



Starting small, thinking BIG

*Roshel manufactures smart armoured vehicles
for commercial and governmental contracts*

By Lindsay Luminoso

Roshel got its start in 2016 when founder and CEO Roman Shimonov launched the smart armoured vehicle company with a vision to create something meaningful and to make a positive change.

At the time, many other established armoured vehicle manufacturers existed in the market. Shimonov recognized that he needed to provide something unique to set his company apart. His approach, therefore, was to find ways to connect the technology and advancements that were occurring in the defence vehicle manufacturing market with commercial vehicle manufacturing, and vice versa.



Images: Roshel

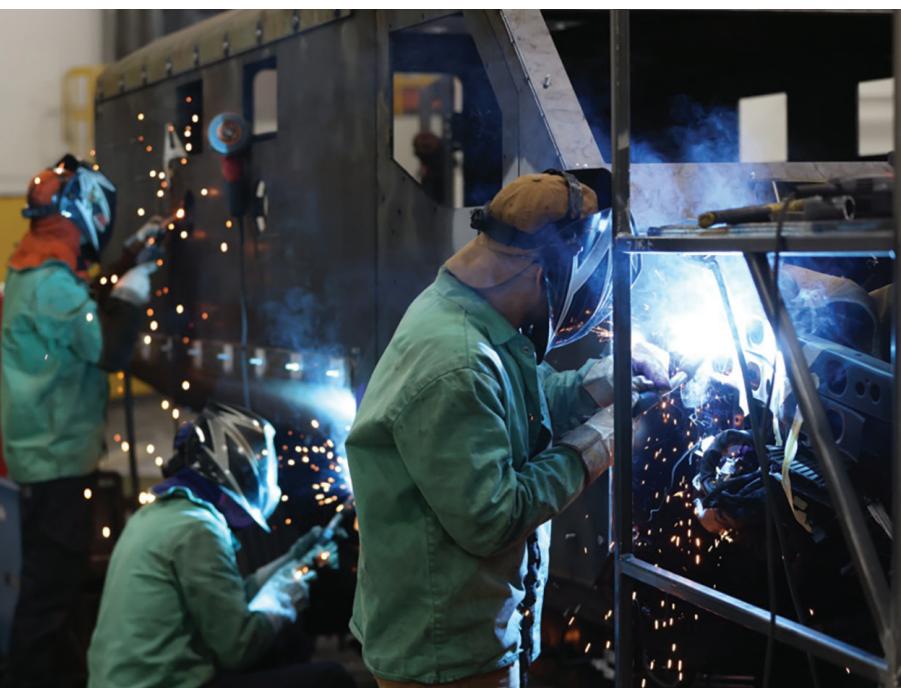
"This was obviously challenging to start with because it required a lot of permits, registrations, and ensuring that we were in compliance with all necessary standards and regulations," said Shimonov. "Many bigger companies only start looking at procedures, governance policies, and certifications when they get big enough. But we did the opposite and started with the elements that people would expect from a big company."

The company launched from a tiny office in Toronto, Ont., and spent its first year developing the right business model to address market challenges and finding technology to fit customer needs.

Today, Roshel is one of the largest manufacturers of smart armoured vehicles for commercial and government organizations in North America, with 500 employees, a 400,000-sq.-ft.-plus facility, and three production shifts that run 24/7.



Roshel offers in-house metal fabrication, paint, machining, turning, assembly, welding, and mechanical and hydraulic work.



Shimonov believes the company's workforce is the driving factor of its success. Roshel's goal is for its employees to understand the meaningful reasons why they do the work they do.

"For the last two years, we haven't stopped even for one minute," said Shimonov. "We were able to create a production flow with a backlog that will allow us to continue the work for at least the next two years."

The company has focused not on acquiring as many new clients as possible, but on preserving relationships with existing customers through quality assurance and support after the sale. This was done by implementing a comprehensive and advanced customer portal system that allows customers to

open tickets and inquire about a number of features, at no additional charge.

"We believe that it is just common sense to include this technology with our products to better help our customers," said Shimonov. "This is one way we are able to differentiate ourselves in this market."

Technology-First Approach

Not only did Roshel focus on the development of armoured vehicles for commercial and defence sectors, it also worked to incorporate the latest smart technology into those vehicles.

"Our niche is the ability to create an additional layer of safety where we're not just utilizing the conservative and classic approaches to make the vehicle safe, just adding layer after layer of steel to feel safe. Instead, our approach is that steel is not the only answer; that additional layer of safety can be addressed with technology."

Technology is something that can mitigate and reduce different exposure variables. Rather than just zeroing in on what could happen should an attack take place, the company has developed technology to identify the source of the potential attack and prevent it from happening through awareness.

