



The global market for Tactical Wheeled Vehicles is booming: here's what it takes to compete

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DEFENSE



GM Defense's ISV family of vehicles, including (left to right) Heavy Gun Carrier, traditional ISV nine-troop carrier and the All-Electric Military Concept Vehicle.

Building on its recent success equipping the first U.S. Army unit with the Infantry Squad Vehicle, GM Defense is expanding into the international market for tactical wheeled vehicles.

By Barry Rosenberg, Breaking Defense



GM Defense President Steve duMont.

Given the geopolitical events, the world's militaries are heavily investing in tactical vehicles. In late December, Canada issued a Request for Proposal for new fleets of light and heavy logistics vehicles under the Logistics Vehicle Modernization Project and begun competition for a Light Utility Vehicle. Countries in

the Middle East and North Africa (MENA), such as the United Arab Emirates, Kuwait, and Morocco are also assessing the need for a modernized tactical capability for their Armed Forces.

Tactical wheeled vehicles (TWV), in particular, are in hot demand around the world, with a new TWV strategy for the U.S.

Department of Defense, for example, expected in 2022. Many of the world's defense departments are taking their lead from U.S. strategy — especially as it will rely heavily on commercial industry's ability to deliver these vehicles at scale and with the latest advancements in safety and performance.

"Because many TWVs are based on commercial vehicles, they benefit from a shared industrial base — including supply chains, research and development operations, and assembly and production systems," states the U.S. Government Accountability Office's July 2021 report on TWVs. "This commonality allows manufacturers to maintain expertise and production line capacity to meet surge demands when necessary and support sustainment."

When it comes to building TWVs, few companies in the world meet that requirement better than General Motors (GM) and its military subsidiary GM Defense. With their vast, worldwide supply chain, huge investments in research and development that include electrification, and modern, clean manufacturing footprint, GM Defense is uniquely positioned to support global military TWV needs. To address the growing international demand for TWVs, GM Defense is building upon its business with the U.S. Department of Defense and other U.S. government agencies, to expand beyond America's borders to meet requirements of the U.S. government's partners and allies abroad.

TARGET MARKETS FOR GM DEFENSE

GM Defense has embraced a philosophy that promulgates greater teaming and knowledge sharing between industry and land forces around the world. The first fruit of that labor is the agile nine-Soldier Infantry Squad Vehicle (ISV) that GM Defense



First delivery of the the Infantry Squad Vehicle, GM Defense's first program awarded in June 2020, was within 120 days of contract award.

is manufacturing under a U.S. Army contract awarded in 2020. Light and compact enough for air transportability, the ISV is based on the Chevrolet Colorado ZR2 truck, featuring 90 percent Commercial-Off-The-Shelf parts.

In April, GM Defense met the important First Unit Equipped milestone when it fielded the initial 59 vehicles to the Army's 82nd Airborne Division, which has sent paratroopers to Poland in response to Russia's invasion of Ukraine.

The ISV is exactly the sort of specialty-built, militarized truck leveraging off-the-shelf technology that many of the world's land forces are looking for; especially as GM Defense further expands the ISV family of vehicles, to create different customization options for seating, cargo, propulsion systems, and the like.

"It's clear why Europe is a very important region for us, especially now," said GM Defense President Steve duMont. "What's going on in Eastern Europe underlines the importance of U.S., DoD and U.S. industry participation in the NATO alliance force."

"We have a lot to offer in the European markets, and while it might not be as critical in some of the larger countries where they have well-established automotive industries, if you look across the eastern flank of NATO there are countries where we can bring a lot of value in terms of off-the-shelf capability that we can adapt to meet their unique needs."

Other target markets for GM Defense include the MENA region — which is projected to buy TWVs, as well as armored vehicles at a compound annual growth rate of more than 2.5 percent from

2022-2027, according to India-based Mordor Intelligence. South America and the Indo-Pacific region are also exploring TWV procurements.

At the top of GM Defense's plans for international expansion, is Canada, where General Motors already has extensive operations. Before we discuss the company's defense plans for the Canadian market, let's look at the discriminators that make GM Defense the right partner to meet much of the world's needs for TWVs.

WHAT GM DEFENSE BRINGS TO THE TABLE FOR INTERNATIONAL PARTNERS

The paradigm for how U.S. companies sell military equipment abroad has evolved over the last couple decades. Under the long-existing Foreign Military Sales model, the U.S. government brokered the deal for a foreign country, the equipment was built in the U.S., and then delivered by the U.S. government. Sometimes it was subsidized by the government, sometimes not.

