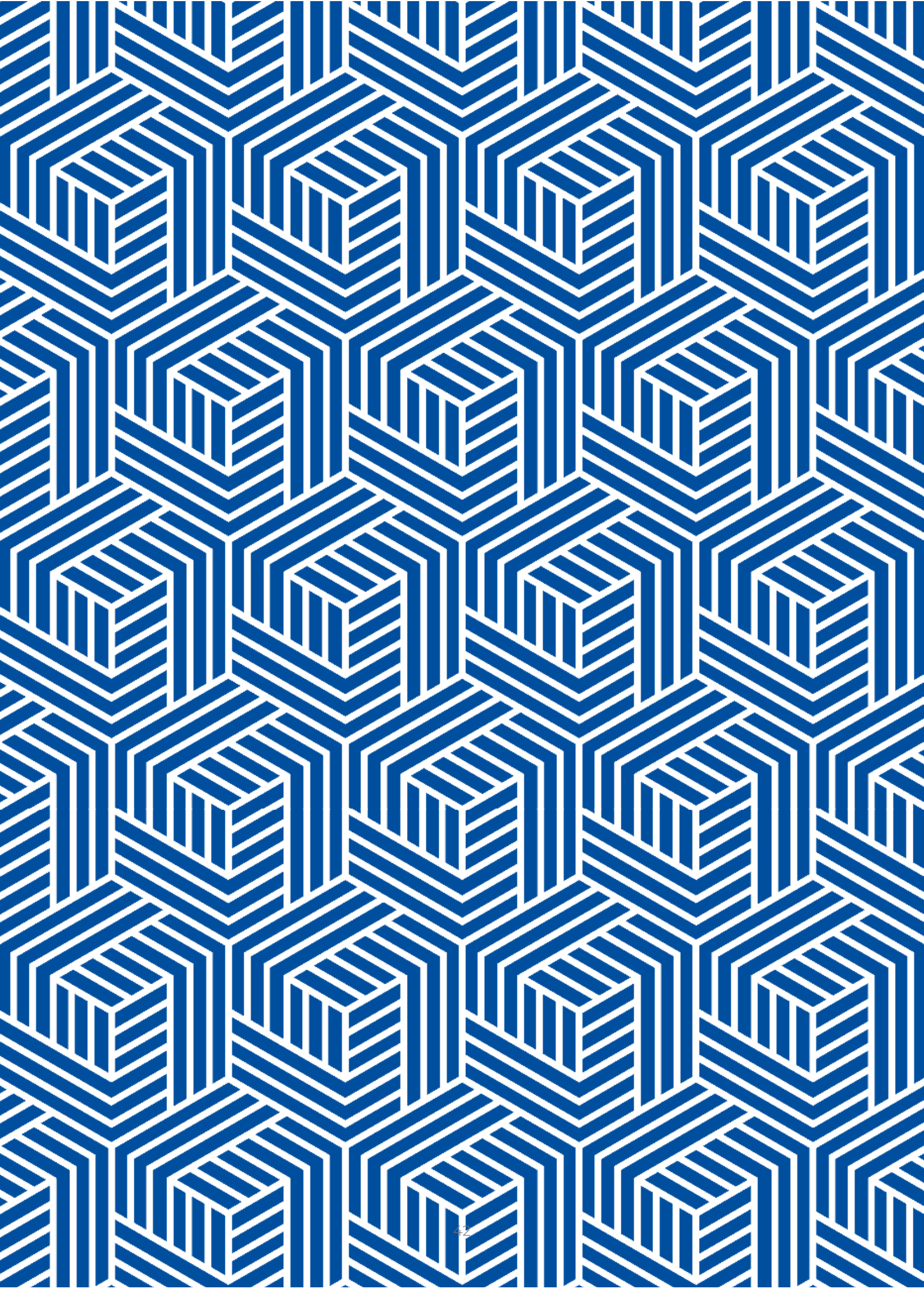


### Uniqueness

The solution is unique due to its VR modeling technology, which sets/it apart from other products developed on 3D engines from the United States.

The VR Concept system is also unique worldwide thanks to the following advantages:

1. Ease of use, support for digital twins, and multi-user functionality for every project.
2. Creation of VR projects does not require programming skills, allowing users to quickly learn to develop VR projects, lessons, or games even without technical expertise.
3. The system provides tools for developers to create complex projects, simulators, and training applications.





## Improving the Quality of Education and Workforce Training

The development of skills is an essential element of quality education, especially in highly specialized professional fields that are not always part of the curriculum in schools or higher education institutions.

Russian universities annually train highly qualified specialists in such fields as oil and gas, transportation, engineering, public administration and economics, information technology, and programming. Educational online platforms and training centers help improve the quality and accessibility of education, as well as accelerate the dissemination of new professional knowledge and skills, making a significant contribution to the transformation of the labor market.

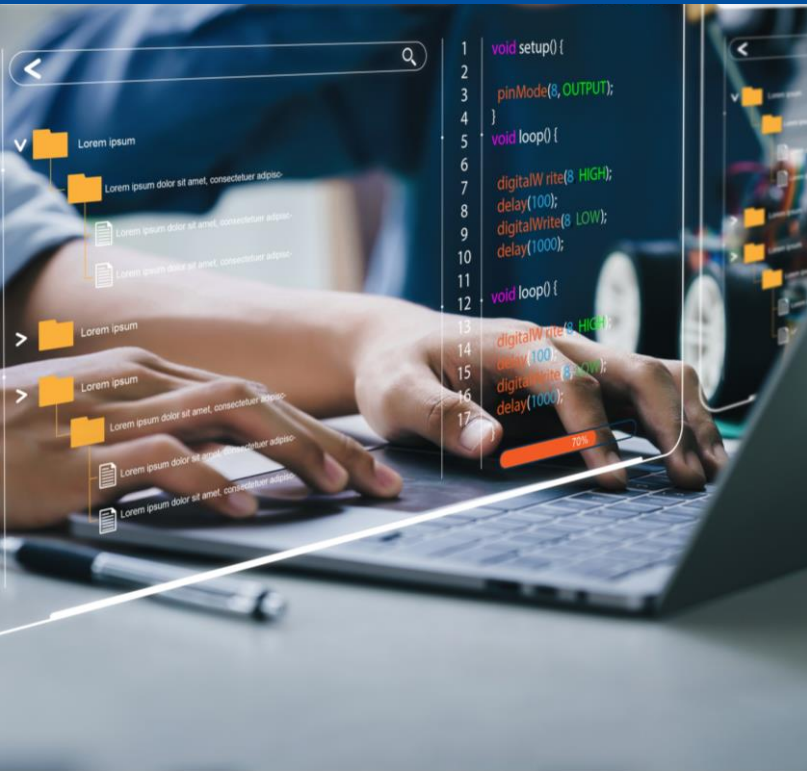


## Technologies and services

- Formation of specialized classes in schools with curricula developed by leaders of various economic sectors (energy, agriculture, transport, etc.);
- Creation and implementation of online courses for professional development and retraining;
- Organization of subject-based Olympiads and IT hackathons;
- Comprehensive workforce training for project implementation and maintenance in specific economic sectors.

## Organizations





### Implementation of the International Platform for Teaching Digital Skills and IT Subjects "Algoritmika"

An educational platform and content for teaching children of various ages IT subjects and mathematics. It is a comprehensive system for managing content, learning, and business processes. The platform's services and analytics make it possible to optimize many aspects of business operations – from small-scale supplementary education courses to the implementation of large educational programs under government contracts. The core technologies include the LBMAS (Learning Business Management Automation System), the AlgoMeet video platform, and a dynamic code verification system for educational projects.



#### Technical Specifications

1. Web platform with remote access.
2. Support for both online and offline learning using interactive tools.
3. Integration with learning management systems.



#### Uniqueness

Interactive lessons and assignments with automatic verification.  
 Support for various programming languages (Scratch, Python, C++, and others).  
 Gamification of the learning process to increase student engagement.  
 Personal account with progress tracking.  
 Integration with Learning Management Systems (LMS).  
 Ability to create individual educational pathways.  
 Scalability depending on workload.



#### Cost

62 to 125 thousand USD



For more information scan here:



## Creation of the "SPUTNIX" Space Classroom

A comprehensive solution for schools in the field of "cosmonautics," designed for training in engineering specialties and including both educational equipment and methodological materials. Drawing on the company's experience in developing spacecraft, integrating them with launch vehicles, launching them into orbit, and operating them, SPUTNIX has developed products that allow students to study the principles of spacecraft design, assembly, testing, and control in a hands-on manner. Several solutions also focus on explaining orbital mechanics and the principles of radio communication.



### Cost

37-62 thousand USD



### Also contributing to SDGs



For more information scan here:



### Technical Specifications

The educational equipment of the space classroom includes:

1. A satellite construction kit equipped with software featuring block-based programming similar to Scratch;
2. A training model of a lunar base;
3. The "OrbiCraft 3D" nanosatellite kit – a laboratory prototype of a real satellite in the international CubeSat format;
4. The OrbiX spacecraft kit for developing interplanetary mission concepts;
5. The "Terra" space environment simulation complex;
6. An augmented reality training module for the "Terra" kit;
7. A satellite data reception training station – a complex for receiving radio signals and telemetry from spacecraft.



### Uniqueness

- In-depth study of disciplines related to the rocket and space industry (mathematics, physics, geography, technology, computer science, and programming).
- Suitable for different levels of student preparation and can be customized for specific requests.
- Comprehensive institutional support, including master classes, open lessons, and webinars.
- All educational products are integrated into a single "Cosmix" ecosystem (visual, literary, and audio materials are tailored to the interests of the younger generation).
- Proprietary educational portal with methodological materials and detailed guides for working with SPUTNIX products.



### Implementation of Projects Based on the “GeoAtelier” Laboratory – Hardware-Software-Methodological Complex (HSMC)

The HSMC laboratory includes a full cycle of working with Earth remote sensing (ERS) data: receiving data in real time at an in-house station from Russian and foreign ERS satellites, including CubeSat-type satellites; using specialized software for advanced thematic interpretation of ERS materials; and applying geoportal technologies to implement practice-oriented projects in accordance with the modern requirements of high-tech NTI (National Technological Initiative) markets.



#### Technical Specifications

Includes the UniScan™ ground receiving station with station management software; Scanex Terminal software for automatic data processing, including visualization modules; ScanEx Image Processor software for advanced thematic interpretation of ERS data; “Digital Globe” software for 3D visualization of spatial data of various types, including data from drones; an integrated geoportal with real-time satellite data updates; and a set of methodological materials.



#### Uniqueness

A fully domestic development that provides access to equipment, tools, and a knowledge base in the field of Earth remote sensing (ERS). It enables students to acquire end-to-end skills for creating their own projects using ERS data.



#### Cost

Upon request



For more information scan here:



## Implementation of the Educational Platform for Farmers, Students, and Agricultural University Lecturers – ProAgro Lectorium (PRO AGRO Lectorium)

Innovative educational platform “ProAgro Lectorium” for students, postgraduates, university professors, agricultural producers, and agribusiness employees:

- over 400 lectures,
- 18 further education courses with university-issued certificates,
- available in multiple languages.

In 2024, ProAgro Lectorium won the BRICS Solutions Awards 2024 international competition.



Also contributing to SDGs



For more information scan here:



### Technical Specifications

Available on both desktop devices and mobile applications.

The number of topics and subject areas offered on the platform is constantly expanding.

Lectures are delivered by leading global industry experts.



### Uniqueness

In collaboration with universities, the ProAgro Lectorium platform has developed educational programs such as “Digital Transformation of the Agro-Industrial Complex,” “Soil Health and Plant Mineral Nutrition,” “Economics of Organic Agriculture,” “Organic Farming,” and “Legal Foundations of Entrepreneurship in Agriculture,” among others.

More than 140 lecturers from 22 fields across Russia, China, India, Brazil, South Africa, and other countries have contributed lectures to the platform.

The program is integrated into 47 agricultural universities across Russia. The platform’s monthly audience exceeds 25,000 users.



### Cost

Free of charge



### Implementation Experience Abroad

CIS and BRICS countries



## Training of Personnel for Nuclear Power Plants Abroad

ROSATOM offers comprehensive training programs for operating personnel of foreign nuclear power plants (NPPs), including theoretical instruction, simulator training, and internships at operating Russian NPPs.



### Technical Specifications

As part of the projects, training centers are established for nuclear power plants under construction both in Russia and abroad.



### Uniqueness

As part of contracts for the construction of nuclear power plants abroad, personnel for the nuclear facilities are trained at the Rosatom Technical Academy.



### Cost

Upon request



### Implementation Experience Abroad

Rooppur NPP (Bangladesh), Xudapu NPP (China), El Dabaa NPP (Egypt), Paks II NPP (Hungary), Akkuyu NPP (Turkey)

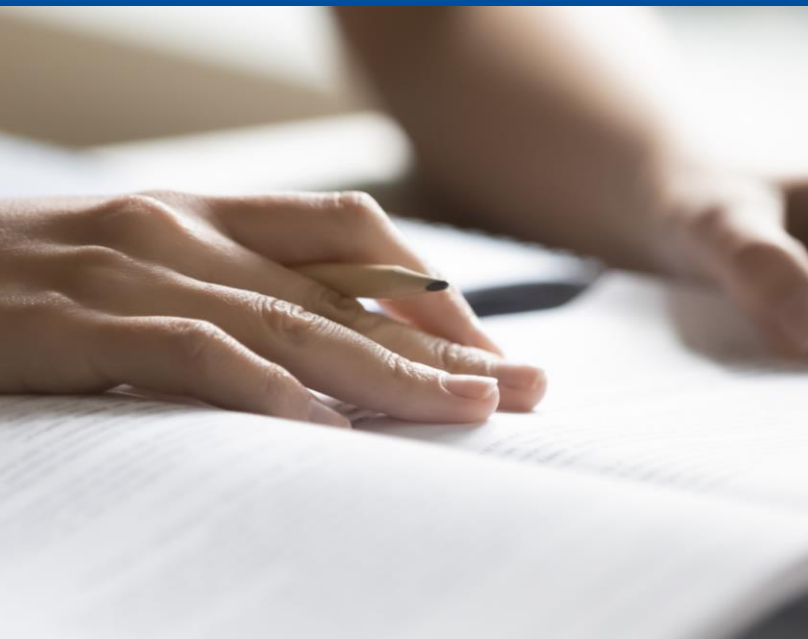


Also contributing to SDGs



For more information scan here:





## Implementation of educational programs for children and teacher training programs for adults

1. Identification, development, and further professional support of gifted children who have demonstrated exceptional abilities in the fields of arts, sports, science, and technical creativity.

The programs are aimed at identifying and nurturing creative potential, fostering interest in project-based, research, engineering, sports, and artistic activities, and promoting scientific knowledge and achievements.

2. Teacher training programs focus on the effective integration of formal and supplementary education. Educators learn modern educational technologies, master methodologies for solving non-standard tasks that develop analytical and critical thinking, and gain expertise in the psychological and pedagogical aspects of supporting the educational process.



### Technical Specifications

Each program lasts 24 days and includes a series of adapted activities tailored to each area of study. Some educational programs are implemented in a project-based format, where participants gain experience in applying subject-specific knowledge and practical skills in professional activities adapted to the project work format.



### Uniqueness

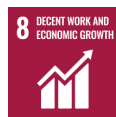
Classes are conducted by professors from leading universities, teachers from physics-mathematics and chemistry-biology schools, and representatives of scientific and technological entrepreneurship.

The programs are led by distinguished Russian scientists, coaches of national and regional teams in various subjects, and highly experienced educators. Each program includes activities aimed at developing students' critical thinking, social skills, creativity, and communication abilities.



### Cost

Upon request



For more information scan here:



## Export of Services of the International Research Center Based on the MBIR Reactor

Provision of a full cycle of high-tech, science-intensive services, including pre-reactor, reactor, and post-reactor research of materials and core elements for existing and advanced nuclear reactors. Formation of an international scientific and expert community to address current challenges in the field of innovative nuclear technologies, based on the operational reactor and experimental infrastructure of the State Corporation Rosatom, including the MBIR reactor.



### Uniqueness

The unique experimental and technological capabilities of the MBIR reactor will significantly expand research areas supporting the development of a two-component nuclear power system and the closing of the nuclear fuel cycle. They will also help accelerate—by an order of magnitude—the creation of safe Generation IV nuclear power installations. MBIR is a multipurpose reactor that also enables fundamental research using in-vessel devices, the implementation of boron neutron capture therapy (BNCT), the production of doped silicon, and other advanced applications.

### Also contributing to SDGs



### For more information scan here:



### Technical Specifications

MBIR is a multi-purpose fast neutron research reactor with sodium coolant and a thermal capacity of approximately 150 MW and a maximum neutron flux density of  $5.3 \times 10^{15}$  n/cm<sup>2</sup>·s, making it the highest-flux research reactor in the world. The reactor enables experiments with various coolants, including sodium, lead, lead-bismuth, gas, and others.

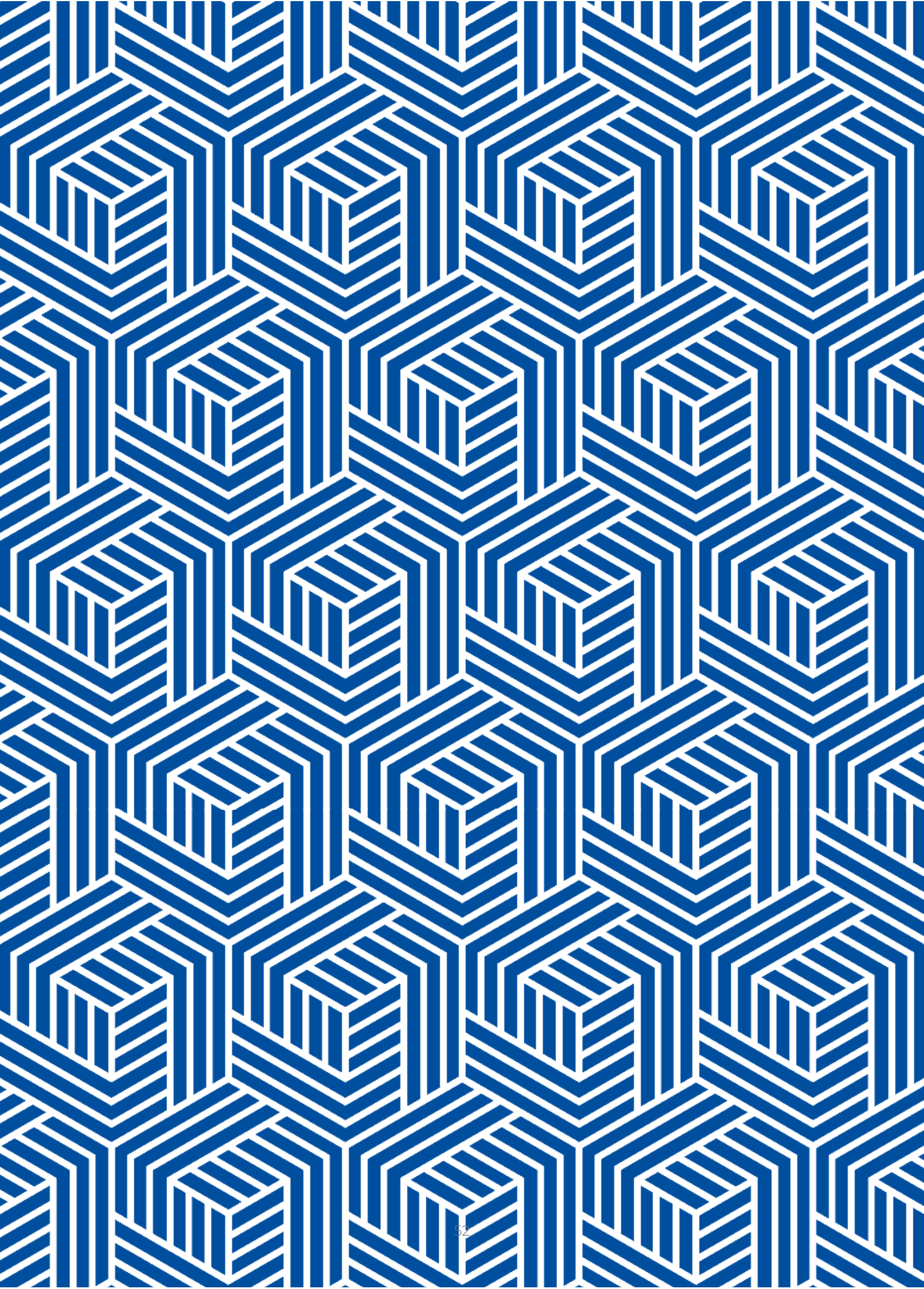
It is being constructed in the city of Dimitrovgrad at the site of JSC “State Research Center – Research Institute of Atomic Reactors” (JSC “SSC RIAR”).

The physical characteristics of the MBIR reactor make it ideally suited for conducting materials science experiments, developing new technologies for the production of radioisotopes and modified materials, testing different fuel compositions (including under transient and emergency conditions), and studying new coolants and related technologies.



### Cost

The cost of reactor resources depends on the period of participation, the required resource volume, and other factors, and is discussed individually with each participant





# SDG 7

## Affordable and Clean Energy



Ensuring affordable, reliable, and sustainable energy is a key element of socio-economic development. As of 2022, nearly 700 million people—or about 9% of the world’s population—still lack access to electricity, while more than 2 billion people do not have access to clean and safe fuels or technologies for cooking. Flawless access to electricity is not only essential for a comfortable and safe modern life, but also a necessary condition for the stable growth of various economic sectors.

Modernizing existing energy infrastructure to increase generation efficiency, reduce resource consumption, and minimize transmission losses helps lower production costs, thus enhancing industrial competitiveness. At the same time, the modernization of energy systems and the expansion of renewable energy use are key measures for reducing emissions from the energy sector—the main source of anthropogenic greenhouse gases—and mitigating global climate change.

### **Russian Achievements:**

Russia makes a significant contribution to achieving SDG 7. As one of the world’s leading exporters of coal, oil, and gas, Russia ensures stable and reliable energy supplies to other countries. By 2030, the country plans to maintain its position among the top three suppliers of one of the most environmentally friendly hydrocarbons—natural gas—doubling its exports and developing new LNG clusters, as well as expanding hydrogen production and exports to become a global leader in hydrogen energy. In addition, Russia is actively implementing international projects in nuclear and renewable energy, helping other countries gain access to affordable and clean energy.

Russia supports other nations in addressing the energy trilemma—balancing affordability, reliability, and environmental sustainability—through comprehensive solutions for low-emission energy systems, efficient energy infrastructure, and clean production technologies. On the global stage, Russia consistently advocates for a fair and balanced energy transition that takes into account national contexts and promotes energy security worldwide.



## Ensuring Low-Carbon Energy Systems

The creation of low-carbon energy systems is a balanced, environmentally friendly, and efficient solution for ensuring energy supply to both large and small settlements located at varying distances from main energy infrastructure and in diverse climatic conditions. Renewable energy sources, such as wind, solar, and hydro generation, can serve as the foundation of the energy system or perform supporting functions, helping to reduce electricity generation costs. Nuclear energy also plays a crucial role in addressing global climate challenges: it is a low-carbon source of power with no direct CO<sub>2</sub> emissions, and its lifecycle greenhouse gas emissions are minimal – placing it on par with wind, solar, and hydro generation. Nuclear power ensures stable 24/7 electricity generation over 60 years, with the potential for operational life extension. The construction of nuclear power plants contributes to economic diversification, industrial growth, and increased investment attractiveness of host regions.

Russian companies successfully implement projects for the development of nuclear and renewable generating capacities worldwide. The construction of nuclear power plants of various capacities, as well as projects in solar, wind, and hydropower across Europe, Africa, and Asia, confirms Russia's status as one of the global leaders in the energy sector.



## Technologies and services

- Construction and maintenance of large and small nuclear power plants (NPPs);
- Construction and maintenance of large and small hydropower plants (HPPs);
- Construction and maintenance of solar power plants (SPPs), including solar panels, into urban infrastructure;
- Construction and maintenance of wind power plants (WPPs).

## Organizations



ROSATOM



RusHydro



Сахалинэнерго



TATNEFT



RUSNANO  
Russian Corporation of Nanotechnologies



UNIGREEN  
ENERGY



## Construction of Large-Scale Nuclear Power Plants

Nuclear energy is a low-carbon source of power, with minimal greenhouse gas emissions throughout its entire life cycle, placing it on par with wind, solar, and hydro generation. It provides stable 24/7 power generation for up to 60 years, with a potential for service life extension. The construction of nuclear power plants creates conditions for economic diversification and industrial growth.

Large-scale NPP projects make a significant positive contribution to improving the quality of life in their regions: infrastructural development, job creation, and increased quality of education and science. ROSATOM State Corporation ranks first in the world in terms of its order portfolio and the number of nuclear power plants being built simultaneously in various countries. It has reference projects for Generation III+ power units. All NPPs are constructed on a turnkey basis.



### Implementation Experience Abroad

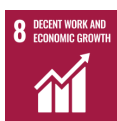
- VVER-1200: Rooppur NPP (Bangladesh),
- Belarusian NPP (Belarus),
- Xudapu NPP and Tianwan NPP (China),
- El Dabaa NPP (Egypt),
- Paks II NPP (Hungary),
- Akkuyu NPP (Turkey).



### Cost

Upon request

### Also contributing to SDGs



For more information scan here:



### Technical Specifications

- Reactor types: VVER-1200 and VVER-TOI (Generation III+ pressurized water reactors with enhanced safety and digitalization), BN-1200M (a Generation IV fast neutron reactor using liquid sodium as a coolant)
- Power output per unit: from 1,200 MW to 1,255 MW
- Reactor life cycle: up to 100 years (including lifetime extension)
- The infrastructure includes backup diesel generators, transformer substations, and reserve heat supply systems to ensure operational reliability.



### Uniqueness

- VVER-TOI reactors: equipped with active and passive safety systems providing functional redundancy, long-term autonomous operation under accident conditions (at least 72 hours), and protection against common-cause failures. Technical systems are provided to manage beyond-design-basis events (such as primary circuit pipeline ruptures) beyond the 72-hour period.
- Construction time reduced to 48 months for the first unit and 40 months for serial units.
- Reduction of industrial site area by 23%, physical protection perimeter by 26%, length of technological tunnels by 40%, and on-site roads by 12%.
- Digital control systems enable rapid response to any operational changes.
- Flexible energy output adjusted to the changing needs of the power grid.
- BN-1200M reactor: safety level eliminates the need for population evacuation under any accident scenario.
- High fuel efficiency and flexibility – suitable for plutonium of various isotopic compositions.
- Capability for implementing a closed nuclear fuel cycle (CNFC).

## Construction of Small Modular Reactors (SMRs and Floating NPPs)

One of the promising areas of activity for ROSATOM is the construction of small modular reactors (SMRs) in land-based (SMR) and floating (FNPP – Floating Nuclear Power Plant) configurations for remote areas with underdeveloped grid infrastructure and energy-isolated regions, where the construction of large-capacity nuclear power plants is not feasible. Small modular reactors provide regional energy independence, including reduced dependence on fossil fuels and stable electricity and heat supply from clean energy sources, including for energy-intensive industries. They help to reduce greenhouse gas and pollutant emissions into the atmosphere by replacing existing generation sources, particularly diesel-based ones.



### Cost

Upon request



### Also contributing to SDGs



For more information scan here:



### Technical Specifications

SMRs and FNPPs are based on the RITM reactor series, originally developed for nuclear icebreakers and later adapted for both land-based and floating configurations.

The main technical characteristics of the plants include an electrical capacity of 10 MW for the Shelf-M reactors and from 55 MW for RITM reactors, enabling the creation of power generation facilities with total capacities of:

- 10–40 MW (for land-based SMRs with Shelf-M reactors);
- 106–424 MW (for floating power units with RITM-200 reactors);
- 110–440 MW (for land-based SMRs with RITM-200N reactors).

The reactor service life is 60 years, featuring an extended fuel cycle – refueling is required only once every five years, which significantly reduces operating costs.



### Uniqueness

- The reactor design provides a high degree of automation, requires minimal operating personnel, and ensures resilience to extreme climatic conditions, including low temperatures and vibrations – confirmed by operational experience on nuclear-powered icebreakers.
- Modular factory assembly allows for faster construction and improved installation quality.
- The reactors are equipped with passive safety systems and are capable of withstanding natural and man-made impacts.



### Implementation Experience Abroad

Upon request

## Construction and maintenance of solar power plants (SPP)

Provision of a full range of services: design, construction, and operation of solar power plants (SPPs), as well as development of customized solutions to improve the energy efficiency of social, commercial, and industrial facilities (reducing energy supply costs, lowering greenhouse gas emissions, improving environmental conditions, increasing productivity, expanding the share of renewables in the energy mix, and reducing the carbon footprint of products).

