

RESPONDING TO THE CHALLENGES OF THE TIME

Maxim V. Mironenko

Gazpromtrans LLC

Abstract

Over the past 20 years the Gazpromtrans company has come a long way of development and formation, which has allowed it to create a solid foundation for successful operation on the cargo transportation market. It is based not only on the regular introduction of modern management and production solutions in business processes, but also on the cultivation of young qualified specialists in various fields. All this enables the company to confidently respond to external challenges and make appropriate decisions in a timely manner, which is especially important in an unstable macro environment.

Keywords

Transportation logistics, advanced solutions, product groups, routes, infrastructure projects, digital programs.

- **You graduated from MGIMO, the School of International Business and Business Administration. What distinctive traits and qualities of this school graduates can you name?**

- Even though I graduated from the School of International Business and Business Administration MGIMO in 2000, I will assume that both then and now the graduates of our faculty are characterized by such qualities as systematic thinking, speed of reaction, non-trivial solutions to various types of problems, the ability to see the whole picture, simultaneous focus both on general and globally important things, and, if necessary, on details. This is the ability to be in demand in any industry and in any field of activity, showing miracles of versatility. And of course, this is a set of various “soft skills”: the ability to build and maintain relationships, listen and hear different points of view, negotiate.



The current situation has once again proven that any challenges bring hidden opportunities for further development.

The task is to detect them in a timely manner and appropriately arrange work to make use of them.

- **How does Gazpromtrans treat newly minted specialists? Which universities mostly provide their graduates to you?**

- We treat them perfectly. We always welcome graduates from both our specialized higher schools and any others, since we need specialists in a variety of fields. Our company is constantly developing, new jobs are created and our need for specialists is growing.

For instance, in February 2023, Gazpromtrans started shipping products from the Kovykta gas condensate field in the Irkutsk region, which was preceded by setting up our Irkutsk branch office, already the seventh in a row. The implementation of this project required the development of new infrastructure from scratch: railway tracks, capacities for loading condensate into tanks, facilities for the preparation and repair of locomotives and rolling stock. Today we are actively recruiting new employees of various occupations for our staff in the Irkutsk branch office. And we seriously rely on youth. After all, the infrastructure of the branch office is a new generation infrastructure: the most advanced technical and digital solutions - exactly what is close, interesting and understandable to young people, which, I hope, encourages them to consider the Irkutsk branch office and, in principle, our company as very interesting and promising employment.

In any case, at Gazpromtrans, regardless of their job, we offer a good start to fresh graduates. In particular, we have developed high-quality training programs aimed at both the rapid development of professional skills and the improvement of personal competencies. We have also developed a mentorship program. We have a Council of Young Scientists and Specialists - colleagues actively participate in scientific conferences and events on a national scale. For instance, in October young employees of Gazpromtrans became the winners of the “Youth Initiatives Projects” contest at the National Russian Labor Safety

Week. Young specialists participate in scientific and practical conferences of creative youth, where they present their contribution to solving relevant problems for the company. They are also actively involved in rationalization activities, master TRIZ tools - the theory of inventive problems solving, and soon become co-authors of interesting rationalization projects. It is interesting to work and develop with us, as we love to try everything new. For instance, our company has set up several competence centers. They are engaged in the implementation of software robots to perform routine operations, and the use of TRIZ tools (the theory of inventive problem solving), and the research into the latest communication means for digital projects, and also help employees master the Optimacros, corporate planning system and electronic document management, and popularize the culture of continuous improvement - lean.

We try to train our staff from their student days. We regularly invite students to join our internship program, where we aim to provide the knowledge and skills that will be required after their employment. In particular, last summer students and postgraduate students of the Russian University of Transport (MIIT) and the Siberian State Transport University were engaged in research work on the railway bridge over the Yuribey River located on the Yamal Peninsula. They acquired practical skills in geodetic work, electrical tomography, soil temperature measurement, vibration diagnostics of supports and air-laser scanning of a bridge with approaches. The data obtained during internship program were taken into account to study the conduct of bridge structures located in the Arctic zone.

Gazpromtrans comes up with educational initiatives and they find a great response from the administrations of the regions where our company has its footprint. Thus, we received support from the Yamal-Nenets Autonomous Okrug, directly from the Governor of the Yamalo-Nenets Autonomous Okrug, Dmitry Artyukhov, to arrange training for students of the Yamal Multidisciplinary College of the profile "Organization of Transportation and Transport Management." The first cohort began studying at the college in September. By the way, the number of candidates per spot was three. A classroom with all the required demonstration equipment has been created for students and a high-quality curriculum has been developed. Soon, we hope, college graduates will start their career as required specialists in our company.

And our employees have various higher schools behind their shoulders - the Russian University of Transport (MIIT), Moscow and regional state transport universities, Moscow State University, Moscow Institute of Physics and Technology, RANEPA and even MGIMO.



Our work with personnel is based on flexible approaches to motivation and social policy.

Since last year we have switched to competency-based personnel management, providing systematic employee development and developing managerial potential.