Today, friendly foreign militaries want to have "some skin in the game," as duMont put it. They want to ensure that they can get more than just the defense capability. They want to build some of the ecosystem and support in their own local markets.

"GM Defense can do that by leveraging GM's broad footprint around the world," explained duMont. "And that global footprint of General Motors is a real differentiator for GM Defense. So not only can we deliver the vehicles, but in many cases, we can offer to build vehicles locally, leveraging a local, national workforce, and giving meaningful scope of work to countries around the world.

"That means offering partner nations some type of final assembly or letting them be responsible for logistics and aftermarket support. General Motors, with its global network of manufacturing facilities and technical knowhow that exists around the globe, is going to enable GM Defense to bring our advanced capability through these local entities to be adapted for their unique requirements. We're excited about that, and I think it's a great differentiator we bring."

That means not only providing value to a client in areas like power propulsion, connected vehicles, hands-free, and autonomous

solutions, but making them collaborators in the development of those technologies and capabilities.

When working with partner nations, GM Defense can both leverage the international infrastructure that exists today across GM and, depending on the scenario, can build and equip new manufacturing facilities by flexing its muscles as one of the largest vehicle manufacturers on the planet.

“We stood up our ISV build facility in Concord, North Carolina, in just over 90 days after breaking ground,” observed duMont. “It was a hollow, concrete slab with four walls and about 90 days later, we were turning out world-class vehicles to be delivered to the United States Army. We can bring that same capability anywhere in the world when we have the right business opportunity and the right agreements in place to do that.”

Finally, the company will continue to manufacture purpose-built mobility solutions as it can architect vehicles based on GM’s light and heavy-duty trucks. At the same time, GM Defense sees opportunities to collaborate on larger vehicles, as well.

LAUNCHING FROM THE GREAT WHITE NORTH

For GM Defense, the launching pad for the company’s expansion into the international defense market is our neighbor and ally to the north — Canada. Canada has been a major partner for GM since the General Motors of Canada Company was founded in 1918 with billions of dollars invested in developing Canadian infrastructure.

GM Canada presently employs more than 5,000 people and has a network of approximately 450 dealers supporting thousands of additional workers in the Canadian supply chain. GM’s Oshawa Assembly and CAMI Assembly in Ingersoll, Ontario, halfway between Toronto and Detroit, are the hub of those activities. CAMI Assembly has produced more than five million vehicles since starting production in 1989 and is recognized both inside and outside of the manufacturing industry as one of the most efficient assembly plants in North America. GM Canada’s Oshawa Assembly recently completed one of the fastest plant launches in GM’s history, retooling 65 percent of the line in less than a year. In the coming months, Oshawa will accelerate to three shifts to support production of both heavy-duty and light-duty pickups.

As its first competitive entry into the international TWV market, GM Defense is pursuing the Canadian Department of National Defence’s Light Utility Vehicle (LUV) program.

The Canadian Armed Forces (CAF) require a protected, lightweight, multi-role, and highly mobile ground vehicle to conduct multiple battlefield roles and tasks across the spectrum

of conflict: combat, command support, combat service support, individual training, and training support. This includes tactical helicopter squadrons in the Canadian Air Force that need LUVs to help secure landing zones as well as disaster response teams from Canadian Joint Operations Command and health services and military police under the office of the Vice Chief of the Defence Staff, as reported by the website Canadian Army Today.

Canada’s current LUV wheeled fleet consists of a Militarized Commercial-Off-The-Shelf (MilCOTS) Chevrolet Silverado truck from GM and a Standard Military Pattern (SMP) Geländewagen (G-Wagon) from Mercedes-Benz. This fleet has been in service since 2003 and has reached its end-of-useful life with operational limitations, safety deficiencies, no longer meeting Canada’s Strong, Secure, Engaged Defence Policy and CAF objectives.



GM Defense’s expeditionary Logistics & Mission Support Concept Vehicle is a new variant that is part of the ISV family of vehicles.

The LUV program is projected to be worth between \$250 million to \$499 million for as many as 2,500 vehicles, with first deliveries planned in the 2025/2026 timeframe.

“We’ve created an unbadged, seamless environment between GM Defense and GM Canada teams to deliver the best vehicle for the Canadian defense requirements,” said duMont. “We understand that the procurement process for LUV requires significant investments in Canada, and with GM’s current and future investments, we’ll meet our future Industrial Technological Benefit obligations. We’re excited about the value we bring, and we’re evaluating the supply chain to determine the right Canadian partners to work with us.



