

CANADIAN ARMY



TODAY

SPRING 2026 | VOLUME 10 | ISSUE 1

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- Arctic expedition
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- Cold-weather clothing feedback
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- Battlefield lessons

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A member of 38 Canadian Brigade Group's Arctic Response Company Group aims a C9 light machine gun during Op Nanook-Nunavut near Cambridge Bay, Nunavut.

Photo: MCpl Sarah Morley

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EDITOR'S NOTE



The U.S. Department of Defense (DoD) has awarded an “undefinitized” contract action to Lockheed Martin to begin work on 17 M142 High Mobility Artillery Rocket Systems (HIMARS) “to address urgent needs for the Army, Marine Corps, and Foreign Military Sales customers in Australia, Canada, Estonia, Sweden, and Taiwan.”

The Canadian government has yet to formally confirm the acquisition of the HIMARS, but Army Commander Lieutenant-General Michael Wright

noted a letter of request to the U.S. government during an interview last fall. The inclusion of Canada in DoD’s April 29 contract announcement suggests a certain quantity are destined for the Army. And relatively soon. The DoD set an estimated completion date of April 2028.

Long-range precision strike is among Wright’s top priorities, a critical enabler for division level operations. Training the platforms to their full extent, though, may be a challenge, at least initially. Canada has some of the largest training ranges in NATO, but none have the distance to match the M142’s full range.

Major-General John Errington, commander of the Canadian Army Doctrine and Training Centre (CADTC), said the Army is looking to expand some ranges. “We’re looking at modernizing these to keep up with technology, because our training areas need to fit the weapon systems we’re getting.”

But to enable division-level training, CADTC is also moving a project, Land Integrated Training System, that would network simulators across the Army and deliver a live, virtual and constructive training environment.

In this issue, Errington and members of CADTC and the Director Land Requirements explain the changes already underway to realign division training centres and brigade group battle schools; new courses to onboard recent recruits more effectively and prepare soldiers for division level effects; and simulation systems to support a higher level of training.

We also join members of the Army on Operation Nanook-Nunavut, an eye-opening encounter with the challenges of working in the extreme cold of the Arctic. It’s a training experience that tests the capability and limits of both human and machine. And it underscored the importance of the Canadian Ranger Enhancement initiative to strengthen the Rangers’ operational mandate and improve their response capabilities. ■

Chris Thatcher, Editor

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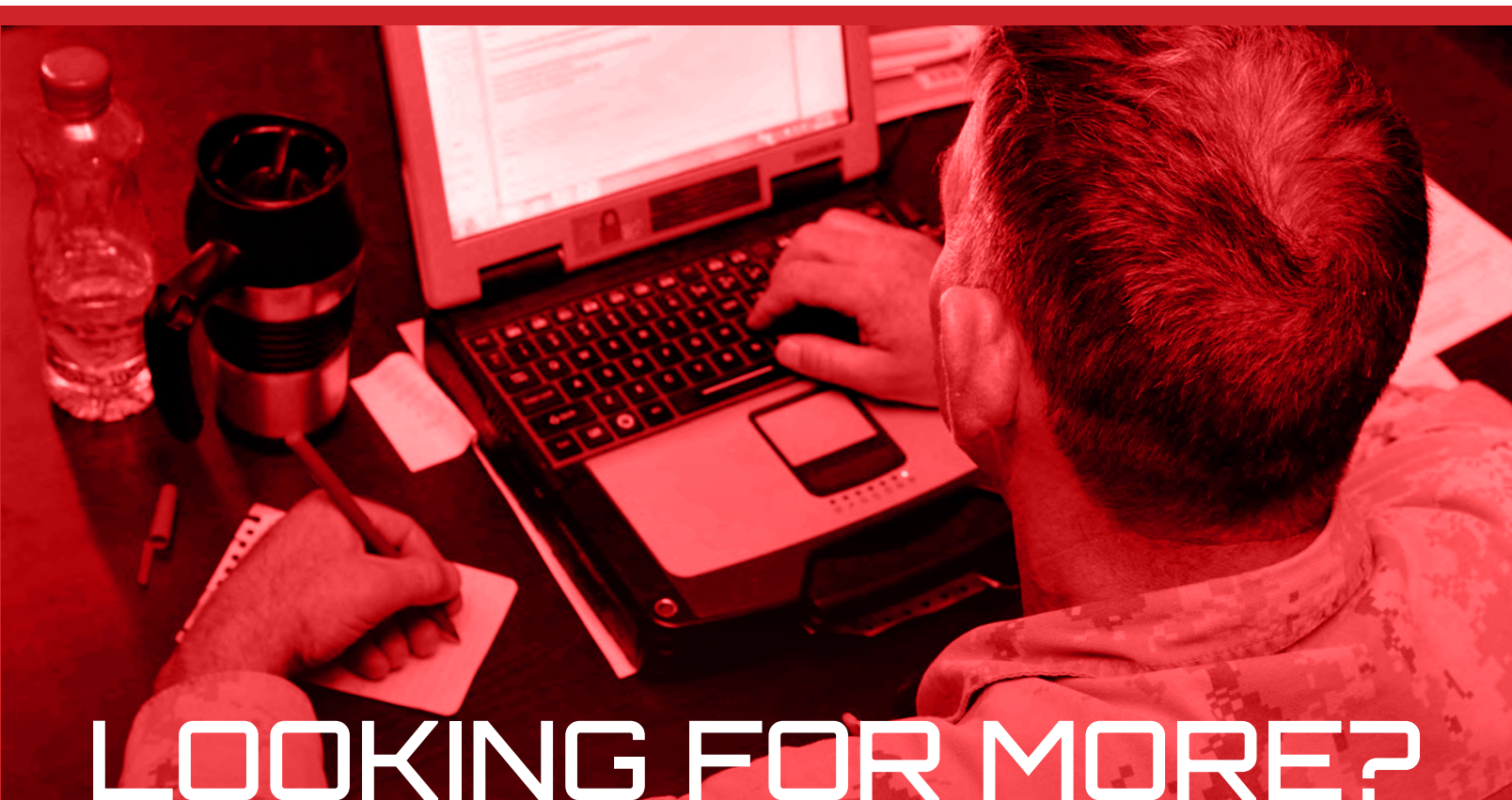
SUBSCRIPTIONS

subscriptions@canadianarmytoday.com

Canadian Army Today is published by Cremona Ink
ISSN 2561-584X (Print) • ISSN 2561-5858 (Online)

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Printed in Canada. Publication Mail Agreement Number: 43470516



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SHORT-RANGE AIR DEFENCE ON TARGET FOR 2027



Missile firing on Ex Baltic Zenith. Photos: DND



By Canadian Army Today Staff

If a year ago the Army was in the process of rebuilding its air defence capability, today the Ground-Based Air Defence (GBAD) program—it's grown beyond a single project—rests on a concrete foundation—literally. As of early spring, the floor was poured and walls were being erected for a new building in Gagetown, N.B., that will house GBAD batteries and new training simulation systems.

More importantly, the first element of the Canadian Army's Air Defence initiative is now an operational capability. The Saab RBS 70 NG, a very short-range air defence (VSHORAD) system acquired as an urgent operational requirement (UOR) for the brigade in Latvia, achieved initial operating capability (IOC) in late 2025.

Saab was awarded a \$227 million contract in February 2024 that included firing units, missiles, transport vehicles, training and support. As of April 2026, 60 soldiers had completed initial cadre training (ICT) and the first battery, stood up in mid-2024, had completed live missile firing, including striking drone targets on Exercise Baltic Zenith with the Latvian brigade in June 2025, and then destroying targets in both auto track and manual modes as part of an ICT delivered live-fire event in Sweden.

"Six serials of operator training

have been conducted," said Major Matt Becker, the GBAD project director, "and in April, we started our second serial of maintainer training. It's been a success."

The project is on pace to achieve full operational capability by November 2027. The 4th Artillery Regiment (General Support) is regularly rotating personnel through Latvia as it continues to force generate more soldiers for the RBS 70 NG system.

"We now have three serials of initial cadre training happening every year, in March, August and October," said Becker. "We're on a routine."

The ICT training is provided by Saab, but both the Royal Canadian Artillery School and 4th Artillery Regiment (GS) are developing a training plan that will eventually see them assume responsibility for specialized courses.

"The bottleneck of being able to do your own training is the quantity of simulators that we have," Becker explained. "Currently, we only have one simulator in Gagetown and one in Latvia. You need a ratio of one simulator per two members, so until we have a critical mass of simulators, we're relying upon the manufacturer. When full operational capability rolls around in November 2027, we'll have more simulators, and that's the trigger point to begin doing our own training."

On a parallel track, the Army

is working with Saab Canada, Ottawa-based DEW Engineering and Cambli of Saint-Jean-sur-Richelieu in Quebec on an up-armoured Ford F600, called the BlackWolf, to serve as a detachment vehicle. While the RBS 70 NG will be operated as a dismounted system, the vehicle delivers vital mobility and is being configured so the four-soldier detachment can "store the aiming unit, missiles and all the equipment they need on a day-to-day basis," said Becker.

The first vehicles should complete production by the end of 2026, and deliveries into theatre are slated for 2027.

"If we can get them in by the end of the year, we will, but there's more coordination that needs to be done to enable that," said Becker.

Uplift coming for Latvia

As the program has evolved, so too has the terminology. The next three phases of GBAD, previously referred to as Uplift and Enduring Phases 1 and 2, have been simplified to Phase 1 Uplift SHORAD, Phase 2 Enduring SHORAD, and Phase 3 Enduring VSHORAD.

Engagement in 2025 with five potential bidders helped refine the requirements for Phase 1 Uplift, a military-off-the-shelf short-range air defence (SHORAD) and counter rocket, artillery and mortar (C-RAM) platform destined for the

multinational brigade in Latvia.

Becker said the back and forth with industry helped the Army "be more realistic in terms of our requirements," understanding the extent of SHORAD technology currently on the market.

Following a draft request for proposals (RFP) in December of 2025, Public Services and Procurement Canada issued the full RFP to selected bidders on April 9.

The Army is targeting November 2027 for initial operating capability in Latvia, though that could change. The broader GBAD program is among the Army commander's top priorities and was recently moved under the umbrella of the new Defence Investment Agency (DIA), created by the federal government in October 2025 to streamline military procurement. Becker said it is still too soon to know if DIA involvement will fast-track some or all the remaining three phases, "but we're very optimistic."

In anticipation of the first SHORAD system, 4th Artillery Regiment (GS) will stand up a new battery, 119 Air Defence Battery, this summer. "Their personnel will be in place and ready to receive the initial cadre training once we reach contract award," said Becker. "That was my main concern."

As with Saab's VSHORAD system in Latvia, that initial training will be delivered by the manufacturer until

the new facility and training plan are established.

Enduring SHORAD

As Uplift nears contract award, Enduring Phases 2 and 3 are now in the refinement stage of their requirements, “based on everything that we’ve learned from both the [air defence] UOR and [Phase 1 Uplift],” said Becker.

The Army expects to achieve IOC for the SHORAD system by 2029, and a year later for the VSHORAD capability. Both will be earmarked for operations in Canada, including in cold weather, as well as overseas.

“For a capability that is designed for use in Canada, obviously the requirements will be different,” he said. “For example, we’ll need to operate in Canadian environmental conditions and be able to easily

integrate into our own vehicle fleets. The emphasis will be on mobility and transportability.”

The Enduring Phase 3 VSHORAD system will be mounted on a vehicle. Whether that’s the BlackWolf being acquired to transport the RBS 70 NG and its equipment in Latvia, or a light armoured vehicle or lighter armoured platform is still being discussed.

“Regarding the exact platform, we’re not at that stage yet,” he said. “But we definitely want it on a vehicle.”

Unlike Uplift Phase 1 SHORAD, the project team is not prescribing a ready-made, military-off-the shelf solution, “but we’re still looking to enable speed of delivery and minimizing design and integration where possible, because these all affect delivery timelines,” Becker emphasized.

The team has learned enough from the first two phases of GBAD to accelerate the second two if the DIA opts to bring them online sooner, he added.

“What the equipment is capable of doing in a real-life capacity is very important when you’re drafting requirements, and we now have a lot of information on both SHORAD and VSHORAD capabilities from a number of different vendors.

“Most of the effort right now is obviously with the air defence UOR and with GBAD Phase 1. But as we bound forward, we’ll be leapfrogging and reassigning personnel to support those [other] phases of the project.”

The Army will be consulting again with industry for both. While Uplift Phase 1 was a limited tender, the two Enduring phases will be fully

competitive, suggesting there could be more interested manufacturers at the table.

“It is possible that we have different vendors come on that haven’t competed before, but there were a lot of vendors that responded to [Phase 1], so I personally would expect it to be similar companies, possibly with one or two new additions,” said Becker.

Before either delivers, the Army must complete construction on the building that will house both SHORAD and VSHORAD systems. That includes space and network infrastructure to support a range of simulators for the weapon systems.

“We’re expecting the building to be ready for occupation in March 2028, well in advance of when our Enduring SHORAD and VSHORAD will deliver,” said Becker. ■



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TAKING RESPONSIBILITY IN A CHANGING WORLD



COUNTERING DRONES IN AN URBAN SANDBOX



Photo: DND



Testing drone detection technologies near Parliament Hill. Photo: DND

By Treena Hein

Overnight March 22-23, Ukrainian drones struck the port of Primorsk in Russia, the largest crude oil loading port in the Baltic Sea. Some of the 249 drones were intercepted, but many got through. The damage to the port suspended the daily shipment of around 1.5 million barrels of crude—adding another major pressure point to the impending global energy crisis emanating at the time from the Strait of Hormuz off the coast of Iran.

This attack underscored the importance of counter-uncrewed aircraft system (CUAS) technology in global conflict, and the parallel importance of the Department of National Defence's (DND) 'sandbox' trials.

In late November 2025, the Innovation for Defence Excellence and Security (IDEaS) program hosted 19 innovators from Canada and three other countries for a drone detection trial over downtown Ottawa.

The four-day sandbox was a battled for 'Diamond in the Rough' prizes totalling \$1.75 million, but it was also an opportunity for hands-on support from members of the Canadian Armed Forces, the Royal Canadian Mounted Police (RCMP), and other personnel as the 19 companies demonstrated their technologies in a realistic scenario and setting.

Previous IDEaS CUAS sandboxes in 2019, 2022 and 2024 were

conducted over several weeks in the wide-open space of Defence Research and Development Canada's (DRDC) Suffield Research Centre in Alberta.

To fully address the potential of drone threats, Canada must understand how countermeasures perform across the full spectrum of conditions and environments, explained Andrée-Anne Poulin of DND's media relations. Ergo, the shift "from [the] usual remote setting in Suffield to a complex urban location to test technologies in a realistic urban environment."

Operating in an urban environment has always been part of the broader CUAS challenge, she added.

"Urban settings present unique obstacles. Buildings and electromagnetic noise found in an urban environment present a very different operating environment from the open military test range in previous sandboxes. Drone testing for this event took place at ground level, on mid-level and high-level balconies of high-rise buildings, and on rooftops. This demonstration hoped to identify technology that can be used safely around people, including in public gatherings, without putting bystanders or crowds at risk."

To minimize risk and avoid interference with public activity, including traffic, pedestrians or access to services, the event was organized with the support of the RCMP,

Transport Canada, Parliamentary Protective Services, the City of Ottawa, and the Ottawa Police Service.

And unlike CUAS sandboxes in Suffield, all of which included drone destruction, the event was limited to demonstrations of drone detection.

Over 240 observers from eight countries as well as the Canadian Armed Forces (CAF), DRDC, RCMP, and the U.S. Capability Development and Innovation group took in the trials.

Feedback from end users and defence scientists indicated no single solution currently provides a complete, standalone CUAS capability suitable for all operational contexts, said Poulin.

"Instead, the sandbox reinforced the necessity of layered, integration-centric architectures, combining multiple sensing modalities and robust command and control (C2) systems."

Sandbox success

OBJEXIS of Oakville, Ont. and Prandtl Dynamics of Toronto tied for second place and each received \$375,000. OBJEXIS AI offers FIXAIT, an AI-powered visual detection and classification engine that transforms any video stream into a real-time CUAS detection platform. Prandtl Dynamics has developed Oscura, which combines advanced acoustic sensing with interrogation methodologies to detect, confirm, and locate drones in urban environments.

The top solution and recipient of \$1

million came from DARIT Technologies of Sherbrooke, Que. REMPART is an autonomous intrusion detection system designed for both CUAS and ground perimeter protection. REMPART employs DARIT's proprietary FusionCore software suite and distributed sensor technologies (vision, acoustic, radar, LiDAR) to monitor air and ground activities within a C2 system.

For the 2025 sandbox, REMPART was integrated with the systems of several DARIT sensor technology partners. One was Echodyne's EchoShield, a next-generation, software-defined, medium-range, pulse-Doppler, cognitive 4D radar. The others were the IRIS Radar from Robin Radar Systems, the Vision Flex EO/IR camera from OpenWorks Engineering, and the ARC Camera from Infiniti Electro Optics.

Among REMPART's benefits are the ability of its AI to track multiple targets simultaneously and conduct 'intelligent tracking' of various types of intrusions such as drones, humans, vehicles, robots and animals. Target paths are tracked in real time and recorded in a database for analysis. Data processing is performed locally for maximum confidentiality and cybersecurity—no cloud use. The system is fully autonomous and minimizes false alarms. It's also lightweight, portable, and weather resistant.