- **How has export cargo transportation in Russia changed over the past few years?**

- Over the past two years there have been significant changes associated with export cargo flows in Russia.

We have been observing a consistent restructuring of supplies from traditional Western markets in favor of the Far East, countries of Central and Middle Asia, as well as countries of the “Global South”. As of the end of 2023 the share of supplies in this direction increased by an average of 8-9%. This trend will only intensify.

Of course, depending on the specific product group, the dynamics of changes differ. Thus, as far as coal is concerned, the most massive cargo in the transportation network of the Russian Railways, the share of its supplies to the Far East and ports of the Azov-Black Sea basin rose by a total of 8-10%, whereas its turnover through western border crosses and ports of the North-West declined by a similar amount. The redistribution of coal flows has already amounted to about 20-25 million tons per year.

As for the transportation of petroleum products and liquefied petroleum gas (LPG), it is worth noting the rapidly growing role of supplies to the countries of Central and Middle Asia, where the share of petroleum products rose from 4% to 8%, and for LPG from 0.5% to 11%. In addition to the traditional markets of Kyrgyzstan, Uzbekistan and Tajikistan, surge in demand can be seen on the markets of Iran, Afghanistan, and Pakistan.

Till 2030, JSC Russian Railways is implementing large-scale infrastructure projects to foster the capacity of the Eastern direction to increase supplies to Asia-Pacific countries, including China, where we can witness active development of land frontier crosses. As a result, cargo volumes are projected to increase to 260 million tons by 2035 (from 164 million tons in 2023).

In the Azov-Black Sea basin the expansion of throughput capacity to increase supplies to countries in Africa and the Middle East is also underway.

It is worth mentioning the development of the North-South corridor to access the markets of Central Asia, including India, which cargo traffic should reach 30-35 million tons by 2030. Its individual routes are: The Trans-Caspian, Western and Eastern routes will pass through 11 countries and will accelerate trade with the countries of the Persian Gulf, Central Asia and Africa. One of the main advantages of this transport corridor is the reduction of transportation distances by more than half, in particular, compared to transportation by sea through the Suez Canal. This will result in a reduction in transportation costs. Investments in the development of the North-South corridor until 2030 will amount to 280 billion rubles and will be associated with large-scale construction of railway and road infrastructure, border checkpoints, and so on.

- **What challenges does the company face amid market turbulence and sanctions pressure?**

- It should be noted that not only our company, but our country as a whole is working under unprecedented sanctions pressure.

It's hard to imagine, but approximately 18 thousand sanctions have been imposed against our country; we work amid bans on trade and the import of products from unfriendly countries. Moreover, it is necessary to note higher security risks, including in the IT sector, the need for prompt import substitution, including software and information systems, as well as the need for new approaches to working with personnel, for instance, employees need to be adapted to new conditions. But we are not sitting idly by and are quickly developing specific measures to reduce and in some cases completely offset the impact of these challenges.



We intend to digitize not only cargo transportation, but also the movement of rotational personnel, and create a single information space with our clients.

- Talking about new challenges, how will they affect the future activities of Gazpromtrans?

- In short, changes in transportation logistics lead to an increase in the average transportation distance and the need to use more rolling stock, which is either to be chartered on the market (rented) or built at car-building enterprises, which implies considerable investment.

And this situation forces us to concentrate maximum efforts on ensuring higher productivity and efficiency in the use of rolling stock, minimizing the time it spends in any type of operation. We set a goal to ensure even stricter control over the movement and turn round of wagons, over unproductive downtime of wagons while unloading the goods, in transit. To implement this task, a number of management and production solutions have already been promptly developed and introduced; we use modern information systems to assist operational decisions.

For instance, we have recently received a certificate from the Federal Bureau for Intellectual Property for the state registration of a computer software, which constitutes a recommendation system for optimizing the distribution of a fleet of cars and wagons. This is our own innovative development, providing us with flexibility and efficiency of logistics processes.

Let me give you another example. In 2023, the Astrakhan branch office launched an automated system for commercial inspection of wagons and cars, which uses computer vision technologies and enables examining wagons and cars for damage. Now specialists quickly receive information on defects and the degree of faulty parts and assemblies deviation from standard values.

- The challenges you mentioned require adaptation of personnel to work in new realities - what is Gazpromtrans' response to them?

- It may not always be easy for employees to quickly adapt to new systems and to perceive new realities in general. But the main thing in this case is not to be afraid of innovations. With the set of measures, the systematic work within personnel management that we carry out today, colleagues can perceive innovations and adapt to new realities much faster and more effectively.

Our work with personnel is based on flexible approaches to motivation and social policy. Since last year we have switched to competency-based personnel management, providing systematic employee development and developing managerial potential. In particular, we offer continuous training – both inhouse and external. We have seriously expanded the capabilities of our corporate university and developed corporate training courses. It's interesting that we have managed to raise business coaches just inside the company and

they teach courses that are in great demand by employees. Advanced teaching methods also help to understand new advancements, for instance, virtual and augmented reality technologies - the student can be immersed in the process he is studying using special touch devices and analyze in detail all its stages and features.