For remote areas, various modifications of autonomous, hybrid, and grid-connected power plants based on renewable energy sources (RES) are available.



### Cost

Upon request



### Also contributing to SDGs



For more information scan here:



### Technical Specifications

High-tech products for renewable energy generation (full production cycle in industrial cooperation with leading sector participants):

- wafers for the production of photovoltaic converters;
- photovoltaic converters (solar cells) manufactured using heterojunction technology (Si-HJT) with a target efficiency of about 24.5%, designed for assembly into photovoltaic modules;
- photovoltaic modules based on HJT cell technology.

For the implementation of renewable energy projects, Russian high-tech equipment

is used, along with a wide range of engineering services providing the best technical solutions.



### Uniqueness

- In-house production
- The use of heterostructural technology with development potential and its successful introduction into mass production;
- A vertically integrated company,
- Providing full control of the supply chain - from the manufacture of silicon wafers to the construction and maintenance of solar power plants;
- Creation of innovative technical
- Solutions in the field of solar energy
- For customers based on its own
- Research and development center, equipped with high-tech equipment for complex testing of solar cells and modules.

## Construction and Maintenance of Wind Power Plants (WPPs)

Design, construction, and production of wind turbine generators (WTGs), as well as operation and maintenance of wind farms.

As of the end of 2024, ROSATOM commissioned nine wind farms in Russia with a total installed capacity exceeding 1 GW.



### Cost

Upon request



### Implementation Experience Abroad

CIS Countries, Central and Southeast Asia



### Also contributing to SDGs



For more information scan here:



### Technical Specifications

ROSATOM implements wind energy projects using modern gearless L100 2.5 MW wind turbines. These turbines employ a synchronous direct-drive generator with permanent magnets, reducing the number of rotating parts, enhancing reliability and technological readiness, and ensuring a low levelized cost of electricity throughout their life cycle.

Each turbine generates 2.5 MW at a nominal wind speed of 11.4 m/s, with an 8-ton, 51-meter-long blade rotating at 14.8 rpm.

The operational wind speed range is 2.5–25 m/s. The tower height is 100 meters, with a total turbine height (including the blades) of about 150 meters. The operational lifespan of a single turbine is 25 years. Wind turbines occupy only around 1% of the total land area of the wind farm.



### Uniqueness

- Full production cycle: design, construction, component manufacturing of wind turbines, supply chain management, logistics, service, and operation of WPPs.
- High localization: most wind turbine components are produced domestically in Russia; locally made composite materials are used for blades, hub housings, and nacelles.
- Custom-developed software optimized for Russian climatic and operational conditions for monitoring and controlling wind turbines.
- Low operational costs due to high automation and minimal staffing requirements.
- Modular tower design enables faster construction, eliminates oversized cargo transportation via public roads, and improves assembly quality.

## Production and supply of energy-generating photovoltaic facade systems (PVFS) for reducing greenhouse gas emissions in urban environments

The project aims to implement energy-generating photovoltaic facade systems (PVFS) that combine the architectural function of building facades with the function of generating electricity from solar radiation. The systems enable the effective use of solar energy in dense urban areas with limited space for traditional solar installations, as well as in locations experiencing power supply interruptions or grid connection limitations.



### Cost

Upon request



### Also contributing to SDGs



For more information scan here:



### Technical Specifications

Design and engineering parameters:

- Module type: glass-glass triplex with/without frame mounting;
- Maximum circuit voltage: 1500 V;
- Electrical safety class: II (according to GOST R 58698-2019);
- Current type: direct current;
- Overall dimensions without frame: up to 2127 × 1200 × 32 mm;

Photovoltaic parameters (current, voltage): vary depending on the module design.



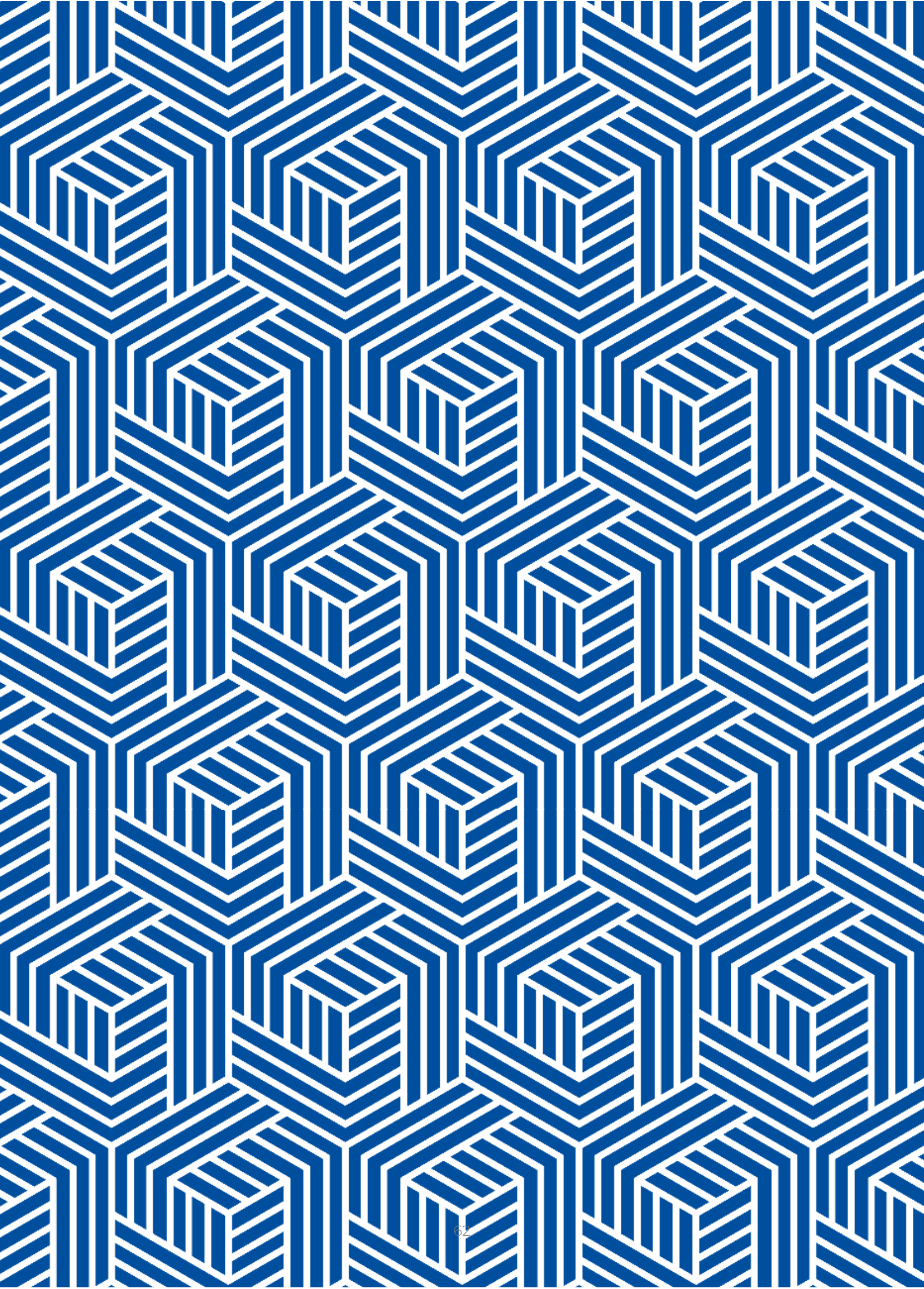
### Uniqueness

- Ecological importance and uniqueness:
- Reduction of CO<sub>2</sub> emissions by up to 80 kg/m<sup>2</sup> per year.
- Visual integration and durability: façade glass with ceramic printing allows for customization of color and texture to match architectural design solutions.
- High energy efficiency: photovoltaic converters are manufactured using heterojunction (HJT) technology, achieving up to 25% efficiency.
- Low operating costs: vertical installation on façades eliminates the need for regular cleaning from precipitation.
- Economic efficiency:
- After reaching the break-even point, the module continues to generate electricity with minimal operating costs throughout its entire life cycle (over 25 years).



### Implementation Experience Abroad

China, Netherlands, Australia, Germany





## Creating an efficient energy infrastructure

Adapting energy infrastructure to diverse climate conditions and terrain is a prerequisite for ensuring its efficiency. Russia has achieved significant progress in developing high-quality infrastructure for the production, distribution, and transportation of energy resources beyond the Arctic Circle, in mountainous regions, seas, and other extreme conditions. The extensive experience of Russian companies in implementing national and international projects can be leveraged to build reliable energy systems in various regions of the world.



## Technologies and services

- Modernization of energy infrastructure, including transition to lower-emission fuels;
- Development of digital technologies and enhancement of electricity affordability (installation of smart meters and creation of digital substations);
- Improvement of energy efficiency in production and reduction of harmful emissions.

## Organizations





## Replacement of Coal-Fired Power Generation with Gas-Fired Generation

Modernization of coal-fired power generation facilities through the replacement of coal-fired boiler units with gas-fired ones enables the reduction of emissions and environmental impacts from industrial processes with minimal financial and time costs.



### Technical Specifications

Reconstruction of boiler units with conversion to natural gas combustion. Possibility of implementing and certifying the project as a "climate project" with subsequent issuance of carbon units.



### Uniqueness

The first large-scale climate project implemented in Russia, and the first in the thermal power sector. This project served as the basis for developing the core methodology later used in other climate initiatives. In 2023, the project accounted for 85% of the total carbon units generated in Russia.



### Cost

Upon request



For more information scan here:



## Energy Storage Using Stationary Systems and Portable Devices

1. Stationary energy storage systems for power grids, emergency and uninterruptible power supply systems, renewable energy storage, and charging stations. The main goal of integrating energy storage systems into power networks today is to increase the reliability of energy supply and optimize electricity costs for end users.

2. Traction batteries for electric transport – electric buses and trolleybuses, passenger electric vehicles, electric forklifts, railway and water transport.



Also contributing to SDGs



For more information scan here:



### Technical Specifications

Lithium-ion batteries offer several advantages over lead-acid, alkaline, and other types, providing customers with both operational and economic efficiency:

- longer service life,
- no “memory effect” and the ability to recharge at any convenient time, reducing equipment downtime.

Electrode plates are corrosion-resistant, allowing for the creation of various modular configurations. Li-ion storage systems are sealed, maintenance-free, and do not require a dedicated charging room, freeing up space and personnel.



### Uniqueness

- Development and implementation of integrated energy supply solutions for isolated regions, integrating all types of generation, including small-scale and renewable energy sources.
- Automated remote monitoring and control improve the energy efficiency of facilities and ensure a balance between electricity generation and consumption.
- Uninterrupted power supply enables instant switching to battery power in case of grid voltage loss.
- Backup power supply is provided for the internal needs of energy facilities.



### Cost

Upon request



## **Creating an affordable and environmentally friendly production infrastructure**

Given that the energy sector accounts for more than 70% of anthropogenic greenhouse gas emissions, ensuring affordable energy without harming the environment presents a serious challenge to achieving SDG 7. The use of renewable energy sources, as well as advanced technologies in the extraction, transportation, and processing of traditional energy resources, helps reduce negative environmental impacts without compromising energy security.

Russia is actively developing the production and transportation of liquefied natural gas (LNG), which has significant potential across various sectors of the economy and can also be used to supply energy to remote areas and develop refueling infrastructure for transport. Russian companies also have experience in implementing projects related to the extraction of energy resources in unique ecosystems that are particularly vulnerable to environmental impacts, including marine and Arctic environments. The application of new technologies in resource extraction and processing contributes to greater production efficiency and enables assessment and mitigation of potential environmental impacts.



## Technologies and services

- Formation of LNG infrastructure complexes;
- Hydrogen generation and ammonia synthesis;
- Development of GHG capture and storage technologies.

## Organizations





## Application of Intelligent Well Injection and Continuous Monitoring Technology

The first mass-scale intelligent well injection technology. It enables efficient field development through optimized inflow control and online well operation monitoring. The solution significantly reduces water cut and increases oil recovery. The technology is 15 times cheaper than competitors' solutions and can be cost-effectively applied to most horizontal wells. TS components have been successfully tested in wells operated by major Russian companies.



### Technical Specifications

- Remote monitoring of oil inflow into the well;
- Exclusion of certain wellbore sections from production;
- Selective well treatment;
- For injection wells: flow profile leveling and improvement of displacement efficiency.



### Uniqueness

- The use of quartz sensors without downhole electronics increases equipment lifetime up to 15 years.
- The interval control technology, patented by the EAPV (043470), allows remote operation of electric valves in the wellbore, opening or closing isolated zones to control the production of oil, water, or gas. The system can be repeatedly retrieved and reinstalled.



### Cost

Depends on the composition of equipment used for implementation at a specific well.



For more information scan here:





## Implementation of an Energy-Independent Gas Metering Station with Zero Methane Emissions

The product is designed for automatic measurement of natural gas flow rate and volume, as well as quality indicators, at the boundaries of gas transmission enterprises.



### Technical Specifications

A next-generation gas metering station with zero methane emissions into the atmosphere, developed for the automatic measurement of gas flow, quantity, quality, and composition in main gas pipelines with enhanced accuracy.



### Uniqueness

The product has no analogues worldwide. The applied technology significantly reduces construction and installation costs and timelines (by 2–3 times) and requires no maintenance compared to existing solutions.



### Cost

5–7,5 mln USD, depending on application and country of commercialization



Also contributing to SDGs



For more information scan here:



## Application of LNG Production Technology with an Innovative Natural Gas Cooling System

LNG offers a number of commercial, environmental, and energy advantages over traditional fuels.

“Arctic Cascade” – based on cascade cooling of natural gas and includes two cooling circuits using ethane and nitrogen as refrigerants.

“Arctic Cascade Modified” – based on sequential cascade cooling of natural gas in ethane, nitrogen gas, and liquid circuits. To improve energy efficiency, heat recovery is used in the nitrogen cooling circuit.

“Arctic Mix” – based on the use of three separate cooling circuits with mixed refrigerants for pre-cooling, liquefaction, and cooling of natural gas.



Also contributing to SDGs



### Technical Specifications

Applicable LNG project categories:

- Arctic Cascade: mid-scale, capacity up to 1 million tons per year;
- Arctic Cascade Modified: large-scale, capacity up to 3 million tons per year;
- Arctic Mix: large-scale, capacity over 6 million tons per year.



### Uniqueness

- Expansion of low-carbon technologies and optimization of LNG production processes.
- Arctic Cascade Modified: uses pure ethane as a refrigerant; low ambient temperatures allow ethane condensation in air-cooled units.
- “Arctic Mix”: designed for large-scale LNG projects with single-line capacity exceeding 6 million tons per year; the use of mixed refrigerants broadens the geographic applicability, increases energy efficiency, and reduces the amount of required equipment.



### Cost

Upon request

For more information scan here:





## Development of Low-Carbon Hydrogen and Ammonia Production Technology

The technology is based on the method of natural gas steam reforming. The patented technological solutions ensure a production capacity of over 1 million tons of low-carbon ammonia per year. To reduce the carbon footprint, energy-efficient technological solutions are implemented allowing capturing more than 90% of carbon dioxide for underground storage. The large-scale ammonia cracking technology is an important step in creating a production chain in which the obtained clean hydrogen can be delivered to end consumers at a competitive and affordable price.



### Technical Specifications

Capacity per production line: over 1 million tons of low-carbon ammonia per year.  
CO<sub>2</sub> capture rate: more than 90%.



### Uniqueness

Unique patented technology with no analogues worldwide.  
Capability for implementation under Arctic conditions.



### Cost

Upon request



For more information scan here:





## Installation of Production Assets (LNG, ammonia), Raw Material/Product Storage, and Power Generation Plants on Gravity-Based Structures (GBS)

Construction of gravity-based structures (GBS), integration of equipment, and installation of large-scale upper modules on GBS are carried out at the LNG Construction in Belokamenka, Murmansk Region. The completed floating production complex is then transported to its installation site by sea towing.



### Technical Specifications

Project implementation period: 24–34 months (excluding towing of the completed GBS complex to the permanent site).



### Uniqueness

The GBS-based production complex can be installed at any coastal location, including the Arctic region. Placement of production facilities on GBS reduces environmental impact and helps to preserve ecosystems by minimizing land use, decreasing material consumption during construction due to compact location of facilities, and eliminating the need for construction on permafrost.



### Cost

The cost of the project is determined based on the composition of technological equipment placed on the GBS.



For more information scan here:





## Reduction/Prevention of Methane Emissions

Prevention of greenhouse gas (methane) emissions through the use of mobile compressor stations (MCS) during the preparation of main gas pipeline sections for maintenance and repair operations.



### Technical Specifications

The MCS is a set of primary and auxiliary equipment.

- Primary equipment: two mobile units with a high-pressure compressor and a 749 kW engine.
- Auxiliary equipment: a flatbed truck with a manipulator crane.

The MCS is fully autonomous in terms of energy supply and operates independently from other energy infrastructure, allowing deployment in any region.



### Uniqueness

- Compliance with the Upstream Emission Reduction (UER) industry scheme, verified under ISO 14064-2 standard.
- Universal technology applicable to other stationary greenhouse gas sources.
- Scalable solution.
- High efficiency and low cost per ton of CO<sub>2</sub>-equivalent prevented compared to other technological projects.



### Cost

Depends on the project scale.



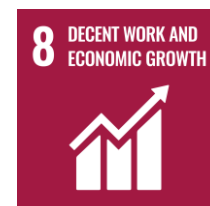
For more information scan here:





# SDG 8

## Decent work and economic growth



The implementation of SDG 8 aims to create conditions for long-term, inclusive, and environmentally sustainable economic development, where every person has the opportunity to engage in productive activities, enjoy social protection, receive fair income, and work in safe conditions. In today's world, where economic and social challenges such as unemployment, inequality, poverty, and labor market instability remain pressing, achieving this goal is a key factor for sustainable economic growth and improving the quality of life for millions of people.

### **Russian Achievements:**

Russia contributes to the achievement of SDG 8 through comprehensive measures aimed at stimulating sustainable economic growth and creating quality jobs. In the medium term, the country seeks to become the world's fifth-largest economy by GDP (PPP), setting a new growth trajectory and increasing its share in the global economy. By 2036, the key targets include a 30–40% increase in labor productivity and a retention of unemployment within the 4–5% range. These objectives are fundamental to strengthening the competitiveness of the Russian economy and developing human potential.

At present, Russia's innovative practices in promoting economic activity, reducing unemployment, and diversifying its economy have driven socio-economic development, enabled rapid GDP growth, and resulted in one of the lowest unemployment rates globally.

Russian companies are ready to share their experience in this field with international partners and offer innovative solutions to improve the efficiency of public services for businesses and support entrepreneurship.



## Improving the Efficiency of Public Services for Businesses and Supporting Entrepreneurship

Creating favorable investment and economic conditions for the development of private enterprises is a key government objective aimed at ensuring socio-economic development and achieving SDG 8. Russia implements a wide range of programs at both national and regional levels to provide public services for small and medium-sized enterprises (SMEs) and to support entrepreneurship. Measures to support small businesses, as well as the development of digital platforms for suppliers and investors, help establish connections between economic actors and stimulate economic activity.



## Technologies and services

- Development of digital ecosystems for small and medium-sized businesses.
- Implementation of digital solutions to optimize stages of public procurement processes.
- Creation of systems for attracting investment into business projects.

## Organizations



GOVERNMENT  
OF THE RUSSIAN  
FEDERATION



Минцифры  
России



Корпорация  
МСП



The Government  
of Moscow



ЦИФРОВАЯ

ЭКОНОМИКА

D-ECONOMY.RU



### Implementation of the MSP.RF Digital Platform

A state digital platform designed to support entrepreneurs and self-employed individuals. The platform helps users select support measures tailored to their business specifics, provides business training, and offers express consultations on business support.



#### Technical Specifications

The portal contains information on available support measures, interactive business statistics in Russia, and educational courses for entrepreneurs.



#### Uniqueness

Over 30 online services  
More than 800 business support measures available through online applications



#### Cost

Upon request



Also contributing to SDGs



For more information scan here:





## Automation of the Procurement Process Using the “Supplier Portal” Service

An online resource designed to automate the activities of customers and suppliers in carrying out small-scale operational transactions and to increase the transparency of government and municipal procurement.



### Technical Specifications

- All stages of the procurement procedure are carried out through electronic document management.
- The portal is integrated with the Unified Information System in the field of procurement, ensuring automatic data exchange.
- Users have access to analytical data on completed purchases, allowing them to assess the market and plan participation in tenders.
- The “Supplier’s School” section in the personal account provides instructions and recommendations for suppliers.
- 90% of the portal’s audience are small and medium-sized enterprises (SMEs).



### Uniqueness

- Support center with user instructions for suppliers and customers
- Ability for users to create offers and an electronic catalog of goods and services
- Option to conclude operational transactions
- All procurement data is publicly available – ensuring trust in the system and reducing corruption risks
- Possibility of conducting joint procurements



### Cost

Depends on the functional application and country of commercialization.



Also contributing to SDGs



For more information scan here:



## Implementation and Operation of the “Investment Portal” Service

A digital platform for online interaction between residents and entrepreneurs with city authorities, providing access to up-to-date statistics, analytics, ongoing investment projects, and business support measures.



Also contributing to SDGs



For more information scan here:



### Technical Specifications

- The portal features an interactive map displaying investment sites, infrastructure, and real estate available for investment.
- Users can apply for participation in investment projects, receive consultations, and access necessary documents through their personal account.
- The portal is integrated with other government information systems.



### Uniqueness

- Centralized access to all necessary information and services for investors
- Information on support measures, tax incentives, and preferences provided by the government
- Access to current news and analytics
- Opportunity for virtual 3D property viewing



### Cost

Depends on the functional application and country of commercialization.



## Application of the Unified Service for Supplier and Support Measure Search

The unified service “i.Moscow” helps technology businesses attract investments, find infrastructure partners, establish cooperation with corporations, and bring products to market, including international markets.



### Technical Specifications

- The portal is integrated with the digital platforms mos.ru and ICT.Moscow, providing a unified information space for users.
- Personal data and transmitted information are protected through encryption.



### Uniqueness

- The centralized platform integrates various aspects of the city’s innovation activities.
- The portal contributes to the development of regional innovation ecosystems by providing tools for interaction between participants and supporting new projects.



### Cost

Depends on the functional application and country of commercialization.



Also contributing to SDGs



For more information scan here:





# SDG 9



## Industrialization, innovation and infrastructure

SDG 9, dedicated to industrialization, innovation, and infrastructure, is one of the key goals for global progress and human well-being. It aims to create resilient, sustainable, and modern infrastructure, as well as to foster comprehensive industrial and technological development. In the modern world, where economic growth faces challenges, such as declining productivity and environmental constraints, innovation has become the main driver for improving resource efficiency, advancing “green” technologies, and developing new industries. Industrialization, technological progress, and sustainable infrastructure not only stimulate economic growth but also improve quality of life by ensuring access to clean energy, digital technologies, and modern services.

### **Russian Achievements:**

Russia demonstrates significant progress in building a modern innovation-friendly environment, combining industrial development with environmental responsibility. By 2030, the country aims to take a leading position in establishing a network of sustainable partnerships with foreign states through the creation of the necessary infrastructure for international economic cooperation, technological and industrial collaboration, the development of new markets, and the expansion of the export potential of industrial goods and services.

Russian companies and government institutions are actively promoting digitalization solutions, including e-government platforms, cybersecurity systems, and financial technologies (fintech) targeted at developing countries. According to expert assessments, the export volume of Russian digital technologies reached approximately USD 3.5 billion in 2023, reflecting growing international interest in Russian IT solutions.

Another important direction of Russia’s contribution to SDG 9 is the development of sustainable and secure transport and logistics systems. Between 2024 and the early 2030s, Russian transport projects are being planned or are already being implemented in more than 20 countries, including Ghana, Laos, Mongolia, Iran, Nicaragua, Venezuela, and Cuba. In addition, the construction of an oil pipeline in Congo-Brazzaville and the final establishment of the North-South International Transport Corridor (ITC) as a seamless route are currently under development.

The creation of independent and reliable financial settlement channels, secure digital ecosystems, and resilient transport and logistics systems are key areas where Russia offers modern, comprehensive solutions to promote industrialization, innovation, and infrastructure development worldwide.



## Establishing Independent and Reliable Financial Settlement Channels

The creation of independent and reliable financial settlement channels is critically important for ensuring the financial stability and economic security of a country. Such channels help minimize risks associated with external geopolitical factors and disruptions in international payment systems – an issue of particular relevance in today’s global environment. In recent years, the Russian fintech sector has demonstrated steady growth and active development, including the export and international implementation of financial technologies. According to the analytical agency Smart Ranking, the volume of the Russian fintech market in the first quarter of 2024 amounted to 60.6 billion rubles, which is 31% higher compared to the same period in 2023. Over the course of 2024, the combined revenue of the 100 largest Russian fintech companies reached 231 billion rubles.

The leading Russian companies in this field include YuMoney, specializing in alternative payment solutions; Tensor, a developer of software for banking automation; Sberbank, which is actively expanding its fintech services across multiple directions; and KoronaPay, which develops international payment solutions. These companies focus on creating convenient and accessible financial services, automating business processes, and enhancing cybersecurity, thereby contributing to the digital transformation of the financial sector.



## Technologies and services

- Development and implementation of independent payment infrastructure;
- Creation of fast and transparent interbank transfer and payment services;
- Introduction of comprehensive digital currency settlement systems.

## Organizations



Bank of Russia



**GAZPROMBANK**

Bank GPB (JSC)



**SBER**

**VTB**



**Alfa-Bank**



Russian Agricultural Bank



**Simple** Lab



**FINBRIDGE**

## National Payment Card System (NSPK) (Bank of Russia)



### Integration of Mir Payment System into National Payment Systems

The development of a national payment system is a key factor in ensuring the sovereignty payment landscape. The national payment system guarantees the safety and continuity of domestic bank card transactions. NSPK provides transaction processing for Mir cards and cards of international payment systems, while also developing new products and services under the MIR brand. This solution covers the entire cycle of cashless payments and can be adapted to national and regional specificities of any country.



#### Technical Specifications

Flexible platform for issuing payment cards and managing transactions: point-of-sale (POS) payments, online payments, money transfers, withdrawal/deposit of funds. Compatibility with digital wallets, mobile applications, and contactless technologies (NFC, QR). Integration with national financial systems and government digital services. Localization and customization options to meet the legal and technological standards of the recipient country.



#### Uniqueness

Reliable alternative to international payment solutions with full domestic control;  
Ready-to-deploy infrastructure allowing for fast scaling and implementation;  
Tools to promote cashless payments (loyalty programs, cashback, digital identification);



#### Cost

Depends on specific project conditions



Also contributing to SDGs



For more information scan here:





## Implementation and Application of the Faster Payment Systems (SBP) in National Payment Systems

The Faster Payment Systems (SBP) is a service that allows instant transfer of funds from the sender's account to the recipient's account. SBP enables individuals to perform Me2Me bank-to-bank at SBP participants and P2P transfers using a phone number.

In addition, goods and services, purchases at offline and online stores, cafes, and restaurants can be paid for via SBP. For this purpose, high-tech payment tools have been developed – QR codes, NFC plates, and payment links.

SBP is a convenient, secure, and reliable system for performing transactions, which has a number of advantages for both businesses and individuals, including instant funds crediting to recipients' accounts and favorable fee rates for all categories of users. The system ensures round-the-clock availability of payments using a phone number, QR code, and payment links, and is suitable both for the mass consumer and for businesses.



### Technical Specifications

- High-speed transaction processing;
- Support for C2C, C2B, B2C, B2B- and C2G payments;
- Settlement between credit institutions in real time;
- Solid scalable architecture with high fault tolerance.



### Uniqueness

- Reduction of dependence on international payment systems;
- Capacity for full localization with due consideration of regulatory requirements of the recipient country;
- Significant reduction of transfer and payment costs for the general public and businesses;
- Increased financial inclusion, even in regions with limited banking infrastructure;
- Simple integration for banks, small businesses, and government services;
- Direct support from the Central Bank – a guarantee of reliability, stability, and trust.



### Cost

Depends on specific project conditions



For more information scan here:





## Secure Digital Ecosystems

The creation of secure digital ecosystems is one of the priority areas of Russia’s technological development. A digital ecosystem represents a sustainable model of interaction between the state, business, and citizens in the field of information technology and digital services. It contributes to the creation of an innovative environment, increases the competitiveness of the country, and improves the quality of life of its citizens.