"Our product provides a unified architecture that generates a rich and shared operational picture, enabling organizations to detect, track, analyze and neutralize threats more rapidly and easily in complex environments," explained Jonathan Vincent, DARIT's chief executive officer. "REMPART is sensor and effector agnostic, meaning it can interface with any type of device."

The ability to integrate into existing CUAS architectures and to leverage existing hardware makes it highly attractive as a platform, he noted.

Through its mesh network architecture, DARIT deploys a network of autonomous ground stations equipped with diverse sensors, all connected to a central server, which allows it to integrate data from the distributed sensors.

"These stations can operate independently or collaboratively, while a unified control interface ensures seamless system integration," he said. "The result is a distributed, resilient, and scalable environment that delivers wide area coverage, operational continuity and critical redundancy, even under the most demanding conditions."

Further testing

The solutions showcased at each sandbox are aimed to help the CAF keep pace with rapidly evolving technologies and emerging operational threats, Poulin explained, so the focus is on both current developments in drone technology and the future trajectory of UAS and CUAS capabilities.

"The IDEaS program supports the development of innovative technologies through progressive stages of research, testing, and evaluation, ultimately bringing many solutions close to commercial readiness," she said. Indeed, at this stage, "several IDEaS funded technologies are now approaching the maturity level required for real world assessment by the CAF."

Some may be procured in limited

quantities for operational trials, but Poulin said any broader acquisition would follow established government procurement processes and subject to separate budgetary authorities and approvals. However, the program is collaborating with procurement officials within DND and Public

Services and Procurement Canada to streamline the process of acquiring and integrating these innovative solutions.

The next CUAS sandbox returns to its roots in Suffield over a more traditional month-long period, September 14 to October 9. As was

the case with past events, both drone detection and defeat solutions will again be evaluated. However, Poulin noted IDEaS plans to build on the success of the urban trials in Ottawa by hosting a second event focused on detection only solutions in an urban environment, as early as next year. ■

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COLT CONTRACT FINALIZED FOR MODULAR ASSAULT RIFLE

By Ken Pole

About this time next year, soldiers should begin getting hands on a long-awaited replacement for the combat-proven Colt Canada C7 rifle and C8 carbine, which were introduced 42 years ago and are now well past their prime, despite ongoing modifications.

The Canadian Modular Assault Rifle (CMAR)—its Department of National Defence (DND) designation is the C25 General Service (GS) Weapon System—is based on Colt Canada's Modular Rail Rifle (MRR).

"CMAR can reasonably be seen as both evolutionary and revolutionary," Colt Canada told *Canadian Army Today*. "While the Canadian small arms fleet had not seen major changes

in approximately 20 years since the C7A2 and C8A3 upgrades, there have been meaningful advances in the C7/C8 platform over that same period."

A \$307-million contract for the first 30,000 C25 systems, along with a full engineering and support package, including lifecycle management, was announced in mid-March at Colt Canada's manufacturing centre in Kitchener, Ont. That first phase of the procurement will be completed over a three-year period. A second phase to procure 19,207 more C25s is expected to begin in the fourth year.

The first-phase weapon is designed for frontline combat with priority delivery likely to deployed forces. Optimized for operations in urban and open terrain, it brings an array of new capabilities to Regular infantry units. The second-phase weapon is intended for broader use across the Canadian Armed Forces (CAF) in personal protection and deterrence for personnel who are not in primary combat roles.

"Rifles remain foundational to soldier effectiveness in the field," said Army commander Lieutenant-General Michael Wright. "This

development brings over

40 years of technology

evolution to Canada's fighting forces."

Colt Canada is the federal government's Centre of Excellence for Small Arms. Sean Congdon, president and chief executive officer, called the CMAR program "a cornerstone investment" in Canada's defence readiness and industrial capability.

"The C25 General Service Weapon System reflects decades of experience supporting the [CAF], while delivering a modern, adaptable platform built in Canada for Canada."

Defence Minister David McGuinty echoed that. "By investing in modern, reliable tools and working with a trusted Canadian partner, we are supporting the operational readiness



Photos: Colt Canada

of our armed forces while strengthening Canada's defence industry and the skilled workforce behind it."

Much of the improvement flows from discussions through the company's Technical Investigative Engineering Services (TIES) contracts with DND about evolving operational and performance requirements. The main points involved enhancing mature and proven technologies to improve barrel life, precision, performance and reliability, as well as evaluating suppressor technologies as they evolved.

A five-slot MRR Upper Receiver with an integrated STANAG 4694 NATO accessory top rail is fundamental to the new weapon's effectiveness, accommodating a Low Power Variable Optic with 1–6x magnification; this facilitates rapid target acquisition and engagement at a wide range of distances.

Once a target is identified and/or acquired, a two-stage trigger provides for a lighter initial "take-up" first stage pull to an initial stop point, followed by an additional stage to fire.

New features developed in close consultation with CAF operators include fully ambidextrous lower receiver controls, including bolt catch and release, magazine release, and fire selection. These enhance frontline troops' adaptability in complex environments, as will a 3D-printed suppressor designed as an integral component of the system.

Other advances include an Integrated Upper Receiver and free-floating barrel that does not touch the stock or handguard except where it connects to the receiver. This prevents stock pressure, which is when the receiver interfacing with the barrel can cause harmonic vibrations that can compromise long-range accuracy. The free-floating barrel also reduces the amount of heat transferring from the barrel to the upper receiver where

the shooter holds the weapon.

Also, the C-25 barrel is only as thick as is necessary to permit the rifle's gas block to trap the gas from a fired round and direct it through a tube to the bolt carrier, which uses the pressure to eject the spent casing and chamber the next round.

The outgoing C7/C8 fleets, scheduled to be replaced on a one-for-one basis, can cycle at 750-950 rounds per minute (RPM) in fully automatic mode, but are limited to 15 RPM at a sustained rate of fire, albeit in quick repeatable bursts. In semi-auto mode, depending on how rapidly a shooter can pull the trigger, it's up to 65 RPM. The new 34.8-centimetre (13.7-inch) cold hammer-forged barrel, optimized for durability and sustained performance, potentially could permit longer bursts.

All key components are finished with a sandy-coloured Cerakote ceramic polymer that not only improves corrosion resistance, but also can reduce a weapon's infrared signature. Weapon furniture, including the buttstock, hand grip and backup sights, are finished in

Flat Dark Earth (FDE). In addition, the tactical sling can be converted to a one-point attachment from two to suit operators' preferences.

The design process yielded "reduced material and machining requirements," important factors for cost control. Colt Canada declined to go into detail, saying only that, "at a high level, the program reflects the disciplined integration of enhanced performance requirements while retaining a robust and proven operating system."

Ammunition for the new weapons, a 5.56x45-millimetre NATO round, will be manufactured by General Dynamics Ordnance and Tactical Systems-Canada, another federal government centre of excellence, in Repentigny, Que.

While Colt Canada declined to comment on market competition, an expansion of its Kitchener facility signals its optimism about export potential. It already has a track record with "other elite armed forces" such as the Dutch and Danish armies—the latter recently ordered more than 50,000 assault

rifles—and the Special Air Service of the British Army.

A subsidiary of Connecticut-based Colt's Manufacturing Company—itsself acquired in 2021 by Colt CZ Group SE in Prague, Czech Republic—Colt Canada sees a "strong opportunity," working through the new Defence Investment Agency, to promote its domestic small arms capability. It said that in addition to reinforcing domestic security of supply and strengthening Canada's defence industrial base, "there are also interoperability benefits among allied forces, particularly NATO partners, operating common or closely aligned platforms."

The C25 procurement was a first for the new Defence Investment Agency announced by Prime Minister Mark Carney in October 2025, setting the stage for a new Defence Industrial Strategy. The agency is tasked with modernizing an historically complex procurement apparatus and accelerating mission-critical equipment by centralizing expertise and streamlining decisions. ■

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TRAINING CONSOLIDATION

By Chris Thatcher



Earlier this year, the Canadian Army began the transition from regionally aligned divisions to a new functional structure: a Manoeuvre Division, formerly 3rd Canadian Division, headquartered in Edmonton; a Defence of Canada Division, formerly 2nd Canadian Division, headquartered in Montreal; and a Support Division, formerly 4th Canadian Division, headquartered in Kingston. 5th Canadian Division, based in Halifax, will stand down.

Like a heritage home that retains one wall in a remodel, the fourth pillar in the new Army structure is the one with the least amount of exterior change.

The new training formation, headquartered in Kingston, Ont., will still be known as the Canadian Army Doctrine and Training Centre (CADTC), but behind the walls, the new training division is in the process of absorbing organizations from across the Army.

“On the surface at the Army level, there’s not a lot of structure changes in CADTC,” said Major-General John Errington, commander of the designated training division. “The biggest structural changes are in the other divisions.”

But where each of the previous divisions once had its own training centre



A Leopard 2A4 Tank from the Lord Strathcona's Horse (Royal Canadians) fires a round during training in Latvia, December 2025. Photo: Cpl Raj Dhagat

to support specific requirements, and where each Canadian Brigade Group (CBG) had a battle school to deliver tailored training to Reserve members, all are now being amalgamated under CADTC.

As of April, the four division training centres will be part of a new Army Training Centre (ATC), headquartered in Gagetown, N.B., and led by a colonel and chief warrant officer. In September, nine battle schools—two in Atlantic Canada are being consolidated—will follow suit under the same umbrella.

“That’s the speed at which this is happening,” said Errington. “They will

be the first units to change from one division to another under the [Army’s] modernization plan.”

The ATC itself will not officially become a headquarters until June, when the new command team and initial staff arrive. Until then, the Combat Training Centre (CTC), also in Gagetown and the authority for individual training, will synchronize courses while Errington provides the leadership.

The full scope of ATC responsibility is still evolving, Errington acknowledged. CTC will retain its oversight of trades training—infantry,



Reservists from 39 Canadian Brigade Group during Ex Ranger Contact. Photo: Cpl Brandon Lin

artillery, armour, engineer, and others—while the new centre will begin by overseeing common training across the Regular and Reserve Force.

While the four training centres that previously answered to 2nd, 3rd, 4th and 5th Divisions, are unified under ATC, they have distinct footprints. All four will run all courses, but ATC-West in Edmonton will become the center of excellence for uncrewed and counter uncrewed systems—in short, a new drone school modelled on a program in Ukraine.

At ATC-Central in Meaford, Ont., the priority is on the Canadian Army Soldier First Course (CASFC), new training for recent graduates of Basic Military Qualification to acquire the fundamental skills of shoot, move and communicate so they are employable at a unit while they wait for an opening on a Developmental Period 1 (DP1) training at a CTC trade school. A means to reduce some of the backlog in the training system for new members, the course will be offered at all four ATC locations. ATC-Central, as the centre of excellence, will be its steward as it develops.

ATC-East in Valcartier, Que., is focused on delivering all courses and courseware in French, and ATC-Atlantic in Gagetown continues as a centre of excellence for leadership development, a leadership qualification program critical for developing young unit leaders and instructors.

“Now I’ve got a command team as the centres of excellence in each [ATC

location] that can make recommendations or adjustments to the training,” said Errington. “And as we get more numbers through the recruiting system, the backbone is now set for all of them to be able to run one of these courses every month in every training center. That’s 44 (Regular Force) candidates times four, every month. And if we have to ramp it up, we can.”

LOCAL FLAVOUR, COMMON STANDARDS

The nine CBG battle schools, which align under ATC in September, each have a distinct flavour, in step with the needs of their brigades. Some of that will be retained, and all will have a “dotted” reporting line to the CBG headquarters, “because that is who they need to service,” said Errington. But much of the training will become more standardized to meet the requirements of the Defence of Canada Division.

“Once the Defence of Canada Division understands what skillsets, courses, and tasks they need specific to defending Canada, then we will start creating the courseware to be more efficient in giving them the skills and tool sets specific to that,” he explained.

While that may include training oriented for response to national emergencies such as floods and wildfires, the primary focus will remain on warfighting skills.



MGen John Errington with soldiers during Ex Global Ready in Skillingaryd, Sweden, May 2026. Photo: Pte Joshua Schultz

“Those battle schools will still run that DP1 training,” Errington stressed. “I don’t want people to think that, oh, there’s no more warfighting or infantry training for the Reserves. That’s not the case at all. That’s one of the myth busters out there that I’m trying to get across, because people are jumping to that conclusion.”

The changes will mean a significant adjustment for each of the division training centres and battle schools, many of which have developed specialized training in unarmed combat, simulation or other skills. Though that might create some friction if the ATC needs those instructors focused on the Soldier First course, Errington said training units won’t be told to abruptly stop.

“In a transition year, we’re not just going to step away and say, ‘Hey, you were doing that for the division, too bad.’ ... Because we’re changing it so quickly, we can’t just drop the extant tasks that are out there. We will continue to do those, but we will reprioritize and work with the parent division and CBG to make sure that we’re not creating a gap. I’m going to give them arcs to fall within, and give them enough leeway within those arcs.”

Once all three divisions have completed an assessment of training needs for their new structures, CADTC might then drive further change across the

ATC locations and the battle schools.

“I need to take my speed off of [the divisions] because we’re a service provider,” said Errington. “We are delivering people [and] the skillsets they need. So, I need them to determine what those skillsets are, then we’ll develop the courseware for it.”

The Peace Support Training Centre in Kingston, for example, “is ready to develop and adjust a whole bunch of courseware for information operations based on lessons learned and what allies are doing,” he noted. “But they’re not going to deliver that until we’re done the [training] estimate for the Manoeuvre and Defence of Canada Divisions.”

With 13 training facilities amassed under one headquarters, and all delivering the CAFSC, the structure gives the Army a “training backbone” to meet a call for mobilization, should the government and the Canadian Armed Forces (CAF) move forward on recommendations to mobilize as many as 300,000 citizens.

“If that structure, base of command and control, and knowledge on how to run those courses doesn’t exist, you’re starting from scratch,” Errington observed.



A member of 1st Battalion, Royal 22nd Regiment, on the C6 during Ex Maple Resolve in Valcartier, April 2026. Photo: Cpl Liam Stagg

WAR GAME VALIDATED

If there's a potential friction point looming as the Army adds another foundational course, it could be over demand for instructors. There is always a tension between the field force, which needs experienced master corporals, sergeants and captains, and CTC and the division centres that need the same personnel as instructors. Errington anticipates "friction from time to time" as demand across ATC facilities ramps up.

"If the parent division or CBG doesn't give the instructors, then we can't run the course, and they don't get the troops. It's the hand that feeds them, so the onus is on them to provide the instructors so we can give them back the troops they so badly need," he said.

In the months before the division training centres were moved under ATC, a CADTC team visited all four centres and many of the battle schools to understand challenges—from sufficient personnel to funding, equipment, and other issues—and then put them through a week-long war game.

The intent was to ensure everything that could be solved was documented "so that we have a common understanding of how we're going to address these problems, and anything that we can't, we've consolidated [for] General Errington [for direction]," explained Major James Fitzgerald,

the acting chief of staff for the Army Training Centre.

That included the Indigenous summer programs offered by the four former divisions, which teach similar skills but with different approaches.

"There are a couple of things that I do have to centralize, and those were very apparent in the war game," said Errington. "I need to build a system of standards to make sure that the CASFC, if it's going to be your baseline, it doesn't matter where that's taught, it is the same in any battle school or ATC, or with anybody else that ends up getting the authority to run it. It's the same thing with the Indigenous summer programs. Even though it's asymmetric, an Army level order will [provide] one document so that everybody knows who's doing what, and we don't artificially create gaps through modernization."

While the Army expects to reach initial operational capability for the ATC by this summer, Fitzgerald said the headquarters itself will build up gradually. "This isn't like hitting a switch [and] we're good to go. It's definitely going to be a phased approach."

CONDITIONS FOR CHANGE

In addition to the concentration of all foundational training under the Army Training Centre, CADTC is planning changes to professional military



Members of the Multinational Artillery Battalion train with the RBS-70 man-portable air-defence system in Latvia, April 2026. Photo: Cpl Raj Dhaga

education. The internationally recognized Army Operations Course (AOC), delivered by the Canadian Army Command and Staff College, is heavily focused on the operations of a brigade.

“The analysis is ongoing right now, but the bottom line is the uplift to division level operations needs to happen in our education system as well,” said Errington, noting the options could include expanding the current AOC or adding a new one.

The College also created an Advanced Land Power Studies course, intended to provide selected majors and lieutenant-colonels with wargaming and planning tools for land power in a joint context. The course fills a small gap between the Joint Command and Staff Program and the U.S. Army School of Advanced Military Studies, explained Errington, and will provide graduates for specific jobs in the Army and joint force. The four-month course will be delivered each fall. Funding and resources have been allocated for three years, after which its success will be evaluated. But it could expand to international students if successful.

Errington admits the pace of change to individual and collective training will make some people “uncomfortable.” The Canadian Manoeuvre Training Centre will need to become mobile, Lessons Learned will need to be disseminated differently, and training ranges will be to be expanded, altered

or re-thought to enable division-level training and longer ranger fires.