The current situation has once again proven that any challenges bring hidden opportunities for further development. The task is to detect them in a timely manner and appropriately arrange work to make use of them. Therefore, even though the difficult external environment has adjusted some of our forecasts, on the whole we are satisfied with the overall result of our work.



Gazpromtrans is aimed at creating and developing a culture of continuous improvement among its employees and introducing lean manufacturing principles. It's an affordable and powerful productivity tool.

- **What digital transformation projects are you currently implementing?**

- Our projects are combined into digital programs and cover all principal areas of our activity. Each program consists of several projects. In total there are more than 70 of them, and 34 are identified as principal ones.

There are projects which implementation we are especially proud of, since Gazpromtrans was the pioneer of their development and introduction in the railway industry.

For instance, in 2020, it was in the innovation laboratory of Gazpromtrans that the “Digital Dispatcher Assistant” project was born. This software set allows us to optimize the management of our railcar fleet. It shows the required amount of rolling stock to fulfill transportation plans and determines the optimal empty run for cars. This tool helps minimizing costs subject to unconditional execution of the cargo plan. A human is incapable of processing large amounts of data so quickly and efficiently. And based on this data, decisions need to be made quickly, and they have direct impact on economic performance. In 2023, intense three years of work on the project culminated in the Certificate from the Federal Bureau for Intellectual Property on state registration of the recommendation system for optimizing the distribution of the fleet of cars and wagons “Digital Dispatcher Assistant” in the register of computer software.

Another interesting project is “Digital Twin of a Locomotive.” Inside the company we are thinking about introducing electronic assistants and digital systems to ensure the efficient operation of traction rolling stock. We set ourselves the task of creating an exact virtual copy of the locomotive, indicating the characteristics of all its components, demonstrating in real time the condition of assemblies and power units, fuel consumption, and so on. Based on the data obtained, it is possible to quickly identify malfunctions in the operation of a diesel locomotive and more accurately predict the timing of its repair, thus reducing its costs.

The implementation of the Digital Cargo Station project is relevant for

Gazpromtrans. In October we submitted an application to Rospatent for DEXA, a robotic system for commercial inspection of rolling stock driven by computer vision technology. The Astrakhan branch office of Gazpromtrans is currently testing the operation of the system. We hope that it will be installed in other branch offices in the near future.

We intend to digitize not only cargo transportation, but also the movement of rotational personnel, and create a single information space with our clients. This will ensure simplicity and transparency of operation, and will enable monitoring the fulfillment of requests in real time.

And in the Yamal branch office we are now implementing an “end-to-end” digital transformation project. It covers both production processes - monitoring and diagnostics of the current state of infrastructure, logistics, and management processes - personnel management, preparation of management reporting.

By the way, Gazpromtrans’ achievements in digitalization have been repeatedly awarded by PJSC Gazprom.



We try to train our staff from their student days. We regularly invite students to internship, where we aim to provide the knowledge and skills that will be required after their employment.

- **What are the company’s long-term development plans?**

- We will continue to implement digital projects and launch new ones. Thus, the GetRail software is to be implemented in the Irkutsk branch office. It is planned to further develop electronic document management with clients and suppliers.

We were also able to evaluate the potential of using artificial intelligence. So, in particular, at Gazpromtrans we successfully develop and introduce software robots to automate processes. We plan to go further: in particular, to use neural networks to make it easier for employees to get acquainted and work with internal documents. We have joined the Code of Ethics in artificial intelligence (AI), and the company will soon launch a competency center for the introduction of AI.

Gazpromtrans is aimed at creating and developing a culture of continuous improvement among its employees and introducing lean manufacturing principles. It’s an affordable and powerful productivity tool. This year we have entered the national project “Labor Productivity”, arranged training for employees in the principles of lean production, raised coaches among us and launched a pilot project in the Orenburg branch office with the Moscow Regional Competence Center. Recently, at a corporate conference on lean production, Gazpromtrans employees presented their reports on the results of implementing lean projects in various areas of production and management. After getting acquainted with them, it became even more obvious to my colleagues how great the potential is for switching to the path of

lean production, and how universal this tool is, applicable to any field of activity. By the way, the level of proficiency of our employees with this tool is rated very highly: in November the Gazpromtrans team became the silver medalist of the III Cup for Rationalization and Productivity in the “Optimization of Railway Transportation” section.

Our plans also involve further improvement of work with personnel. In 2022 we switched to competency-based personnel management and are ensuring the systematic development of the company’s management potential. We plan to introduce digital projects to make effective management decisions, continue to develop the educational ecosystem, and maintain and develop our image as an attractive employer.

About the author:

Maxim V. Mironenko – CEO of LLC Gazpromtrans, 108814, Russia, Moscow, 101 Gazoprovod village, bldg. 9.

Conflict of interest: the author declares no conflict of interest.

Funding: the study was not sponsored.

For references: Maxim V. Mironenko (2024). Responding to the challenges of time, 4(6), pp. 185-192

Submitted for publication: 20 October 2023

Accepted for publication: 5 November 2023