GM Defense designed the light and agile Infantry Squad Vehicle to provide the U.S. Army rapid ground mobility.

“We’re going to have a great proposal for the Canadian government to deliver a world-class vehicle adapted for the Canadian military’s specific needs and still heavily based on commercial technology. That, in turn, will drive down the overall cost of design development and production to deliver better value to the Canadian armed forces. It will be multi-mission capable, and it’ll be built in Canada by Canadians leveraging Canadian technology development and a Canadian supply chain.”

The company’s LUV will be built as a robust, durable vehicle designed to withstand the rigors of military and defense environments. It will form the basis of what can be sold not just to Canada but to other allied land forces around the world.

The international defense market will get its first chance to view the Chevrolet Silverado-based, Canadian LUV prototype at Eurosatory, a large global defense tradeshow taking place in Paris in June 2022. The goal is to show that what GM Defense is doing in Canada also has significant applicability outside of the Canadian market.

At Eurosatory, GM Defense will also be displaying the U.S. Army’s Infantry Squad Vehicle and demonstrating its accomplishments in electrification through GM’s commercial, next-generation Ultium EV Platform.

“We want to get the message out that GM Defense is a global company, and we’re interested in collaborating with countries and their defense organizations and local industry to adaptively engineer products to meet their defense needs,” said duMont. “We recognize that countries no longer want systems that are just built in the U.S. We’re willing to explore opportunities to produce locally around the world with our customers.”

LEADING THE WAY IN ELECTRIFICATION FOR INTERNATIONAL MARKETS

GM Defense’s international expansion efforts are not limited to TWVs powered by traditional internal combustion engines (ICE). GM Defense believes that every program in the U.S. and abroad can benefit from the modernization that electrification brings — from all-electric or hybrid-electric powertrain, anti-idle, and start-stop technology for fuel-demand reduction and silent watch, to exportable power that provides redundancy, replacing diesel generator equipment and facilitating micro-gridding of multiple vehicles for power during natural disasters when power grids go out.

In addition, electrification means that warfighters will have a greater ability to maneuver during silent watch operations. The lower acoustic signature that battery technology and fuel cells provide will also enable stealth capabilities. These are real advantages for warfighters, duMont noted.

GM Defense has already adapted electrification to the ISV and displayed what it calls the All-Electric Military Concept Vehicle at the Association of the U.S. Army (AUSA) 2021 trade show last October. It took GM Defense just three months from concept to completion to build the all-electric concept vehicle by replacing the internal combustion engine in the ISV with GM’s current-generation battery electric propulsion system.

Last year, parent-company GM announced plans to invest approximately \$35 billion in both electric vehicle and autonomous vehicle technology development for both its U.S. and international customers. As part of its commitment to the Canadian market, GM will invest nearly \$800 million to convert CAMI Assembly into Canada’s first large-scale commercial electric vehicle manufacturing plant. The two-million-square-foot CAMI facility will manufacture BrightDrop’s all-electric light commercial vehicles, with full-scale production of the BrightDrop Zevo 600 beginning later this year.

“While the Canadian requirements for a Light Utility Vehicle are currently for an internal combustion engine-powered vehicle, everything we build now has got us thinking through how we can enable a transition to an electric variant and add advanced autonomy to the vehicle,” said duMont. “The world’s movement



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toward the use of electric and autonomous vehicle technology tells me that unless defense customers around the world want to stand up their own supply chains and commit their own resources to deliver ICE-powered vehicles, they're going to make the same transition.

"Some will make it sooner than others, and I think that even within the U.S. DoD there's a show-me mentality around how electric power provides a tactical edge — whether it's DC-to-DC battery charging or hydrogen fuel cell technology, both of which GM is leading in. For our part at GM Defense, we're working with various defense customers domestically and are starting to discuss with allied land forces the concept of transitioning to an all-electric future."

GM Defense will continue to focus on integrated vehicles, mobility and autonomy, and power and propulsion solutions to help drive its customers to a more electric, connected, and autonomous future. As it is doing within the U.S., it is leveraging GM's massive investment in the underpinning technologies of this major transformation toward electrification.

Said duMont, "We think there's a lot of benefit to customers around the world where we can leverage both GM's investment and strong placement as a world-class manufacturer that's truly global in its presence."