The volume of the Russian digital ecosystem market reached 717,5 mln in 2022. In 2023, the market for ecosystem subscriptions grew to 1,4.7 bln USD, while the number of subscribers reached 66 million people, showing an almost 40% increase. The largest players remain “Yandex”, “Sber”, and MTS, which are actively expanding their services and subscription offers.

In Russian companies developing digital ecosystems, areas related to content-based everyday services—such as music streaming, online cinemas, and e-commerce—are gaining popularity. These sectors hold leading positions in terms of users and subscribers. The largest ecosystems – “Yandex”, MTS, “Sber”, VK, “Tinkoff”, X5 Retail Group, Wildberries, T-Bank, and Ozon – are focusing on improving existing services, moving away from expansion into numerous verticals, and emphasizing integration and enhancement of user experience. They are also actively implementing artificial intelligence technologies, including generative AI for intelligent chatbots, data analysis, and marketing automation.



## Technologies and services

- Ensuring Internet security;
- Innovation of an autonomous search system operating within the national digital space;
- Development of national digital ecosystems and operating systems;
- Creation of specialized marketplaces with integrated logistics infrastructure.

## Organizations





## Implementation of Cybersecurity Solutions

Kaspersky Lab’s solutions protect millions of users and over 220,000 companies worldwide, ensuring the security of businesses, critical infrastructure, government agencies, and individual users. The company develops comprehensive cybersecurity solutions designed to protect information systems, critical infrastructure, businesses, and public institutions from modern digital threats. Its products cover a wide range of tasks – from antivirus protection to targeted attack detection and incident management.



### Technical Specifications

End-to-end protection – from workstations to cloud environments and industrial systems  
Attack prevention and incident response systems (EDR/XDR)  
Centralized security management  
Advanced threat analytics  
Support for securing corporate networks, mobile devices, and remote work



### Uniqueness

Independent architecture and technological sovereignty  
High efficiency of solutions confirmed by international tests and audits  
Capability for localization and adaptation to specific country requirements  
Technology transfer programs and establishment of local competence centers



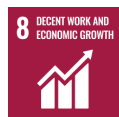
### Cost

Upon request



### Implementation Experience Abroad

Worldwide (CIS, Asia, Middle East, Latin America)



For more information scan here:





### Implementation of a Sovereign Internet Browsing System

A technological platform designed to establish an independent and scalable Internet browsing system with full localization capability. The solution enables countries and organizations to create their own search ecosystems based on Yandex’s advanced algorithms, while maintaining control over data and infrastructure.



#### Technical Specifications

- High-precision ranking algorithms based on machine learning
- Real-time crawling, indexing, and content updating mechanisms
- Intelligent answers, snippets, autocomplete, and typo correction
- Multilingual search support
- Built-in tools for filtering, analytics, and personalization
- Deployment options in isolated environments or in the customer’s cloud infrastructure
- Integration with local web resources and government portals



#### Uniqueness

- A full-fledged alternative to international search engines with local control
- Reduced dependence on foreign IT corporations
- Support for digital sovereignty
- Flexible customization for cultural and linguistic features of the region
- Access to Yandex’s advanced AI and natural language processing technologies
- Ability to create a secure and resilient information environment at the national or enterprise level



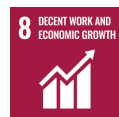
#### Cost

Upon request



#### Implementation Experience Abroad

CIS countries



For more information scan here:



VK, Sber, Yandex, MTS



## Development of Ready-Made Digital Solutions and Ecosystems

A multi-industry digital platform that combines ready-made solutions for telecommunications, cloud computing, artificial intelligence (AI), Big Data, Internet of Things (IoT), fintech, e-commerce, and digital services for both citizens and businesses. The ecosystem is designed for large-scale implementation across various industries, with the ability to adapt to national specificities.



### Technical Specifications

Cloud solutions for business and the public sector platforms for smart cities and digital public utilities. Big Data analytics and predictive analytics systems. IoT infrastructure with remote monitoring and control capabilities. Mobile and web services for users and enterprises, Integration with government information systems. High scalability and resilience under heavy loads. Comprehensive data security management system.



### Uniqueness

Unified digital ecosystem integrating telecom, fintech, AI, and cloud technologies  
Ready-to-use solutions for digital transformation of cities, enterprises, and government institutions  
Flexible architecture allowing local or hybrid deployment  
Proven experience in large-scale national and regional implementations  
Customizable solutions adapted to the legal and technical standards of the recipient country  
Full project lifecycle support – from consulting and deployment to maintenance and development



### Cost

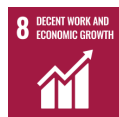
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### Implementation Experience Abroad

CIS countries

For more information scan here:



Ozon, Wildberries, CDEK,  
Yandex, Sber

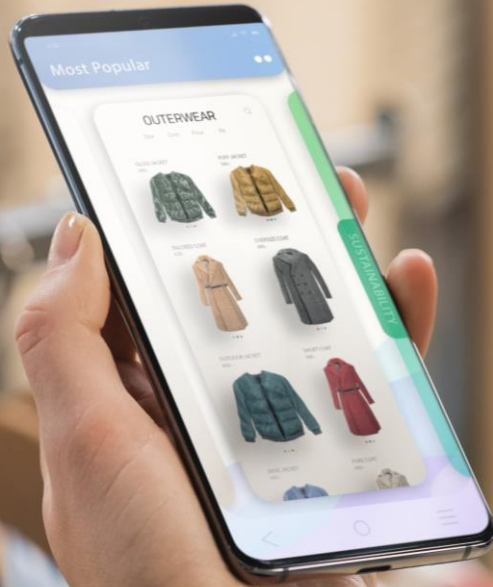
WILDBERRIES

OZON

Yandex

CDEK

SBER



## Implementation and Operation of Marketplace Platforms

A universal e-commerce platform for trading goods and services that connects millions of sellers and buyers. It provides a full range of tools for online sales, logistics, payment processing, and promotion, and can be adapted for launch in other countries as a standalone solution.



### Technical Specifications

- Scalable platform with microservice architecture
- Multi-level catalog, order, and inventory management system
- Built-in logistics tools
- Support for multi-currency payments and integration with local payment gateways
- AI-based personalized recommendation and promotion systems
- Extensive API for connecting external services
- Support for mobile applications, web interfaces, and B2B mechanisms



### Uniqueness

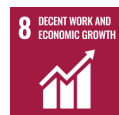
- Fast turnkey launch of a local marketplace using proven infrastructure
- Full seller support at all stages – from registration to scaling
- Adaptation to regional legislation, tax, and customs regulations
- Technological independence – all development and architecture are managed internally
- Proven experience managing a multi-million user base and dynamic product turnover in high-load environments



### Cost

Upon request

For more information scan here:





### Deployment of the Digital Photogrammetric Platform

The high-tech digital photogrammetric platform PHOTOMOD is used to obtain metrically precise 3D-information about Earth through processing optical and SAR remote sensing data.



#### Technical Specifications

Designed for servers and PC compatible with OS Windows, Astra Linux 1.7.x/1.8.x, ALT Linux 10.4, RED OS 8.0, AlterOS 9.6.

Available as a cloud service.

High performance and automation.



#### Uniqueness

Processing imagery from the most available aerial and satellite-based sensors with high and very high resolution.

Closed technological cycle for obtaining all types of 3D-mapping products.

Flexible modular configuration.

Neural network technologies onboard.

Quality control at all stages.



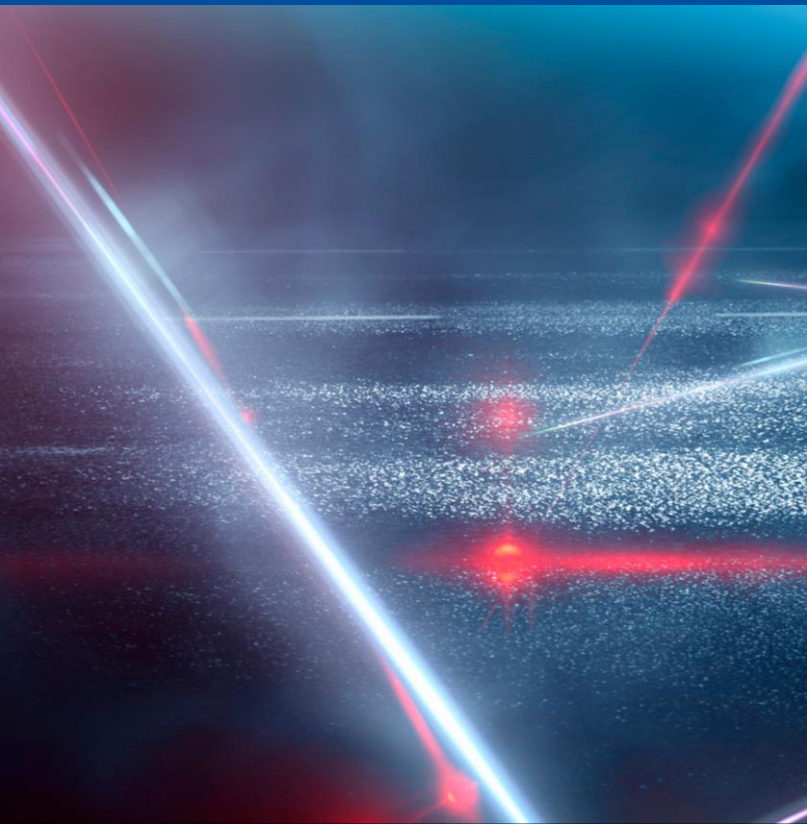
#### Cost

Upon request



For more information scan here:





## Production and Integration of Broadband Light Sources Based on Xenon Plasma

Broadband radiation sources based on laser plasma are designed to be used as high spectral brightness optical emission sources across a wide wavelength range. They are used for illuminating micro-objects with broadband radiation, particularly in metrology systems and the semiconductor industry.



### Technical Specifications

- Plasma-based broadband optical radiation source XWS-R UV FS W
- Spectral range: 250–2500 nm
- Equipped with a retroreflector and nitrogen purging capability
- Emission over a wide wavelength range
- High temporal and spatial stability
- Cooling type: liquid



### Uniqueness

- Compact emitting plasma source
- Capable of continuous operation in 24/7 mode throughout the year (8760 hours)
- High brightness and radiation power characteristics



### Cost

55 thousand USD



For more information scan here:





## Provision of Video Hosting Services

RUTUBE is a leading Russian video platform offering access to live TV, movies, series, cartoons, and user-generated content. The service is available in over 170 countries worldwide. It is most popular in Russia, Belarus, Kazakhstan, Ukraine, Uzbekistan, Kyrgyzstan, and Moldova. RUTUBE also has an active international audience, with a significant number of subscribers in Germany, the USA, France, Japan, the Czech Republic, Latvia, the United Kingdom, and Canada. RUTUBE develops and provides a wide range of technological solutions and services, offering a complete video lifecycle – from upload and storage to recommendations and analytics – giving both individual creators and large media companies a powerful tool for digital broadcasting.



### Technical Specifications

- Support for Full HD and 4K video formats
- Built-in tools for video editing and content management
- Integration with AI-based recommendation systems
- Moderation and copyright protection mechanisms
- Advanced viewership analytics system
- Geo-distributed CDN infrastructure for content storage and delivery
- Support for white label solutions and interface customization



### Uniqueness

- National alternative to major international video hosting platforms with full data control within the country
- Compliance with local legislation and digital sovereignty protection
- Monetization options for creators and partnership programs
- Integration with TV channels, educational platforms, and government services
- Transparent content policies and independence from external technology providers
- Scalable and adaptable platform for deployment in other countries



### Cost

Upon request



For more information scan here:





### Provision of Access to a Cloud Platform Service for Video Streaming Management and Intelligent Video Analytics

The cloud platform provides tools for video management and intelligent video analytics across various business and industrial sectors. Using this media platform, it is possible to create a unified analytical environment for video analysis systems across geographically distributed sites. A proprietary cluster server with load balancing ensures stable and reliable real-time video analytics services.



#### Technical Specifications

More than 3,000 servers  
Over 13 Tbit/s daily peak loads  
Traffic protection (DDoS, WAF) – more than 3 Tbit/s of mitigated cyberattacks.



#### Uniqueness

Low latency for all types of network activity.



#### Cost

1-1,2 mln USD



For more information scan here:





### Implementation of Highly Secure Operating Systems

Highly secure operating systems designed for use in governmental, corporate, and industrial infrastructures. Astra Linux provides full control over the software environment, complies with information security requirements, and can be adapted to local standards of any country. Versions are available for server, desktop, mobile, and embedded use cases.



### Technical Specifications

- Secure architecture based on the Linux kernel
- Support for a wide range of domestic and foreign hardware
- Compatibility with modern office, engineering, and industry-specific applications
- Built-in protection modules (integrity control, access control, encryption)
- Centralized administration capability
- Comprehensive migration tools from other OSs
- Support for virtualization and containerization
- Flexible licensing and update system



### Uniqueness

- Certified according to national security standards (including "state secret" level)
- Full source code control – no hidden components or dependence on external developers
- Adaptable to national regulatory requirements
- Suitable for building independent IT infrastructures in government and critical systems
- Available in desktop, server, and mobile configurations
- Proven implementation experience in large-scale national projects, including defense, energy, and finance sectors

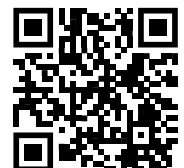


### Cost

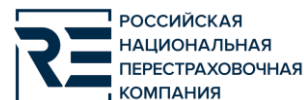
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For more information scan here:



## Joint Stock Company “Russian National Reinsurance Company” (RNRC JSC)



### Scaling of the “National Risk Office” Project

Project Objectives:

1. Preventive measures aimed at reducing potential damage from catastrophic risks.
2. Analytical support to ensure prompt decision-making for eliminating the consequences of catastrophes.

The project’s methodologies and approaches can be rapidly adapted and scaled to any territory worldwide.

Project Outcomes:

Currently, the project provides analytical data for:

- Insurance market: data for tariffing and underwriting; stress testing; portfolio accumulation assessment; calculation and calibration of reserves and capital; parameters for reinsurance portfolio transfer.
- Regional authorities: assessment of territorial vulnerability; economic feasibility of preventive measures; real-time assessment of expected and actual damages from catastrophic events; data for management decisions considering catastrophe risks.



### Technical Specifications

Developed methodologies allow the identification of flood and earthquake risks and estimation of potential economic losses.

To automate risk analysis, the Automated Information and Analytical System of the Risk-Office (AIAS RO) and the Russian National Reinsurance Company (RNRC) Geographic Information System have been developed.

Modeling and assessment of exposure and vulnerability are carried out using spatial analysis and geoprocessing operations. Systems provide interaction and integration interfaces via REST API protocols.



### Uniqueness

Earthquake Risk Analysis:

Multifactor consideration of object parameters allows precise assessment of actual seismic resistance and potential economic losses.

Ability to analyze various types of objects using a unified parameter set.

Flood Risk Analysis:

The database contains over 15 million real objects, accurately reflecting urban development.

Technical capability to scale the system to any territory.

AIAS RO calculations have been tested on numerous real flood events, demonstrating high accuracy.



### Cost

Upon request

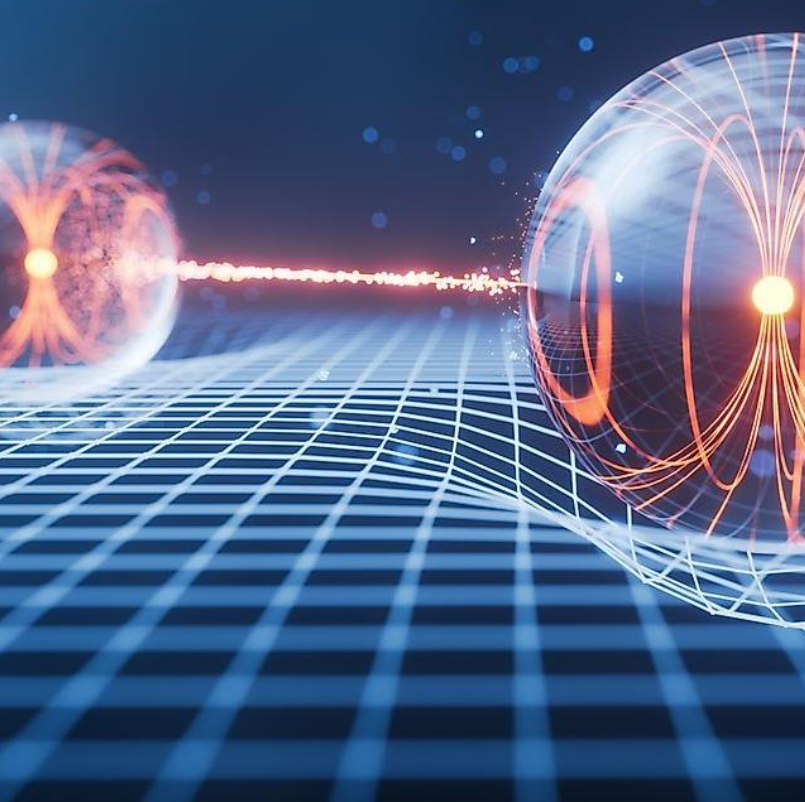


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## Protection of High-Speed Dedicated Communication Channels

The Quantum Cryptographic System (KVAKS) is an integrated solution that combines a Quantum Key Distribution System (QKDS) and a Cryptographic Information Protection Tool (CIPT) within a single unit to ensure the protection of dedicated communication channels (point-to-point topology).



### Technical Specifications

The system consists of Sender and Receiver modules. Connection between modules is established via standard optical fiber G.652/G.654. Maximum fiber link length: 100 km (equivalent optical loss – 20 dB). Quantum key generation rate: at least 700 bit/s (at 10 dB optical loss).



### Uniqueness

- Administrator involvement is required only during the initial system setup.
- Integrated CIPT modules provide throughput of 10 Gbit/s, with optional platform upgrades up to 100 Gbit/s.
- Low network latency due to the use of L1-level encryption, protecting the communication channel at the OTN (Optical Transport Network) protocol level.
- Possibility to establish a quantum communication channel in open space (range up to 50 m).



### Cost

From 430 thousand USD

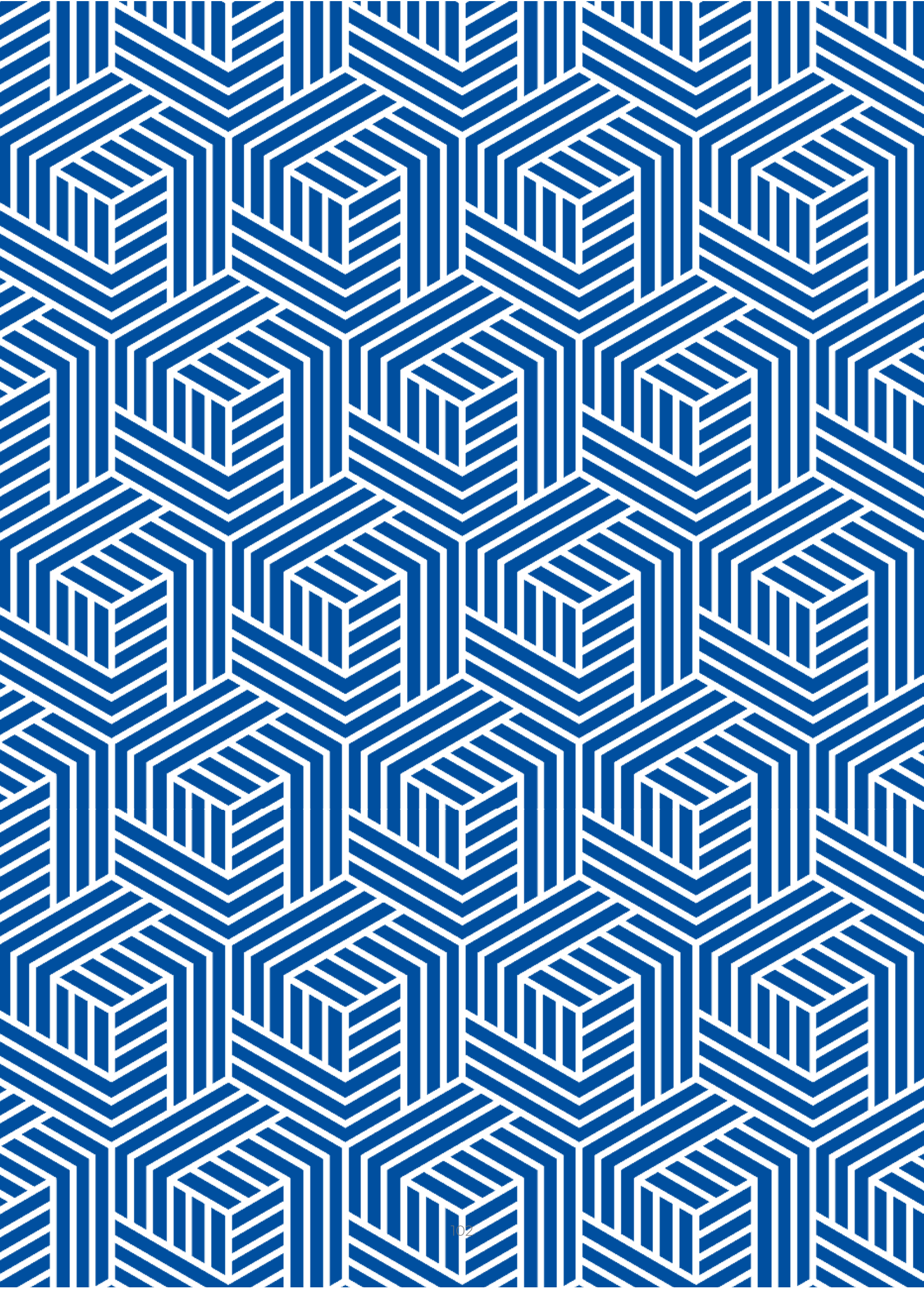


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## Sustainable and Secure Transport and Logistics Infrastructure

In the context of the ongoing disruptions and breakdown of established transport and logistics supply chains, the formation of a safe and stable transportation framework is a crucial factor for both national and global development. According to analysts, in 2023 the Russian logistics services market grew by 21.7%, reaching a record volume of 11.1 trillion rubles.

The main areas of activity for Russian transport and logistics companies include road freight transportation (intercity, regional, consolidated, and dedicated), railway, maritime, and river transport, freight forwarding, customs clearance, warehouse logistics, and multimodal transportation.

Companies such as Russian Railways (RZD), FESCO, Delo Group, Ruscon, TransContainer, Delovye Linii, ITECO, PEK, DPD, and ZheIDorEkspeditsiya, among others, are actively implementing digital technologies to optimize routes, manage warehouse inventory, and increase process transparency.

Innovative solutions ensure the safety and environmental sustainability of transport and logistics operations, improving efficiency, reliability, and resilience of freight movement both domestically and internationally.



## Technologies and services

- Modernization of railway infrastructure to improve transport speed and safety;
- Development of infrastructure for electric transport;
- Implementation of decarbonization and circular economy strategies in the aviation industry.

## Organizations



## Russian Railways (RZD), Center for Branded Transport Services (CFTS)



### Implementation of Piggyback (Combined Road-Rail) Transport

Combined freight transportation integrating rail and road modes, piggyback (or contrailer) transport represents a key component of the modern logistics system, combining the advantages of both rail and road freight.

This technology enables the optimization of long-distance cargo delivery, reducing transportation costs and minimizing environmental impact.



#### Technical Specifications

The main transport unit is a contrailer – a container mounted on a road-type chassis with wheels, suitable for loading onto rail platforms.



#### Uniqueness

Advantages:

- Reduction of carbon footprint through the use of rail transport for long-distance freight
- Extended service life of truck fleets due to reduced wear and tear
- Lower repair and maintenance costs due to fewer accidents compared to road-only transport
- Decrease in variable expenses (fuel, driver wages, tolls)
- Reduction of road infrastructure wear
- Time and resource savings through precise route planning and optimized delivery schedules



#### Cost

By agreement



Also contributing to SDGs



For more information scan here:





## Implementation of the Onboard Technical Vision System (BSTZ)

The Onboard Technical Vision System (BSTZ) is an intelligent computer vision system designed to ensure the safety of railway operations. It recognizes railway signals along the train's route, detects and identifies obstacles within the track gauge, determines their distance, recognizes the position of switch points, and automatically initiates braking if the driver fails to respond to system warnings about obstacles, stop signals, or incorrect switch positions.

The system operates by analyzing real-time video data of the track environment, displaying the analysis results on the driver's monitor, and, if necessary, directly interacting with the locomotive systems (horn, braking system, traction control).



### Technical Specifications

- Track detection range: up to 200 meters
- Switch position detection: up to 50 meters
- Human detection: up to 100 meters
- Vehicle detection: up to 200 meters
- Signal light detection: up to 200 meters
- Obstacle recognition: any object with dimensions of  $30 \times 30 \times 30$  cm at a distance of up to 70 meters



### Uniqueness

Innovative product with no analogues in foreign countries



### Cost

Upon request



Also contributing to SDGs



For more information scan here:





## Production of Eco-Friendly Aviation Fuel from Peat

A project aimed at producing sustainable aviation fuel (SAF) from peat using low-emission technologies.



### Technical Specifications

The technological chain for producing SAF from peat includes the following stages:

1. Gasification of peat to obtain raw synthesis gas;
2. Removal of by-products from synthesis gas – carbon dioxide, moisture, sulfur and nitrogen compounds;
3. Fischer-Tropsch synthesis;
4. Hydrocracking of the obtained paraffin.

The production process involves the use of:

- Air separation units;
- Treatment facilities;
- Closed-loop water supply systems;
- Flare systems;
- Storage tank farms;
- Loading terminals;
- Transport infrastructure;
- Laboratory facilities;
- Safety and security systems, etc.



### Uniqueness

Reduction of aviation’s environmental impact.



### Cost

R&D – 120 thousand USD.  
 Preliminary CAPEX estimate for plant construction – 413 mln USD.



For more information scan here:





## Application of a High-Temperature Composite Material System for Aircraft Engines

A range of serially produced polymer composite materials, including film adhesives, as well as bismaleimide and phthalonitrile prepregs.



### Technical Specifications

The project's product is used in the production of aircraft engines. The main advantage is the preservation of key physical and mechanical properties of the composite at high temperatures – 95% retention at 280°C and 75% at 350°C. Prepregs are used in heat-resistant engine components such as turbine blades and combustion chambers to increase durability and efficiency.



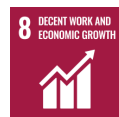
### Uniqueness

The product surpasses foreign analogues in tensile strength and elasticity and shows superior resistance to crack formation.



### Cost

123–740 USD per m<sup>3</sup>, depending on the configuration of the final product and the country of commercialization.



For more information scan here:





**ROSATOM, FESCO Transport Group**



**Implementation of the Port Infrastructure Development and Modernization Program**

Improving the energy efficiency of production processes at the Commercial Port of Vladivostok.



**Technical Specifications**

Transition from a fuel oil boiler to centralized heating (reducing pollutant emissions by 23.65%, fuel oil consumption by 496.6 tons per year).  
 Improvement of thermal characteristics of the refrigerated container fleet (reduction of GHG emissions under Scope 1 by 380.54 tons, 2025–2030).  
 Implementation of a fuel acceptance system based on actual weighing indicators (fuel savings in the first half of 2025 – 13,871 liters).  
 Tire pressure monitoring and installation of sensors on reach stackers to reduce fuel consumption (fuel savings of 26.97 thousand liters; GHG reduction under Scope 1 – 73.59 tons, 2025–2030).  
 Use of energy-efficient lighting systems during modernization and construction (installation of high-efficiency masts) – reduction of electricity consumption by 576.42 thousand kWh, and Scope 2 GHG emissions by 278.41 tons (2025–2030).  
 Replacement of diesel-powered terminal tractors (reach stackers) with electric ones (fuel savings of 199.96 thousand liters; Scope 1 GHG reduction – 2,177.09 tons, 2025–2030).



**Uniqueness**

The program provides a comprehensive approach to optimizing port technological processes, achieving:

1. Economic efficiency – cost reduction through lower resource consumption;
2. Climate change mitigation – reduction of greenhouse gas emissions (Scope 1 by 19% and Scope 2 by 8% by 2030);
3. Minimization of environmental impact – reduction of pollutant emissions.