He’s even toying with an idea of delaying the selection of a trade until after a soldier has completed the CASFC, when they have a better idea of “what they are getting into before they’re asked to select.” It might go against tradition, but it could more efficiently align a soldier’s true area of interest with Army needs, and would avoid the bureaucracy of an occupational transfer.

If some proposals sound like ideas that failed in the past, Errington says the conditions have changed. “I’m a firm believer that in a change management system, the conditions need to be set for change. Right now, I think they are,” he said, noting new threats are being met by new funding and government commitment. The new Army structure is a window in which to re-think parts of the training system. “And if you don’t do it fast enough, it’s not going to take root,” he said.

“As somebody that’s on their 37th year of service, I’m motivated and excited, because in my entire career, I’ve never seen the opportunity for change the way it is now.” ■



Graduates of BMQ in New Westminster, B.C., May 2026. Photo: Cpl Brandon Lin

Soldier First

Bridging the employment gap

By Canadian Army Today Staff

For too many new recruits, the art of soldiering is a waiting game. After completing Basic Military Qualification (BMQ) at the Canadian Forces Leadership and Recruit School (CFLRS) in Saint-Jean-sur-Richelieu, Que., many find themselves in employment limbo, waiting for space in a Developmental Period 1 (DP1) course, the first stage of their occupational qualification for an Army trade.

With the Canadian Armed Forces (CAF) exceeding its recruitment target for the second consecutive year—7,310 new members enrolled in fiscal year 2025/26, well above the 6,957 objective—the Army needed a way to bridge that gap between BMQ and DP1.

The solution? The Canadian Army Soldier First Course (CASFC), a stepping stone to continue advancing soldiering skills and prepare new members for employment at a unit while they wait for more specialized training as infantrymen, gunners, tankers or engineers.

DP1 training to an occupational functional point (OFF) remains the goal, but CASFC provides

flexibility to the training system and serves as a building block for soldier development. Where basic training provides a first experience with military discipline, culture, ethos, and rudimentary skills, the CASFC will deliver the “shoot, move, communicate” foundation of soldiering, explained Major-General John Errington, the commander of the Canadian Army Doctrine and Training Centre.

“It’s kind of like crawling with the CAF, walking with the Army, and then running into your trade.”

The four-week course is itself designed as a crawl-walk-run process, taking candidates from weapons handling and other weapons skills through tactics theory and into small-scale field operations.

The first week, called Soldier Foundation, serves as refresher for CAF ethos, use of personal kit and personal weapons, hot and cold weather injury prevention, and other basics. The second week builds on established individual skills with the C7 rifle, C9 light machine gun, fragmentation grenades, and other weapons. In the third week, candidates are exposed to tactical theory for

offensive and defensive manoeuvres, patrolling, fieldcraft techniques, reports and returns, range firing, and a section attack demonstration. The course culminates with 10 days of field integration, applying new skills and theory to section attacks, patrolling, night navigation, use of pyrotechnics, counter improvised explosive device drills, among others.

All the training is conducted in what the Army calls a counter-uncrewed aerial system (C-UAS) environment, a way to build awareness and resiliency to the persistent threat of drones in operations.

Upon completion, soldiers are confirmed capable of operating within a defensive position, performing as a section member, and able to extract from an explosive threat area.

“The output of that course becomes the baseline for any soldier that wears an Army uniform in the future,” said Errington. “They can go on any common task, whether it’s security, driver, patrolling—there’s lots of tasks internationally and domestic that require that.”

The course, which launched in April, is delivered by the Army's four Regular Force Army Training Centres, and its nine Reserve Force battle schools.

Soldiers completing the DP1 course reach an OFP where they can fire a unit's weapons, operate most of its vehicles, integrate into its operational tactics, and participate in collective training. With Soldier First, Errington is introducing a new term—employment functional point (EFP)—that will allow graduates to be employed and trusted at a unit while they wait for a DP1 course.

The course is not a substitute for BMQ, he emphasized. Candidates still need that initial transition period from civilian to soldier, to appreciate the discipline, ethos, culture, and rank integral to the Army.

"I don't want to have to deal with that in Soldier First," he said. "We're trying to teach them how to survive on a battlefield, not how to tie boots or make it to a launch on time. When you ramp up that level of training, there is a requirement for extra emotional support in padres, clothing stores, barracks and all those other things. I'm not setting up for that type of infrastructure. I'm setting up for warfighting shoot, move and communicate infrastructure. ... I want to teach them how to be in the Army."

With rapid growth likely to be a challenge for the next several years, the course relieves the pressure to shorten and degrade DP1 courses and push more training onto units to get recruits through the entry system faster.

"We don't want to push everything onto the field force," said Errington. "What we're trying to do is make interim steps. Once they come out of basic training, then they'll do Soldier First, and if they cannot go directly onto their trade training within [a certain period], then they'll go to the unit and be employed."

He noted that for new members stuck in the training pipeline, the lengthy wait can quickly become demoralizing.

"They're excited about joining and a new career path, and then they spend six months just waiting for their next course, reporting every day, maybe doing some online courses or some [menial] tasks. This gets them to a unit where they feel like they're contributing to the bigger picture."

Graduates of CASFC could be used as drivers or to support training on the next course, serving as the demonstration soldiers for the cadre following them.

Errington suggested there may even be scope at some point to forego certain qualifications if a Soldier First graduate builds enough experience at a unit to take on broader functions. "If their sergeant says, 'this person is one of my better soldiers,' and they recommend through the chain of command to make them, say, an infantry soldier, maybe there's scope for that."

That combination of CASFC and on-the-job training also might improve the success rate of the DP1 courses.

"If you go to a unit and spend some time in a rifle section or a tank unit, or with the engineers, you're starting to learn," he noted. "By the time you go on your DP1, now our efficiency rate and our pass rate should be higher because you've seen what right looks like." ■



Grenade training. Photo: Cpl Fazal Roy



Candidates on the Canadian Army Soldier First Pilot Course will train with the C6 General Purpose Machine Gun and C9 Light Machine Gun. Photo: DND

WOLFPACK AMBUSH PUTS “TEAM OF TEAMS” CONCEPT TO LIVE-FIRE TEST

BY LT(N) ANDREW MCLAUGHLIN

A major Canadian Army Reserve (ARes) training exercise at Garrison Petawawa served as a rehearsal of sorts for a new deployment framework.

The Army has begun a fundamental modernization of its structure that includes reshaped divisions built for operational purpose: Defence of Canada Division, Manoeuvre Division, Support Division and Training Formation. The former, composed primarily of ARes soldiers, is focused on national emergencies, homeland defence, and scalable force expansion.

Over two consecutive weekends in March, hundreds of ARes soldiers from 33 Canadian Brigade Group (33 CBG) converged for Exercise Wolfpack Ambush, a major live-fire training event.

Drawn from units across Northern, Central, and Eastern Ontario, they formed a “team of teams” that could serve as a rudimentary

framework for future CBG tasks that may include standing up light-infantry battle group forces, aimed at maintaining ARes readiness to support international operations. These new units will be made up of full-time reservists.

Known as “The Wolfpack,” 33 CBG was ready to test the model.

The first weekend of the exercise served as a work-up, where the basis of the larger plan was tested in a Level 2 (live) context and the stage was set for the second phase. On the second weekend, 33 CBG generated a robust combined arms force including infantry, artillery, engineers and the critical signals and Combat Service Support required to operate in the Level 3 (live) context.

The infantry successfully completed pairs, section and platoon Level 3 live-fire training, where fire and manoeuvre were enhanced by utilizing specialized targets, including robotic pop-

up targets brought in exclusively for the exercise.

The gunners of the Wolfpack added to the event, launching a combined regimental exercise at Level 4 (battery live), led by 30th Field Artillery Regiment (30 Fd) alongside 42nd Field Artillery and 11th Field. This included fire missions, forward observers, and recce elements, day and night as well as planning and coordination with Regular Force counterparts from 2 Royal Canadian Horse Artillery (2 RCHA).

“From coordinated regimental firing to executing a Troop Commander’s fire plan at the battery level, our gunners demonstrated precision, discipline, and teamwork across all elements,” said Captain Sam Waterman, 30 Fd. “With operations spanning the gun line, observation posts (OPs), and regimental headquarters, this exercise showcased the strength and integration of our artillery



Photo: Cpl Alex Ward

capabilities in a dynamic field environment.”

A deployed Combat Service Support element was also on full display, as 33 Service Battalion’s logistics and support capabilities were put to the test of supporting such a large and complicated training event.

“Mobile support equipment operators, weapons techs, maintenance techs, cooks and others kept the mission moving with nonstop refueling, troop transport, feeding, and resupply,” said Lieutenant Isabelle Hendy, of Call Sign 8. “Their around the clock support ensured the Wolfpack could train effectively in a high tempo environment.”

With hundreds of troops engaged in live-fire training evolutions at multiple locations across the Garrison Petawawa range training area simultaneously, the teamwork of the Wolfpack shone through, but only after a great deal of planning.

“Exercises like Wolf Ambush take an immense amount of planning and synchronization to be conducted safely and efficiently,” said Lieutenant-Colonel Ryan Hendy, exercise director.

Key leadership of The Brockville Rifles paired with the Highland Tactical Grouping (HTG), consisting of the Cameron Highlanders of Ottawa (Duke of Edinburgh’s Own) and Stormont, Dundas

and Glengarry Highlanders were instrumental in planning the complex live-fire ranges, and were responsible for confirming the Wolfpack could operate in the Level-3 context.

Multiple parade nights were utilized to conduct detailed battle procedure (BP) ahead of the exercise. BP involves receiving orders, analyzing the mission, conducting reconnaissance, preparing plans, and issuing orders to subordinates. This iterative process emphasizes speed, flexibility, and decentralized decision-making (mission command), all critical elements to effective land operations—and integrating small units into the larger “team of teams.”

“Our operational planners played a critical leadership role in the execution of this highly successful readiness exercise, and provided effective personnel to the Wolfpack team of teams,” said Hendy.

The sappers of 33 Combat Engineer Regiment (33 CER) joined in as well. Adding to the complexity and weight of the exercise, 33 CER conducted multiple live-fire events of their own, enhancing the combined arms approach and further testing the “team of teams” concept.

“We deployed to test our skills with a variety of weapons systems,” said Lieutenant-Colonel Ng, commanding officer. “We ran live grenade

ranges, C6 and C9 machine-gun shoots; but also employed shotguns to further hone our capabilities to employ these systems within the contemporary battlefield context.”

With the coming re-organization of the Army’s CBGs under a newly-formed Defence of Canada Division and following the direction that “the [Army] must also develop ARes self-sufficiency in terms of training, operations, and sustainment to accomplish the needed capacity to support modernization efforts,” the Wolfpack acknowledged “the challenge in meeting universal standards of proficiency,” and “a more tailored and imaginative approach to reserve training and sustainment [was] undertaken.”

It’s within this context that the Wolfpack has accepted the challenge of modernization, and adaptation, by implementing the “team of teams” approach to collective training—and all other activities—just as real wolves in the natural environment do to remain ready to spring an ambush on prey.

It is apt then that Wolfpack has unofficially adopted a famous quote by Kipling as their mantra: “For the strength of the Pack is the Wolf, and the strength of the Wolf is the Pack.” ■

Lt(N) Andrew McLaughlin is a public affairs officer with 33 Canadian Brigade Group.

Photo: Cpl Dustin Levasseur-Pearce





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Exercise STRIKE, Military Base Adazi, Latvia (Photo by Sgt Aydyn Neifer, July 17, 2025 – Multinational Brigade Latvia Imagery Technician)



Operation NANOOK-NUNAVUT, Alberta-Northwest Territories Border (Photo by Cpl Amelie Gravelle/Robert Mitchell, Imagery Technician, 12 Wing Shearwater, February 9, 2026)



Exercise RESOLUTE WARRIOR, NATO Multinational Brigade Latvia (Photo by Armins Janiks, November 10, 2025 - Ministry of Defence of the Republic of Latvia)



national resilience. It means sovereign control of the design, manufacture and sustainment of platforms that impact the safety of Canadian soldiers.

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Readying Canadian Soldiers

In recent months we have seen increased focus both for GDLS-Canada and the Army with the introduction of *Inflection Point 2025*, a new Defence Industrial Strategy, and the acceleration of priority projects.

As articulated by Canadian Army leadership in “*The Canadian Army Modernization Plan*”, land power matters because:

- You cannot seize, hold or defend ground from the air or sea;
- Outcomes are decided by trained, equipped and determined soldiers;
- Soldiers are Canada's most versatile all-weather, all-terrain capability. Trained to survive, adapt and endure in any environment.

The LAV 6.0 and the Armoured Combat Support Vehicle (ACSV) are examples of sovereign readiness. The ACSV is a case study in accelerated collaboration. Built on the LAV 6.0 pedigree, the ACSV has delivered several variants, with additional variants now fielding, ahead of originally scheduled timelines because of Canadian engineers, army operators, testers and sustainment personnel located in London and Ottawa, Ontario being able to work side by side with Canada.

Having this complete spectrum of capability all within one organization provides the Army with incredible flexibility. This is what sovereign industrial capability looks like in practice.

Why Exports Strengthen Canada's Army

GDLS-Canada earns export contracts because the LAV is world-leading. The benefits of those contracts do more than sustain production — they fund continuous research, development, and modernization. International programs sustain ongoing innovation supporting Canada's priorities. In practical terms, our export success helps underwrite the upfront development costs of innovations that ultimately strengthen and accelerate capability for the Canadian Army.

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Exports and investment directly benefit and advance the next generation of LAVs for Canada.

Future Force

Senior Army leadership has noted that modernization must align closely with the Canadian Defence Industrial Strategy to:

- Accelerate capability delivery;
- Strengthen sovereign defence production capacity;
- Ensure long-term sustainment of a combat-credible land force.

GDLS-Canada already has an established framework

of Build, Partner, Buy, and reflects this in our investments aligned with the Army's 4+1 priorities. In short, we build where we're experts, buy when economical, and partner with Canadian or international industry.

As we approach **50 years of delivering capability** to the Canadian Armed Forces, the partnership between Canada and GDLS-Canada stands as a testament to what can be achieved when government, industry, and the military work together with a shared purpose.

Over five decades, that collaboration has grown into a trusted relationship built on performance, reliability, and a deep understanding of the mission. The Canadians who design, build, and support these vehicles take great pride in the role they play in strengthening the country's defence industrial base and ensuring the Canadian Armed Forces have the tools they need to succeed.

Looking ahead, our focus remains clear: to continue working closely with the CAF and the Government of Canada to accelerate innovation, bring the latest technologies to the battlefield, and ensure Canadian soldiers remain protected, capable, and ready to deter — and, if necessary, defeat — those who would threaten our security. Because ultimately, delivering sovereign capability for Canada is more than a mission — it is a responsibility we have proudly carried for almost half a century, and one we are committed to for decades to come.

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INTEGRATED SYSTEMS

The building blocks for LVC division level training

By Chris Thatcher

The Army's shift to a divisional operating construct has not fundamentally changed the training and simulation systems currently on the procurement list of the Directorate of Land Requirements (DLR). But it has changed the way in which those systems will need to integrate.

"We have some of the largest training areas in the world, but even our training areas are not really large enough to support a full division exercising at the same time," observed Chris Radl, a recently retired armoured officer with both the 12^e Régiment Blindé du Canada and the Royal Canadian Dragoons, and the newly-appointed section head for DLR's training and simulation systems.

If you can't mass a division's worth of troops in one area for training, can you amass and network all your simulators through Live Virtual Constructive (LVC) integrated training? The answer is the Land Integrated Training System (LITS) project.

Even as the Army moves ahead with the Land Crew Vehicle Training System (LVCTS) and Weapons Effects Simulation Modernization (WESM), projects that have been on the books for many years, it is seeking a digital backbone to integrate Canadian Armed Forces-wide training systems to deliver a division-level environment.

Whether it's soldiers on a live simulation exercise with the WES system, troops in a simulator such as LVCTS, a small arms trainer, or computer-generated entities in a command-and-control exercise, all must be networked "to actually get to the divisional level," explained Radl.

"Imagine two combat teams worth of troops in vehicle trainers in Petawawa and Edmonton conducting an exercise in a virtual environment. An uncrewed aerial system (UAS) is flying a physical mission in Gagetown, and their surveillance footage is visible to the vehicle crews in their virtual simulators. On top of that, a virtual CF-18 sortie is flown from Cold Lake with a joint terminal attack controller directing the aircraft onto a target from a separate simulator from Shilo. All these individual synthetic simulations contribute to the main live simulation exercise in Wainwright where a full brigade of soldiers is using WES in a force-on-force. Of course, a divisional headquarters directs the battle from Kingston, without really knowing which parts of the exercise are live, and which parts are virtual simulations.

"As we bring on new simulators, we need a backbone that puts it all together. We have an enormous country, so geography is going to be a challenge. We need to include the Reserve in this picture. All too often, they need to move to a divisional training centre, which is difficult for part-time reservists."



An indirect fire trainer on Ex Allied Spirit IV in January 2016. Photo: Cpl Nathan Moulton



Allied nations participating in Force Academies in Latvia, January 2026. Photo: Cpl Raj Dhagat

It's a "complicated problem set," Radl acknowledged, "but you take all of those inputs, and you mash them together into a synthetic training environment ... [and] we can put the building blocks together for divisional level training without having to bring a full division together."