For example, Roshel identified a glaring issue with existing cash-in-transit vehicles: they used simple locks that open with a key. The company developed a vehicle with technology that is controlled by a

dispatcher rather than the driver. When a dispatcher sees that a vehicle is in the right location and that there is no threat hiding around the vehicle, the dispatcher then can open the locking mechanism remotely.

Roshel approached GardaWorld, a globally recognized company in the security sector, with its vehicle prototype that included this new dispatcher-controlled remote locking mechanism, to see if the company wanted to add them to its fleet.

While GardaWorld was very skeptical at first, the prototype exceeded its expectations and led to a significant number of orders. And as a result of this success, Roshel continued receiving orders from other companies in the cash-in-transit sector, where this technology-focused approach became the new standard in the field.

From there, Roshel took this approach and applied it to the defence sector.

“Rather than focusing on using thick steel to mitigate bullets being shot at the vehicle, we developed technology to identify the source of the flash of the fire,” said Shimonov. “By identifying shots in real time, users can make a decision that can eliminate the chance of someone shooting at the vehicle. Our goal is finding cutting-edge technology to protect the crews in our vehicles in whatever ways we can.”

While the company had steady orders for this technology, it wasn’t until the war in Ukraine broke out that Roshel experienced a significant surge in demand and became recognized as a provider of a cost-effective and competitive vehicle certified to all North Atlantic Treaty Organization (NATO) standards with blast and ballistic mitigation.

“This is how we continue the growth,” said Shimonov. “We see areas of weakness and work to mitigate them. We are on the path of huge growth with numerous orders from the United States, Canada, and European authorities. Our focus on both technology and not just steel has allowed us to become so successful in such a short time.”

Uncompromising Production Standards

To ensure quality production standards were met on all of its vehicles, the company brought all manufacturing and production in-house, eliminating its reliance on suppliers.

“We wanted to control the turnaround and quality,” said Shimonov. “We invested in machinery and created the entire production cycle in-house to give us the agility and flexibility we need to address unique situations as best we can.”

Roshel does all its own metal fabrication, paint, machining, turning, assembly, welding, and mechanical and hydraulic work.

For the company, metal fabrication requires a professional approach and attitude, especially related to quality control policies and procedures.

“It’s about ensuring that we follow all of the procedures, have the right production work order, and have all of the routing sheets in order,” said Shimonov. “Everything needs to be produced in ways our customers expect. Working with the government or other entities requiring certain standards comes with a huge responsibility. As a manufacturer, we need to ensure that all of the standards and procedures are not just implemented on paper, but in practice.”

Quality assurance is built into all aspects of the production cycle, not just something done at the end. The goal is consistency in quality across the board for all customers.

“As a manufacturer, we have to rely on so many elements to ensure we get that high-quality consistency,” said Shimonov. “We depend on clients, suppliers, employees, raw materials, and vendors. We cannot compromise on any of these aspects. There is no compromising quality in this manufacturing business.”

This philosophy pushed Roshel to adopt an enterprise resource planning (ERP) system, which allows it to properly identify the right approach to deal with every order correctly and follow proper policies, procedures, and production flows in the most efficient and lean way possible. Shimonov credits the company’s early ERP system adoption with a lot of its successes.

The ERP system has been especially helpful in the company’s effort to differentiate vehicles that are for countries that use the metric system and those that use Imperial standards.

“We cannot expect our employees to remember which bolts, nuts, and equipment they need to take,” said Shimonov. “Because of this, we were able to use our ERP system to implement an automated vending system on the production floor. Every employee starts the day by accessing all the elements they need to complete the job. The system is able to create a bill of materials for each work order and employee to allow them to do the job and mitigate any issues related to changing features.”



Roshel has delivered over 1,300 vehicles to Ukraine's war effort, which generated hundreds of millions of dollars in revenue.

Shimonov also believes that the workforce is the driving factor of Roshel's success. The company's goal was not to hire individuals who would simply punch the clock, but rather those who would understand the meaningful reasons why they do the work they do. Having a motivated workforce is key, and one way the company inspires motivation is through proper compensation.

"We want our workers to know that we support them and that we are doing something, not for the sake of doing it, but is important," said Shimonov. "We stand behind them and our products. Our success rate is based on the repetitive nature of the quality of the products and the willingness of our customers to come back and purchase more from us."

Programs, Not Projects

Roshel has focused on programs rather than projects. Every manufacturing process requires non-recurring engineering, adaptations, modifications, engineering, and training. Every change costs money. For Roshel, programs are long-term, strategic initiatives focused on delivering sustained value, while projects are seen as shorter-term efforts with specific deliverables that contribute to the overall program goals. Programs encompass multiple related projects and align with

broader organizational objectives.