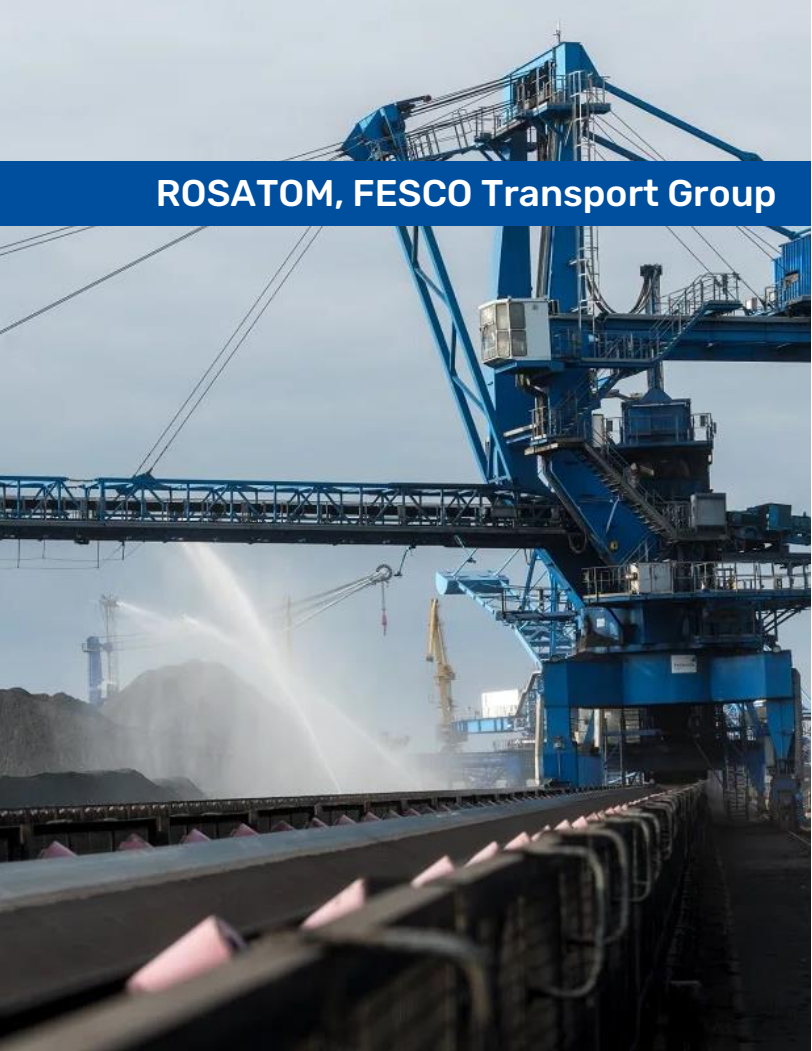


**Cost**

Upon request

**For more information scan here:**





**Technical Specifications**

The coal storage area is fenced with dust and wind protection screens 10 m high, installed on 3 sides, excluding the loading-unloading side.

Dimensional retaining walls of the warehouses with a height of 5.6 m are installed on all 4 sides.

Sprinkling of the coal warehouse using mobile and stationary irrigation installations.

Use of tarpaulins when loading coal onto the vessel.

Installation of devices for automated control of emissions into the air and an automatic observation point for meteorological parameters with transmission of all data to the servers of state supervisory authorities.

The reduction of coal dust concentrations in the atmospheric air in the summer period is 88.28%, in the winter period 87.53%.



**Uniqueness**

The systems make it possible to reduce the concentrations of coal dust in the territory of nearby residential buildings to a safe level (below the TLV (Threshold Limit Value of pollutants in the atmospheric air of urban and rural settlements), as well as to reduce the pollution of the water body.



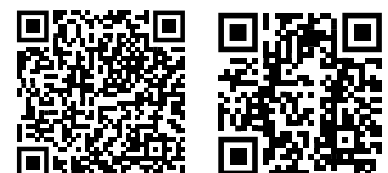
**Cost**

Upon request

**Application of a Dust Suppression System for Coal Transshipment**

Implementation of technologies for coal handling and storage at terminals that minimize dust formation and environmental impact.

For more information scan here:



Russian Railways (RZD), CTECH,  
Transmashholding (TMH),  
ROSNANO



## Operation of a hybrid shunting locomotive with lithium-ion batteries

Production of the EMKA2 electric locomotive using lithium-ion batteries manufactured by ROSNANO. The EMKA2 can be powered both by an onboard energy storage system and by an external contact network.

No dedicated charging infrastructure is required for its operation.



## Technical Specifications

Key parameters:

- Axle arrangement: 2o-2o
- Weight: 92 tons
- Maximum speed: 90 km/h
- Tractive effort:  $\geq 168$  kN
- Locomotive power:
  - From contact network (3 kV DC):  $\geq 500$  kW
  - From onboard battery:  $\geq 300$  kW



## Uniqueness

No foreign or domestic analogues currently exist.

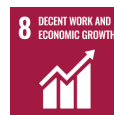
This solution ensures flexible operation without the need for a dedicated charging infrastructure.

- Traction from contact network
- Traction from onboard energy storage system
  - Battery charging from 3 kV DC contact network (both in motion and at standstill)
  - Battery charging from standard industrial power supply (380V, 50Hz)



## Cost

By agreement



For more information scan here:





ТРАНСМАШХОЛДИНГ

## Transmashholding (TMH)



### Production and implementation of the EMKA2 hybrid contact-battery shunting electric locomotive

An innovative four-axle locomotive that combines power supply from the contact network with energy from modern batteries. It is the first model in TMH’s line of eco-friendly locomotives featuring a hybrid traction system.

The EMKA2 is designed for shunting operations in depots, passenger stations, and non-electrified sections. Operating on battery power, it can autonomously move trains for up to 20 km without harmful emissions. Its use eliminates the need for diesel traction in high-traffic areas and zones with strict environmental regulations.



### Technical Specifications

Key technical characteristics:

- Cab with 360° visibility
- Modular design
- Extended maintenance intervals
- Power from contact network: 500 kW
- Power from batteries: 300 kW
- Maximum speed: 90 km/h
- Autonomous range: up to 20 km
- Energy recovery system (regenerative braking returning power to the contact network)



### Uniqueness

Advantages:

- Operates both from the contact network and onboard batteries
- Does not require specialized charging infrastructure
- Low noise level – ideal for passenger areas
- Minimal environmental impact
- Ergonomic and safe working conditions for the locomotive crew
- High modernization potential



### Cost

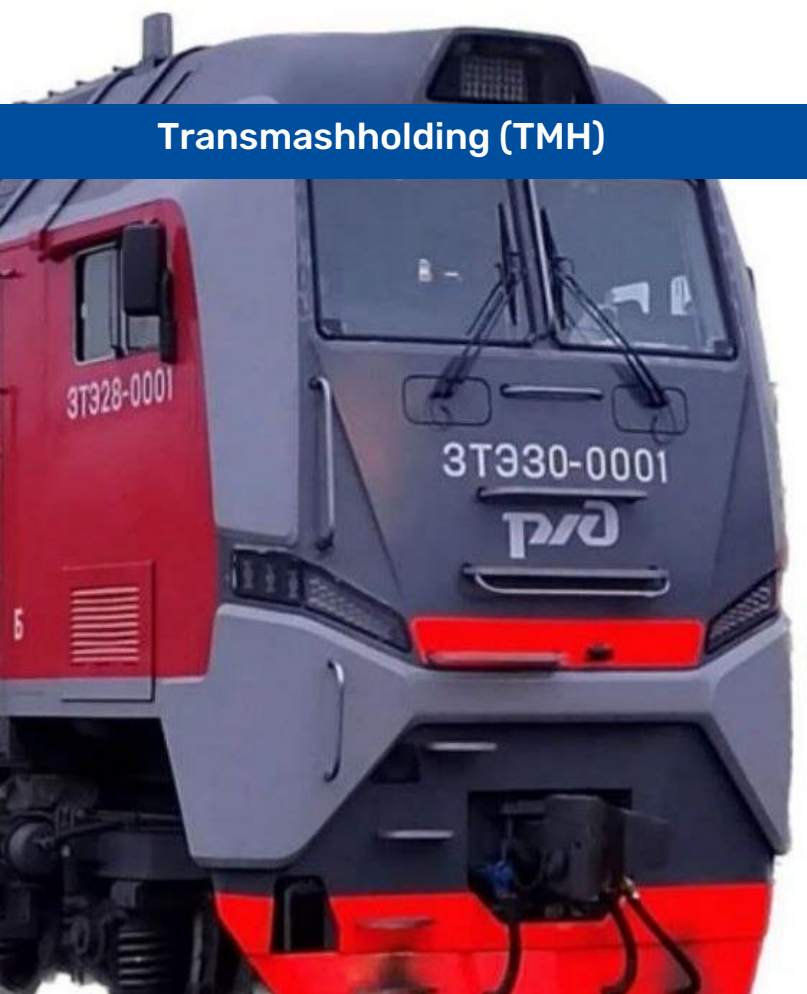
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## Application of the 3TE30 mainline gas-diesel locomotive with a high-power gas-diesel power unit and extended autonomy

A three-section mainline locomotive with gas-diesel traction designed for freight transportation on long non-electrified routes, including the Eastern Railway Range. The middle section accommodates cryogenic LNG tanks, providing the locomotive with a high level of autonomy.



### Technical Specifications

Key specifications:

- Type: mainline, gas-diesel
- Configuration: 3 sections
- Power unit: 16GDG gas-diesel generator (V16)
- Power output per unit: 3,300 kW
- Purpose: freight transport over long distances, including the Eastern Polygon
- Extended maintenance intervals enabled by asynchronous traction motors



### Uniqueness

Advantages:

- Mainline traction using LNG ensures maximum autonomy
- Integrated gas system without compromising payload capacity
- Unified with diesel locomotives 2TE30 and 16LDG220



### Cost

Upon request



Also contributing to SDGs



For more information scan here:





ТРАНСМАШХОЛДИНГ

## Transmashholding (TMH)



### Production of the Ivolga 4.0 Electric Train

The flagship model of TMH’s universal platform for urban electric trains, specifically designed for high-frequency operation in a “surface metro” mode.

The new version features intermediate cars with three doors per side and updated interior design and materials.

Manufactured at the Tver Carriage Works using up to 97% Russian-made components.



#### Technical Specifications

Key specifications:

- Maximum speed: up to 160 km/h
- Maximum acceleration: up to 1 m/s<sup>2</sup>
- Gangwayless design
- Air conditioning and air disinfection system
- Advanced passenger information system with over-door and ceiling LCD displays
- Adaptive lighting
- Ergonomic seats with USB-A and USB-C ports
- Window tables with wireless chargers and hooks for personal belongings
- Bicycle racks and dedicated areas for passengers with reduced mobility
- Charging points for electric scooters and bicycles



#### Uniqueness

Advantages:

- Flexible configuration: from 4 to 12 cars
- Intermediate cars with three doors per side – improved passenger flow and reduced dwell times
- High comfort and service standards: ergonomic design, multimedia systems, adaptive interior lighting
- Dual-stage control system with 100% redundancy and dual operator monitors
- Direction reversal in under one minute
- Support for micromobility: built-in charging and storage for scooters and bicycles



#### Cost

Upon request



Also contributing to SDGs



For more information scan here:





## Production and Supply of a Hydrogen Passenger Train

The first hydrogen-powered passenger train designed for the 1520 mm gauge – an innovative transport solution for non-electrified routes.

The project is being implemented under an agreement between TMH, Russian Railways (RZD), and the Government of the Sakhalin Region.

Two pilot units are scheduled for completion in 2026.

The train is designed with a focus on environmental sustainability, autonomy, and adaptability to low-infrastructure routes.



### Technical Specifications

Key specifications:

- Maximum speed: 120 km/h
- Hydrogen range: up to 725 km (two-car configuration)
- Battery-powered range: up to 80 km (two-car configuration)
- Central driver's control panel providing equal safety in both directions
- Full gangway between cars with sealed intercar transitions
- Low-floor entry zones for comfortable boarding
- Passenger amenities: 220V sockets, USB-A and USB-C ports, LCD information displays and screens
- Booster section housing the power equipment



### Uniqueness

Advantages:

- First hydrogen-powered passenger train in Russia
- No vibration from the power unit across the full speed range
- Suitable for operation on non-electrified railway lines
- First train in Russia specifically designed for compatibility with both medium (550 mm above railhead) and low (220 mm) platforms



### Cost

Upon request



For more information scan here:



## Transmashholding (TMH)



ТРАНСМАШХОЛДИНГ



### Technical Specifications

Key specifications:

- Capacity: up to 1,490 passengers
- Design speed: 90 km/h
- Flexible interior design options
- Ergonomic, vandal-resistant seats
- Anti-slip, dirt-repellent flooring
- Ventilation, air conditioning, and heating systems
- Air disinfection system
- Route displays above doors, interactive maps along passenger areas
- USB ports for charging devices
- Accessibility: dedicated spaces for passengers with limited mobility, equipped with additional handrails, staff call buttons, and pneumatic-mechanical lift ramp for wheelchair access

### Production and maintenance of Metro Trains

Innovative, quiet, smooth-running, and spacious metro trains featuring open gangways, wide doorways, and modern interactive passenger information systems. These solutions ensure fast and seamless passenger flow even during rush hours while providing comfortable, well-designed environment for travel, work, and rest.



### Uniqueness

Advantages:

- Customization in accordance to the needs of each metro system
- Enhanced passenger comfort: wide doors, spacious interiors, ergonomic seating
- Use of modern, durable, and vandal-resistant materials
- Improved soundproofing
- Combination of comfort, speed, and inclusivity
- Advanced passenger information system: transfer guidance and full digital navigation



### Cost

Upon request



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For more information scan here:





ТРАНСМАШХОЛДИНГ

## Transmashholding (TMH)



### Production and maintenance of Trams

Modern low-floor trams with customizable configurations of sections and axles, equipped with a proprietary TMH-designed swivel bogie.

The modular design allows for customization and adaptation to the transport systems of different cities while simplifying maintenance and reducing operating costs.



### Technical Specifications

Key specifications:

- Available configurations:
  - Single-section, four-axle trams
  - Two-section, four-axle trams
  - Three section, six-axle, single direction trams, Three-section, six-axle bi-directional trams
  - Three-section, eight-axle bidirectional trams, Five-section, eight-axle bidirectional trams.
- 100% low-floor design
- Variable passenger capacity: 115 to 400
- External video surveillance and road assessment
- Driver assistance
- Climate control
- Folding ramp and wheelchair space with fixation system
- Passenger information screens and USB charging ports
- Autonomous movement (contactless network)



### Uniqueness

Advantages:

- Unique flexible swivel bogie
- Driver's cab with maximum visibility and ergonomic workspace
- High energy efficiency and low noise
- Spacious, well-lit interiors designed for accessibility and passenger comfort
- Integration of climate control, multimedia systems, USB ports, and Wi-Fi routers



### Cost

Upon request



Also contributing to SDGs



For more information scan here:





ТРАНСМАШХОЛДИНГ

## Transmashholding (TMH)



### Technical Specifications

Key specifications:

- Length: 12,375 mm
- Width: 2,550 mm
- Seats: 35
- Total passenger capacity: 80
- Charging type: combined (380/600 V socket, pantograph, trolley poles)
- Battery capacity: from 93 to 150 kWh
- Autonomous range: 40–100 km (customizable per customer requirements)
- Charging time: 0 minutes during dynamic charging, up to 85 minutes at a station
- 100% low-floor design
- Separate climate control systems for driver and passengers
- Wide doors with anti-pinch and illumination systems
- Multimedia systems, 360° camera monitoring
- Accessibility features: ramp, wheelchair fixation system, and driver call button

## Production and supply of Electric Buses

A high-tech solution for sustainable urban transport that combines the best features of trolleybuses and electric buses, including a unique hybrid charging system.

The TMH electric bus demonstrates high operational performance, full compatibility with existing urban infrastructure, and is designed for comfortable transportation of all passenger categories, even in dense city traffic conditions.



### Uniqueness

Advantages:

- First electric bus with triple-mode charging system
- Fully low-floor design with increased seating in the low-floor area
- High operational flexibility – can use city trolley networks or stationary charging stations
- Composite, flame-retardant body materials resistant to urban environmental stress
- Quiet, eco-friendly, and energy-efficient urban mobility solution



### Cost

Upon request



Also contributing to SDGs



For more information scan here:





ТРАНСМАШХОЛДИНГ

## Transmashholding (TMH)



### Development of Trolleybuses

A modern technological solution suitable for any trolleybus network.

The 100% low-floor design ensures safe and convenient access to the interior and comfortable movement for all passenger categories, including people with reduced mobility.



### Technical Specifications

- Length: 12,375 mm
- Width: 2,550 mm
- Number of seats: 35
- Total passenger capacity: 100 people
- Unique traction battery of Russian production
- Connection/disconnection from the contact network within seconds
- Autonomous range: up to 50 km (adjustable according to customer requirements)
- Low-floor elastic chassis
- Climate control systems (separate for driver and passengers)
- Wide doors with pneumatic or electric drive and illumination
- Multimedia systems and all-round cameras
- Accessibility features: ramp, wheelchair fixing system, driver call button



### Uniqueness

- Full compatibility with existing urban transport infrastructure
- Low specific electricity consumption for traction
- Easily replaceable interior elements
- Low fire load per 1 m<sup>2</sup>
- Enhanced sound insulation
- Increased number of seats directly in the low-floor section of the cabin



### Cost

Upon request

Also contributing to SDGs



For more information scan here:





## Green Port Project

Since 2021, Delo Group (the largest transport and logistics holding in Russia), together with the ROSATOM State Corporation, has been implementing the “Green Port” project aimed at transitioning logistics terminals to the use of low-carbon energy sources.

The first port infrastructure facilities to switch to renewable electricity in 2022 were two terminals in the Azov–Black Sea region of Russia.



### Technical Specifications

- As part of the transition to the Green Port concept, a direct contract was signed for the supply of renewable energy. Thus, all electricity consumed by the port terminals has certified green origin.
- Further development of the Green Port initiative – and the reduction of the carbon footprint of transported cargo – is ensured both through the renewable energy attribute certificates (RECs) mechanism and through the purchase of green and nuclear energy certificates, which became available on the Russian market in 2024.



### Uniqueness

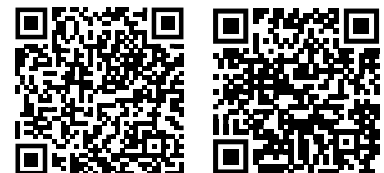
- The Green Port project enables the use of renewable electricity to minimize indirect energy-related greenhouse gas emissions (Scope 2), as well as other indirect emissions (Scope 3).
- The annual CO<sub>2</sub> emission reduction achieved by the participating terminals amounts to approximately 12,500 tons of CO<sub>2</sub> per year.
- This approach to lowering the carbon footprint of port infrastructure can be replicated internationally, particularly in partner countries with maritime access.



### Cost

Upon request

For more information scan here:





## Production and Supply of the "Atom" Electric Vehicle

The Atom electric vehicle is an advanced digital platform developed in the Republic of Tatarstan. It combines:

- Modern engineering solutions;
- Advanced ADAS electronic systems (driver assistance and safety technologies);
- Telematics equipment;
- Capability for integration with digital infrastructure of governmental and corporate clients.



### Technical Specifications

- Range: up to 500 km
- Charging time: 30 minutes (20–80%)
- Turning radius: 4.9 m
- Acceleration: 0–100 km/h in 8 seconds



### Uniqueness

- The first mass-produced Russian electric vehicle
- Optimal balance of cost and performance
- Tested in extreme cold conditions (down to –40°C)
- Open architecture for integration of applications from smartphone and gaming developers



### Cost

Upon request



### Implementation Experience Abroad

China, Uzbekistan, Belarus, Malaysia



For more information scan here:





LLC "Piklema"



### Technical Specifications

Calculations and analyses are performed using neural network algorithms. The system functions as a voice and visual driver assistant and includes detailed analytics on fuel consumption and driving speed. It optimizes driving styles, enables driver self-training, performs factor analysis of specific fuel consumption, and generates driver performance ratings after each shift.



### Uniqueness

The solution addresses the issue of inefficient fuel consumption caused by subjective speed choices and varying driving styles. It provides fuel savings of 3–7% (up to 200 million rubles per fleet of 100 vehicles) and reduces CO<sub>2</sub> emissions by 5% through optimized driving modes.



### Cost

Up to 620 thousand USD

## Piklema Driver Assistant System (Digital Advisor for Mining Dump Truck Operators)

The Piklema Driver Assistant is an AI-powered digital advisor designed for dump truck operators. It provides visual and audio recommendations to help maintain optimal speed modes on industrial roads by analyzing factors affecting fuel consumption.



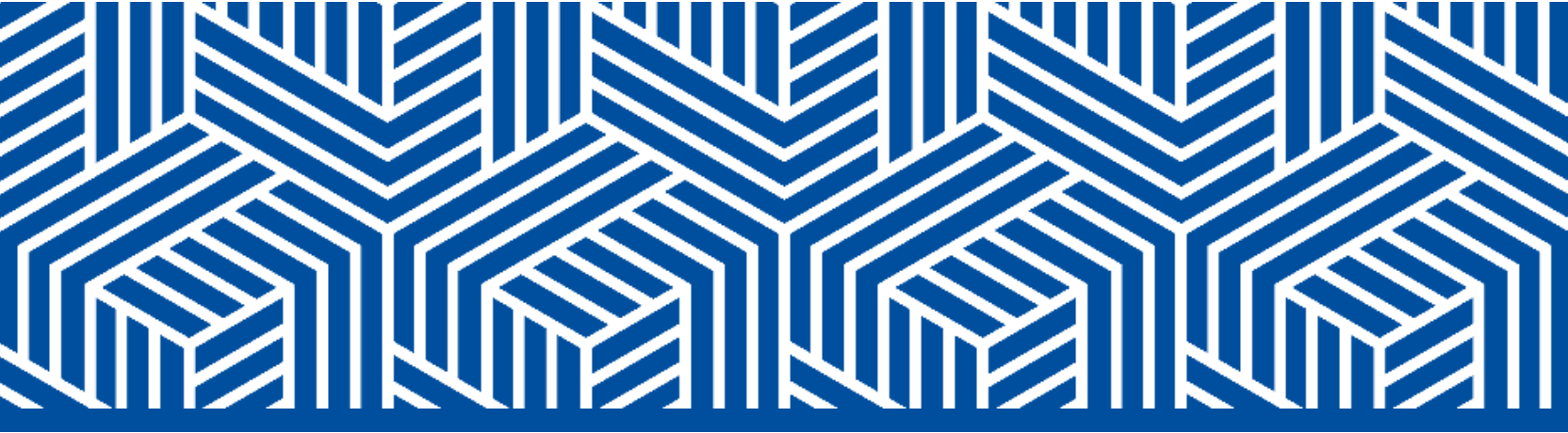
Also contributing to SDGs



For more information scan here:







# SDG 11

## Sustainable cities and communities



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Urbanization is an integral process in the development of society. Cities are the centers of economic growth, but they can also trigger environmental and social challenges. Ensuring that cities and settlements are open, safe, resilient, and environmentally sustainable represents a key objective of SDG 11.

### **Russia's Achievements:**

Modern Russia is characterized by high rates of urbanization: around 80% of the country's GDP and more than 75% of its population are concentrated in cities. By 2036, Russia plans to improve the quality of the urban environment in key settlements by 60% through the development of transport, social, and utility infrastructure, the implementation of smart city management systems, and the promotion of investment projects aimed at transforming Russian cities into major centers of economic growth.

In 2020, the Russian capital ranked 18th in the international Services Globalization Index for digital city transformation, improving its position by five places and surpassing cities such as Dubai, Tokyo, and Seoul. By 2024, Moscow entered the top five in the Urban & Innovation Index, while according to the HSE Global Cities Innovation Index 2024, among more than 1,000 cities from 144 countries, Saint Petersburg and Novosibirsk ranked within the top 100 for indicators such as technological development, creative industries, and urban environment quality.

Such progress has been made possible through the active efforts of Russian companies in urban digitalization and optimization, the development of accessible infrastructure for both residents and tourists, and the adoption of energy-efficient technologies. Russia is ready to share these solutions with international partners to support the development of sustainable and comfortable cities and communities around the world.



## Digitalization and Urban Space Management

The digitalization of urban environments in Russia is aimed at creating an efficient system for managing city infrastructure through the use of modern digital and engineering solutions. In recent years, Russia has shown significant progress toward achieving these goals, proved by a 55% increase in the national “Urban IQ” digital maturity index over the past five years – from 2018 to 2023, it reached 61 out of 120 points.

Moscow remains the leader in digitalization, maintaining the maximum score of 120 points in the Russian Ministry of Construction’s ranking for six consecutive years. The city annually introduces and modernizes over 100 electronic public services and actively applies artificial intelligence in urban management. Other cities such as Kazan, Tyumen, Yekaterinburg, and Yuzhno-Sakhalinsk are also advancing digital transformation through projects focused on intelligent transport systems, housing and utilities management, and environmental monitoring.

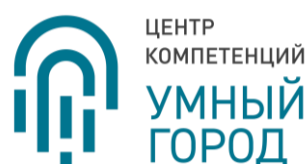
Russian companies including Rostelecom, MegaFon, Smart-City, Compass, Orange System Group, ICBCCom, and Sitronics are actively implementing urban digitalization and management projects. Their initiatives cover smart housing and utilities systems, intelligent transport infrastructure, urban development, and the integration of AI and IoT solutions to optimize operations and improve quality of life.



## Technologies and services

- Development and integration of technological, environmental, and social solutions for creating smart cities;
- Implementation of digital services for urban transport systems;
- Development of digital platforms to support civil and industrial construction projects;
- Expansion and integration of digital services in the housing and utilities sector.

## Organizations





## Implementation of Passive Safety Systems (Crash System) for Coupling Devices of High-Speed Electric Trains, Metro, and Urban Transport

Crash systems integrated into coupling devices significantly reduce the risk of fatalities and passenger injuries in the event of a railway accident.



### Technical Specifications

Can be used as both head-end and inter-car coupling systems.  
Applicable for high-speed passenger trains (up to 200 km/h) and very high-speed trains (up to 360 km/h).  
Operating temperature range:  $-50^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$ .



### Uniqueness

Exceeds global analogues in impact energy absorption (up to 70%) ensuring a higher level of safety.



### Cost

17 – 21 thousand USD per unit, depending on functional application and country of commercialization



Also contributing to SDGs



For more information scan here:



## Implementation and Application of the "Digital Twin" System

A management tool for urban development based on a 3D model of the city covering more than 2,500 sq. km and incorporating over 9,000 data layers, developed by domestic contractors. The platform enables a comprehensive approach to infrastructure development and urban improvement, taking into account diverse conditions and development scenarios.



### Also contributing to SDGs



For more  
information  
scan here:



### Technical Specifications

- A complete, highly detailed photogrammetric model of the city based on over 12 million photographs
- The digital twin contains more than 9 thousand analytical layers with arrays of data on all spheres of city life.
- Generative AI and computer vision are used, as well as the Internet of Things (IoT)
- Subsystem "Meta" – modeling planned changes in the city with details down to the facades.



### Uniqueness

- AI algorithms are integrated into the platform, which: project images from city cameras in real time onto 3D model zones; improve detail; and remove individual objects from photographs.
- Generative design: AI creates and tests various building options (schools, residential complexes, hospitals) in a digital model of the area, optimizing their integration into the existing infrastructure.
- The digital twin stores an up-to-date spatial model of the city, as well as provides access to historical versions and functionality for modeling scenarios for the development of the territory, taking into account future developments.
- Developed by domestic contractors



### Cost

Depending on functional use  
and country of commercialization.

## Digital control of housing and communal services (HCS)

Digital control of utility equipment – a system for efficient street cleaning control by equipping city utility vehicles with movement sensors.

Digital control of snow and construction waste removal – a system for tracking the timely removal of snow and construction waste, ensuring compliance with transportation rules and environmentally friendly waste disposal.



### Cost

Depending on functional use and country of commercialization



### Also contributing to SDGs



For more information scan here:



### Technical Specifications

Automated Information System for the management of construction and demolition waste and soils (AIS OSSiG):

Controls the movement of construction waste and soils in Moscow

Uses onboard navigation-communication equipment (ONCE) with GLONASS/GPS support

Movement data is automatically transmitted to the system, ensuring transparency and waste removal control

Automated Technical Resource Management System (ATRMS):

Integrated with the Automated Information System for the management of construction and demolition waste and soils (AIS OSSiG) to monitor technical resources, including construction machinery.

Enables real-time tracking of equipment location, condition, and movement routes.

Provides accurate accounting and control over waste handling processes.

Control and Measurement Points (CMP):

Installed at sites of organizations that generate waste and at facilities receiving it.

Used for weighing and measuring waste, as well as for recording the transport vehicles involved in its movement.