Consequently, LITS is now the Army's top procurement priority for its evolving training system, and LVC integration is its primary objective.

That might seem a contradiction for a project still listed as being in pre-identification with no fixed schedule. But the Army intends to lean heavily on industry to help it identify, design and develop a solution, which it sees as necessary modernization to train a growing number of soldiers on new equipment.

"We've started leaning forward and speaking with industry about what's in the realm of the possible," said Radl. "Pretty much everything [we want], industry has told us we can do it."

With simulation and training systems designated a sovereign capability in the government's new Defence Industrial Strategy, and several Canadian companies recognized world leaders in developing training solutions, "I'm confident from a technical vantage point, we can move fast," he said. "We have great people to potentially partner with in industry."

Unit Weapons Training

If LITS and the integration of LVC are the umbrella for training modernization, the Unit Weapons Training System and Direct Fire Targets Modernization are two supporting projects being steered through the procurement process concurrently as part of LITS.

The former will be much more than a small arms trainer. The Army is exploring the use of augmented, virtual and mixed reality within the system, as well as other technical advances. The Defence Research and Development Canada Centre for Operational Research Analysis is researching which technologies work in such training systems to maximize soldier experience and performance.

"It's not just a marksmanship trainer, but a low-level tactical trainer," explained Radl. "You can do things like distribution of fire, some indirect

fire, amongst other things. We want it to be more responsive, to exercise the troops more."

Like LITS, both projects are still in pre-identification but should move quickly once LITS receives Defence Capability Board approval this fall and solidifies its high-level mandatory requirements.

"I'm confident we can move fast. We already know what we need from our small arms trainers. Now it's just a matter of consulting with the Canadian Army Doctrine and Training Centre, with industry, and with soldiers on what other capabilities we need," said Radl. "Luckily, almost every major defence contractor has solutions in this space."

One of the core requirements for LITS will be a training management system, perhaps enabled by artificial intelligence (AI), "that can apply analytics and metrics to all of our training," he said.

The current weapons effects simulation system provides "a pretty good after-action review, however, you put it on a thumb drive, you take it back to your unit, and you hope that maybe somebody uses it one day."

Networked simulators will deliver a deluge of data, but LITS offers the opportunity for a more holistic understanding of both collective and individual performance, supporting a greater quantity of training repetitions and sets, but also higher-quality training delivered more efficiently—essential for a military simultaneously re-equipping and sustaining large-scale deployments.

With the Direct Fire Target Modernization solution, for example, analytics would reveal not just that "you hit the target, but where you hit the target, how long it took you to hit the target," said Radl. "And we need to look at that over time, at how [a unit] does all of this together."

LITS could also streamline the role of the Canadian Army Simulation Centre, which can spend months and require many contractors to design and deliver major exercises.

"LITS will look to reduce that workload dramatically. We are going to look at perhaps using AI tools for exercise design. From that we can take past performance, lessons learned, have AI look at our training over time," he said. "Where do we need to improve?"

LVCTS and WESM

Even as the Army pursues an overarching program to deliver its digital training system backbone, it's still moving ahead with LVCTS and WESM.

LVCTS has the distinction of being the longest running project within the simulation and training portfolio, but it is finally through the bid evaluation stage after two proposals were accepted from three submissions in response to a request for proposals published in January 2025.

The project will deliver five simulation centres in Edmonton, Shilo, Petawawa, Valcartier, and Gagetown that will "revolutionize" how combat vehicle crews are trained. Radl had limited insight on what was in the proposals for the contractor-run facilities, but said both bidders hit the mark.

"That bid evaluation was very complicated, with many different steps in it, and both proposed the full capability. This project has had an unenviable path, but now we are going to get what we intended."

Initial operational capability (IOC) has slipped from 2028 to 2029 or early 2030, but the delay is mostly due to building the infrastructure at each location.

WESM was paused as the Army reassessed its requirements after moving its largest collective confirmation exercise to Latvia in 2024. While the "demand signal arguably got a little muddled, now the signal is clear," said Radl. "We know what we need."

The project cleared Defence Capability Board 2 in December 2025 and is expected to begin the definition phase this fall. And because there are several vendors likely to meet the Army's requirements, he hopes it can move quickly. IOC is currently slated for 2033.

The two critical requirements are interoperability with allies and portability. The current WES system

cannot integrate with other training partners, a severe limitation when participating in U.S. and NATO exercises.

"WESM has to provide that architecture that everybody else can plug into," said Radl. "A fairly simple problem set, because there are standards in this realm."

It must also be mobile. While training areas may have fixed equipment, the essential components must be easy to transport.

"We're going with a hybrid system that has a bit of both worlds. There'll be some static components, but we will have kits and a capability available so we don't have to rent something in Latvia; we can bring our system wherever we want to go, be it on a base or off a base," said Radl. "We're going to develop it in a way that mobility is inherent to the product."

As with the current system, all Army projects will have to consider how to "WES-ify" their equipment, and now how to plug their training simulators into LITS.

Ultimately, LITS must be a capability "that's elastic enough that, as we introduce new simulators, they can also be integrated into that synthetic environment," he said. "I don't foresee LITS being a one and done. It's going to have to be a capability sustained and adapted over time."

Radl stressed the importance of industry participation early in LITS and its sub projects. "I see that as the key to moving quickly," he said. "We're looking for an opportunity to have industry play a larger role in LITS because it is a huge problem set. We want to provide a deliberate training environment, but given the scope, it's a daunting challenge that I lose a little sleep over—all the interconnections of different projects. Industry already does this stuff, so let's ask them." ■



Leopard main battle tanks from Lord Strathcona's Horse (Royal Canadians) and infantrymen from 2nd Battalion, The Royal Canadian Regiment advance during Mission Rehearsal Oak Resolve, Latvia, April 2026. Photo: Cpl Raj Dhagat



A Canadian and Italian weapons exchange during Op Lacplesis in Latvia, February 2026. Photo: Cpl Peter Grieves



Canadian soldiers assault through an enemy position on Mission Rehearsal Oak Resolve, Latvia, April 2026. Photo: Cpl Justin Dreimanis

SECURING ACCESS AND ADVANTAGE IN THE HIGH NORTH FROM MOBILITY TO SOVEREIGNTY: A MADE- IN-CANADA APPROACH TO ARCTIC OPERATIONS

The Arctic is rapidly shifting from remote frontier to strategic priority. Warming at nearly four times the global average, the region is opening new maritime corridors and exposing vast natural resources, transforming the dynamics of global competition and national security planning. For Canada, this has translated into a clear operational and policy imperative: ensuring persistent, credible presence in the High North using capabilities designed for Arctic realities.

Within this context, the Domestic Arctic Mobility Enhancement (DAME) program represents a foundational enabler. Beyond replacing the legacy BV206 fleet, DAME is intended to deliver a scalable, survivable, and supportable Arctic mobility system aligned with Canada's sovereignty, alliance, and industrial objectives.

MEETING THE OPERATIONAL REQUIREMENT

DAME calls for up to 170 highly mobile, amphibious vehicles capable of transporting a full infantry section and sustaining independent operations for up to 72 hours in austere Arctic conditions. The requirement prioritises reliability, flexibility, and endurance over bespoke or narrowly optimised solutions.

From an industry perspective, this creates an opportunity to deliver not just platforms, but integrated capability—combining mobility, mission systems, digital connectivity, and sustainment within a coherent, low risk delivery framework.

ARCTIC OPTIMIZED MOBILITY BY DESIGN

Operating effectively in the High North requires platforms engineered for extreme cold, complex terrain, and minimal support infrastructure. The ExtremV, assembled and integrated in Canada by Roshel and drawing on the proven Bronco family of articulated all-terrain tracked vehicles, aligns closely with these requirements. The platform's twin-cabin pivoted at the articulation enables independent movement of front and rear units, improving traction, stability, and manoeuvrability across snow, ice, muskeg, and soft ground. Its rear payload modularity allows rapid role reconfiguration, from troop carrier and command post to logistics support and casualty evacuation, enabling a single platform to fulfil diverse operational needs while simplifying logistics.

Arctic specific features such as engine cold-start, supplementary cabin heating and thermal insulation, wind screening defrosting, and cold weather harden electrical systems are integrated as baseline features. This approach de-risks performance and sustainment in prolonged sub-zero operations, ensuring the platform remains effective while safeguarding personnel during extended deployments.

SYSTEMS INTEGRATION AS A FORCE MULTIPLIER

Mobility alone is insufficient in the Arctic operating environment. Dispersed operations, minimal support infrastructure, and limited communications demand platforms that function as networked nodes rather than standalone assets.

ST Engineering brings established expertise in land C2, battlefield management systems, and secure tactical communications. Through platform digitalization, vehicles are enabled

with sensor fusion, integrated ISR feeds, and mobile command functions, enhancing situational awareness and decision-making at the tactical edge.

Importantly for the Canadian Armed Forces (CAF), these systems are designed to NATO standards, supporting interoperability with allied forces. Digital upgrades of this kind offer a cost-effective pathway to capability enhancement, aligning with CAF modernization priorities while avoiding the schedule and political risks often associated with major weapons procurement.

FROM VEHICLE TO OPERATIONAL SYSTEM

Arctic operations place a premium on endurance and self-sufficiency. ST Engineering complements platform mobility with integrated mission systems optimized for extreme cold, including advanced power management, cold resilient propulsion architectures, and beyond-line-of-sight communications.

When combined with C4ISR integration, Arctic mobility platforms such as the ExtremV can be configured as fully functional command and control nodes. This shifts the value proposition from individual vehicles to integrated operational systems capable of supporting command, sustainment, and mission execution across the Arctic battlespace.

COMPLEMENTARY INDUSTRY PARTICIPATION

ST Engineering's role within the DAME ecosystem is deliberately structured. The company positions itself as a technology originator and systems integrator supporting Canadian-led delivery. Its contributions focus on mission modules, subsystem integration, and targeted upgrades to existing CAF fleets. This includes enhancing legacy platforms with digital capabilities, improving operational effectiveness without requiring full fleet replacement.

This approach reduces program risk while enabling incremental capability upgrades aligned with CAF priorities. It also reflects a practical understanding of procurement dynamics, where collaboration and integration often deliver greater long-term value than standalone platform competition.

MADE IN CANADA: INDUSTRIAL STRATEGY AS A FORCE MULTIPLIER

Central to DAME is Canada's emphasis on domestic industrial participation. Programs of this scale are not only about capability delivery but also about



strengthening national industry under the Defence Industrial Strategy (DIS) and Industrial and Technological Benefits (ITB) framework.

Roshel, as the Canadian prime, leads production, integration, and sustainment in Canada, ensuring high Canadian content, resilient domestic supply chains, and skilled employment creation, while reducing reliance on offshore manufacturing. The inclusion of Indigenous-owned businesses further strengthens Canada's northern industrial ecosystem.

This effort is reinforced through collaboration with Kinetics Drive Solutions (KDS), ST Engineering's subsidiary with an established Canadian presence specializing in powertrain and Arctic mobility solutions. Through structured technology transfer, ST Engineering enables the localization of key capabilities, including the development of sovereign intellectual property tailored to Canadian requirements.

Through partnerships with Canadian suppliers and academia, this model establishes a sustainable ecosystem capable of supporting in-service needs, future upgrades, and export growth within Canada's defence sector.

SUSTAINMENT AS A DECISIVE DIFFERENTIATOR

For the CAF, where platforms routinely remain in service for decades, sustainment is a decisive factor. ST Engineering embeds supportability from program outset through condition-based maintenance, digital fleet health monitoring, and comprehensive technical data and training transfer.

Delivered by Roshel as the in-country prime contractor, this fully localized in-service support model enhances responsiveness, reduces reliance on overseas supply chains, and strengthens operational sovereignty while controlling lifecycle costs.

INDUSTRIOUSLY ALIGNED, OPERATIONALLY RELEVANT

Roshel and ST Engineering's joint contributions to DAME are anchored on four key pillars: Roshel's Canadian-led production, integration, and in-service support as the domestic prime; a mature, Arctic-proven amphibious platform in the ExtremV; enhanced capability through ST Engineering's digital systems and mission integration expertise; and reduced program risk through proven engineering and manufacturing experience.

Together, these elements align with DAME's operational objectives while reinforcing Canada's long-term industrial and sovereignty goals. Environmental considerations are also addressed, with low ground pressure designs minimizing impact on sensitive Arctic terrain.

SECURING THE FUTURE OF ARCTIC OPERATIONS

DAME represents more than a vehicle recapitalization program. It is an opportunity to establish a scalable, low-risk Arctic capability anchored in Canadian industry, supported by proven global expertise, and adaptable to future operational demands.

Through pragmatic partnerships, modular capability delivery, and early integration of sustainment and digital systems, Canada can field a resilient Arctic mobility solution while strengthening its domestic defence industrial base. In doing so, DAME becomes not just a procurement program, it is positioned to secure its interests, project stability, and lead in an increasingly contested domain.



EXTREMV REAR CABIN (PHOTO: ROSHEL)



EXTREMV AMBULANCE VARIANT



EXTREMV HOOKLIFT VARIANT



THE DIA'S EARLY INFLUENCE ON ARMY PROCUREMENT

By Chris Thatcher

It's still early days, but if the Canadian Modular Assault Rifle (CMAR) is any indication, the newly created Defence Investment Agency (DIA) is already having a noticeable impact on defence procurement.

Within five months of the agency's official launch in October 2025, the project to replace the Army's C7 and C8 assault rifles was among a handful announced in the weeks after the federal government unveiled a Defence Industrial Strategy in mid-February.

To be fair, staff from the Directorate of Land Requirements (DLR), Assistant Deputy Minister (Materiel), Public Services and Procurement Canada (PSPC), and Innovation, Science and Economic Development (ISED) had invested several years of work on the project prior to its transfer to DIA.

CMAR also benefitted from its alignment with the Munitions Supply Program (MSP), a long-standing contracted arrangement with several manufacturers of ammunition and small arms, which reflects the type of long-term strategic partnerships the government is seeking to establish with industry.

Still, the way it was fast-tracked

to contract with Colt Canada suggests a new way of doing business.

"The ability to speak with the company early, ask them questions, and get into the details allows for focused effort, improved decisions on procurement strategies, and a much-reduced timeline to get to contract," observed Lieutenant-Colonel Benjamin Lafave, the Army's capability advisor to the DIA.

"[CMAR] wasn't starting from scratch. As the MSP was already established, we were able to talk with the company about what they could provide, what type of contract could be developed, and work towards a solution. The fact there was already an established structure for those conversations, with a legal framework and route for contracting, it really did support moving CMAR faster."

The DIA was created to modernize and streamline Canada's defence procurement, part of the Liberal government's commitment to increase defence spending to meet NATO's five percent Defence Investment Pledge by 2035 and deliver strategic economic value from the defence sector.

Members of 1st Battalion, Royal 22nd Regiment during an assault on a trench as part of Ex Maple Resolve in Valcartier, April 2026. Photo: Cpl Liam Stagg

With the Defence Industrial Strategy (DIS), a document long sought by industry and a vital component in the DIA's ability to meet its mandate, the government set ambitious targets: Over the next 10 years, it aims to grow the number of defence contracts awarded to Canadian companies from the current 43 percent to 70 percent, increase exports by 50 percent, invest more in defence-related R&D, and encourage and accelerate procurement of Canadian innovation to ensure Canadian control over intellectual property.

Lafave was among an initial group of seven Canadian Armed Forces (CAF) members who, when offered the opportunity to help reform procurement, eagerly packed up laptops and relocated to a new building in late September 2025, even before the DIA was officially opened.

As the Army's capability advisor, the two-year secondment from DLR places him as a guide to the Army's modernization plans and a liaison between Army and DIA leadership. As such, he attends project meetings under both the Chief of Staff Army Strategy (COS A Strat) line of governance and within the Procurement Branch of DIA, a necessary division of time to stay abreast of project priorities and reflect to the DIA where Army projects are encountering roadblocks and would benefit from DIA authorities and processes.

"There have already been initial authority and procedural changes that enable DIA to accelerate procurement. The way we are doing business here is already better than it was," said Lafave. "But we still need to keep improving, and there are a lot of changes still to come ... this is an iterative process of improvement."

While no Army project was listed among the initial eight posted on the DIA website, there are several among the over 30 projects held at DIA. Beyond CMAR, Lafave could not speak to any specifically until they are announced, but acknowledged the four-plus-one priorities of Army Commander Lieutenant-General Michael Wright—ground-based air defence, long-range precision strike, indirect fire modernization, and domestic Arctic mobility, plus C5ISR (command, control, communications, computers, cyber, intelligence, surveillance, reconnaissance and targeting).

Wright's consistent voice, both publicly and privately, on those priorities has been important in establishing focus for land procurement within DIA, he noted.

The DIA has contracting authority on procurement contracts above \$100 million, but there are several factors also affecting how



LCol Benjamin Lafave

projects are being identified, including their priority for service commanders, the urgency to get capability into active theatres, and operational risk.

While meeting CAF requirements remains a primary procurement objective, alignment with the three pillars of the DIS—build in Canada, partner with allies, and buy from abroad when required, underpinned by industrial and technological benefits—will be an important factor. So, too, is the viability of a potential strategic partnership.

The DIS is a big part of every discussion, and DLR can relay through DIA the strength of the Canadian supplier base for a particular capability, said Lafave.