By focusing on programs, the manufacturer is able to reduce these variables and repeat the same production process, reducing the cost and increasing the margins.

"We believe that having the right program, which is versatile and can serve as many customers as possible, allows us to increase the quality of the product because we can identify different deficiencies while optimizing and improving consistently," said Shimonov. "In return, we can market the same product to more customers. This allows us to focus on programs rather than projects."

Every project can be different, but with programs, the company can build and contract at much longer intervals by producing the same product time after time.

The Roshel Senator MRAP (mine-resistant ambush protected) is an example of how the company developed, certified, and tested the vehicle, which has its own NATO designation number. It has become one of the most popular and requested products among buyers because they know what to expect—a certified, tested, combo-proven product with modules that the manufacturer is constantly optimizing for continuous improvement.

"Everyone benefits from long-term programs," said Shimonov. "It's not about a check mark, it's always ongoing work. Programs not only benefit the buyer, but suppliers, manufacturers, and even taxpayers of government-purchased vehicles. The price gets lower, and the vehicle gets more efficient. We focus on being more lean, competitive, and offering better performance as the program advances."

It also allows the company to lower overhead costs. With the ERP system in place, Roshel is able to have a set bill of materials that allows it to reassess vendors, choose new vendors, or preplan with preferred vendors.

The technology allows for a lot of the planning work to be done automatically.

"AI is very relevant with our ERP system," said Shimonov. "A lot of the repetitive functions which are crucial but can be done automatically, including counting the parts to use inventory more efficiently. By being more efficient with inventory, we can cut some overhead costs depending on the contracts that come in. We don't focus on how things have always been done, we push the boundaries on what is capable, and AI is one way we are doing that."

For example, Roshel tries to get several quotes from different vendors and identify the delivery time. Shimonov noted that sometimes it's better to pay a little more if the delivery time is optimal rather than paying extra money for storage and space. It's a balancing act where the company has found its footing.

Navigating Global Disruptions

Because of the continuous improvements and technology that the company has woven into the fabric of its operations, it has been able to handle disruptions better than most.

For example, Shimonov noted that the short-lived CP and CN rail strike had the potential to be disas-

trous for some businesses, but Roshel understood its inventory and could plan accordingly. Similarly, while the blockage of the Suez Canal by the ship Ever Given was a catastrophe for some, Roshel once again used its technology to adapt and keep production going.

Sometimes a disruption can be an opportunity. The Russia/Ukraine war spurred Roshel to find a way to help.

"The war in Ukraine created a huge demand, and we were able to meet this demand in the shortest time possible," said Shimonov. "Roshel has successfully delivered a significant number of armoured vehicles, which have been widely adopted by various governmental entities, including Canada, USA, European governments, and Ukraine. Our products are known for their quality and reliability, leading to a strong demand from these esteemed clients."

So far, Roshel has delivered over 1,300 vehicles to Ukraine's war effort, which generated hundreds of millions of dollars in revenue.

"Continuous development of products put us ahead in the market when it comes to

blast and ballistics mitigation," said Shimonov. "We created a first-of-its-kind vehicle based on a commercial chassis that costs 30 per cent less than vehicles of identical capacity. As a result, we got a sole-source order from the U.S. Department of State, and we were qualified for the largest contract in Canadian history to supply thousands of vehicles for the Canadian Army. We are a small company that is competing on something big."

In addition to technological advancements and operational excellence, Roshel is committed to maintaining the highest standards of corporate governance and ethical conduct.

"Our transparent and responsible management practices ensure compliance with international regulations and foster trust among clients and partners,"

said Shimonov. "We approach our business with a well-established framework that emphasizes accountability and integrity, reinforcing our reputation as a reliable and trustworthy partner in the global defence industry."

Orienting Towards Social Responsibility

Beyond continuous improvement, the company also is focused on social responsibility. It has addressed the need to ramp up production and fill vacant positions.

For example, Roshel hired over 200 refugees from Ukraine, providing them with valuable skills and experience. As the company plans to expand into Ukraine, many of these employees will soon have the opportunity to return home.

"We've equipped them with new skills and knowledge, giving them more choices for their future," said Shimonov. "If they decide to return to Ukraine, they can continue their work with Roshel or explore new opportunities with the expertise they've gained here. We're not just creating jobs; we are allowing people that came to Canada to work hard and eventually get back to their home country. We're creating a positive influence in the economy. We are investing in the region, buying more machinery, creating jobs, and paying our taxes. Everything we're doing is creating something out of nothing, and doing that within Canada and Ontario." **FW**

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