### Uniqueness

- Integrates various systems and technologies to prevent unauthorized waste dumping and enhance the city’s environmental safety.
- Enables real-time monitoring of cleaning operations and waste removal. Artificial intelligence is applied to detect deficiencies in cleaning and landscaping based on screenshots from surveillance cameras.
- Uses GLONASS/GPS trackers to monitor vehicle routes and locations.
- Ensures compliance with environmental regulations and standards.
- Control and Measurement Points (CMP) at key locations provide accurate waste measurement and accounting to ensure data reliability and effective waste disposal management.



### Operation of the Intelligent Transport System

A system for efficient management of traffic flows, designed to increase the throughput capacity of the road network, prevent traffic congestion, improve road safety, and provide road users with information about the current traffic situation.

Traffic Management Center (TMC): a unified center that monitors and controls traffic flows in real time.



### Technical Specifications

- Over 60,000 traffic lights operating in adaptive mode based on traffic conditions
- Over 3,900 traffic detectors collecting data for analysis and regulation
- Over 1,400 cameras monitoring road conditions and recording violations
- 800 display boards informing drivers about current traffic situations and alternative routes



### Uniqueness

- One of the world’s largest ITS— covers the entire city
- Integrated with city systems (mos.ru, EMIAS, etc.)
- Use of AI and Big Data for real-time traffic regulation



### Cost

Depending on functional use and country of commercialization



For more information scan here:





### Application of Digital Service Solutions for Passengers

A set of digital services in public transport provides citizens with convenient mobility across the city, enables route planning (surface transport and metro), and access to navigation screens in trains and a chatbot for prompt support.



#### Technical Specifications

- "Moscow Metro" app – allows payment using biometrics, precise to-the-minute route planning in the metro, and analysis of train car occupancy.
- "Moscow Transport" app – enables real-time route planning across all types of transport, including cars provided by carsharing services and scooters.



#### Uniqueness

Face Pay: biometric fare payment system in the metro, allowing passengers to pass through turnstiles without physical cards or devices.

Chatbot provides consultations on public transportation routes.



#### Cost

Depending on functional use and country of commercialization



For more information scan here:



## Implementation of Cluster Project Solutions: “Smart Home” and “Smart Apartment”

The “Smart apartment” solution is aimed at improving the quality of life within the home, providing comfort and safety, increasing overall efficiency of heat and energy resource usage, reducing utility costs, and managing household devices and engineering systems.



Also contributing to SDGs



### Technical Specifications

- Reduction of residents’ expenses for heat and energy resources.
- High level of security and fault tolerance.
- Integration of various types of systems and devices into the “Smart Apartment” via wired or wireless methods.
- Comprehensive automation of all apartment systems with various control methods: scenario buttons, switches, mobile app, individual scenarios, voice assistant “Salut”.
- All devices are integrated into the spatial environment of the apartment.



### Uniqueness

Addressing the needs of the developer at all stages of the construction lifecycle, conceptual design, development of information models (3D modeling), detailed working documentation, complete panel, local operation without internet, integration of any apartment systems, pre-set user scenarios.



### Cost

It is defined according to the customer's tasks and the chosen configuration of solutions

For more information scan here:



## Implementation of Cluster Project Solutions: “Smart Home” and “Smart Apartment”

Part of the "Smart home". Automation of lighting control systems in common areas of residential and office buildings – an automated system for managing internal engineering systems.

The lighting system supports adjustable light color scenarios, biorhythm tracking, presence sensors, and energy-saving criteria, as well as operating cost optimization (e.g., common area lighting payments).



**Also contributing to SDGs**



**For more information scan here:**



### Technical Specifications

- Reduction of greenhouse gas emissions by scope 2 – 1,000 tons CO<sub>2</sub>-eq/year.
- Reduction of negative impact on biodiversity.
- Maintenance of residents' quality of life and health.
- Reduction of residents' and companies' expenses for energy resources.
- Optimization of energy consumption volume and cost.
- Reduction of operational expenses via remote monitoring of deviations and technical accounting systems.



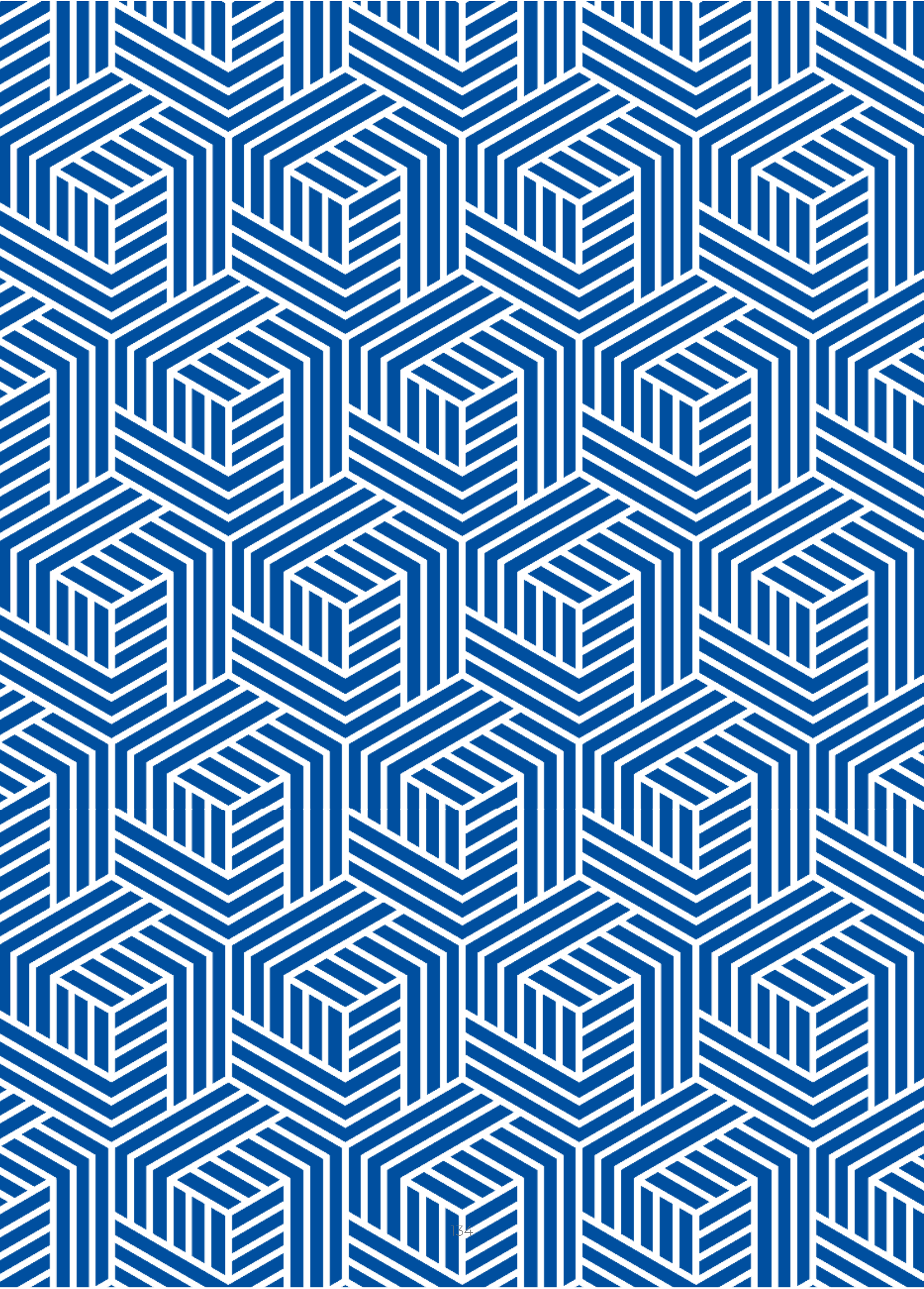
### Uniqueness

- Reduction of infrastructure downtime losses by incident cycle management.
- 24/7 monitoring and control of real estate operation processes and engineering systems via a unified digital platform.
- Implementation of an AI-based energy management module.
- Implementation of an ISO-compliant incident management system.
- Automation, optimization, and cost reduction of real estate operation processes through the implementation of an intelligent building management system.



### Cost

Cost depends on the client's objectives and the selected configuration.





## Creation of Accessible Urban Infrastructure for Local Residents and Tourists

In Russia, the creation of accessible infrastructure for residents and tourists is implemented through the development of transport systems, housing, social and tourism infrastructure, as well as the improvement of public spaces under various national, federal, and regional initiatives. According to the Urban Environment Quality Index, by 2024 the share of Russian cities with a favorable living environment had reached 82.4%. Furthermore, a study by the Higher School of Economics (HSE University) found that Russia's largest cities – Moscow and Saint Petersburg – are among the world's top 20 cities in terms of pedestrian accessibility to essential social services: on average, Moscow residents spend no more than 10 minutes walking to kindergartens, shops, and clinics – significantly exceeding global benchmarks in this area.

Key players in improving the country's urban infrastructure include the Ministry of Construction and the Ministry of Transport of Russia, as well as companies such as "Smart City", "Compass", "Orange System Group", and "Sitronics", alongside major travel operators – "Biblio-Globus", PEGAS Touristik, Anex Tour, Coral Travel, Tez Tour, and Intourist. These organizations drive projects integrating innovative digital solutions, enhancing the comfort and safety of the urban environment, and expanding transport accessibility through the creation of comprehensive urban infrastructure tailored to the needs of both citizens and tourists.



## Technologies and services

- Development of urban lighting and intelligent transport infrastructure systems;
- Improving quality of life through enhanced urban infrastructure;
- Formation of a barrier-free urban environment;
- Creation of engineering and transport infrastructure to support tourism cluster development.

## Organizations





### Production of Children's playground equipment

Creating safe and functional playgrounds for children using environmentally friendly and recycled materials helps develop modern play areas that support child development.



### Technical Specifications

Recycled materials are used in production, and manufacturing waste (sawdust, shavings) is reused as a heat source. Renewable energy sources are used in the production process (15% reduction in GHG emissions). Various types of wood with unique properties, steel, and innovative materials (HLP with UV protection, HDPE) are used. Technologies include shot blasting, Leber Zinc Protect corrosion protection, Leber Durable Painting powder coating, and VR technologies etc.



### Uniqueness

The company creates custom-designed playgrounds for each location.

Playground infrastructure promotes inclusion, helps develop musical skills, and supports children's understanding of the surrounding world.



### Cost

Upon request



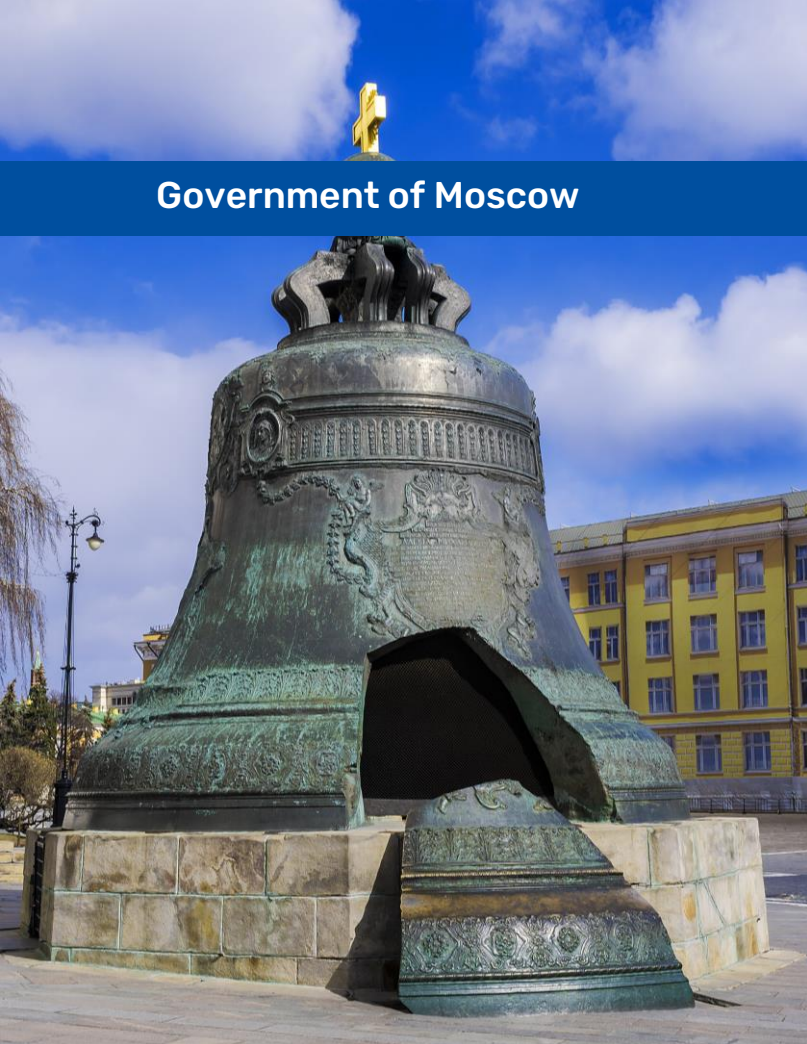
### Implementation Experience Abroad

CIS countries, Middle East countries



For more information scan here:





### Development and Implementation of an Online Guide Similar to “Discover Moscow”

An interactive online guide for exploring the history and architecture of city buildings and monuments, and planning walking routes around the city.



#### Technical Specifications

- Cross-platform (iOS, Android)
- Description of over 3000 architectural objects in Moscow
- Interactive maps and routes, themed quizzes
- QR codes on landmarks for accessing information
- 3D tours and panoramic photos
- English version of the portal for foreign tourists



#### Uniqueness

- Augmented reality (AR): interactive exploration of surroundings, virtual tours of closed sites
- QR codes: fast access to object information
- Audio guide: background listening mode
- User-generated routes and object descriptions



#### Cost

Depending on application and country of commercialization



For more information scan here:





# Government of Moscow



## Technical Specifications

- Virtual tours of exhibitions;
- Access to digital collections and archives;
- Interactive educational programs.



## Uniqueness

- Integration of various Moscow museums on a single platform;
- Content accessibility for a wide audience, including people with disabilities.



## Cost

Depending on application and country of commercialization

## Implementation of similar to "Museum Moscow Online"

Photographs of artworks and artifacts from various historical periods from the collections of Moscow exhibition venues in digitized format.



Also contributing to SDGs



For more information scan here:





### Provision of Access to the "RUSSPASS" Travel Planning Service

A service that provides online tourist services: travel planning across Russia (ticket purchases, hotel bookings), organization of tours/excursions, and information on cultural events.



#### Technical Specifications

- Booking of hotels, airline tickets, train tickets, and excursions;
- Ready-made routes and tours around Moscow and other cities;
- Information about attractions, restaurants, cafes, and events;
- Ability to create a personalized travel itinerary.



#### Uniqueness

- Integration with city services and events;
- Availability in multiple languages for foreign tourists.

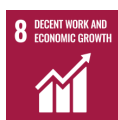


#### Cost

Depending on application and country of commercialization



Also contributing to SDGs



For more information scan here:



## Government of Moscow, National Payment Card System (NSPK) (Bank of Russia)



The Government  
of Moscow



### Operation of the “Muscovite Card” Urban Infrastructure Access System

The Muscovite Card (Moscow Resident Card) is a key tool in implementing the social policy of the City of Moscow. It integrates support measures, benefits, discounts and city services. The project aims to improve the efficiency of targeted social assistance to citizens – pensioners, students, schoolchildren, people with disabilities and other privileged groups.

The card identifies the holder as a recipient of social support measures and records entitlement to such measures, including government social aid and benefits. It also provides access to an ecosystem of city services – from transportation and healthcare to cultural initiatives.



#### Technical Specifications

- Provides free or discounted public transport in Moscow and suburban trains for specific categories of citizens;
- Allows booking medical appointments via EMIAS terminals in Moscow medical institutions;
- Used to confirm eligibility for benefits and discounts in various city institutions;
- The card is valid for 7 years, the card maintenance is free for its holders;
- New cards use domestic chips that offer a higher level of personal data protection.



#### Uniqueness

- Provided to various categories of Moscow residents, including pensioners, students, people with disabilities, and others;
- The most popular benefits offered by the Muscovite Card include subsidized public transport fares, discounts from program partners, making medical appointments, social certificates, registration for and access to classes in the Moscow Longevity Project, school attendance and meals, and more.



#### Cost

Depending on functional use and country of commercialization



For more  
information  
scan here:



## Government of St. Petersburg, National Payment Card System (NSPK) (Bank of Russia)



## Operation of the "Unified St. Petersburg Resident Card" Urban Infrastructure Access System

The Unified St. Petersburg Citizen Card (UPC) is rightly considered the flagship among digital resident cards. This embossed multifunctional electronic smart card was created to provide social support measures and additional social support measures to all categories of St. Petersburg residents.

The Unified St. Petersburg Card combines the following features:

- bank card
- travel card with the option of registering a Unified Social Travel Card
- discount card
- electronic signature carrier

Over the past year, three new products have been implemented on the Card:

- UPC Silver Age Card - a special card for citizens of pre-retirement and retirement age.
- UPC Leningradskaya Card - the first agglomeration card for residents of the Leningrad Oblast
- UPC kids' card (EKPshka Card) - a special children's card with the option of paying for meals and gaining access to schools.

Features:

- Favorable rates when paying for ground transportation and the metro;
- Special discounts and promotions from partners;
- An ecosystem of digital services aimed at improving the quality of life of citizens – access to 13 services on the UPC portal and in the mobile app.



### Technical Specifications

- Any Russian citizen can apply for the card;
- It combines several applications, which simplifies access to city services;
- The project's services are tailored to different target audiences;
- Gifts for cardholders from the city through the "Rewards Store" for completing small tasks;
- Receiving feedback from cardholders through the "City Dialogue" service.



### Uniqueness

- All cards are embossed and include the holder's photo and personal data.
- The project initiated the development of a new Russian-made chip that will provide the highest level of cardholder data protection.



### Cost

Depending on functional application and country of commercialization



For more information scan here:





## Creating an Energy-Efficient City

Cities play a crucial role in achieving Russia's national goal of carbon neutrality by 2060. Therefore, improving the energy efficiency of urban areas is one of the key priorities for federal and municipal authorities, as well as for private companies.

Moscow remains a national leader in this field, ranking among the top three most illuminated cities in the world. The installation of over 827,000 energy-efficient lighting fixtures and the implementation of smart lighting control systems have enabled the city to reduce electricity consumption by up to 30% by 2025.

According to DOM.RF, in the first half of 2024, the total area of energy-efficient housing (class A and higher) reached a record 41.9 million square meters – a 22% increase compared to the previous year. Such housing now accounts for 36.5% of all residential construction in the country.

Key Russian companies and organizations working to improve urban energy efficiency include the Russian Energy Agency (REA) under the Ministry of Energy, SberCity, Rostelecom, and Rosatom. These entities are implementing smart city systems to optimize heat supply and energy consumption, developing intelligent energy management systems, digitalizing and automating energy infrastructure, promoting renewable energy, and creating charging networks for electric vehicles.



## Technologies and services

- Development and implementation of integrated energy-saving and energy-efficiency solutions in the construction of multi-apartment residential buildings;
- Integration of the “Smart Home” ecosystem solutions complex.

## Organizations



## Implementation of a comprehensive set of energy supply solutions

The software and hardware complex "Territory Energy Management Center" (TEMC) is designed for technological and operational management of energy assets for centralized thermal energy production and distribution based on actual demand from residents (end users) within SberCity.



Also contributing to SDGs



For more information scan here:



### Technical Specifications

- Reduction of greenhouse gas emissions: -19.4 thousand tons CO<sub>2</sub>-eq./year;
- Monitoring and control of GHG emissions;
- Automation of energy centers (EC) based on user demand rather than temperature charts;
- Reduction of wear and tear on engineering equipment;
- Combination of classical and "green" energy generation;
- Reduction in thermal energy consumption.



### Uniqueness

- Automatic regulation of process parameters;
- Equipment status monitoring; Cyber and physical security; Prevention of emergency situations;
- Forecasting financial performance of the energy-supplying company;
- Calculation of energy tariffs;
- Development of maintenance and investment programs;
- Accounting for supply and consumption of fuel and energy resources;
- Calculation and registration of climate indicators.



### Cost

Defined according to the customer's tasks and the selected configuration of solutions

## Implementation of a comprehensive set of energy supply solutions

Energy center for multiple blocks (replacement of centralized boiler house with EC, eliminating trunk networks) - a boiler house and cooling center located in the technical floor of a building, operating for multiple buildings and centrally producing heat and cold.



Also contributing to SDGs



For more information scan here:



### Technical Specifications

- Year-round heat supply capability (365 days);
- No need for trunk thermal networks with protected zones;
- Ability to operate based on client demand;
- Reduction of NO<sub>x</sub> emissions.
- GHG emission reduction: from 4,000 tons CO<sub>2</sub>-eq./year;
- 10.5% fuel consumption reduction;



### Uniqueness

- Transition from a central boiler house to a distributed heat and cooling generation system serving multiple buildings and located on the upper technical floors of the buildings.
- Use of refrigeration equipment capacities to dissipate heat during peak loads.
- Application of variable frequency drives.
- Reduction of losses during energy transmission.



### Cost

Defined according to the customer's tasks and the selected configuration of solutions



## Implementation of a comprehensive set of energy supply solutions

Centralized cooling supply for residential and office districts based on absorption chillers (ACH) or direct resource conversion systems (gas-to-cold, GTC) instead of chillers and household air conditioners.



### Technical Specifications

- Possibility of centralized maintenance by a specialized organization;
- Preservation of the building's architectural appearance;
- Possibility of using secondary heat for hot water needs;
- Payment for the "cold" resource via metering;
- Reduction of GHG emissions: -5.4 thousand tons CO<sub>2</sub>-eq.



### Uniqueness

- Reduction of Capex due to use of cooling installations during peak load hours;
- Potential use of secondary heat for domestic hot water supply;
- Preservation of architectural appearance of buildings.



### Cost

Determined by the customer's objectives and chosen system configuration



Also contributing to SDGs



For more information scan here:





## Implementation of a comprehensive set of energy supply solutions

Green generation based on heat pumps.



### Technical Specifications

Generation of electricity for powering common areas  
Reduction of CO<sub>2</sub> emissions



### Uniqueness

Heat production and hot water supply based on geothermal heat pump



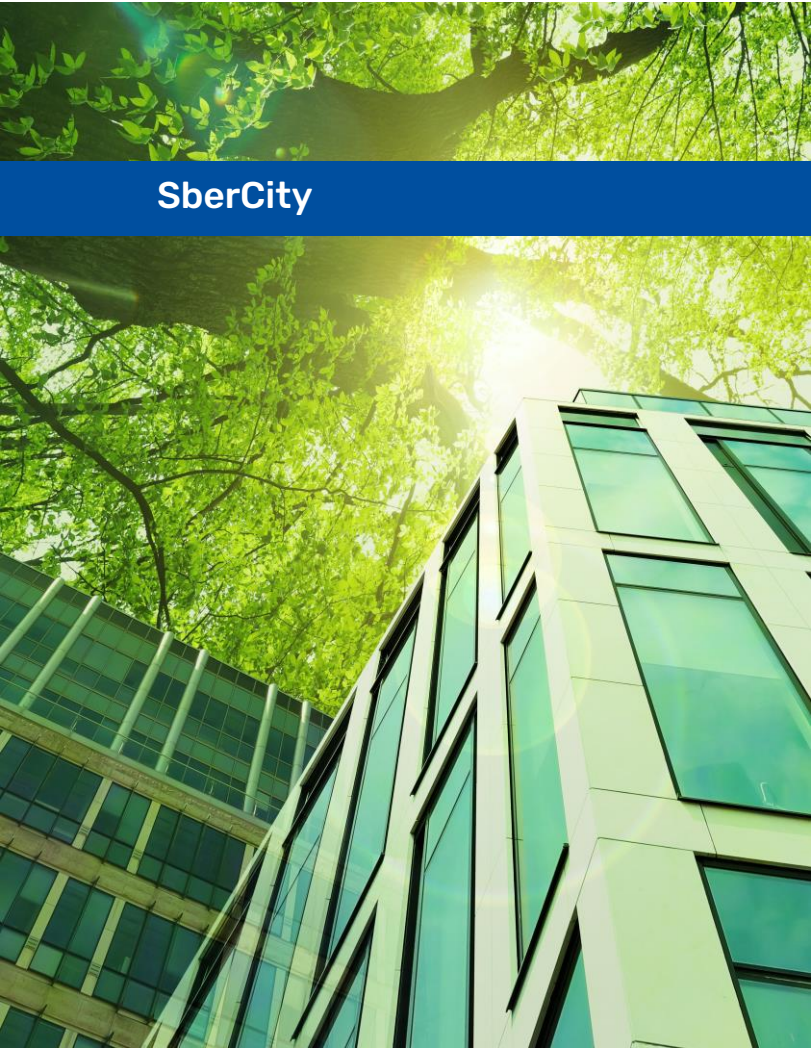
### Cost

Defined depending on the customer's tasks and selected configuration of solutions



For more information scan here:





### Implementation of a comprehensive set of energy supply solutions

Application of trigeneration systems for office buildings. For residential buildings – cogeneration for hot water production using gas-driven heat pumps.



#### Technical Specifications

- Maximum fuel utilization factor
- Use of exhaust gas heat for data center cooling
- Reduced occupied area
- Reduction of greenhouse gas emissions (Scope 2) – 1.4 thousand tons of CO<sub>2</sub>-eq./year



#### Uniqueness

Simultaneous generation of three types of energy from fuel (heat, cold, electricity).



#### Cost

Defined depending on the customer's tasks and selected configuration of solutions



For more information scan here:





## Implementation of a comprehensive set of energy supply solutions

Energy modeling of buildings at the design stage – determining actual energy consumption through Software that takes into account over 100 parameters, including: geographic orientation, building orientation relative to the sun, temperature characteristics, wind rose, equipment usage simultaneity, indoor temperature fluctuations, shading from neighboring buildings, solar energy reflections, equipment load factor.



### Technical Specifications

- Savings on technological connection – 7.5 billion RUB
- Reduction of required electric capacity purchased via technological connection by 34%
- Reduction of required thermal capacity purchased via technological connection by 38%
- Reduction of required gas capacity purchased via technological connection by 35%



### Uniqueness

- Maximum fuel utilization factor
- Reduction in pipeline diameters and sizes of heating equipment
- Reduction in installed equipment capacity
- Load consolidation in a single power supply center



### Cost

Defined depending on the customer's tasks and selected configuration of solutions



For more information scan here:





## Implementation of a control system for the power supply equipment

Software and hardware complex Microgrid for automatic intelligent control of the 0.4 kV power supply equipment complex. The control perimeter includes: energy storage systems (ESS), photovoltaic modules (PVM), electric vehicle charging stations (EVCS), gas piston units (GPU), and power delivery points in main distribution boards (MDBs) and input distribution devices (IDDs) of consumers. The system is designed to improve power supply reliability and automatically manage power balance in the mode of parallel operation of classical and green generation.



### Technical Specifications

- Achieving maximum savings from local generation through energy storage and discharge at the most rational time
- District energy consumption management to minimize costs for consumed and transmitted power
- Reduction of greenhouse gas emissions – 46.2 thousand tons of CO<sub>2</sub>-eq./year



### Uniqueness

- Elimination of emergency overloads in the power supply system and subsequent outages
- Green outlets in multi-apartment residential buildings
- Reduction in costs for technological connection to power grids



### Cost

Defined depending on the customer's tasks and selected configuration of solutions



For more information scan here:





## Development and integration of the “Smart City” system

“Smart City” – a comprehensive information platform that unites various groups of users. The system optimizes operations in the areas of urban management, city infrastructure, housing and utilities, transportation, public safety, and business development.



### Technical Specifications

Photo and video recording cameras, intelligent video surveillance systems, and smart parking solutions (Full HD, supporting up to 916 cameras).



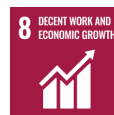
### Uniqueness

- Ability to integrate solutions across various sectors to create optimized dashboards for municipal and regional administrators.
- Simultaneous data transmission to multiple information systems, monitoring systems, etc.).
- On-device computing – does not require high-speed internet or external servers.
- Detection of over 25 types of traffic and public order violations.
- Real-time data transmission via secure communication channels.



### Cost

Upon request



For more information scan here:





## Production and Operation of Electric Transport (Electric Buses and River Vessels)

The company specializes in the design (with its own design bureau) and construction of innovative passenger electric vessels, including the following main projects:

1. Catamaran Ecovolt
2. Electric vessel Ecobus (TFRP.401)
3. Flagship catamaran Ecocruiser (REGK.122)
4. Vessel for shallow-water operation Moika 2.0 (EM2108)
5. Sightseeing ship Ecocruiser-m (Moskva 2.0 EM901)
6. Sea cabin vessel Baikal
7. Inland-waterway electric ferry Kurs
8. River-sea class electric ferry Vector

Additionally, the company develops modern infrastructure solutions for electric fleets – floating charging piers, including:

1. Ecostation D10 (TFRP.501)
2. Ecostation D16 (TFRP.502)
3. Guberniya 1
4. Guberniya 2

The company possesses its own production facilities, providing a full cycle of operations – from concept development to final vessel construction.