"Better communication between the many players in the procurement process, from DLR to DIA, and all those involved throughout, is helping the overall team to understand the environment within Canada, including the industrial base that exists for a particular type of capability," he said.

"Improving communication and having detailed conversations earlier on is a focus of DIA, to develop those better integrated teams. This allows earlier consideration of all the factors and can allow more effective decision-making on procurement strategy, focusing efforts and leading to accelerated schedules."

The process is being aided by a risk-based approach. Adopted during COVID to speed up the acquisition of vaccines and personal protective equipment, it means that "if a project has got the three authorities that it needs to move forward—

project authority, spending authority, and contract authority—and it is medium risk or less, we only have to go to the Treasury Board once," explained Steve Fuhr, Secretary of State for Defence Procurement. "As long as we stay within the budget of the program, we don't have to go back and forth to the Treasury Board every time we hit a project milestone."

What used to take potentially months of shuttling among Treasury Board and other departments has, in one case so far, been completed in as little as 30 days, added Lafave.

The change from risk aversion to risk management will reduce the multitude of reviews project documents receive. Where possible, the DIA is also looking to complete project steps in parallel rather than sequentially, foregoing the typical waterfall approach of finishing one process before starting the next.

Converging procurement expertise and resources under one tent should also lessen the risk of misunderstanding and miscommunication. Lafave noted a visible "mental shift" among those assigned to the DIA team. Where connecting with someone in another department might have required using lengthy chains of communication and writing formal documents or emails to get information, it is becoming, "why don't we call them and just have that chat?" he said.

"While those chats were happening before amongst certain teams, we are taking one more step in the direction of having improved dialogue at lower levels so that we can get everyone on the same page early and work together on procurement solutions.

"When there are disagreements on the way forward, the increased dialogue will still improve the understanding of the other side's point of view," he added, "so that when the leadership gets together to discuss the differing opinions or recommendations, they can be better informed and prepared to address the concerns of those around the table, converse on risks, and reach decisions."

The framework for the DIA and its authorities will be further refined over the next few months, and change will be a constant for the near future, as it will take time and be iterative in nature, Lafave cautioned. Nonetheless, he sees a real sense of urgency and commitment within the DIA, as well as already increased authorities and improved processes supporting Army requirements and defence industry engaging on Army projects. ■



A section attack by the Arctic Response Company Group during Op Nanook-Nunavut 2026.
Photo: MCpl Sarah Morley



Canada's North, Canada's Moment

The largest Arctic operation in nearly two decades unfolded across three territories this winter. At its centre were the Canadian Rangers.

By Allan Joyner



1 RCHA Drone Team flying near Cambridge Bay. Photo: Allan Joyner

In the winter of 1946, a small Canadian Army expedition set out to answer a question that had never been tested: Could a modern military force actually move across the Canadian Arctic?

Exercise Muskox took tracked vehicles, snow-capable carriers, and a handful of determined soldiers across the central Arctic mainland to Hudson Bay and back, relying on dead reckoning, compass work, and sheer will. It was less a military operation than a proof of concept, and its conclusion was sobering. The North was vast, unforgiving, and it did not reward the unprepared.

Eighty years later, the question has changed. Getting there is no longer the hard part.

Operation Nanook-Nunavut 2026 (NA-NU 2026), running from February 14 to April 15 across all three northern territories, was Canada's most emphatic answer yet.

It was the largest Canadian Armed Forces (CAF) contribution to Op NA-NU since the broader Nanook series began in 2007: up to 1,300 CAF members, roughly 750 troops drawn from 3rd Canadian Division alone, nearly 200 vehicles and pieces of equipment, and allied participation from the United States, Belgium, France, and Denmark. The operation spanned Yellowknife, Behchokq and Inuvik in the Northwest Territories, Cambridge Bay in Nunavut,

and Whitehorse in the Yukon, and it sent a long-range patrol on snowmobiles across the entire breadth of the Canadian Arctic.

That patrol was conducted by the 1st Canadian Ranger Patrol Group. They not only supported the operation. At every node, along every bound, they were indispensable to it.

A Different Kind of Urgency

Op NA-NU 2026 was shaped by a world that had shifted under Canada's feet. U.S. statements challenging Canadian sovereignty in the Arctic had sharpened the politics of northern defence. Russian air activity in North American identification zones was increasing. A growing international scramble for Arctic access was no longer a future scenario. The North had become a matter of urgent political attention in a way it had not been in decades.

Inflection Point 2025, released by Army Commander Lieutenant-General Michael Wright in August 2025, had already named the problem. "The Army we have is not the Army we need." The document identified the Arctic as a region of increasing geopolitical vulnerability and listed Long Range Precision Strike-Land capability as a priority investment, one that would, in Wright's own framing, "enable us to conduct area denial in the Arctic."



1 RCHA positioning the M777 in -38C temperatures near Cambridge Bay. Photo: Allan Joyner

Getting M777 howitzers to Cambridge Bay was a first, imperfect step toward proving the Army could begin to close that gap. Signals from Canada to friends and foes alike became concrete during the operation itself, with the federal government announcing new funding for northern operational support hubs and infrastructure nodes while troops were still on the ground.

Lieutenant-Colonel Jordan Beatty, commanding officer of 1st Regiment, Royal Canadian Horse Artillery (1 RCHA) and the Land Task Force commander in Cambridge Bay, Nunavut, was direct in his assessment: “We need to continue to invest in sustainment hubs in the north. We need to invest in the infrastructure to be able to stage in the north, and we need multiple locations to do that, because it’s so vast.”

The announcement, he said, was exactly aligned with what the operation had demonstrated. The timing was not coincidental.

Structure of the Mission

Op NA-NU 26 was led by Joint Task Force North (JTFN), the Yellowknife-based headquarters responsible for all CAF continental operations in Canada’s vast Arctic region, an area covering approximately 40 percent of Canada’s landmass. The sheer scale of 2026’s operation required 3rd Canadian Division to force-generate a Joint Task Force Nunavut headquarters and a distinct

Land Task Force (LTF). 1st Canadian Mechanized Brigade Group provided the joint HQ and 1 RCHA commanded the LTF.

The Arctic Response Company Group (ARCG), drawn from 38 Canadian Brigade Group in Winnipeg, fell under Beatty’s Land Task Force and deployed to Cambridge Bay alongside the gunners from 1 RCHA. Task Force Grizzly, built around 41 Canadian Brigade Group from Calgary, operated as a subunit of the joint task force headquarters and established a camp near Long Lake outside Yellowknife. 1 CRPG’s Canadian Rangers were present throughout.

The Cambridge Bay hub was the operational centre of gravity for the LTF. Victoria Island sits north of the Arctic Circle at 69°N, and getting there required moving the M777 155-mm howitzers by road from Canadian Forces Base Shilo to Yellowknife in the dead of winter, then by air aboard a CC-130 Hercules for the final bound into Cambridge Bay, the heaviest lift of the operation and a logistics challenge spanning thousands of kilometres—an expeditionary undertaking conducted entirely within Canada’s own borders.

As Beatty put it: “Although domestic, it feels expeditionary, because it’s so far. It feels like the same kind of distances when we go overseas.”

The first two weeks of Op NA-NU 26 subjected every element of the operation to conditions that tested the outer limits of what soldiers and equipment could endure. Wind chills regularly reached minus 60 Celsius



Members of the Quick Reaction Force, deployed with Joint Task Force (North) Headquarters, participate in a ski shooting event. Photo: Cpl Amelie Graveline

across the Cambridge Bay area, grounding aircraft, freezing machinery, and demanding constant cold-weather discipline from troops drawn largely from prairie and southern garrisons. The Rangers were most visible in exactly these conditions. Inuit men and women who have operated in this environment their entire lives, they guided movement, assessed ice conditions, and kept the force oriented. The cold was not a variable to be managed. It was the operating environment, and the Rangers understood it in ways that troops from the south take years of experience to begin to match.

The M777s marked another milestone. Canadian military records indicate this was the first time the weapon had been deployed north of the 60th parallel. The operation aimed to establish that Canada could position, prepare, and fire long-range artillery in the High Arctic. A frozen hangar door, extreme temperatures, and blizzard-induced airspace coordination challenges with Transport Canada ultimately prevented a live-fire shot from going downrange.

Beatty was measured in his assessment of what that meant. The guns had been transported, positioned, and made ready for action. Fuses had been set on shells. The force had worked through extreme cold without a single serious cold-weather casualty.

"We demonstrated we could do that," he said. "What is stopping us from scaling it up more is just synchronizing with other operations?"

The lesson he took from the hangar door, a technical detail with cascading operational effects that included grounding the 450 Tactical Helicopter Squadron CH-147F Chinooks and cutting short an ARCG patrol, was more pointed: "We need to be in the Arctic more, to learn all these details and see the unknown stuff that we don't consider unless you are getting firsthand experience in the Arctic."

The Rangers: The Thread That Holds It Together

The Canadian Rangers of 1 CRPG are, structurally and operationally, the permanent military presence in 65 northern communities stretching across Nunavut, the Northwest Territories, the Yukon, and the northern tip of British Columbia. Their 2,000 part-time members, drawn overwhelmingly from Inuit and other Indigenous communities, hold knowledge of this land that no amount of southern training can replicate.

The long-range patrol tasked to 1 CRPG was the most ambitious screening patrol Canada's military has ever attempted on the Arctic mainland. Starting at the Yukon-Alaska border, the patrol covered almost 5,000 kilometres by snowmobile, finishing at Churchill, Man. The route followed the southern shore of the Northwest Passage east through or near Tuktoyaktuk, Paulatuk, Cambridge Bay, Gjoa Haven, and Rankin Inlet, past multiple North Warning



Members of 1 CRPG depart Cambridge Bay on March 17, 2026. Photo: MCpl Antoine Brochu

System sites, across Coronation Gulf, down the Kivalliq coast, and eventually to the shores of Hudson Bay.

Consider the comparison with Muskox. That 1946 expedition was celebrated as a foundational act of Arctic sovereign reach, proof that Canadians could move and survive on that terrain at all. The 2026 long-range patrol exceeded it in distance and ambition, conducted not by experimental military detachments but by Canadian Rangers who live on and know this land.

The patrol was not without friction. The Inuvialuit Rangers, who opened the route from Herschel Island, judged early conditions unsafe and held for three days at Shingle Point on the Yukon's north slope. That judgment, the kind of ground-truth assessment no headquarters map can replicate, is precisely the value the Rangers bring. When conditions allowed, they moved. When they didn't, they waited.

The 440 Transport Squadron Twin Otters and CH-146 Griffon helicopters of the Air Task Force provided resupply and reconnaissance support through the early stages, scouting sea ice conditions ahead of the patrol and delivering food and fuel. When one Ranger developed Stage 2 frostbite, two Griffons launched within an hour of the alert, extracted the affected member, and inserted a replacement. The patrol did not leave an empty sled behind.

Rangers were equally present in Cambridge Bay, where expertise from men and women in the local company guided the ARCG's 400-kilometre Victoria Island patrol through the realities of sustained Arctic operations.

Muskox and the Long Arc

The legacy of Ex Muskox is often framed as a founding moment for Canadian Arctic doctrine, the point at which Canada first treated the North as a theatre of operations rather than a distant frontier. But Muskox also exposed how unprepared Canada was: threadbare infrastructure, limited integration with northern communities, a wide gap between intent and capacity.

Eighty years later, the Op Nanook exercises have closed the gap. Op NA-NU 26 put more troops on the ground, over a wider area, with heavier equipment, in tighter coordination with allied nations, and with the deepest possible integration of Indigenous expertise. Rangers are embedded in every element of the mission—not borrowed expertise but a permanent presence.

Muskox asked whether Canada could get to the Arctic. Op NA-NU 2026 was answering something harder: whether we can hold it. The snowmobile tracks fade. Presence has to be earned again, every year, and the North does not award it based on intention. ■



ADVANCING WITH THE CANADIAN RANGERS

By Allan Joyner



A member of the ARCG taking direction from a Ranger of the Cambridge Bay detachment of 1 CRPG during Op Nanook. Photo: Allan Joyner



For years, something about the Canadian Rangers has been on the mind of their director, Colonel Benoit Mainville. “We were saying they were the eyes and ears of the North—but that was basically the depth of it. There was no transmission belt. There was no collection plan. There was no framework for what they were supposed to look for or where they were supposed to go.”

Mainville is the driving force behind the Canadian Ranger Enhancement (CRE) initiative, which *Canadian Army Today* first covered in Spring 2025. At that point, the program was still largely aspirational. A year later, the aspirations are becoming structure, the structure is becoming policy, and this past winter, on Operation Nanook-Nunavut 2026, the Rangers of 1st Canadian Ranger Patrol Group (1 CRPG) completed the most ambitious sovereignty patrol the Canadian military has attempted in 80 years: a 5,000-kilometre long-range patrol screening the Northwest Passage from the Yukon-Alaska border to Churchill, Man.

Not everyone perceives the Ranger capability gap the same way. Lieutenant-Colonel Travis Hanes, commanding officer of 1

CRPG, noted that his patrol group has been routing information through Joint Task Force North (JTF-N) for years.

“I don’t know if that was necessarily true,” he said of the gap Mainville described. Hanes commanded the long-range patrol that combined Ranger ground truth with sensors from the RCMP, Parks Canada, Conservation Officers, Environment and Climate Change Canada, and Polar Shelf, transmitting the whole picture up to JTF-N.

Mainville doesn’t dispute it. His point is about the Canadian Armed Forces (CAF) side: The intelligence 1 CRPG was producing for JTF-N stopped there for the most part, and was never integrated into a pan-domain picture managed at Canadian Forces Intelligence Command (CFINTCOM) and shared with security partners.

That is one of the gaps the CRE is aiming to close. Hanes is quick to note that his model belongs specifically to 1 CRPG’s area of operations. Canada’s five Ranger Patrol Groups cover terrain so different in character—the High Arctic archipelago of Nunavut at one end, the mountains of British Columbia at the



Members of 1 CRPG operate light over-snow vehicles on the long-range patrol during Op Nanook on Curtis Mountain near Fort McPherson, NWT. Photo: MCpl Antoine Brochu

other—that no single operational template scales cleanly across all of them. Building a framework flexible enough to hold five genuinely different realities is challenging.

Mainville is committed to solving it through updated Soldat-Capteur training “that will be adapted with our security partners, and CFINTCOM is working on a framework to enable it,” he says.

FIVE ORPHANS BECOME A FAMILY

As of April 1, Mainville’s directorate moved from an advisory function under the Army Commander to a formation-level headquarters under 2nd Canadian Division, which is itself transitioning into the Defence of Canada Division. All five Canadian Ranger Patrol Groups, currently reporting through four separate divisions, will now fall under a single Canadian Ranger Group.

“This takes us from five orphans to a family,” Mainville said.

The practical problem with orphans is inconsistency. A damage claim processed in days in one division becomes a financial investigation in another because the officer handling it has never seen one before. Equipment subsidies, training standards, and operational expectations all vary depending on which division a patrol group happens to fall under. A single formation creates, for the first time, a singular institutional voice for the Rangers inside

the CAF. That alone is not a small thing.

Mainville will wear a dual hat in the new structure: commander of the Canadian Ranger Group, and strategic advisor on policy questions that are uniquely Ranger in nature. Policies, he notes, that have consistently been written for the first 100 kilometres from the border and historically fail the remote regions where the Rangers actually operate.

From out on the snow-covered ground, Hanes’s read on the new structure comes with caution. His concern is that the headquarters could layer itself between 1 CRPG and the JTFN relationships that make Arctic operations work. Access to 440 Transport Squadron air assets, contracting authority through a force employer rather than a force generator, JTFN’s connections to northern industry, the local airlines, the expedition outfitters, and the companies that actually know this terrain are key enablers. They are the infrastructure that made the long-range patrol possible.

“If it becomes more of an administrative headquarters, then I think it could be a huge benefit,” Hanes said. “But if it becomes something more like a traditional brigade, I don’t know how that’s going to work.”

Mainville does not dismiss the concern. But he explains that the Canadian Ranger Group Headquarters (CR Gp HQ) will be more than administration and policy. It will be responsible for force development, force management and

force generation, while the Regional Task Forces will be the force employer. This is the same for all Canadian Army units. The headquarters will remove lots of the admin weights from the five CRPG, and it is intended to enable them to be more agile and responsive to operations.

A CONSTITUTION STILL BEING WRITTEN

A Chief of the Defence Staff (CDS) directive on CRE, along with the related policy instrument DAOD 2020-2 Canadian Rangers, has been circulating in various forms for several years. The DAOD 2020-2 was submitted by the Army commander following extensive consultation in September 2022 and, as of April 2026, is still moving through approval channels. In parallel, a separate CDS directive on CRE—roughly seven pages in length—has also been in review for about four years.

Mainville concedes the reality of the situation: “These documents have taken a very long time to move through the system.”

It is also important to distinguish between the two streams. The DAOD 2020-2 represents the formal policy foundation for Canadian Rangers governance, while the CDS Directive on CRE is the operationally-driven implementation instrument. The CDS has, in fact, been notably proactive

on CRE, issuing an initiating directive in May 2025 and planning an implementation directive in the coming weeks, without waiting for final DAOD approval.