### Technical Specifications

Electric vessels:

- Overall length: 16.5–80.3 m
- Passenger capacity: 38–200 persons
- Draft: 0.8–3.76 m
- Battery capacity: 230–2,200 kWh

Floating piers:

- Overall length: 16.145–47.47 m
- Passenger capacity: 42–150 persons
- Draft: 1.265–2.45 m



### Uniqueness

Emperium is the world's first serial manufacturer of electric vessels (according to Interrecord).

All projects are designed by the company's own design bureau and built at in-house shipyards.

Emperium ranks No. 1 in Russia in terms of vessels launched (64 units in 2 years). The company's vessels combine environmental friendliness, energy efficiency, maneuverability, and low operating costs.



### Cost

Electric vessels:

from 1,5 mln to 62 mln USD

Floating piers:

from 0,7 mln to 6 mln USD



For more information scan here:





## EV charging equipment

Production of AC (alternating current) and DC (direct current) charging stations for electric vehicles, electric buses, and electric vessels.



### Technical Specifications

Power output:  
22–44 kW (AC)  
150–900 kW (DC)



### Uniqueness

Sitronics possesses in-house production facilities and proven experience in manufacturing all types of charging stations with power ratings up to 900 kW. The company operates the largest own network of charging stations in the Russian Federation, and develops proprietary software, forming a unique combination of complementary skills and competencies in the innovative field of electromobility.

This synergy enables the company to continuously and effectively improve the quality of its products and services.



### Cost

Depending on configuration:  
AC: starting from USD 2 thousand  
DC: starting from USD 32 thousand



### Implementation Experience Abroad

Proven expertise in developing and deploying charging networks and implementing software solutions for them across CIS countries.



For more information scan here:





### EV charging equipment

Operation and Management of a Proprietary Network of Charging Stations as Operator and Investor.



#### Technical Specifications

Over 1,000 charging stations in the company's own network.



#### Uniqueness

Sitronics possesses in-house production facilities and proven experience in manufacturing all types of charging stations with power ratings up to 900 kW. The company operates the largest own network of charging stations in the Russian Federation, and develops proprietary software, forming a unique combination of complementary skills and competencies in the innovative field of electromobility. This synergy enables the company to continuously and effectively improve the quality of its products and services.



#### Cost

Upon request



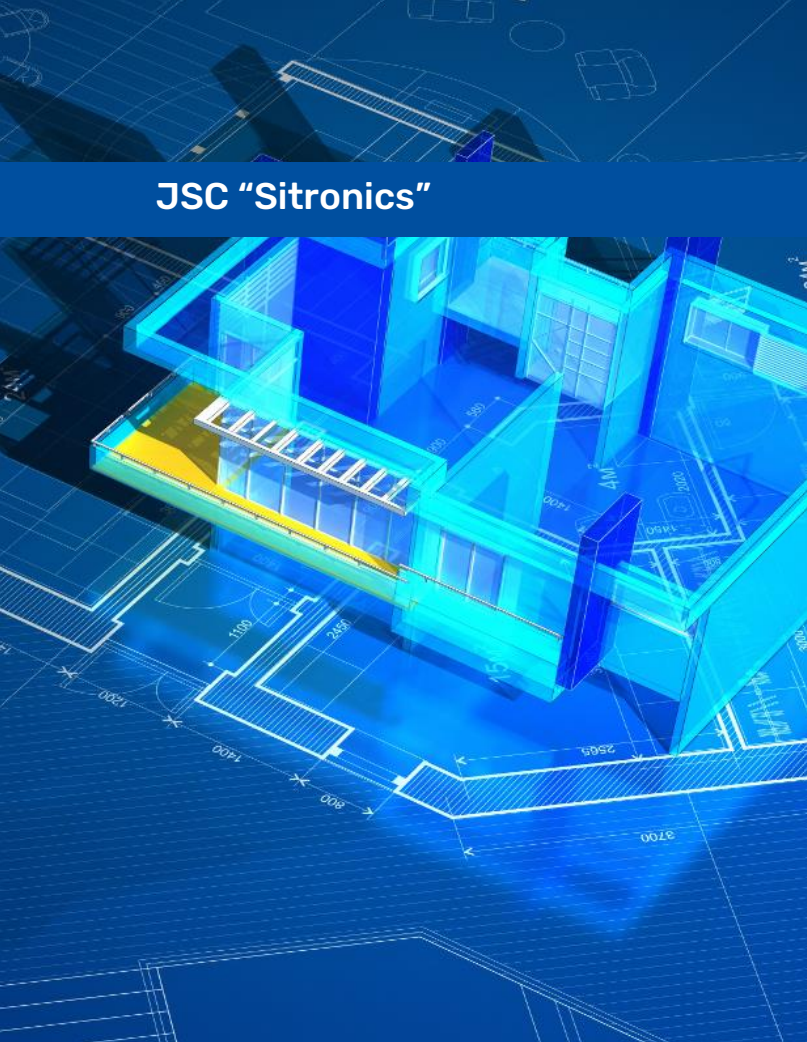
#### Implementation Experience Abroad

Proven expertise in developing and deploying charging networks and implementing software solutions for them across CIS countries.



For more information scan here:





## EV charging equipment

Design and construction of charging infrastructure, including turnkey construction of large electric bus depots.



### Technical Specifications

Proven experience in turnkey construction projects with a connected capacity of up to 3.4 MW (electric bus depots).



### Uniqueness

Sitronics possesses in-house production facilities and proven experience in manufacturing all types of charging stations with power ratings up to 900 kW. The company operates the largest own network of charging stations in the Russian Federation, and develops proprietary software, forming a unique combination of complementary skills and competencies in the innovative field of electromobility.

This synergy enables the company to continuously and effectively improve the quality of its products and services.



### Cost

Design, construction and installation works (C&I), technological grid connection, and commissioning upon request depending on specific technical requirements.



### Implementation Experience Abroad

Proven expertise in developing and deploying charging networks and implementing software solutions for them across CIS countries.



For more information scan here:





## JSC "Sitronics"



### EV charging equipment

Development and installation of software solutions for management and dispatching of electric transport fleets and their charging infrastructure installation.



#### Uniqueness

Sitronics possesses in-house production facilities and proven experience in manufacturing all types of charging stations with power ratings up to 900 kW. The company operates the largest own network of charging stations in the Russian Federation, and develops proprietary software, forming a unique combination of complementary skills and competencies in the innovative field of electromobility. This synergy enables the company to continuously and effectively improve the quality of its products and services.



#### Cost

Starting from USD 12,500 for white-label solution. Subscription-based support solutions also available.



#### Implementation Experience Abroad

Proven expertise in developing and deploying charging networks and implementing software solutions for them across CIS countries.



For more information scan here:





LLC "NPK MSA"



### Production and Operation of Ultra-fast charging stations (UFCS)

The product is used for charging electric transport from various types of grids to provide accessible infrastructure. Unique automatic transfer switch (ATS) scheme with a capacity of 300 kW for charging from different types of grids.



#### Technical Specifications

The product allows charging various types of electric transport (public, freight, passenger, water, etc.) in a wide range of capacities and charging voltages. Planned capacity up to 1000 kW, with nominal cell capacity (single module) up to 200 kW. DC input voltage from 400 to 720 V



#### Uniqueness

The UFCS equipment has no complete analogues. The project's product surpasses alternative solutions due to its versatility in working from different types of networks, smaller dimensions, and lower weight.



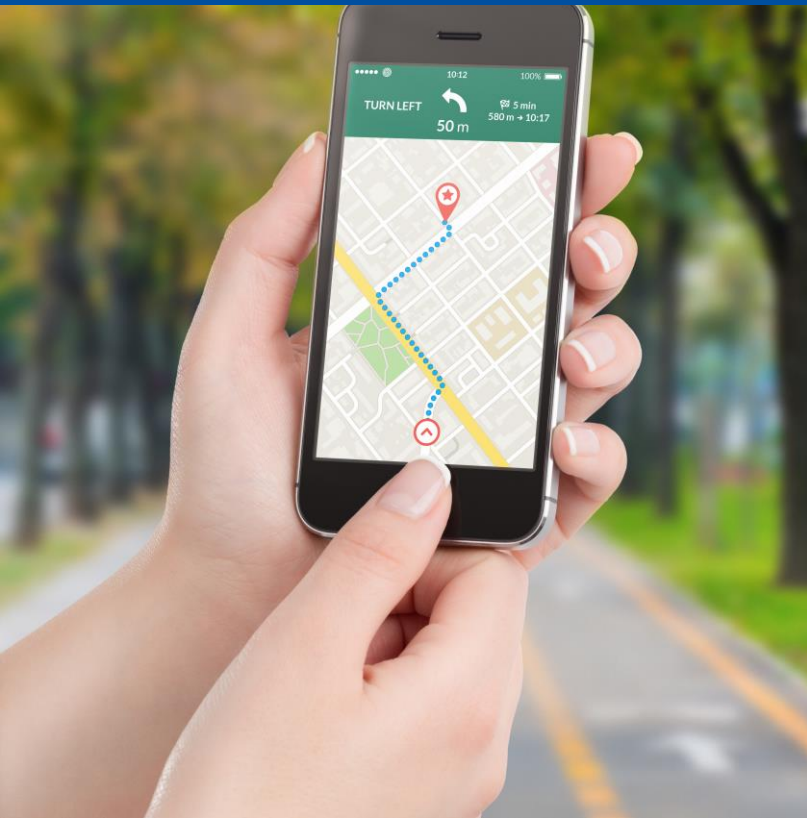
#### Cost

250-280 thousand USD per unit\*  
Depending on functional application and country of commercialization



For more information scan here:





### Development and Implementation of an Interactive Map Similar to the "Eco Points of Moscow" Map

Interactive map showing points for separate waste collection (unwanted items, New Year trees) for residents' convenience.



#### Technical Specifications

- The interactive map provides information about waste collection points, including types of accepted materials.
- Accepted waste types include plastic, paper, glass, metal, batteries, lamps, clothing, and more.
- The service is available on the official portal of the Mayor and Government of Moscow.



#### Uniqueness

- The project is implemented at the city government level, ensuring its broad reach and support.
- Allows residents to quickly find the nearest waste collection point, promoting separate waste collection.
- The service supports the implementation of the national project "Environmental Well-Being" and raises public environmental awareness.



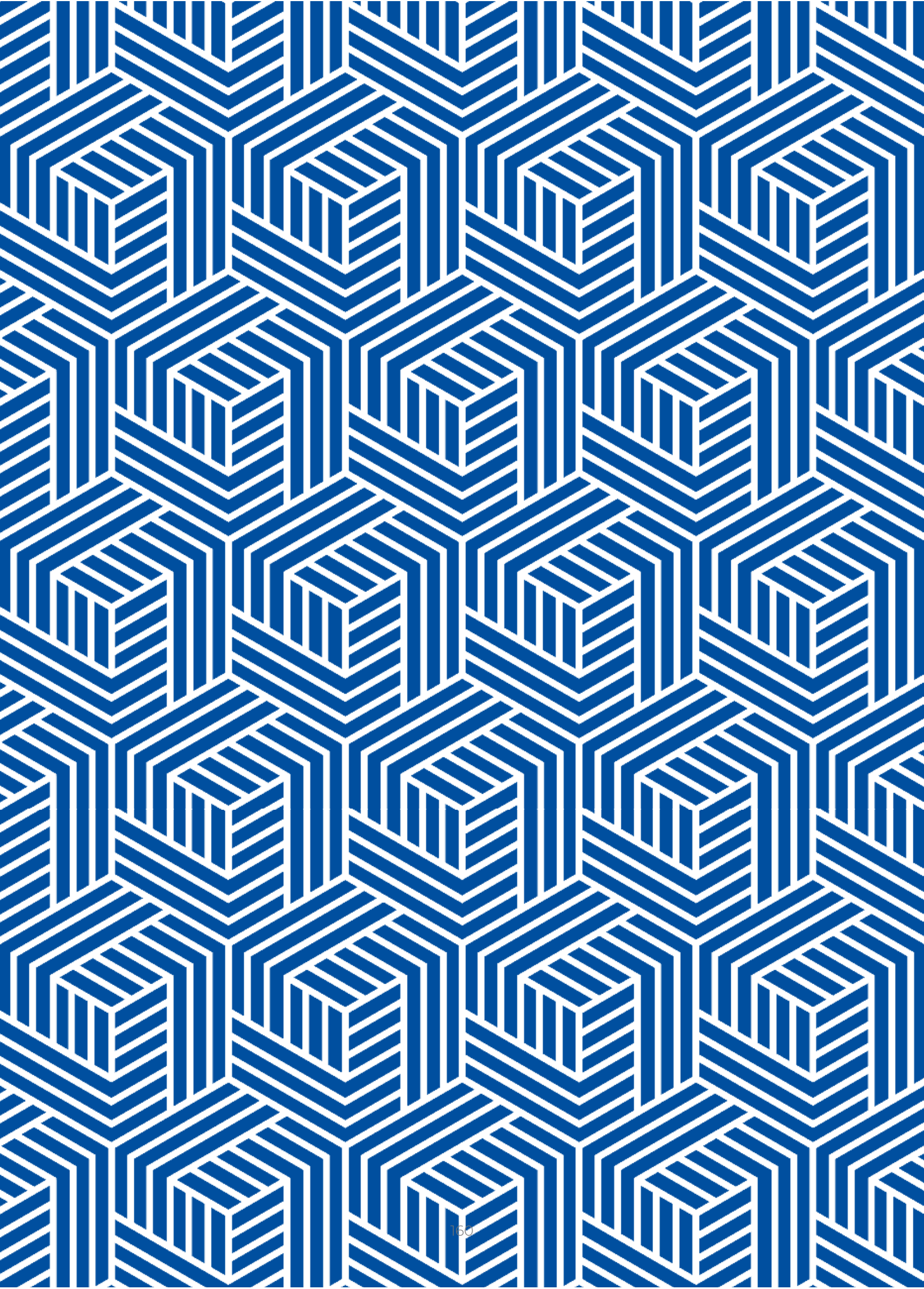
#### Cost

Depending on functional application and country of commercialization

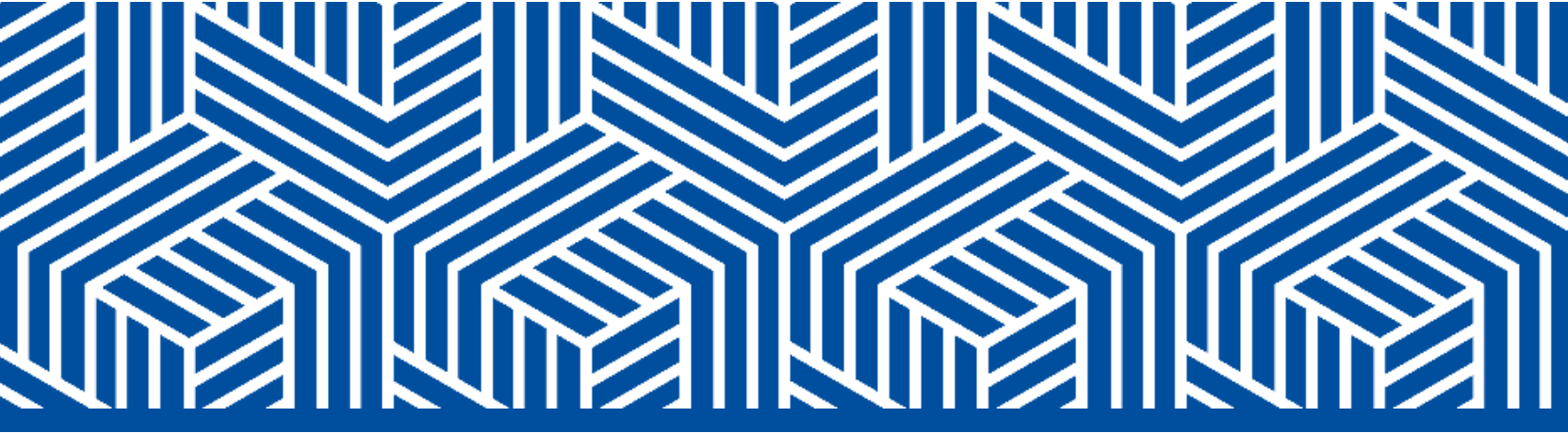


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# SDG 12



## Responsible Consumption and Production

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Responsible production and consumption are essential elements of sustainable development. Resource-saving technologies and practices, including the use of recycled materials, help to reduce production costs and minimize negative environmental impacts.

### **Russian achievements:**

At present, Russia is actively developing a circular economy, which is expected by 2030 to ensure the sorting of 100% of the annually generated municipal solid waste, disposal of no more than 50% of such waste, and the inclusion of at least 25% of production and consumption waste in economic circulation as secondary resources and raw materials. In addition, Russia is a major global exporter of raw materials and industrial goods, including in the metallurgical and petrochemical industries, which contribute to achieving sustainable development goals and addressing climate change, as well as providing technologies necessary for the operation of energy infrastructure – nuclear, solar, and wind power plants. Thus, in 2023, the country exported about 2,200 tons of rare earth metals' concentrate worth approximately USD 22 million.

Technologies for lean manufacturing and low-carbon materials are ready-made solutions that Russia can offer to international partners to effectively achieve the goals of responsible consumption and production.



## Low-carbon materials

At the national level, the concept of Best Available Technologies (BAT), enshrined in federal legislation, is the basis of sustainable production models in Russia. Russian companies are also actively striving to reduce their carbon footprint and promote sustainable production by implementing initiatives aimed at modernizing equipment and improving technological processes.

The metallurgical industry demonstrates significant achievements in this area, including companies such as PJSC Severstal, RUSAL, and PJSC Nornickel, which produce low-carbon metals—primarily aluminum, widely used in the manufacture of solar panels, wind turbines, and electric vehicles. In 2024, TÜV Austria, one of the world’s leading certification service providers, confirmed the low-carbon status of 80% of aluminum produced by RUSAL (3.4 million tons in 2024). Low-emission technologies are also being implemented in the construction and chemical industries through projects for the production of green cement and low-emission soft-coated glass by companies such as “Holsim (Rus)” LLC and “Saratovstroysteklo” JSC.



## Technologies and services

- Optimization of production processes in the metallurgical industry to reduce carbon emissions;
- Development and application of alternative construction materials.

## Organizations





## Production and Supply of Low-carbon Aluminum under the ALLOW INERTA Brand

ALLOW INERTA aluminum is produced using a revolutionary inert anode electrolysis technology powered by hydropower. This results in GHG emissions-intensity of only 0,01 tons of CO<sub>2</sub> equivalent per ton of aluminum, taking into account both direct and indirect energy-related emissions (Scope 1 and 2). This level is in hundred times lower than the industry average and fully meets the most strict global climate and environmental standards.



### Technical Specifications

Carbon footprint: 0.01 tCO<sub>2</sub>/t of aluminum for Scopes 1 and 2, and <2 tCO<sub>2</sub>/t of aluminum across all scopes.



### Uniqueness

Its uniqueness lies in the fact that during the production of ALLOW INERTA aluminum, oxygen instead of carbon dioxide or equivalent gases is released into the atmosphere.



### Cost

Price is determined by aluminum exchange quotations at multi-commodity exchange (London/Shanghai).



For more information scan here:





## Production and Supply of Low-carbon Aluminum under the ALLOW Brand

ALLOW aluminum is produced using hydropower, resulting in emissions-intensity of only of 2.2 tons of CO<sub>2</sub> equivalent per ton of aluminum, taking into account both direct and indirect energy-related emissions (Scope 1 and 2). This level is five times lower than the industry average and meets the most strict global climate and environmental standards.



### Technical Specifications

Carbon footprint: 2.2 tCO<sub>2</sub>/t of aluminum for Scopes 1 and 2, and 5.8 tCO<sub>2</sub>/t of aluminum across all scopes.



### Uniqueness

Its uniqueness lies in the use of electricity generated exclusively from renewable sources in the production of ALLOW aluminum.



### Cost

Price is determined by aluminum exchange quotations at multi-commodity exchange (London/Shanghai).



For more information scan here:





## Production and supply of rolled metal and finished metal products

Severstal is a leader in the production of low-carbon steel and its products in Russia. The company takes measures to reduce greenhouse gas emissions, produces "green" products, including products for adaptation to climate change, and uses "green" financing tools. One of the company's solutions is a line of sheet piles for use in hydraulic engineering, transportation, and industrial and civil engineering.



### Technical Specifications

The range of sheet piles: cold-rolled sheet piling Grani, multi-faceted sheet piling Grani Pro, as well as reinforced tubular sheet piling.



### Uniqueness

Advantages: reduction of metal consumption by up to 30%, good weldability, reduction of construction time and reduction of total costs during tongue-and-groove wall installation. It is also possible to manufacture dowels to meet individual project requirements, and a service for optimizing design solutions is also available.



### Cost

Determined by commercial proposal / project documentation



For more information scan here:





## Development and implementation of a steel framework for construction (including in climatically vulnerable areas)

Heavy metal structures for the construction of residential buildings and social/administrative facilities.



### Technical Specifications

- Welded symmetrical I-beams;
- Welded I-beams with an extended lower flange;
- Rolled channels;
- Hot-dip galvanized steel (zinc coating from 275 to 600 g/m<sup>2</sup>);
- Wall module fire resistance – E15;
- Usable floor area efficiency coefficient – 0.76;
- Construction time reduction – up to 30%;
- Labor force reduction – up to 20%.



### Uniqueness

- Ready-made optimized designs for multi-story buildings with options for customization;
- Possibility of construction in seismically hazardous areas.



### Cost

Determined by commercial proposal / project documentation



For more information scan here:





## Application of Spider 2.0 Construction Technology

Spider 2.0 is a technology for the rapid construction of frame-type buildings based on light steel thin-walled structures.



### Technical Specifications

Frame made of galvanized cold-formed profiles ( $\Sigma$ - and C-shaped);  
 Width – up to 21 m;  
 Height – up to 6.5 m.



### Uniqueness

- A turnkey solution – from surveying and design to manufacturing and installation;
- The structure can withstand high wind and snow loads;
- Suitable for use in areas with seismic activity up to 9 points.



### Cost

Determined by commercial proposal / project documentation



### Implementation Experience Abroad

Kazakhstan



For more information scan here:



## Export of Railway Rolled Products

EVRAZ is the largest producer in Russia of rails, steel I-beams, and grinding balls, as well as a major player in the market for solid-rolled wheels in Russia and the CIS countries. EVRAZ products are widely used in the railway industry. In 2022, EVRAZ became the first company in Russia to produce "green" rails, with steel smelting carbon intensity of 0.4 t CO<sub>2</sub>-eq per 1 t of rolled products.



Also contributing to SDGs



For more information scan here:



### Technical Specifications

- Differentially heat-strengthened rails of increased hardness and wear resistance
- Products designed for operation on railways in cold and moderately cold climates, featuring enhanced impact toughness at -60°C
- Products for operation on heavily loaded railway sections



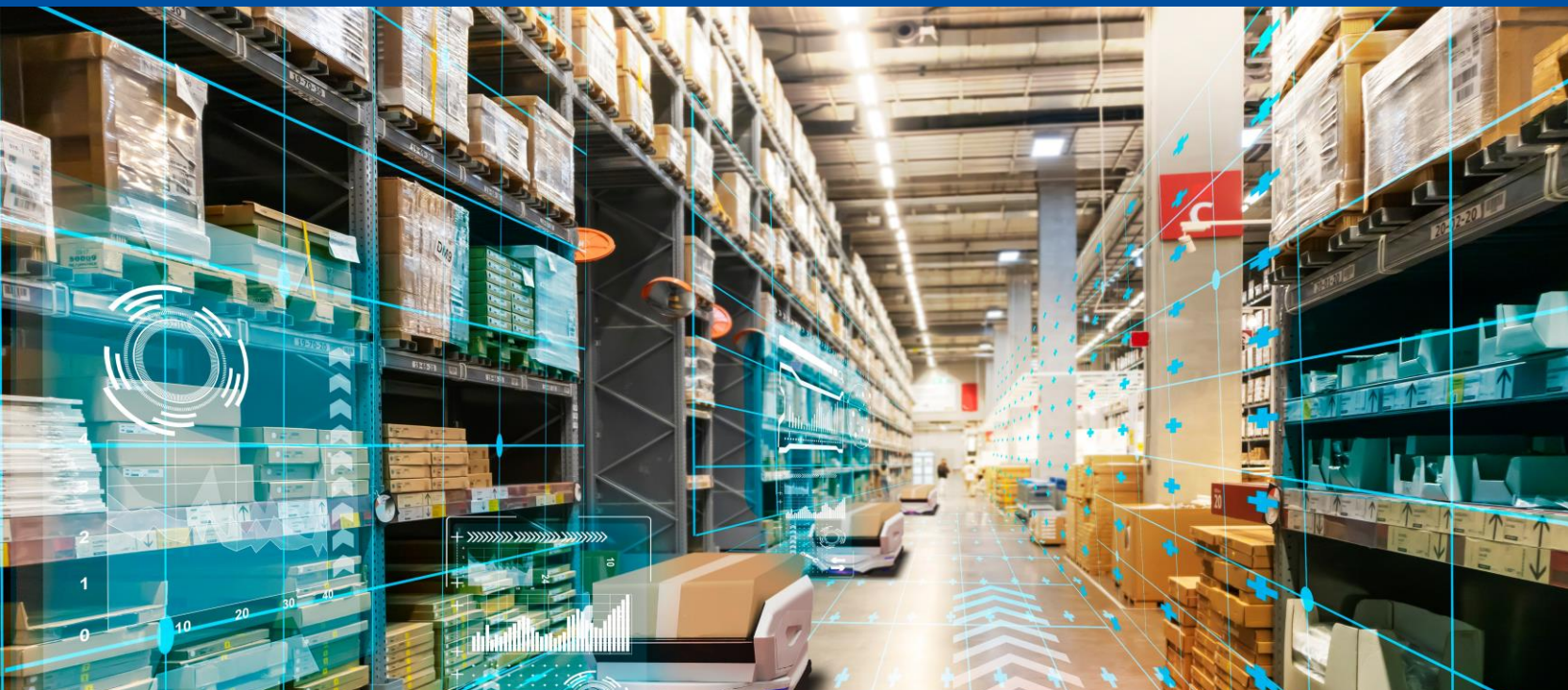
### Uniqueness

- Rail defects reduced by 15% compared to standard grades
- Rails reduce wear in curves by 16%
- The only rail in the world certified for impact toughness at -60°C (minimum 15 J/cm<sup>2</sup>)
- Rails suitable for passenger train speeds up to 400 km/h
- Rail defects reduced by 15% compared to standard grades
- Products designed for export to countries with the most demanding operating conditions



### Cost

Upon request



## Lean Production Technologies

Today, the ongoing large-scale digitalization and the deployment of robotic technologies and artificial intelligence are a key direction in the development of Russia's industrial sector. The integration of industrial robots and automated production modules optimizes enterprise operations and increases productivity.

To improve efficiency, Russian companies participate in the national project "Labor Productivity." By building producing processes based on the principles of lean production, more than 4,000 enterprises involved in the project have increased profits by 318 billion rubles, while the need for labor resources has decreased by 130,000 people over six years.

Key players in the field of lean production include regional and federal capacity-building centers, as well as IT companies and integrators such as "Yandex", "1C PRO Consulting", and other developers of domestic digital solutions. They develop automation systems, robotics, predictive analytics, and digital twin technologies, as well as machine vision systems for quality control and production process management. Companies such as "SIBUR", "Gazpromneft", "Techprom", "Promenergo", "Sistema", "Severstal", "Sintez", and "Yugra-Ecology" are actively implementing robots and innovative technologies to make their production processes more sustainable.



## Technologies and services

- Optimization of production processes, reduction of costs, and improvement of product quality;
- Reduction of resource intensity and labor intensity in production;
- Development and implementation of an integrated internet platform for digital transformation of enterprises.

## Organizations





## Application of Accelerated Organic Raw Material Composting Technology

The technology is designed for processing (utilization) of solid by-products (waste) from livestock farming, with or without moisture-absorbing materials, through composting (aerobic fermentation) using an electrically powered composter-granulator installed in a facility equipped with concrete trenches, forced supply and exhaust ventilation, and a controlled automated aeration system for the composting mass, resulting in the production of granulated organic fertilizer.