Despite the administrative lag, the CRE team has continued to move. Equipment is being distributed, doctrine notes are being published, and the formation headquarters stood up on April 1 regardless of the directive status. “We’re progressing, assuming all these documents are blessed and good to go,” Mainville said, “because we don’t have any choice.”

Once fully signed, the CDS directive will do something the Army alone cannot: it will bind CFINTCOM, Canadian Joint Operations Command, Assistant Deputy Minister (Policy), and other Level 1 organizations to align behind CRE. Without it, the program’s influence remains limited to what the Army can directly control.

The policy gaps the directive addresses run deeper than paperwork. Without a medical standard for the Ranger position, even a baseline as minimal as “mobile, ambulatory, no clinical disability,” the CAF cannot medically release an injured member. Without that release, veterans’ benefits are off the table entirely. Rangers have no mandatory retirement age, and some continue operating into their late 60s, but the law governing death



Members of 1 CRPG capture ice data near Nuajaat, Nunavut. Photo: Jim Welsh



A member of 1 CRPG near Nunalla, Man, on April 10, 2026. Photo: MCpl Antoine Brochu



LCol Travis Hanes, commanding officer of 1st Canadian Ranger Patrol Group.
Photo: MCpl Antoine Brochu



Rangers load a stokes litter onto a kumatuk sled to transport a simulated casualty during Op Nanook in Cambridge Bay, March 2026. Photo: MCpl Sarah Morley

benefits was written without them in mind. A Ranger past 61 years loses a percentage of their coverage until they reach 69.

“So, the Ranger wants to go out,” Mainville said, “but if he goes out, he’s worth 20 percent of the life, because that’s the way the policy is drafted.”

What Mainville measures as success is a policy in development in the CR Gp headquarters that will help staff balance protecting administrative risks at the expense of operational risks. It will resolve a two-and-a-half-year fight over equipment damage liability if the CAF depends on a Ranger’s personal snowmobile or ATV to operate; the CAF will assume liability when that equipment is damaged in the line of duty.

“It sounds logical,” Mainville said. “It’s cheap, it’s economical, and it’s fair to the Ranger who brings his own equipment.”

The CR Gp headquarters will at least partially resolve this.

BEING AN ACTIVE SENSOR

When Mainville sat down with Chief of the Defence Staff, General Jenny Carignan, in 2025 at a CR Advisory Group meeting, the CDS was direct. “I want them to be the active sensor. We have to enable them to become the sensor.”

That intent was built into Op Nanook-Nunaliut 2026 as a specific line

of operation, with two distinct functions: active sensor tasking, in which patrols are directed to specific routes or infrastructure sites with defined reporting requirements; and passive sensor function, in which Rangers are briefed on what to watch for and climate change indicators, shifts in community patterns, and unfamiliar activity.

The distinction matters. What is new is not that Rangers haven’t been observing and reporting. It’s that the intent is now formalized, directed, and structured so that the whole institution can actually use what they see.

An Army doctrine note on Ranger operations was published in June 2025, formally establishing Ranger functions within the Army framework for the first time. A full doctrine document will follow. An addendum to the Army’s drone doctrine note is also in development. It will include how Rangers employ uncrewed systems in an operating environment defined not by traditional battle geometry but by cold, distance, and the maintenance demands of extended operations far from any base. Their relationship with these systems is simply not the same as that of a conventional unit’s.

STILL AHEAD FOR CRE

The Military Employment Structure, the foundational document that defines what a Ranger is at every rank, what skills are required, what

equipment they rate, and how they develop across a career, is in its second year of a three-year development cycle. When complete, it establishes the administrative backbone that every other enhancement depends on.

However, Canadian Ranger Enhancement remains underfunded. The investment requested is significant at \$200 million upfront, followed by \$120 million annually. This covers the increased CR benefits, CR Clothing, CR Gp HQ, Strengthening the CRPG HQ, Increasing CR Training, communication and digitalization, drones and miscellaneous equipment, and infrastructure for training, storage and maintenance.

Mainville is also working to formalize equipment grants and low-interest loans for young Rangers who cannot afford the \$30,000 snowmobile that effective Arctic operations require.

"If you're a 21-year-old Ranger making less than \$30,000 a year, you get maybe \$5,000 in grants and a low-interest loan for the rest. You buy the equipment, you're enabled as a Ranger, and you're helping your community. You're building national resilience," he explained.

The CDS is fully on board, he added.

A NEW MINDSET

Asked what had actually changed for the Rangers in the past year, beyond equipment and directives, Mainville chose a word that wasn't on the expected list.

"Mindset," he said. "Sometimes there's no document, there's no directive, there's nothing concrete. There's just a smell. And the smell is that we are headed toward getting more attention in the Arctic."

The Rangers have been promised a lot over 20 years. Mainville cited 14 directives since a Canadian Ranger Study was conducted in 2000, none of which delivered what an elder once described as the only honest measure of change: additional benefit for the Ranger. "All you have given us is more paperwork," the elder told him. It is not a sentence Mainville has forgotten.

His measure of success is precise: Policy that streamlines administration, risk transferred from the Ranger's shoulders to the CAF, benefits that give a young person in the North a reason to join and inject real money into communities that have been promised attention from the south before.

"The rest will follow," Mainville said. ■

Members of the 1st Canadian Ranger Patrol Group arrive in Nunalla, Man. Photo: MCpl Antoine Brochu

By Allan Joyner

Warrant Officer Thomas Hughes has the Arctic operations advisor patch on his sleeve, which in the world of the Canadian Army's Arctic Response Company Group (ARGC) means something. The Royal Winnipeg Rifles non-commissioned officer (NCO) has been with the ARGC since 2012, operated from Tuktoyaktuk to Cambridge Bay to Resolute, and approaches every exercise the same way.

He keeps running notes as he goes, building an after-action list of what worked, what failed, and what incremental improvements he can drive before the next rotation. In the unusually extreme cold of Operation Nanook-Nunaliivut 2026, in wind chills approaching minus 60 Celsius outside Cambridge Bay, that list got longer.

The snowmobiles needed lighter-grade extreme-cold oil. The radios needed to stay closer to the body. And the new merino wool base layers the troops were wearing needed to hold up better to field

DRESSED FOR THE FIGHT

BUILDING THE ARMY'S COLD-WEATHER CLOTHING SYSTEM

conditions, because the concept was right, but the fabric was too delicate.

That last piece of feedback found its way to Major Chris Blencowe almost immediately. It usually does. Blencowe is the Army clothing requirements officer at the Directorate of Land Requirements, and Hughes is one of his former students from the Arctic Operations Advisor course, when Blencowe was the course director. Hughes is now a long-term collaborator and technical advisor on items of clothing and equipment. Two or three times a year, they talk directly about equipment, field conditions, what the ARGC actually needs versus what it

currently has. It is exactly the kind of feedback loop that, for most of the past two decades, simply did not exist.

That it exists now is the story of how the cold-weather clothing system is changing, who drove that change, and what soldiers going north can expect in the years ahead.

A SYSTEM WITH ROOTS IN THE WINTER WAR

The current extreme cold system, the familiar parka and bib pants that have kept soldiers alive from Yellowknife to Resolute for a generation, is roughly 30 years old. The design underneath it is older

still, rooted in a lineage most soldiers carrying it never knew about.

In 1945 and 1946, 12 Finnish Army officers were recruited by the Americans and tasked with writing a joint Canadian-American winter training manual. These were men who had just fought the Soviet Union through four years of Winter War, who understood cold-weather warfare at a level no army in North America had ever encountered. The manual they produced became the doctrinal foundation for virtually everything both nations have since done in cold-weather warfare: the 10-person Arctic tent; the heated shelter rotation cycle; the layering philosophy; the drill of getting soldiers in, getting them fed, getting them warm, then putting them back out. All of it traces to those 12 officers and what they wrote in the late 1940s.

Blencowe knows this history intimately, because he studied it. He spent four years in Trenton as the course director who finalized the Arctic Operations Advisor course, evolving the program into a broad



Members of B Company, 2nd Battalion, Royal 22^e Régiment during an attack on Ex Rafale Blanche. Photo: Cpl Marc-André Leclerc

experience-based course, to train students in the diverse conditions found across the Arctic Region.

This began by working with JTFN in Yellowknife as the force employer, where they experienced below-the-treeline (Sub-Arctic) conditions with First Nations. They later moved to the Canadian Armed Forces (CAF) Arctic Training Centre in Resolute, exposed to above-the-treeline (High Arctic) and Inuit cultural distinctions, all while working to overcome the tyranny of isolation in a domestic operations environment.

In addition, integrating Ranger NCOs into the course staff and regularly including guest instructors from Norway and Denmark, while sending instructors overseas in exchange, ensured all staff were subject matter experts. That exposure to how Nordic armies approach cold-weather operations gave him a useful and sometimes uncomfortable point of comparison.

"The Canadian Army expects our young southern-based soldiers to do things that in a European army take special forces," he said. Denmark's Sirius Dog Patrol in Greenland deploys six men at a time for two years, soldiers Blencowe describes with admiration as "special forces park rangers," trained to a level of Arctic proficiency that takes years to develop.

The Army, by contrast, routinely sends 20-something reservists from Winnipeg or Barrie into the Canadian High Arctic, one of the most demanding environments on earth, and expects them to function effectively. The Nordic countries have a name for the adversary those soldiers face: General January.

That is not a criticism of Canadian soldiers. Hughes makes the point from a different angle when he describes the ARCG's mentality: "You join this organization to solve problems, to overcome challenges, and the Arctic is the hardest version of that."



A member of the Arctic Response Company Group during Op Nanook. Photo: Allan Joyner

His ARCG soldiers are volunteers, attracted precisely because the work is difficult and the stakes are real. But Blencowe's observation frames the requirement clearly: If we are asking soldiers to operate at that level, the clothing system underneath them has to be the very best it can be.

WHY NOTHING CHANGED FOR 20 YEARS

For most of Blencowe's career, the challenge of improving that clothing system felt insurmountable. The impediment was not indifference. It was procurement architecture.

Under the old policy, clothing was treated as a capital asset, the same category as vehicles and weapons systems. Any significant change to the parka or combat uniform required running a major project: formal requirements definition, multiple governance gateways, staffing up a project team, and timelines measured in years or decades. The program that had last reclothed the Army from the ground up, Clothe-the-Soldier, had a large staff and dedicated funding. Once the project was complete, this staff dwindled to one, with no capacity for any real improvement or means to address key deficiencies identified in user feedback and Gender-Based Analysis Plus (GBA+) of the current clothing. It took significant intervention from senior leadership to confirm this was unacceptable, and ensure change was to be implemented.

"My first five years here, there was no discussion of change," said Blencowe. "The idea of changing just didn't exist."

The most significant improvement he managed in that period was adding a pocket and some fleece lining to a piece of kit. On a handshake, not even a formal product improvement.

The shift came when Treasury Board reclassified clothing as a



A member of 41 Loyal Edmonton Regiment after a simulated attack on their camp during Op Nanook. Photo: MCpl Robert Mitchell

non-capital item. Clothing, by this reasoning, instead of running a whole new project when it wears out, could be replaced directly. The colour of money changed, meaning the Army could use Vote 1 funding rather than capital expenditure to procure and improve clothing.

That change, combined with a new long-term supply contract under the Operational Clothing and Footwear Consolidated Contract, (OCFC2), effectively rewired the entire system. Where Blencowe once needed to stand up a major project

to change pocket designs, National Defence can now task the contractor directly. There is no new contracting process. The work can begin almost immediately.

WHAT'S BEING BUILT: THE CCUE

The Canadian Combat Uniform Ensemble is not a product improvement on the existing clothing system. It is a new system built to fill the gap that has historically caused the most casualties: the cold-wet environment.

Blencowe's historical study of cold-weather warfare identified the danger zone precisely. It is not the minus-45 conditions Hughes was managing in Cambridge Bay, where the risks are immediate and the extreme cold system—parka and bib pants—performs the job it was designed for. The more dangerous zone is the middle ground, the plus-two and raining day that drops to minus 10 after dark, the freezing rain and wet snow of Northern Europe or a Canadian exercise in the shoulder seasons, where a soldier soaked in sweat from exertion can be in serious trouble before anyone recognizes what is happening.

The CCUE is designed to address that gap directly, while enhancing the severe and extreme cold weather layers currently in use.

The system is merino wool at its foundation, base layers in three weights: mesh, lightweight, and medium, all interchangeable. On top of that, two puffy jacket options, a lightweight version and a medium-weight designed specifically to fill the layering gap that has long existed between the fleece mid-layer and the parka. Soldiers have been solving that problem informally for years, wearing civilian puffy jackets under their issued kit. The CCUE formalizes the solution. Windproof layers, waterproof shells, and a dedicated combat uniform designed for dismounted close-combat operations under body armour in temperate cold conditions round out the ensemble.

The CCUE does not replace the parka and bib pants. Those outer garments remain in service as they are still good clothing. They are, as Blencowe says, "perfectly functional," and the concept behind the heated shelter rotation cycle that Finnish doctrine gave the Army still works, with the extreme cold outer shell it was designed around still performing its role.

The parka will eventually be

updated, likely within a few years of CCUE completing its rollout, but that work is deliberately sequenced. The Army could not do everything at once with the resources available, and the CCUE addresses the more immediately pressing gap. When funding and bandwidth allow, the outer system will get its own examination and improvement.

Late 2027 is the current target for CCUE delivery, with development and initial issue valued over \$500 million under the Operational Clothing contract. The CADPAT camouflage pattern alone takes roughly a year to apply to a new fabric for the first time, a complicated formula that Canadian industry is working through now.

THE MERINO BASE LAYER: ALREADY IMPROVING

The first piece of the CCUE has already begun reaching soldiers. The merino wool base layers were in the field at Op Nanook, worn by many in the ARCG on the ice outside Cambridge Bay. The feedback on it was direct and consistent, that the concept was right, with improved warmth, but the fabric was delicate for field conditions.

The concern was specific. The merino garments required careful handling in conditions where clothing gets ground into snowmobile engines, pressed against stove grates, and worn continuously for days. The ARCG found the base layer excellent for thermal performance and for the natural antimicrobial properties of wool, which matter when you cannot wash in the field for extended periods. But durability was an issue.

Blencowe and especially the Assistant Deputy Minister (Materiel) team are actioning feedback on this initial rollout, even before it has been distributed across the Army. The product improvement is already underway. The next iteration of the base layer will use a blended



Arctic Response Company Group member during Op Nanook. Photo: Allan Joyner

fibre, merino mixed with nylon, to maintain the warmth and wicking properties of wool while adding the durability and washability that field use demands. The design refinement began before the after-action reports from Op Nanook were even finalized.

"We had few improvements for nearly 20 years," Blencowe said. "Now we're going to have the ability to make small changes regularly, and every couple of years, a more significant change based on soldier feedback."

The generation cycle for combat

clothing is moving from 30 years to roughly three. Whether it holds is another question. The merino base layer revision is the first real indication of whether that's true.

THE FEEDBACK LOOP

That revision exists because Blencowe heard about the durability concern from people like Hughes, from the ARCG and other officers who filled out feedback surveys, and from a network of field contacts he has maintained since his years in Trenton. Major Christian Doucet, his

counterpart at DLR, who manages the broader soldier system, from helmet to knee, runs a parallel feedback architecture at exercises, with QR codes linked to equipment surveys and DLR personnel embedded in major exercises to capture what soldiers experience in the moment, including the kind of detail that rarely makes it into formal after-action reports.

A down-booty incident from Op Nanook captures why that granular feedback matters. A soldier went briefly outside her tent in the middle of the night, in socking feet, because putting on mukluks in a crowded tent in extreme cold in the dark is genuinely difficult. Had she been able to use the small, insulated camp booties that many Arctic operators carry, it would have been safer. That information reaches the people who can write it into a requirement, but only if the feedback loop is working.

Unit regimental sergeant majors and commanding officers have a role in that loop. Blencowe's approach, when he reaches out to field units, is to ask them to collect feedback collectively from their members and send it back, so that any given deficiency can be validated across multiple organizations before becoming a procurement signal. The system works better when leadership understands what it is for and enables it.

The merino base layers Hughes and his soldiers wore on the ice this year will be better because they wore them and reported on them. For most of the past two decades, that sentence would not have been true.

Hughes, characteristically, put it in terms any Arctic operator would recognize. He keeps a running tally every time he goes north, what worked, what failed, what he would change. "I really believe in incremental improvements every single year," he said. He has been doing it for years. The Army is catching up. ■



EVALUATING THE LIGHT INFANTRY'S NEW LOAD CARRIAGE SYSTEM FOR ALL COMBAT TRADES

By Chris Thatcher

A sapper from the Multinational Engineer Squadron in Latvia, April 2026. Photo: Cpl Justin Dreimanis



Members of Charlie Company, 1st Battalion, Royal 22nd Regiment, during Ex Maple Resolve at Thetford Mines, April 2026. Photo: Cpl Liam Stagg

Fit and functionality have not always been features of military clothing and body armour. It can seem one size fits all is the rule rather than the exception.

Under the Soldier Operational Clothing and Equipment Modernization (SOCEM) program, however, there has been a concerted effort to account for a range of body shapes and sizes as the Army seeks to procure the next generation of footwear, all-weather gear, gloves, clothing, ballistic helmets, rucksacks, and other equipment.

And it has done so through a series of data-collecting trials under operational conditions to understand how performance of common and specialized tasks is affected by the fit of new clothing and equipment.