### Technical Specifications

Raw material humidity level – 65%  
Composting period – 38–50 days (depending on climate)  
Final product humidity level – 12–15%  
Granule size – 1–12 mm (depending on raw material)



### Uniqueness

Round-the-clock, year-round cost-effective production in any climatic conditions (geographical zones).



### Cost

100–150 USD per ton per year of raw material with 65% of humidity (depending on climatic conditions and production capacity)



Also contributing to SDGs



For more information scan here:





## Implementation of an Intelligent Electricity Metering System with Fault Location Diagnostics Function

The intelligent electricity metering device (hardware component of an automated control system, electronics) with the function of detecting and localizing single-phase ground faults (IPU with single-phase earth faults) is designed for use in distributed smart power systems and as part of intelligent control and protection systems.



### Technical Specifications

The intelligent electricity metering devices, when integrated with centralized software, provide adaptive monitoring and localization of fault conditions in 6–35 kV electrical networks.

The accuracy of fault location detection is between 0.3 and 5 km (depending on the completeness of input data). The product is capable of analyzing up to 10,000 feeders simultaneously.



### Uniqueness

There are no direct analogues worldwide. Existing counterparts lack the functionality for pinpoint fault location detection.



### Cost

555–740 USD per unit\*

\*Depending on functionality and country



Also contributing to SDGs



For more information scan here:





## Development and Application of Automatic Laser Pipeline Welding Technology

A unique technology with no analogues worldwide, used in welding operations for the construction of pipelines of various capacities. It enables optimization and automation of labor costs, and significantly reduce construction timelines.



### Technical Specifications

Laser welding is performed from the outside using two laser heads at each workstation, achieving a speed of up to 30 joints per shift.

Each installation is equipped with several belts for pipelines with diameters ranging from 720 to 1420 mm.

The welding process is carried out in a narrow slit groove, where the volume of molten metal is nearly six times less than that required by currently used technologies.



### Uniqueness

The technology surpasses foreign analogues in constructing gas pipelines made from high-strength pipes.

The laser welding process itself has no global equivalents and is protected by three Russian patents.

The equipment is characterized by high energy efficiency (150 kW) and environmental performance.



### Cost

62–87 thousand USD per km\*

\*Depending on functionality and country



Also contributing to SDGs



For more information scan here:



## Implementation of a System for Preventing Quantitative and Qualitative Product Losses

In the production and transportation of various liquid products such as vegetable oil, crude oil, and petroleum products, raw and product storage tanks are used. Over time, sediment accumulates in these tanks, degrading product quality and requiring cleaning – a labor-intensive and hazardous process. The sediment also represents a direct product loss.

To address the issue of preventing both quantitative and qualitative losses of products

in storage tanks, a special device was developed – the EVNAT Jet Mixing Unit (UPS-EVNAT).

It is installed inside the tank, vessel, or reactor, ensuring homogeneity and stable product quality even during the filling process, and can maintain uniformity through circulation of the product via the device.



Also contributing to SDGs



For more information scan here:



### Technical Specifications

Each device is designed individually for specific tanks or vessels, taking into account their characteristics, using proprietary software based on a verified computational computer modeling method. Can be operated in all macroclimatic conditions.

Tank capacity range from 20 to 120,000 m<sup>3</sup>.

Connection nozzle diameter from 50 to 1000 mm.

Material configuration is selected according to the properties of the liquids being mixed.

Maximum performance is determined by the operating parameters of pipelines and tanks.

Applicable for various types and shapes of tanks and reservoirs.



### Uniqueness

The uniqueness and high efficiency of the equipment are achieved through the use of a proprietary, validated method for hydrodynamic and gas-dynamic modeling during the design of each unit. The company has extensive R&D and field experience in developing mixing systems for a wide range of products – crude oil, gasoline components, diesel fuel, vegetable oils, and other liquids.



### Cost

From 12 to 185 thousand USD, depending on tank size and working environment.



### **Production and application of water treatment reagents**

Production of reagents for the purification of water from suspended solids, oils, and petroleum products, as well as complex contaminants, in the fields of water treatment, water purification, and sludge dewatering at water utilities; for the treatment of industrial wastewater and process water used in the technological cycles of oil production, oil refining, and metallurgical companies, as well as enterprises in other industrial sectors.



### **Technical Specifications**

It has a unique advantage over all competitors thanks to its natural component derived from vegetables and fruits, which is completely safe for the environment, humans, and animals. It provides the following benefits:

- In household chemicals – effectively cleans tough contaminants.
- In cosmetics – gently cleanses the skin.
- In animal care products – effectively cleans fur and skin.



### **Uniqueness**

Proprietary unique technology for the production of Biomicrogels® – components based on biopolymers derived from plant-based raw materials such as agricultural waste, starch, cellulose, and others. There are no global analogues.



### **Cost**

USD 20 mln: establishment of local production, product adaptation, and development of sales channels, including marketing and logistics networks, to enter the European and U.S. markets.



**Also contributing to SDGs**



**For more information scan here:**



## Disposal of industrial wastewater and processing of high-salinity brine generated after seawater desalination using the thermal distillation method

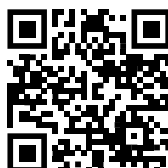
The technology enables the establishment of a closed-loop water consumption system at industrial facilities, returning up to 99% of purified water back into production. The core of the technology is a unique flash evaporation unit, where wastewater boils under vacuum conditions, and the resulting vapor condenses on heat-exchange tubes to produce pure demineralized water. In the next stage, the equipment complex allows for the extraction of commercially valuable salts from the remaining saline concentrate by lowering the temperature.



Also contributing to SDGs



For more information scan here:



### Technical Specifications

Treated water conductivity:  
1–10 microcm/cm  
Standard system capacity: 200 t/h  
Specific steam consumption for 1 m<sup>3</sup> of wastewater: 0.1 t/m<sup>3</sup>  
Service life: 30 years  
High maintainability  
Fully independent of imported components



### Uniqueness

Uniqueness:

1. Energy efficiency – uses 10 times less steam than analogs.
2. Operates with water of any quality.
3. Enables closed-loop water use and returns up to 99% purified water to production.
4. Eliminates liquid discharge into open water bodies.
5. Allows recovery of commercially valuable salts from drain.
6. Increases the operational profitability of industrial enterprises.



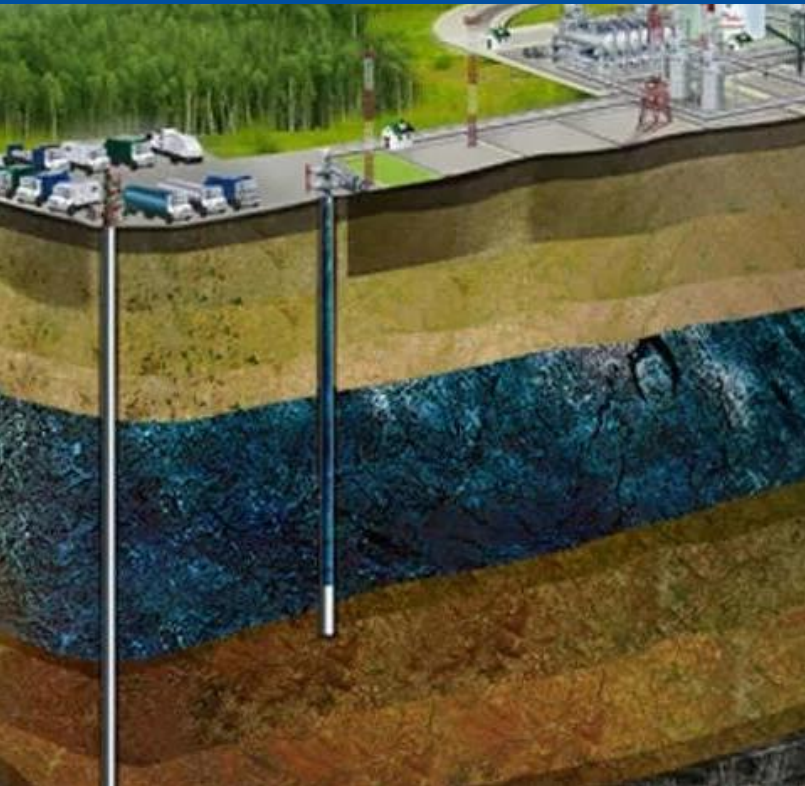
### Cost

Calculated upon request based on the composition of the wastewater and the desired purification outcome.



### Implementation Experience Abroad

Saudi Arabia



**S.M.Art Metals – Production  
of Products Based  
on Ferromagnetic Particles Derived  
from Underground Water  
Secondary Resources**

Federal operator for the treatment of underground water preparation waste (from water utilities, industrial facilities, and oil extraction sites) and subsequent low-waste processing into end products for high-tech industries.

The technology enables water utilities and other subsurface resource users to optimize costs by reducing clean water losses by 5–7% (during filter flushing).



**Technical Specifications**

Base material is nano- and micro-sized iron oxide powder particles derived from secondary raw materials using thermochemical processing.

Particle size: 40 nm – 2 μm

Chemical purity: 65–98% by mass.



**Uniqueness**

A techno-economic system that efficiently converts underground water treatment waste – possessing unique raw material properties – into high-margin products through synergistic cooperative supply chains.



**Cost**

Upon request (depends on the parameters of the water treatment facility)



**For more information scan here:**





### Smart Containers and Sensors for Efficient Waste Management Company

The solution enables assigning a specific waste type to each container and monitoring the fill level of waste and recycling collection stations.



#### Technical Specifications

An interactive waste management platform that provides real-time monitoring of installed smart bins (reverse vending machines). The system tracks key parameters such as location, container type, fill level, and battery status. Control and data visualization are available via the “SmartCity Management” web interface in real time.

Using artificial intelligence, the system optimizes waste collection routes by analyzing traffic congestion and container status.



#### Uniqueness

The solution reduces landfill loads by up to 80%, increases the share of recyclable materials from 50% to 90%, and lowers municipal solid waste disposal costs by up to 70%. It effectively addresses issues of overflowing bins and inefficient resource use.



#### Cost

Up to 310 thousand USD



For more information scan here:





# SDGs 13-15

## Environmental protection and mitigating climate change



The environmental dimension of sustainable development encompasses addressing climate change, as well as environmental protection –including aquatic and terrestrial ecosystems and to biodiversity conservation.

### Russian achievements:

Russia is among the leaders in the international climate agenda and makes a significant contribution to global efforts to tackle climate change, being an active participant to the UNFCCC and the Paris Agreement. By 2050, the country plans to reduce greenhouse gas (GHG) emissions by 80% compared to 1990 levels, and to achieve carbon neutrality by 2060. In its updated Nationally Determined Contribution (NDC), Russia has also set a target to reduce net GHG emissions by 65-67% by 2035 relative to 1990 levels. Furthermore, on the global stage, Russia is engaged in developing financial mechanisms for GHG emission reductions, including participation in cross-border trade in carbon credits. In autumn 2024, during the BRICS Business Forum, the first international transaction involving Russian carbon credits—issued as a result of a forest-climate project by one of the country’s largest metallurgical companies—was concluded. According to expert estimates, the potential of economically viable forest-climate projects in Russia amounts to 500–700 million tons of CO<sub>2</sub> equivalent per year.

Russian companies offer integrated solutions to achieve SDGs 13–15, focusing on enhancing access to objective environmental and climate data and on reducing and offsetting GHG emissions. Applying a scientific approach and leveraging reliable data gathered through cutting-edge technologies enables effective development of solutions in energy modernization, energy efficiency improvement, and deployment of innovative solutions across different economic sectors, thereby creating synergy between climate and environmental protection measures.



## Improving the accessibility of objective data on the environment and climate

In accordance with the Climate Doctrine of the Russian Federation, awareness among all stakeholders is a key element in formulating and implementing effective climate policy. Activities in this area are carried out through the development and implementation of various initiatives aimed at improving the accessibility of environmental and climate data.

In particular, since 2022, the Ministry of Economic Development, together with research institutes, has been developing a National Climate Monitoring System for Climate-Active Substances. As a result of the first phase of the project, a climate monitoring and forecasting system for climate change was established, and the accuracy of carbon cycle modeling improved by 20–70% across various domains.

Organizations and companies actively working to enhance the availability of objective environmental and climate data include the Russian Environmental Operator (REO), Roshydromet, Rosprirodnadzor, Rosvodresursy, Rosleskhoz, Rosnedra, JSC Rosterminalugol, JSC Ecology, JSC NEO, JSC Managing Company, and others. Key business-driven development areas include the creation of digital platforms with geospatial visualization, automated data collection from hydrometeorological stations, and integration of diverse data sources and digital monitoring technologies. These efforts enable not only forecasting climate change but also prompt and effective response measures.



## Technologies and services

- Implementation and deployment of the National Climate Monitoring System for Climate-Active Substances;
- Creation and scaling up of a network of carbon polygons for piloting carbon dioxide capture and long-term storage technologies;
- Use of artificial intelligence technologies in national environmental monitoring systems;
- Deployment and innovation of automated air quality monitoring systems.

## Organizations





### **Scaling up the National System for Monitoring Climate-Active Substances to foreign countries**

The National System for Monitoring Climate-Active Substances provides reliable and scientifically recognized data for assessing anthropogenic and natural fluxes of climate-active substances within the country's territory. Domestic data will help improve the quality of management decisions related to decarbonizing the economy and adapting it to climate change.



#### **Technical Specifications**

A global climate model for scenario-based climate change projections, a system for climate and environmental monitoring of key regions of the World Ocean, a system for ground-based and remote monitoring of carbon and greenhouse gas fluxes, as well as a system for accounting data on fluxes of climate-active substances and carbon sequestration in forests and other ecosystems.



#### **Uniqueness**

A global climate model utilizing data obtained through innovative monitoring systems, including remote sensing, will enhance the accuracy of climate change projections both nationally and globally.



#### **Cost**

Upon request



**For more information scan here:**



## Expansion of the GeoPlatform "Digital Earth": analytics for monitoring natural assets and environmental conditions based on satellite imagery and neural network algorithms

The platform automatically processes satellite imagery to detect objects, processes, and phenomena, providing geospatial analytics on the condition of natural assets, ongoing economic activities, and their environmental impacts. The platform is a cloud-based solution that does not require users to deploy their own substantial technological infrastructure. It delivers analytics across seven service areas: forestry, agriculture, quarries, ecology, emergencies, disturbed lands, and construction; this list can be expanded to meet specific user requirements.



### Also contributing to SDGs



For more information scan here:



### Technical Specifications

More than 100 neural networks and over 1,000 annotated datasets have been developed for accurate classification of objects and phenomena. Neural network accuracy is evaluated using TP, IOU, F1, and Dice metrics, with final accuracy ranging from 85% to 99%, depending on the type of output information product. Over the entire period of operation, more than 650 million sq. km of satellite imagery data have been processed.



### Uniqueness

It is one of the most advanced platforms in terms of automation, digitalization, and the scale of AI technology application to geospatial data. Machine learning algorithms significantly reduce labor and time costs for processing satellite imagery, enable identification and classification of various changes on the ground, and promptly notify users about critical changes or events at monitored sites.



### Cost

The project cost is determined by the number of sector-specific products (services) and the project implementation area.

## Development of an air quality monitoring and management system, including the use of UAVs (Unmanned Aerial Vehicles)

A software-hardware complex and digital platform for automated environmental quality monitoring, utilizing AI methods to analyze data and provide recommendations for managerial decision-making. Includes tools for assessing the impact of emission sources on the environment and algorithms for simulating modifications to industrial processes to reduce their impact on surrounding areas.



### Cost

Pricing is provided upon request and depends on the network size, integration scope, and selected functionality. The average price is 0,6 mln USD per facility.



### Also contributing to SDGs



For more information scan here:



### Technical Specifications

Platform: data visualization, analysis, reporting, and export; Geographic Information System; compatibility with national and international ESG registers and systems; 72-hour air quality forecasting models; dynamic modeling of pollutant dispersion processes from emission sources across the city area. hardware and software system includes compact monitoring stations for measuring key pollutants, adapted for urban and industrial environments; autonomous operation; data integrity. UAVs: dynamic monitoring of ambient air quality.



### Uniqueness

Multi-level flexible monitoring system: stationary, mobile, and corporate sensors.

- Platform routability and scalability across various industries.
- Use of UAVs as environmental data collection sources.
- 24/7 data collection, processing, and analysis with real-time information delivery.
- Compliance with ESG principles and national and international standards.
- Integration modules with government and corporate platforms.
- Proprietary algorithms and AI services developed for identifying environmental threats and optimizing response measures.



### Implementation Experience Abroad

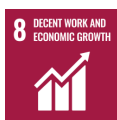
CIS, India

## Establishment and implementation of Carbon measurement test areas as service aggregators for conducting research on the adaptation and mitigation potential of ecosystems

Carbon measurement test areas are territories with unique ecosystems established to implement measures for monitoring and managing climate-active gases, involving universities and scientific organizations. Operators of Russian carbon test sites are interested in international cooperation, including conducting joint research and demonstrating achieved results for potential scaling.



Also contributing  
to SDGs



For more  
information  
scan here:



### Technical Specifications

Carbon measurement test areas enable a range of crucial research activities, including the development and adaptation of terrestrial technologies for field and forest agrochemical soil monitoring and greenhouse gas respiration; the development and adaptation of remote sensing techniques for assessing aboveground and belowground phytomass and rhizosphere; agrochemical soil monitoring and greenhouse gas respiration; as well as the development and adaptation of mathematical models for gross primary productivity, net primary productivity, net CO<sub>2</sub> exchange between the ecosystem and the atmosphere, respiration, and other parameters of the ecosystem carbon balance.



### Uniqueness

- Measurement test areas have been established taking into account landscape and natural-climatic conditions, as well as differences in ecosystem potential.
- In addition to their research function, the test areas serve to develop a new level of human resource capacity for the advancement and maintenance of the climate monitoring system



### Cost

Upon request

## Implementation of environmental monitoring based on the Infrastructure IoT platform

A comprehensive suite of digital services and equipment designed for efficient utility supply to industrial facilities. Centralized monitoring provides a complete real-time overview of the situation across all facilities, enabling prompt and informed decision-making in response to incidents.



Also contributing to SDGs



### Technical Specifications

At the BIM (Building Information Model) repository and visualization tools level, it enables displaying a 3D model of the facility along with the history of its parameter changes.

At the integration module level, it supports integration with third-party IT systems and seamless embedding into the existing IT landscape.

At the SCADA (Supervisory Control and Data Acquisition) IoT level, it enables near real-time collection and processing of data from various sources, with configurable automated incident response scenarios.

Implementation timelines: from 1 to 6 months.



### Uniqueness

- A unified environment for data management and collection, calculation, and monitoring;
- Monitoring of resource consumption and energy efficiency analysis;
- Remote monitoring at hard-to-reach sites;
- Dedicated in-house team of developers and support specialists.



### Cost

Upon request

For more information scan here:



## Implementation of the "Carbon Footprint" automated system solutions

An information system that enables assessment of greenhouse gas emissions volumes and provides customers with documented verification of the carbon footprint of their shipments. It is aimed at minimizing the carbon footprint and simplifying carbon and environmental reporting.



Also contributing  
to SDGs



For more  
information  
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### Technical Specifications

Provides information on the amount of greenhouse gas (CO<sub>2</sub>) emissions for each individual shipment.



### Uniqueness

Enables verification of the carbon footprint for freight transportation, including other indirect emissions (Scope 3), for shippers at the required location, including for emissions reporting related to importing goods into foreign countries.



### Cost

Discussed individually

## Implementation of an air quality monitoring system similar to “Mosecomonitoring”

An open official source of information on air quality in Moscow for both professionals (environmental experts, public organizations, rating agencies) and ordinary citizens. The system includes monitoring of air, water bodies, soil, and green spaces, as well as noise levels.



### Cost

Depending on functional application and commercialization region



### Also contributing to SDGs



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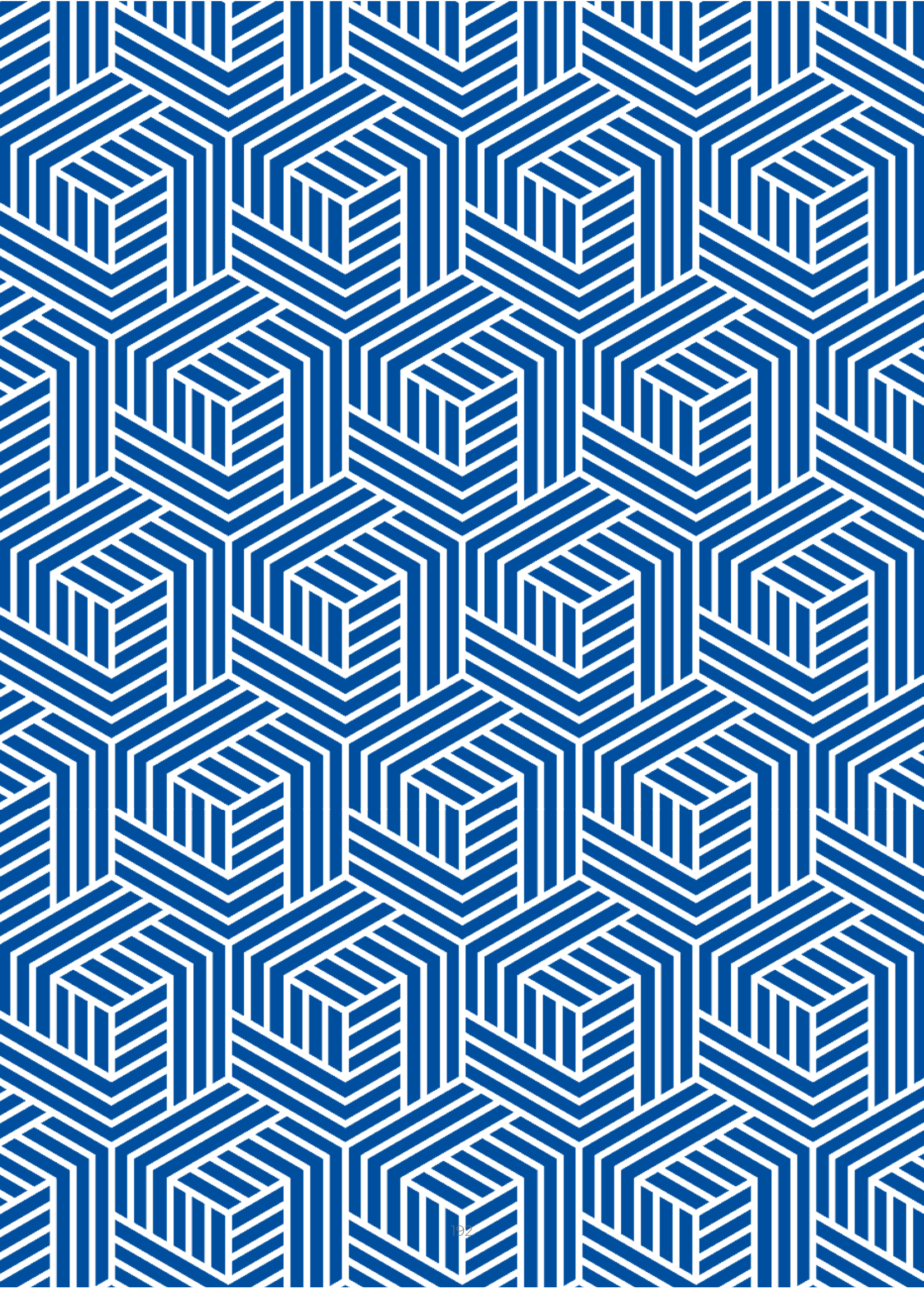
### Technical Specifications

- 78 automatic air pollution monitoring stations (AAPMS);
- 3 mobile environmental laboratories (MEL) equipped with gas analyzers and air sampling devices capable of detecting 120 pollutants;
- 3 specialized meteorological complexes to monitor pollutant dispersion conditions;
- 2 temperature profilers measuring vertical temperature profiles to assess air mixing intensity;
- An accredited analytical laboratory capable of detecting and studying over 600 substances across natural media, including 120 airborne compounds;
- Surface water monitoring at 66 control sites across 24 main water bodies;
- Soil monitoring at 1,333 permanent observation sites, with about 300 analyzed annually;
- Green space monitoring at 130 sites;
- An accredited noise monitoring laboratory surveying over 2,000 urban areas annually;
- A unified citywide environmental monitoring data repository.



### Uniqueness

- The largest automatic environmental monitoring system in Europe, compliant with international standards and requirements;
- A multi-tiered monitoring framework including stationary and mobile laboratories, as well as meteorological complexes;
- A 24/7 Operational Control Service ensuring rapid response to environmental incidents and citizen reports;
- Integration with industrial facilities for real-time emission monitoring;
- Open access to data for all stakeholders via an interactive map and open data portal.





## Reduction and Absorption of Greenhouse Gas Emissions

The implementation of the key goal of the Strategy of the Socio-Economic Development of the Russian Federation with Low Greenhouse Gas Emissions – achieving carbon neutrality while ensuring sustainable economic growth – is carried out through a comprehensive set of measures. These include the introduction of modern technologies in the electric power industry, reduction of fuel leakage during extraction, use, and transportation, electrification of the transport sector, optimization of fertilizer application in agriculture, and the development of precision farming.

Russia has set a target to reduce greenhouse gas emissions by 2035 to 65–67% of the 1990 level and to achieve carbon neutrality by 2060. Currently, around 85% of the Russian energy mix is composed of clean, low-emission generation – primarily natural gas and nuclear energy, as well as renewable energy sources. Within the framework of the carbon neutrality pilot project in the Sakhalin Region, participating organizations that conducted voluntary greenhouse gas inventories managed to reduce emissions by 13 thousand tons of CO<sub>2</sub> equivalent by 2025, representing about 10% of 2023 emission levels.

Significant results in this area have been demonstrated by Russian companies such as “RusHydro”, “RUSAL”, “Nornickel”, “ALROSA”, “Tatneft”, “Irkutskenergo”, Karelbiotech, “Andrei Varichev Mikhailovsky GOK”, “Gazpromneft-Yamal”, Etton Group, “NOVATEK”, “SIBUR”, and others. These enterprises are developing technologies for carbon capture, utilization, and storage (CCUS), transitioning to low-carbon energy sources, and implementing nature-based climate projects that harness the potential of terrestrial and aquatic ecosystems to absorb greenhouse gas emissions.



## Technologies and services

- Implementation of environmental projects aimed at conservation, restoration, and sustainable use of forests to mitigate climate change and enhance the carbon absorption potential of ecosystems;
- Implementation of carbon capture and storage (CCS) technologies.

## Organizations





## CO<sub>2</sub> Capture and Long-Term Geological Storage (CCS, Carbon Capture and Storage)

The project involves the creation of CCS storage facilities for the reliable underground storage of CO<sub>2</sub> in geological formations to reduce the carbon footprint of manufactured goods across various industrial sectors, including oil and gas production, energy, metallurgy, petrochemicals, and gas chemistry.



### Technical Specifications

Performance – 1–5 million tons of CO<sub>2</sub> per year or more.  
Project implementation period – 4–6 years.



### Uniqueness

Unique feature: a comprehensive pre-project assessment of the economic feasibility of CO<sub>2</sub> utilization using CCS technology, along with certification of storage facilities in accordance with international standards (ISO 27914).



### Cost

Project cost is determined by several factors: the volume of CO<sub>2</sub> to be utilized, the distance between the CO<sub>2</sub> emitter and the CCS storage site, and the concentration of CO<sub>2</sub> in flue gases.



Also contributing to SDGs



For more information scan here:





## Issuance of Statements on Emissions and Carbon Footprint for LNG suppliers

In 2022, NOVATEK developed its own methodology for calculating the carbon footprint of LNG supplies for the Yamal LNG project in accordance with international standards. This methodology was later validated by an independent organization holding international accreditation. In 2024, Company began providing Carbon footprint statements for LNG cargoes, based on these methodologies. With the EU’s 2024 methane emissions regulation for the energy sector now in force, importers of energy resources into the EU are required to disclose methane emissions across their supply chains and take measures to reduce them. These statements help NOVATEK’s customers meet the EU reporting requirements.



### Technical Specifications

N/A



### Uniqueness

The statements provide customers with reliable and accurate information, incorporating over 75% of primary data and include GHG-specific data across the stages of gas production, gathering, transportation, liquefaction, and LNG maritime shipping. At the customer request, the statements may also include emissions from the regasification stage through to final consumption, calculated using key emission factors specific to the country or the global market.



### Cost

Upon request



For more information scan here:





## Nuclear Certificates for Verifying the Low-Carbon Footprint of Consumed Electricity

Since 2024, organizations in Russia interested in confirming the green quality of their operations have gained access to nuclear certificates – instruments linked to clean energy generated by Russian nuclear power plants. Similar to renewable energy certificates (RECs), nuclear certificates confirm the low-carbon nature of the electricity consumed, allowing companies to offset the carbon footprint of electricity drawn from the centralized grid.



### Technical Specifications

Currently, three nuclear power plants in Russia – Leningrad, Kalinin, and Balakovo NPPs – are qualified to issue nuclear energy certificates. For each NPP, a detailed calculation of greenhouse gas emissions has been conducted. The average level of greenhouse gas emissions over the full life cycle of nuclear energy produced at these three plants is 5.1 gCO<sub>2</sub>-eq/kWh. Acquisition of nuclear certificates is available both through the platform of the Russian National Operator of the Electricity Origin Certificate Registry – LLC “Center for Energy Certification”, and directly from “Rosenergoatom” JSC.



### Uniqueness

Given the growing recognition and demand for clean nuclear energy as an effective tool for the energy transition, nuclear certificates are becoming increasingly integrated into national and international green certification systems. As of mid-2025, in addition to Russia, nuclear certificates are also available on the I-REC platform, as well as on trading platforms in the United States, France, the United Kingdom, Japan, and the United Arab Emirates.



### Cost

By agreement



For more information scan here:





## Application of Aerial Forest Fire Protection

Preventing and promptly extinguishing forest fires is not only about protecting nature and the climate but also about supporting the resilience of ecosystems – a foundation for climate change adaptation.

RUSAL possesses the necessary experience, expertise, and equipment to implement forest-climate projects that generate internationally tradable carbon units.

The first such project is being carried out in the Krasnoyarsk Territory and focuses on aerial forest fire protection over an area exceeding 500,000 hectares. The project ensures patrolling and, when necessary, firefighting operations. Project activities also include purchasing new equipment and firefighting gear, as well as recruitment, training, and medical support for fire response personnel.



### Technical Specifications

The technical characteristics of the first forest-climate project for aerial forest fire protection are reflected in the Russian registry of carbon units.



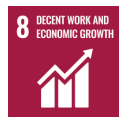
### Uniqueness

The project is characterized by universal technological solutions adaptable to taiga, tropical, and/or boreal forests; compatibility with international carbon market standards; proven effectiveness in preventing and reducing greenhouse gas emissions; and a positive social and economic impact.



### Cost

Upon request



For more information scan here:





## Operation of Secondary Rewetting Methods for Drained Temperate Peatlands

The first climate project in Russia dedicated to the rewetting of drained peatlands was developed and implemented in accordance with the National Methodology "Rewetting of Drained Temperate Peatlands". The project aims to facilitate the natural self-recovery processes of peatland ecosystems. As a result of project implementation, the water table levels will rise, increasing peat moisture levels, reducing fire hazards, and lowering greenhouse gas emissions. Additionally, a paludiculture (wetland agriculture) project has started this year (sphagnum moss). Another paludiculture project (berries cultivation: cranberries, cloudberries, blueberries) will be launched next year.

Over the 10-year period (2025–2034), the total GHG emission reductions and carbon accumulation - 170,419 tonnes CO<sub>2</sub>e. Total project duration: 30 years.



### Technical Specifications

The technical characteristics of the project are reflected in the Russian registry of carbon units. On the rewetting sites, hydraulic structures will be constructed (from locally sourced materials). These structures will retain water and ensure its even distribution within specific rewetting areas. A Comprehensive long-term monitoring program will be implemented to assess the restoration progress of the rewetted peatlands.



### Uniqueness

**Competitive Advantages:**  
Proven expertise of the project team in rewetting of temperate drained peatlands.  
Restoration of unmanaged lands (abandoned drained peatlands) through engagement of a responsible land steward.

**Climate Impact:**  
Rewetting of drained peatlands both reduces and removes carbon emissions (nature-based Carbon Dioxide Removal (CDR) projects) while increasing carbon sinks.  
Production of high-quality, high-margin carbon credits.  
Carbon credits can be generated as early as the 2nd-3rd year of implementation.  
Lower risk compared to other nature-based climate projects.  
Delivery of co-benefits: ecosystem and biodiversity restoration, local community benefits, and more.  
Long-term carbon sequestration potential.



### Cost

Upon request



### Implementation Experience Abroad

In 2024–2025, the Center for Sustainable Development (CSDT), commissioned by the Global Carbon Council (GCC), developed a methodology for climate projects on secondary rewetting of peatlands in temperate regions.



Also contributing to SDGs



For more information scan here:





### Technical Specifications

- Web-based service.
- Built-in modules for carbon accumulation and financial-economic calculations.
- Role-based access control and project saving.
- GIS module with spatial analysis tools for site selection.
- Financial-economic module for automatic calculation of CAPEX, OPEX, NPV, IRR, and payback period.
- Report generation (PDF format) with maps, charts and explanatory notes on a turn-key basis.



### Uniqueness

- Reduces feasibility study preparation time to 1–3 days.
- Provides a complete end-to-end workflow – from site selection to carbon credits estimation and sales forecasting.
- High flexibility in parameter customization.
- Based on international methodologies for nature climate solutions implementation, adapted to local geographical and legal contexts.
- Supported by an expert community and methodological guidance.



### Cost

Demo access is free; commercial licensing is determined individually depending on project scale.

## Digital Platform for Supporting Nature-Based Climate Projects

A fully automated service for assessing the potential of implementing nature-based climate projects (NCPs), taking into account national conditions and international best practices.

The platform enables users to:

- Identify suitable locations for implementing various types of NCPs, considering natural constraints, methodological requirements, and legal regulations;
- Assess the total area available for projects and forecast the potential volume of generated carbon units;
- Receive recommendations on measures to optimize carbon accumulation;
- Calculate key financial indicators and assess the economic efficiency of project implementation.

Users receive a ready-made, transparent, and verifiable feasibility study.

For more  
information  
scan here:





LLC "VideoMatrix"



## Development of a Video Analytics System for Monitoring Atypical Emissions into the Atmosphere from City-Forming Industrial Enterprises

The implementation of this solution allows enterprises to optimize operations in several areas: reducing emissions of raw coke oven gas, including harmful chemical compounds such as benzo(a)pyrene; and ensuring timely maintenance and repair of coke oven doors, thereby extending the service life of the equipment.



### Technical Specifications

By using cameras installed on industrial chimneys combined with computer vision technologies, the system detects and records instances of atypical emissions, classifies their type and duration, and enables rapid response to eliminate hazardous discharges while minimizing human error. The Vmx Dequs solution also accumulates data and evaluates the efficiency of investments in environmental modernization, transmitting relevant information to regulatory authorities.



### Uniqueness

The system eliminates the risk of industrial air pollution by detecting gas leaks from oven doors within 5 seconds (compared to manual inspection) and reduces visible atypical emissions by 5 times.



### Cost

Up to 310 thousand USD



Also contributing to SDGs



For more information scan here:



## Voronezh Region, Voronezh State University of Forestry and Technologies, LLC "SIBUR"



Федеральное государственное бюджетное  
образовательное учреждение высшего образования  
Воронежский государственный  
лесотехнический университет  
имени Г. Ф. Морозова

**SIBUR**



### Adaptive Forestry

The developed technology and innovative solutions for reforestation of burned areas using carbon-sequestering plantations are aimed at reducing emissions and increasing the absorption of greenhouse gases by forest ecosystems.

Due to its ready-to-implement project solutions, the technology is attractive for businesses as an investment opportunity in forest-climate projects.

Project Scale (by activity type):

- Reforestation – 3,738.4 thousand tons CO<sub>2</sub>/year
- Afforestation – 3,738.4 thousand tons CO<sub>2</sub>/year
- Forest fire reduction – 87,623.8 thousand tons CO<sub>2</sub>/year



### Technical Specifications

The technology includes reforestation of burned and logged areas, as well as afforestation, distinguished from conventional methods by the use of integrated soil carbon conservation measures.

An optimized composition and mixing scheme of tree species has been developed to enhance biodiversity and carbon accumulation.



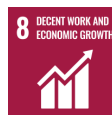
### Uniqueness

- Increases the carbon sequestration potential of forest ecosystems up to 15 tons of CO<sub>2</sub>-eq/ha per year
- High climate and economic efficiency due to the carbon intensity of the projects



### Cost

From 1,5 thousand USD per hectare for the implementation of forest-climate projects.





# SDG 16

## Peace, justice and strong institutions

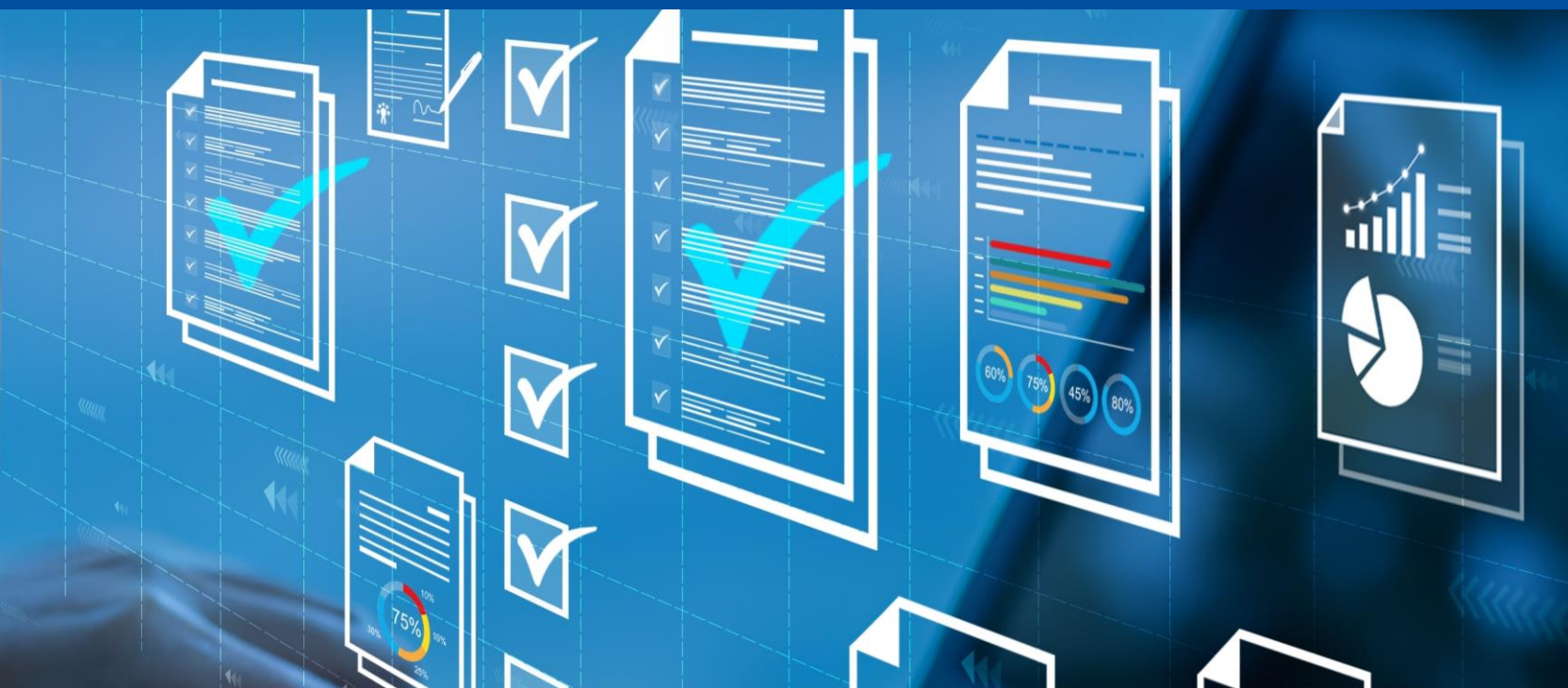


Innovation is an important element in enhancing the efficiency of public institutions. Creating favorable conditions for creating startups, as well as developing and implementing innovative solutions, enables intensive and sustainable growth in many areas.

### **Russian achievements:**

To date, Russia has made significant progress in implementing innovative solutions in the operations of public institutions and plans to achieve "digital maturity" in public and municipal governance by 2030. This entails automating the majority of transactions through unified sectoral digital platforms and adopting a data-driven governance model, incorporating accelerated deployment of big data processing technologies, machine learning, and artificial intelligence. Furthermore, by 2030, at least 99% of socially significant public and municipal services will be delivered in a digital form. In 2022, the country entered the top 10 of the international "GovTech Maturity Index (GTMI)" ranking published by experts from the World Bank team, becoming one of the leading countries in government digital transformation and public sector digitization. In the same year, Russia's capital city, Moscow, ranked 16th in the global cities ranking according to the Local Online Service Index (LOSI).

To achieve SDG 16, Russian companies propose comprehensive projects to create a digital ecosystem that enables effective interaction between citizens and government bodies by enhancing the accessibility of public services for the population and optimizing the operations of government institutions.



## Improving the accessibility of public services for the population

Improving the efficiency of public and municipal service delivery is a key priority in the development of public and municipal governance at the current stage. Today, more than 100 federal public services in the country can be obtained within short timeframes, requiring a minimal number of documents and visits to relevant government agencies. Moreover, the country has developed and is actively implementing a multi-tiered network of digital portals where citizens can access necessary services without having to visit government offices in person. In particular, in 2024, the number of users of the state information portal “Gosuslugi” exceeded 110 million, and over 1,600 services are currently available on the platform.

In Russia, such companies as Rostelecom, Sber, CROC, Center for Information Technologies, Infosystems Jet, Envision Group, Basalt SPO, and others are developing and offering innovative tools and technologies that support the digital transformation of public administration to improve the quality and accessibility of public services. These include cloud solutions, process automation, and the development of digital infrastructure for government bodies, particularly through the implementation of AI and integrated business process management systems in public institutions.



## Technologies and services

- Digitalization of public services;
- Improving accessibility and efficiency of public services for the population.

## Organizations



GOVERNMENT  
OF THE RUSSIAN  
FEDERATION



## Implementation and use of solutions provided by the "Gosuslugi Portal" service

The "Gosuslugi Portal" service is a government information system that provides: information about state and municipal services; the ability to receive state and municipal services, or individual stages thereof, electronically; and the ability to submit feedback on the quality of state or municipal service delivery electronically. Government agencies providing state and municipal services enter comprehensive information about their services onto the portal, implement interactive forms enabling the electronic receipt of services (or individual stages thereof), and develop a web service used for information exchange between the user of the unified portal and the agency. The portal serves as a single point of entry for citizens, through which they can receive state services in a digital form.



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### Technical Specifications

- The ability to use either the desktop version or the mobile application
- Creation of personal accounts for individuals and legal entities
- Integration with other government digital services for quick account login
- Built-in technologies for protecting users' personal data



### Uniqueness

One of Russia's most dynamically developing digitalization projects. The portal's total audience exceeds 100 million users, who have access to over 1,600 government services (with more than 600 million services delivered in 2023 alone). Innovative technologies are employed in its operation, including AI integration to assist users.



### Cost

Upon request

## Development and implementation of solutions for "My Documents" Centers

The establishment of a nationwide network of multifunctional centers for delivering government services, "My Documents," has become one of the most successful initiatives in addressing the objective of building a service-oriented state across the Russian Federation.

The "single window" principle is fully implemented in these centers. Applicants interact not with a civil servant, but with a center employee who accepts documents and, if necessary, provides consultation on obtaining government services.



### Cost

Upon request



### Also contributing to SDGs



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### Technical Specifications

Each MFC is equipped with modern IT infrastructure as part of a unified automated system for registering, processing, and routing applications, integrated with federal and regional service registries, payment gateways, and digital document management systems.

The system includes self-service modules for submitting applications, registering real estate, accessing financial services, preparing tax and legal documents, and obtaining pension and medical services.

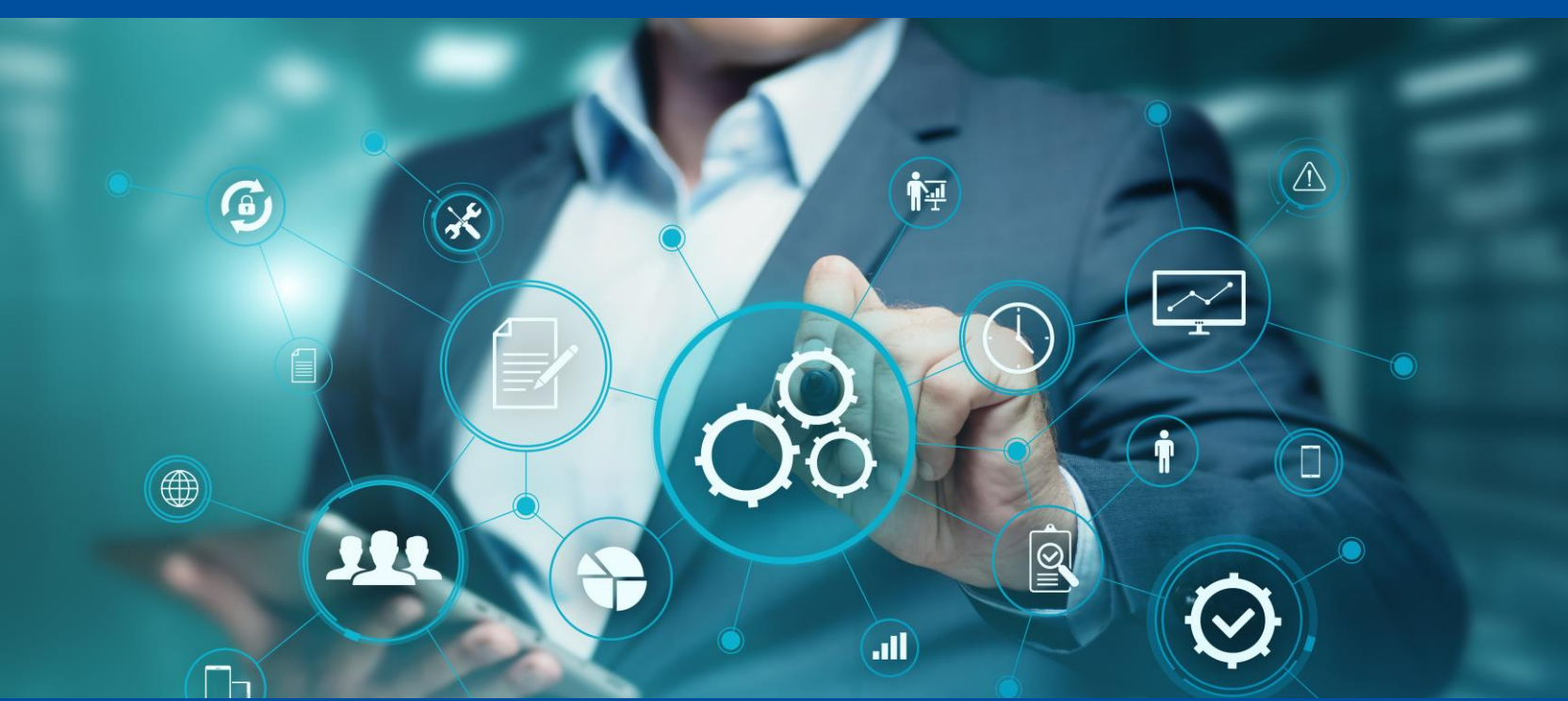
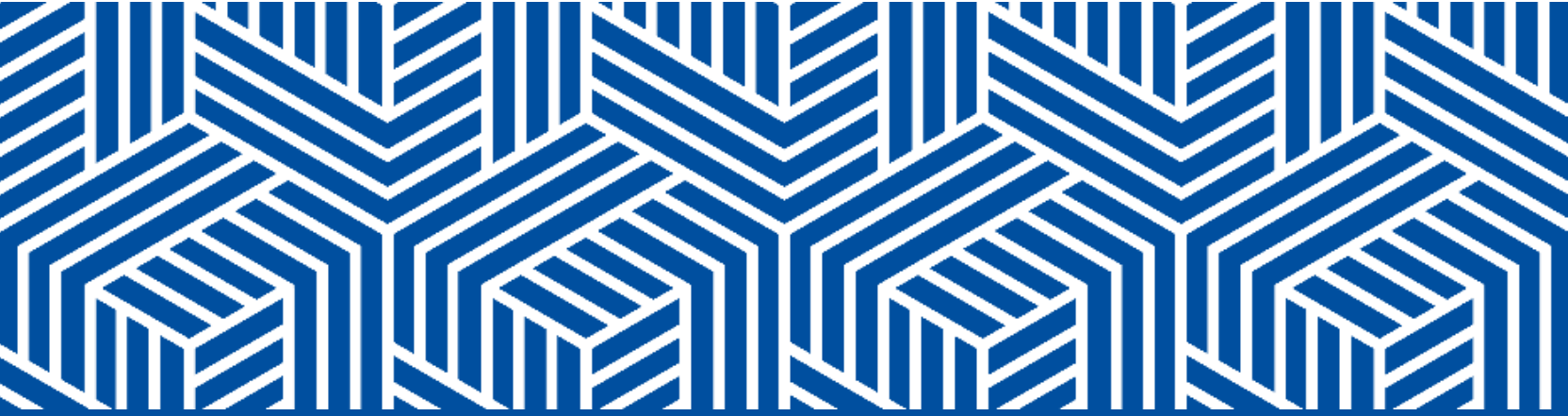
It supports both centralized and decentralized deployment, flexible configuration of available services, interface localization, and integration with national and international identity verification and document management systems.



### Uniqueness

The "single window" principle eliminates the need for citizens to visit multiple government agencies: an applicant submits an application and receives the result, while interagency coordination is handled by the center's staff.

In addition to basic services, MFCs offer exclusive services, including filing court claims, obtaining electronic digital signatures (EDS) for businesses, notarial and banking operations, interactive assistants for drafting legal claims, modules for automatic calculation of state fees, and a video consultation system.



## Optimization of processes in government agencies

Optimization of processes in Russian government bodies is aimed at enhancing the efficiency of public and municipal management. Under this initiative, Russia is implementing a comprehensive program covering various aspects of government operations, including the development of a regulatory framework for the digital environment, reform of oversight and control activities, introduction of new principles for delivering public services, modernization of the national statistical system, and implementation of a national data governance system.

In 2024, owing to the digital transformation, the Government of the Russian Federation achieved record-breaking levels of executive discipline in preparing draft laws and regulatory acts: 99% of draft laws were submitted to the Russian parliament within the stipulated deadlines, compared to 84% in 2022. Between 2022 and 2024, the average level of artificial intelligence (AI) adoption in the economy and public administration in Russia also increased by 1.5 times.

Companies including OTR Group, INEK-IT, Exclusive Business Technologies, NISIPP (National Institute for System Research on Entrepreneurship Issues), Rostelecom, Parus, IKS Holding, Trinity, ICL, ZashchitaInfoTrans, Netrika, Hi-Tech, and AMT-Group provide expert support and develop advanced technologies to implement cutting-edge digital solutions for optimizing management processes, establishing transparent decision-making systems powered by big data and analytics, and ensuring prompt and accurate monitoring and management of public resources.



## Technologies and services

— Research, analysis, and implementation of digital technologies in public administration

## Organizations



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FEDERATION



TECHNOLOGIES



Rostelecom



Reksoft



Группа компаний

**НИСИПП**

Консалтинг для государства  
и бизнеса

## Tax Revenue Mobilization (Tax Superservices)

Mobilization of tax revenues through tax superservices is a comprehensive solution to enhance the efficiency of the tax system by reengineering tax administration business processes, designing and upgrading computing and telecommunications infrastructure, and developing/modernizing information systems for automating tax administration (e.g., taxpayer personal accounts, mobile applications, analytical platforms).

Implementation of the project abroad involves the transfer and deployment of developed or upgraded information systems, accompanied by recommendations for improving the regulatory and legal framework of tax administration, development of a taxpayer engagement strategy, and organization and delivery of training programs for tax authority personnel.



### Cost

Upon request

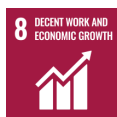


### Implementation Experience Abroad

CIS countries



Also contributing to SDGs



For more information scan here:



### Technical Specifications

The roadmap for the standard project includes:

- A knowledge exchange program;
- Diagnostic assessment of the tax administration system (defining the scope of work);
- Provision of technical assistance;

Deployment of operational tax superservices, including:

- Automated tax administration and compliance monitoring systems;
- Services for business and self-employed registration;
- Automated cash register monitoring system;
- Tax payment service and taxpayer personal accounts.

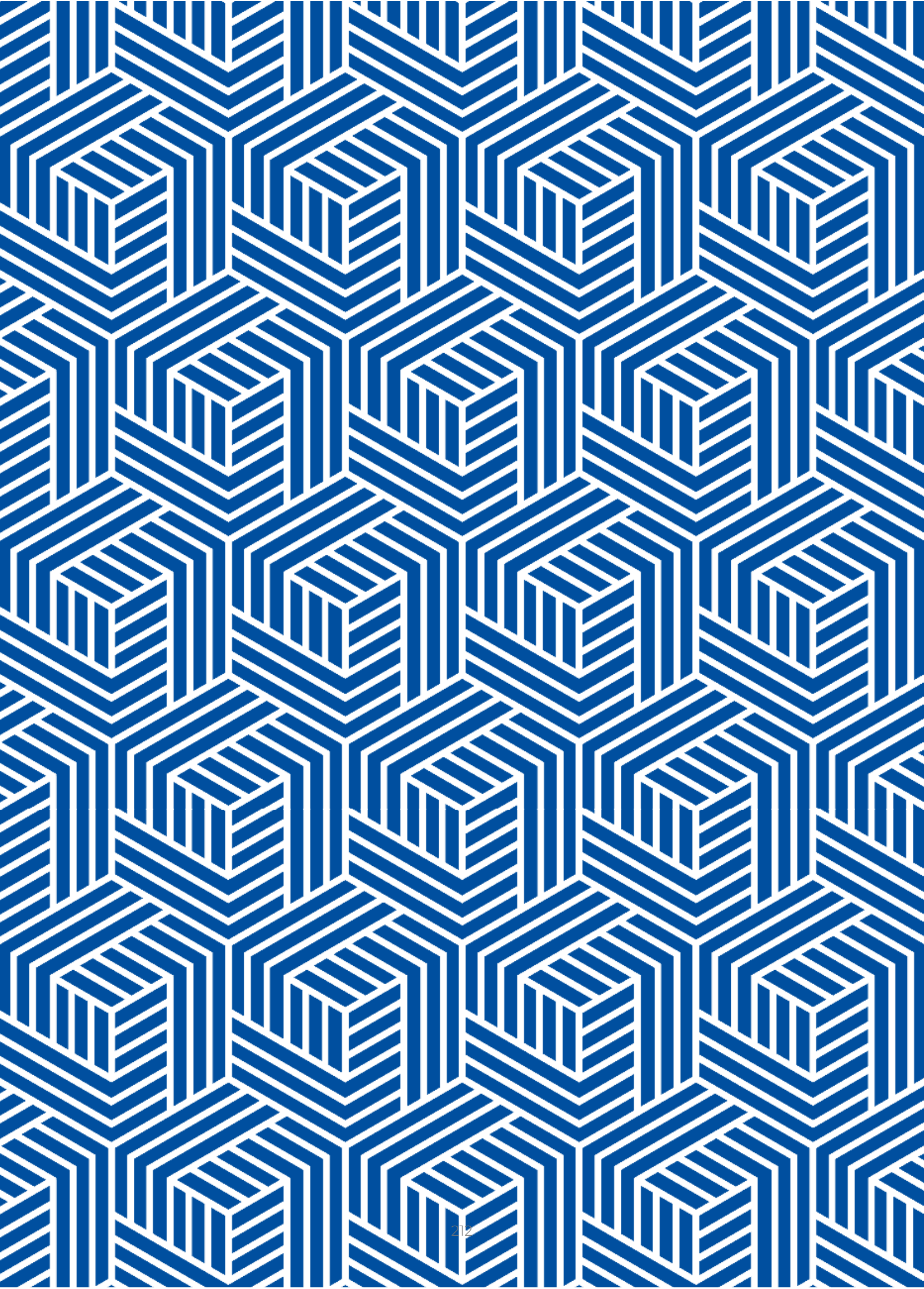
The extended offering also includes banking services:

- Account opening;
- Cash and settlement services;
- Payment acquiring (acquiring services).



### Uniqueness

- A variety of technical assistance formats: training seminars and workshops for tax authority specialists, advisory support on tax administration issues, IT infrastructure assessments, and export of ready-made technologies.
- Customized approach: taking into account the needs of foreign partners, the digital maturity level of existing information systems, and the specific challenges facing the tax administration.





Ministry of Economic  
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