In late 2020, the Directorate of Land Requirements (DLR), working with the Assistant Deputy Minister (Materiel) Branch (ADM (Mat)) and Defence Research and Development Canada (DRDC), launched a series of trials with light infantry for two of the SOCEM projects—ballistic

helmets and modular load carriage or fighting rigs.

Known as Dismounted Infantry Capability Enhancement (DICE), the novel approach held controlled trials with the dismounted light infantry battalions to evaluate options for helmets and load carriage for one community while gathering soldier feedback to inform larger SOCEM projects for the wider Army.

The first assessment was conducted in 2022 with the 3rd Battalion, Princess Patricia's Canadian Light Infantry to evaluate three options for ballistic helmets. As a result of the rigorous trial, a contract was awarded in February 2023 to Galvion for 2,100 of its Batlskin Caiman, the highest rated by 3 PPCLI. That led to a subsequent trial of the Batlskin Caiman with mechanized infantry and, in July 2024, ADM (Mat) exercised an option for an additional 8,400 helmets.

A similar evaluation process followed for competing load carriage systems, including ballistic plates, fragmentation armour, vests, pouches and packs. In fall 2024, members of 3rd

Battalion, Royal 22^e Regiment put several systems through their paces to assess weight load and mobility, completing the Combat Force test and a ruck march and then conducting section attacks, advanced to contact, and patrolling.

They also fired the 84mm Carl Gustaf M4 recoilless rifle, M72 light anti-tank weapon, C9A2 light machine gun, C6 medium machine gun, and C-7 automatic rifle from various positions.

That led to a \$19.7 million contract to Logistik Unicorp in March 2025 for 3,000 units of load carriage equipment—ballistic armour layers, tactical vests, pack systems, and associated pouches—for the light infantry. Delivery is expected late this year or early 2027.

Before the Army opts to provide a similar solution to the entire land force, it wanted to ensure the design was a good fit for all combat arms trades. The modular system includes some 65 components, including over 30 pouches, and there were questions about how well it would function beyond the dismounted light infantry.



A member of C Company, 1st Battalion, Royal 22nd Regiment, exiting a LAV during Ex Maple Resolve, April 2026. Photo: Cpl Liam Stagg

In November 2025, the Canadian Army Trials and Evaluation Unit (CATEU) in Gagetown, N.B., led an assessment of the body armour and pack system with instructors from the Combat Training Centre's infantry, armour, and artillery schools.

Around 40 participants drawn from the Royal Canadian Armoured Corps School, the Royal Regiment of Canadian Artillery School, 4th Artillery Regiment (General Support), 4 Engineer Support Regiment, the Infantry School and 2nd Battalion, The Royal Canadian Regiment tested the DICE system against the legacy Clothe-the-Soldier (CTS) and a general-purpose rucksack slightly smaller than the current pack.

"We were not evaluating specifically the DICE equipment, we were evaluating more the concept of DICE," emphasized Captain Ryan Drake, DLR's deputy project director for Soldier Systems.

"The main concept of the trial was to take the baseline—the tac vest, frag vest, and rucksack soldiers are using now—and compare it to DICE. You are going from CTS, which is a fixed one-piece system, to DICE, which is completely modular and flexible. We wanted to see [if] this concept of a modular system meets the needs of the other combat arms trades, or does something simpler like the CTS or the general-purpose rucksack meet their requirements?"

The DICE system features a complex mix of a one-piece tactical vest, ballistic plates, training plates, chest rig, battle belt, 30 to 40 pouches, and a modular pack with two bags that can detach to allow a soldier to attach unconventional loads between the pack and the frame, such as heavy equipment, jerry cans, or weapon systems.

The initial tests focused on sizing for each soldier and building familiarity with the many components. All participants then conducted range of motion and mobility tests, including the Combat Force test and a ruck march, swapping in the general-purpose bag for part of the evaluation. That was followed by weapons handling and firing in a Small Arms Training range.

Each trade then conducted specific trials with platforms such as the LAV 6, Armoured Combat Support Vehicle (ACSV), Engineer LAV, and Leopard 2 main battle tank, quickly getting in and out of vehicles, performing various drills in the turrets, and extracting casualties, especially from the hatches of the ACSV. Gunners worked around an LG1 105mm howitzer while combat engineers were asked to attach Bangalore, mines and other equipment to their packs and perform various functions.

While soldiers were appreciative of the modular concept of the body armour and the ability to modify their pack and pouches for specific tasks, there were obvious challenges getting into turrets and through hatches with



An armoured corps member removing a casualty during the trial. Photo: MS Alyssa Jackson, CATEU

the pouches as part of a single system.

Drake noted that with the two-piece CTS system, the armoured corps typically wear their frag vest inside the Leopard 2 turret and their pouches are attached to the tac vest, which they leave in the back or up on the turret basket. If they dismount, they're just throwing on their tac vest. The one-piece DICE body armour and tac vest system was a tighter fit.

"They had difficulty in the turret if there were pouches on the system," he said. "That was something we noticed. The armour corps clearly needs to have a battle belt they can leave in the basket; they can't have any pouches on their body armour. They will need those supplementary accessories to have the real estate to add those pouches.

Throughout the trial, soldiers were reminded, "if you have something that's not working, or there's something that would be better, this is the time to tell," said Drake. "This was the moment to provide feedback. That will allow us to transform it into requirements for the equipment that they're eventually going to receive."

Drake said DLR recently received CATEU's detailed 100-page report capturing the subjective feedback of trial participants, the objective results of each test, and a series of observations and recommendations.

The report will inform not only the acquisition of DICE or a similar system

for the combat arms, but also the SOCEM program writ large, which is now working on two projects, contoured body armored carriage system (CBACS) and body armor carriage system (BACS), to procure new systems for the remainder of the Army.

CBACS will target primarily female soldiers while BACS will encompass the rest of the force. Delivery of the CBACS solution is expected in 2028, followed by BACS by around 2030, said Drake. "BACS is a much larger project, so it is going to take a bit more time, but we are trying to find ways to accelerate this project to deliver sooner."

With some foresight, the project team has been visiting Canadian Armed Forces clothing stores to discuss DICE. While it's only a system for the light infantry, it could become a logistical challenge if a similar system is adopted by the wider Army.

"DICE is complex to store and definitely a lot more complicated for returns," said Drake. "If we have a similar system, with four different sizes of vests, with 65 different components that need to be outfitted to 45,000 soldiers—the logistical side is going to be complicated." ■

Cloud TAK evolution

From a military to public safety capability

By Chris Thatcher

As part of Army modernization and the emerging Defence of Canada Division concept, interoperability will be a critical enabler. Beginning this May, first responders across the federal and provincial governments will have access to a cloud-based version of Team Awareness Kit (TAK), a suite of software applications for situational awareness, personnel and platform tracking, geospatial mapping, and command and control.

Known as GUARD, or Government Unified Architecture for Response and Defence, the system will help connect military and public safety partners through a shared digital capability. Through a partnership with National Defence, Shared Services Canada will maintain and deliver GUARD as a service, enabling shared development of the capability and broader availability for domestic response partners.

GUARD is based on the same core capability as Cloud TAK, a software solution launched by the Army as a trial edge network for the opposition force in a brigade exercise in 2023. It has since become a deployed capability on domestic operations, providing a common operating picture to Canadian Armed Forces (CAF) members and provincial firefighters on Operation Lentus. And it is poised to become an additional tool for the Canadian-led multinational brigade in Latvia.

Cloud TAK is now a readily available service and has been widely adopted across the Army. But its use is “asymmetrical,” observed Major Martin Simard, product leader with the Directorate of Digital and Army Combat Systems Integration (DDACSI), who has doggedly driven its development and acceptance since that first exercise in Alberta with the 12 Régiment blindé du Canada.

“Even though it is widespread, there’s still a huge asymmetry, and it depends on the operational tempo,” he said. “We’ve been available to users for three years now and there are still units that are not aware of it. I’m trying to over communicate, but even then, the message doesn’t get down to the end users.”

Units like 1 Canadian Mechanized Brigade Group and 39 Canadian Brigade Group have become Regular and Reserve force champions of Cloud TAK; others have had less time to test the capability as they prepare for deployment to Latvia.

But since members of 2 Canadian Division used Cloud TAK on cellphones and tablets with provincial firefighters and police as they battled a series of wildfires across Quebec in the summer of 2023, Simard has been breaking silos—with the Air Force and its digital hub, with the Navy, and with other government departments—to encourage its adoption and expansion.

The software solves the problem of information sharing among different services and agencies, an interoperability issue that is often addressed with liaison officers to bridge technical gaps. Even though he’s approached it as a start-up company, breaking old paradigms and forging new relations, he’s still trying to convince some how Cloud TAK can integrate sources of data across organizations and share situational awareness.

Not so, Shared Services Canada. SSC was among those intrigued by the initial use of Cloud TAK in 2023. In December, the department launched GUARD as a service following months of collaboration between its cloud team and Simard’s small group within DDACSI.

The submission of a joint cloud business requirement “happened really quickly,” said Simard. “The way Cloud TAK is built, we can share it easily. We were able to get it within two weeks. We need to give credit to the work that Shared Services is doing. They are fast moving and a great partner.”

The rebranded Cloud TAK means not only seamless interoperability between the CAF and first responders, but also among federal and provincial agencies when the CAF is not a participant in an exercise or operation.

Moreover, the collaboration with Shared Services “allows us to develop a capability jointly at a much faster pace,” he said. “We’re

still developing the core of Cloud TAK, so the networking and functionality to make it scalable infinitely. But the code base is the same, so they can reuse it. Whatever we build on the Cloud TAK side, they enter it on the GUARD side.

Simard noted that “SSC is going through their own process with authorization to operate, making sure all the security controls are there. And we’re finishing a few things on the refactoring—because Cloud TAK grew so quickly, we had to do a refactoring on the code base. But it is the same architecture, the same devices, the same message going directly from Cloud TAK to SSC GUARD.”

Cloud TAK was built from the outset to be interoperable with other government departments, so the process for onboarding other organizations is relatively straightforward. Encouraging other departments to embrace the software for operations and contribute to its development might be tougher, but “it is just a question of time,” he said.

“It is about educating people about the capability, educating people about modern software development. We are used to procuring software from industry and then depending on the industry. We’re not used to building our own capability and maintaining our own capability. But if we want to survive in 2026, we need to innovate, we need to break things.”

The Joint Cloud

Another organization paying close attention to the first uses of Cloud TAK in 2023 was the Director, Joint Defence Cloud Program (DJDCP), created in 2019 to accelerate digital modernization for the Department of National Defence and CAF by acting as the single gateway for public cloud hosting capabilities. Consequently, it serves as an engine behind the Army’s digital agility and currently supports over 170 unique public cloud projects.

One of its top priorities is the operationalization of a Defence Cloud Mission Systems (DCMS) framework.

“As a result of the early operational use [of Cloud TAK], we immediately recognized the need to adjust the Joint Defence Cloud Program to meet round-the-clock operational demands, including implementing 24/7 on-call support and re-architecting cloud and networking capabilities to ensure greater resilience and redundancy in support of mission-critical operations,” said Julia Scouten of the DJDCP.

“Cloud TAK has been one of the key catalysts in reshaping both the DJDCP and the evolution of the DCMS framework by driving a clear shift toward a more mission-focused posture. Its early operational use highlighted the need for cloud capabilities that operate at the speed of mission, directly shaping the development of the DCMS framework from its initial design in winter 2024 through to approval in spring 2026.”

Where GUARD has clear enterprise and civil response applications, DCMS is approaching digital systems as weapon systems, and is prioritizing digital services that can directly affect the fight.

“Cloud TAK for the Canadian Army proved unequivocally that cloud technology is a critical warfighting enabler, not just a back-office administrative tool,” said Scouten. “Its success in delivering real-time command and control at the tactical edge served as a powerful, real-world use-case and proof of concept for a mission focused public cloud program supporting the CAF.”

As an enabler to improve decision-making, Cloud TAK has been hardened against cyber threats for possible overseas deployment this year, said Simard, and it is designed to work when connectivity is disrupted.

“We build everything to deploy at the tactical edge, because we will lose connectivity to the cloud,” he said. “We have a way to automatically deploy spoke kits. Building a server from scratch at the edge, something that can take weeks and months to do, now takes us five minutes. If we lose connectivity because we’re jammed, we can maintain local command and control. And once the connection is reestablished, then we have more services available. The intent is always to be able to work disconnected.”

While Cloud TAK’s influence on the wider Defence Cloud Mission System is rewarding, seeing its adoption by SSC was “a huge win personally,” said Simard. It validated the value of sharing work and encouraging use beyond the Army and CAF—a message he’s been preaching since Cloud TAK was first deployed with soldiers and Quebec provincial firefighters in 2023. ■



MCpl Justin Fernandes, Royal Westminster Regiment, and Capt Benson, 39 CBG HQ, with the ATAK map on Ex Cougar Fortress 2026, northern British Columbia, March 2026. Photo: Cpl Daniel Pereira



Photo: Cpl Daniel Pereira



WINNING THE NEXT FIGHT

HOW THE ARMY IS WORKING TO TURN BATTLEFIELD

LESSONS INTO FIGHTING KNOWLEDGE

By Allan Joyner

The Canadian Army is currently absorbing new equipment and capabilities at a pace that would have seemed extraordinary a decade ago. Drones, advanced sensors, upgraded Arctic kit—the hardware is showing up. The challenge now is ensuring that how the Army thinks, trains, and fights evolves quickly enough to make effective use of them.

Investments in new equipment and capabilities also demand reinvestment in the Army's intellectual foundation. That work falls largely to the Canadian Army Doctrine and Training Centre (CADTC) in Kingston, Ont. Within CADTC two organizations—the Army Lessons Learned Centre (ALLC) and the Army Doctrine Centre (ADC)—play a central role in accelerating how the Army learns, adapts, and institutionalizes change.

Chief of the Army Lessons Learned Centre, Lieutenant-Colonel Stephen Rankin, and Chief of the Army Doctrine Centre, Lieutenant-Colonel Paul Marois, are candid about the strain their organizations are under. The pace of change consistently exceeds available capacity. Rather than downplaying that reality, both officers argue it makes change unavoidable. Their focus is on reworking processes, tools, and relationships so that lessons and doctrine move faster, stay relevant, and better support the force.

“Unquestionably, our Army is learning,” says Rankin. Recent doctrine publications on Counter-Uncrewed Aerial Systems and Robotics and Autonomous Systems, along with ongoing modernization efforts, reflect that progress. The question, according to Rankin, is whether its learning fast enough. The ALLC is focused on ensuring that the Army has the institutional processes in place to learn faster than its adversaries.

ALLC is not short on observations. With ongoing conflicts in Ukraine and the Middle East, a high operational and training tempo, and rapid industry innovation, there is a constant flow of lessons observed. The challenge is ensuring that those are deliberately transitioned into lessons learned.

This happens in two ways. At the tactical and unit levels, formations adapt standard operating procedures in response to changes in the operating environment. This represents localized learning. The Army's broader objective, Rankin explains, is institutional learning, embedding those insights into concepts, doctrine, and training so they shape

Photo: DND

the force more widely.

To support that effort, the ALLC collects observations from a broad range of sources, including current conflicts, allied reporting, academic and think-tank research, and Canadian training exercises. Those inputs are then organized and distributed through two pathways.

The first pathway is dissemination of raw observations directly to the field force via *Army Lessons Learned Centre Insights*, a bi-weekly email aimed at putting observations into the hands of junior leaders as quickly as possible. The second pathway supports institutional change, with trends and issues passed to subject-matter experts for deeper analysis.

This is described as the difference between information and intelligence. Information needs to be pushed out to the field force as quickly as possible. With intelligence, a more deliberate effort is required—looking for trends to inform

deeper analysis in support of future concepts and adaptations to current doctrine.

Rankin is clear that the work is ongoing. Exploring new distribution methods and digital tools remains a priority, and progress has not closed the gaps entirely. That effort, Rankin notes, is closely linked to the ADC, which takes the learning identified by the ALLC and turns it into authoritative guidance for the force.

The Meaning Of Transformation

Doctrine represents the Army's institutional wisdom. Marois, now in his second posting to the ADC, has returned with a clear intent to drive necessary changes. He is thinking carefully about what modernizing doctrine actually requires, and whether modernization is even the right word.

He describes his approach across three areas: getting publications out faster and in formats soldiers will use; investing in digital tools that

make doctrine searchable in ways suited to how people look for information now; and rebuilding the communication link between the doctrine centre and the field force. Of the three, the last may matter most. It has also been fraying the longest.

On credibility, Marois is direct. "We have suffered a credibility issue with our doctrine." Some publications carry date stamps that undermine a soldier's confidence before the first paragraph is read. In a period of rapid capability introduction, that is not simply inconvenient.

To bridge the gap between what new capabilities demand and what formal publications can deliver, Marois has directed his staff to increase use of the Doctrine Note, a shorter, faster publication produced in one to three months rather than years. A recent Robotics and Autonomous Systems Doctrine Note developed with heavy input from ALLC and drawing on experience from



ARCG tents on the ice near Cambridge Bay during Op Nanook 2026. Photo: Allan Joyner



Members of 1 PPCLI launching a TEAL-2 drone during Ex Cougar Fortress in northern British Columbia, March 2026. Photo: Bdr Daniel Pereira



Multinational Battle Group orders during Mission Rehearsal Strike, Latvia, February 2026. Photo: Cpl Peter Grieves

Task Force Unifier in Latvia is the current example. Doctrine at speed. Not the comprehensive publication the subject eventually warrants, but a credible and timely anchor while that larger work moves forward.

Marois agrees that transformation is a more honest term than modernization. “Modernization is kind of the buzzword that is easy to use.” The distinction matters in practice. Modernization implies upgrading what exists. Transformation means rethinking how you work. Marois is doing both simultaneously, and he is clear-eyed about which one is harder.

Pipeline From Field To Publication

The relationship between the two centres is deliberately structured. The ALLC is the intake arm. When something comes in from the field, from allies, or from open-source analysis of what’s unfolding in Ukraine, it flows first through Rankin’s centre where it is collated and organized. It is then quickly passed to Marois’ team to determine where gaps might exist within current doctrine. Fast-moving cases go into a Doctrine Note, more complex ones work into the larger publication cycle.

For the pipeline to function, both ends need to stay connected to the field force that’s generating the raw material. Rankin notes that the rapid distribution of drones and other emerging technologies across units is already creating opportunities for soldiers across trades to experiment, adapt, and in so doing generate lessons for the Army. The infantry will use these systems differently from the armoured corps, and both will use them differently than the artillery. That variation is where the value lives.

Marois has been taking the effort to communicate seriously, in ways that might surprise people who associate doctrine with dusty binders. Rather than assuming future leaders will absorb doctrine on their own, he has been taking it directly to them—engaging technical staff students at the Royal Military College and planning regular briefings for every Army Operations Course serial at the Canadian Army Command and Staff College. The intent: making doctrine a two-way street, not just pushing information out, but making clear that the field force’s input is wanted and valued.

A Staffing Challenge

Both officers are working within a Canadian Army that is, by its own frank admission, short of experienced people at the levels this work most demands. Effective doctrine and lessons learned work requires a specific combination of operational experience, institutional familiarity, and the analytical depth to recognize which lessons transfer and which don't. Rankin knows that a budget line cannot produce that on short notice.

"You can't just knit new people," he stresses. In a recent example, when his centre identified the need to stand up a new Robotics and Autonomous Systems Office of Collateral Interest, to bridge top-down unmanned aircraft systems (UAS) development work with the bottom-up innovation happening at the unit level, he had to find the people from within his existing resources.

Fortunately, new government investment in defence is beginning to change the picture. But as Rankin observes, funding solves the budget problem. Not the experience problem.

"It's going to be a deliberate process," he says of rebuilding the force's depth. "It won't be slow, but it'll be deliberate."

Whether the pace of learning and doctrine development can keep up with the pace of procurement is the key question, and it's clear that both men understand that ensuring it does is the mission of their teams.

Enabling the Force

Near the close of his interview, Marois was asked what the current moment means to him after 30 years in uniform. His answer was not institutional.

"Seeing that investment now, it is absolutely amazing. It provides me such great hope for our younger soldiers and officers and what we're going to be able to provide them."

He returns, as he tends to, to doctrine's fundamental purpose: "I really want doctrine to be a key component of that, to enable them, so they feel like they can go on operations, and they know what they're doing."

After three decades of watching the Army cycle through underfunding and institutional drift, he reads as genuine. The Army is getting new tools. The hard work that is being done at CADTC is making sure every soldier who picks one up understands what to do with it. ■



Canadian and Swedish soldiers coordinate during Mission Rehearsal Oak Resolve, Latvia, April 2026. Photo: Cpl Peter Grieves



Firing on the Multinational ATGM range, Latvia, April 2026. Photo: Cpl Raj Dhagat

BATTLE HONOURS



Calgary Highlanders



North Shore (New Brunswick) Regiment



Les Fusiliers Mont-Royal

By John Boileau

Battle honours awarded to Canadian Army units are a custom inherited from the British Army. They publicly recognize the presence of a cavalry, armoured or infantry regiment in a particular battle, campaign or war and their contribution to it.

The first battle honours awarded to Canadian units were for the War of 1812. Despite numerous battles in Upper Canada and one in Lower Canada, only two were initially recognized by an honour, Queenstown (properly Queenston) and Niagara.

Units of the Canadian Militia fought in most of these actions. One of them, the Glengarry Light Infantry Fencibles, was awarded Niagara, the first ever for a Canadian unit. Unfortunately, no existing unit traces its unbroken lineage to the Glengarrys.

None of the other famous battles were recognized until the war's bicentennial in 2012, when the government authorized seven additional battle honours.

The next time battle honours were granted in Canada also marked a significant milestone. The honours Eccles Hill and Trout River for the 1870 Fenian Raids were awarded under the authority

of the Governor General. The British, upset over honours issued for essentially bloodless skirmishes, quickly re-established control. No further ones were given for the Fenian Raids, but three infantry battalions kept the earlier ones.

The North-West Resistance of 1885 was not bloodless. Although only Canadian units were involved, three battle honours—Saskatchewan, Fish Creek and Batoche—and a campaign honour—North-West Canada 1885—were eventually approved. These honours were shared by the 15 cavalry and infantry units that contributed troops. The majority exist today, either as regular or reserve regiments, although several have since undergone amalgamation.

The next time battle honours were awarded to Canadian units marked another milestone: the first time Canada deployed troops outside its boundaries, heralding a trend that continued throughout the 20th and into the 21st centuries. The South African War, 1899–1902, saw more than 7,350 Canadian soldiers sent to South Africa by a reluctant government.

While some politicians were decidedly

lukewarm about the issue, the general public was not, and four contingents of varying sizes were sent. Although there were about 35 separate battles against the Boers, only six battle honours were granted, plus one campaign honour, South Africa. One battle honour, Paardeberg, was won by the first Canadian unit sent overseas, the 2nd Special Service Battalion, Royal Canadian Regiment. Twenty-nine cavalry and infantry units received the campaign honour, with appropriate year dates.

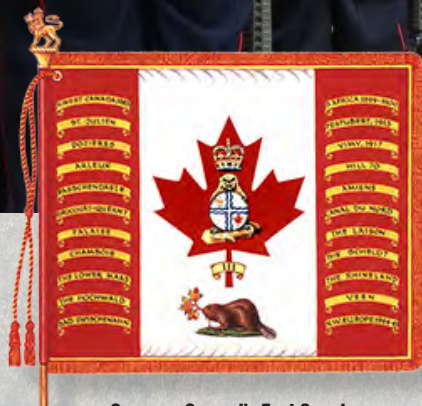
After the First World War, a Battle Honours Committee was established to link the 260 numbered Canadian Expeditionary Force battalions with appropriate Militia regiments. If this had not been done, the vast majority of First World War honours would have disappeared, except for a few Permanent Force units.

There were nearly 175 battle honours granted for the war, with the Canadian ones largely limited to France and Belgium. Canadian units earned more than half of the approximately 100 Western Front honours.

There were two somewhat unusual exceptions



His Royal Highness the Duke of Edinburgh presents new colours to the 3rd Battalion, The Royal Canadian Regiment on April 27, 2013.



Governor General's Foot Guards



Ontario Regiment



Royal Canadian Dragoons

to these honours. The first was Siberia 1918-19, awarded to the 259th and 260th Battalions for the campaign against the Bolsheviks. In 1997-98, the Directorate of History and Heritage (DHH) offered this honour to existing units. The 2^e Régiment blindé du Canada and the Princess Patricia's Canadian Light Infantry (PPCLI) applied and now carry this honour.

The other exception was Gallipoli 1915-16 and Egypt 1915-16, won by the Royal Newfoundland Regiment, not then a Canadian unit. Today, they are carried by the perpetuated unit.

For the Second World War, existing Permanent Force and Militia units were mobilized and dispatched overseas. Nearly 1,000 different army battle and campaign honours were awarded for the war, reflecting its wider global reach, greater mobility, and longer length.

In Sicily and Italy, about a third of more than 250 battle honours were awarded to Canadian regiments. In Northwest Europe, Canadian units won 40 percent of the more than 150 battle honours for that campaign. In many cases, honours were granted to Canadian units only. The

other campaign with Canadian Army participation was Southeast Asia 1941-42, where two infantry battalions were awarded this campaign honour, as well as Hong Kong.

Some Second World War battle honours initially disappeared as the units awarded them ceased to exist when the war ended. Notable among these are 1st Canadian Parachute Battalion, First Special Service Force (FSSF) and 1st Canadian Armoured Carrier Regiment. These units won 26 honours between them, 10 of them awarded to no other Canadian units.

The Canadian Airborne Regiment was permitted to carry 11 of the 13 honours gained by the Paras and the FSSF, but with the disbandment of the regiment in 1995, these disappeared. Then, in 2008, the newly-established Canadian Special Operations Regiment was authorized to perpetuate the nine honours of the FSSF.

Fortunately, virtually all the remaining Second World War honours are still carried today, many through amalgamations.

For the Korean War, 21 honours were approved. Four Canadian regiments were awarded the

campaign honour Korea, but only one unit received a battle honour. Kapyong was awarded to the PPCLI.

These Korean honours were the last awarded to the army until the Afghanistan War. Although the PPCLI applied for an honour for 1993's Battle of the Medak Pocket, the government turned it down.

In 2014, 65 army units received the theatre award Afghanistan. According to staff at the DHH, "phase II of the battle honours process for South-West Asia will deal with specific campaigns, battles, and engagements." Although "consultations are ongoing," DHH cannot provide a "timeline for an announcement" at this time.

During more than two centuries, Canadian Army units have won over 270 different battle honours. Such honours are a significant part of the history of our regiments; daily reminders of the sacrifices made by the soldiers who played their part in our nation's wars.

The Canadian Army's battle honours are a source of pride forever. ■

John Boileau has written several articles about battle honours.



Members of 2 RCR and the Swedish Army conduct joint trench clearing training in Latvia in March 2026. Photo: Cpl Raj Dhagat



Combined arms rehearsal during Mission Rehearsal Forge in Latvia in January 2025. Photo: Cpl Raj Dhagat

EXTENDED REALITY AND THE MODERNIZATION OF DISPERSED TRAINING

BY MAXIME LEBLANC

The Canadian Army is undergoing one of the most consequential transformations in its recent history. Unveiled in late 2025, *Inflection Point 2025*, the Canadian Army's strategic modernization blueprint, confronts a frank operational reality: the Army we have is not the Army we need.

Central to this transformation is not only what soldiers fight with, but how they are trained. The Army is reorganizing for new divisional roles and preparing soldiers for an operating environment defined by dispersion, rapid technological change, and the constant pressure to be ready in a time and resource-constrained environment.

Training modernization should not be understood as a search for novelty, but rather as a practical effort to give soldiers more opportunities to learn, rehearse, and retain critical skills before they are tested in the field. Defence science work in this area increasingly points to virtual, augmented, and mixed reality as useful tools in that effort, especially when training must reach soldiers who are geographically separated from instructors, ranges, and specialized equipment.

Dispersed individual training—that is, training conducted by soldiers who are geographically separated from instructors, ranges, simulators, and collective exercises—creates a persistent tension between readiness and

feasibility. A soldier at a remote base, unable to access a qualification range or a certified weapons instructor, is a readiness gap waiting to materialize.

Extended Reality (XR)—an umbrella term encompassing Virtual Reality (VR), Augmented Reality (AR), and Mixed Reality (MR)—is proposed as a solution to this gap. These technologies offer scalable and repeatable simulation experiences that, in principle, compress scheduling constraints and enable repeated deliberate practice without the logistical burden of live exercises.

Yet, as with any technology adopted under operational pressure, the imperative to move quickly must be balanced against the obligation to move wisely.

BLENDED TRAINING

The strongest case for immersive training appears in tasks that are procedural, physical, or both. When soldiers need repetition and to make decisions under time pressure, simulation can create useful learning opportunities without waiting for the next available range or large exercise. It is particularly well suited to building familiarity and reinforcing sequences prior to confirming one's skills in live exercises.



Students on a Tactical Combat Casualty Care Course in Latvia in January 2026. Photo: Cpl Peter Grieves

That does not mean, however, that every task should migrate into a headset. Research on simulator-enabled training shows that some skills transfer well, while others depend heavily on cues that are difficult to reproduce fully in synthetic environments, such as: recoil, depth perception, timing, stress, environmental conditions, and interaction with real equipment.

The broader pattern in the evidence from meta-analysis work conducted by the Canadian Army Operational Research and Analysis Team (CA ORAT) suggests that simulation can indeed reduce reliance on live ranges and help trainees build the necessary fundamentals, but it works best as part of a blended curriculum of training where soldiers train in both live and simulated environments together.

In the example of small-arms training, synthetic training environments cannot yet completely simulate the physical demands of shooting, meaning that live-fire remains essential for validation and confirming that simulator performance reflects genuine readiness rather than familiarity with a digital tool. That lesson applies far beyond marksmanship.

The Army should not ask whether synthetic training can replace live training in the abstract but rather ask which parts of a skill can be learned well in simulation, which parts still demand live confirmation, and how the two should be combined to produce the best result with the time available.

RETENTION GAP

What remains consequential is not what is known, but what remains unmeasured. Skill retention and long-term transfer are consistently identified as important in the literature yet are insufficiently measured longitudinally. Studies examining XR flight training, confined-space procedural training, and marksmanship all report short-term performance outcomes but do not track whether those gains persist weeks or months after training concludes.

If XR accelerates skill acquisition but does not prevent skill fade (a

plausible outcome for tasks requiring regular live practice to sustain), then the Army may be trading one readiness bottleneck for another.

Dispersed training strategies often implicitly assume that on-demand, repeatable XR practice will improve retention; that assumption should be treated as a hypothesis requiring longitudinal validation, not an established fact.

A PATH FORWARD

The Army's modernization agenda rightly identifies technology integration as foundational to the future force. The Canadian Armed Forces (CAF) is already advancing this agenda through projects which integrate live, virtual, and constructive training methodologies. VR and MR are enabling technologies that, when applied strategically, offer scalable, cost-effective, adaptive, and real-time-trackable training outcomes (provided they align with CAF Qualification Standards and operational objectives).

The opportunity now is to build a training system that is both modern and disciplined. That means using immersive tools where they expand access, increase repetitions, and improve feedback; preserving live training where realism and validation are essential; and treating training modernization as a readiness problem rather than a technology project.

For the Army, the promise of training modernization is real. Virtual and extended reality can help the force train more often, in more places, and with better use of scarce time and resources. But their greatest contribution will not come from replacing the fundamentals of Army training. It will come from helping the Army deliver those fundamentals more intelligently across a dispersed and increasingly demanding operational landscape. ■

Maxime Leblanc is a defence scientist with Defence Research and Development Canada (DRDC)'s Centre for Operational Research and Analysis (CORA) and a member of the Canadian Army Operational Research and Analysis Team (CA ORAT) embedded with the Canadian Army. The views expressed reflect the author's own research findings and expertise and are not official positions of DND/CAF.

THE DRONE INITIATIVE

Testing a General-Purpose Uncrewed Aerial System (GPUAS) in Latvia. Photo: Cpl Peter Grieves

The United States' war with Iran has underscored what Russia's war with Ukraine made abundantly clear: the need for an array of simple, low cost, and attritable uncrewed systems. In short, drones able to perform a variety of tasks—precision strike, intelligence, surveillance and reconnaissance (ISR), logistics—in the air, on the ground, and over the littorals.

Last September, the Canadian Army launched the Minerva Initiative, a sweeping effort to identify realistic applications for autonomous uncrewed systems, experiment with options in operational-like conditions, and then spearhead integration into the land force.

Minerva is not a procurement project. But if it is successful in pulling together the experimentation and funding resources from across government and industry, it could help bridge a gap that currently leaves innovative technology just short of Canadian Armed Forces adoption.

Led by the Canadian Army Land Warfare Centre (CALWC), the initiative has held five engagements with industry since its September unveiling. The first two, in December and January, laid out the objectives and then how the Army intends to approach drone experimentation.

"The feedback we got was, there is a lot of industry desire to get after this," said Lieutenant-Colonel D'Arcy Lemay, CALWC's chief of Experimentation Services Centre. "They are looking for us [to deliver] collaboration between industry defence scientists and soldiers that is tied to relevant operational environments. It's not [industry] testing stuff and [claiming] it works. We can provide some of that environment and use all the various elements that the Army can reach into."

From that initial scene setter, CALWC has

launched three working groups focused on distinct lines of effort: uncrewed aircraft systems (UAS); uncrewed ground and littoral systems; and enabling and supporting technology such as systems integration, communication and tracking capability integrated into battle management systems, and training.

Prior to the first meeting with industry, MINERVA brought together representatives from across the Army for a deep dive into drones. They identified 20 priority areas for investigation, which were presented to industry in December, and then refined to a first tranche of 10 by January.

"We can't do everything all at once," said Lemay, "so we're choosing the highest priority ones, and then we're going to turn those into challenges, leveraging existing programs such as the Innovation for Defence Excellence and Security (IDEaS) and the Innovative Solutions Canada programs.

The UAS list includes first-person view (FPV) strike, target acquisition, ISR, cargo, and Arctic-capable drones. For FPV systems, CALWC is leveraging an IDEaS contest called Drone Surge, which has already selected 30 innovators to compete in a second round of evaluations. And it will launch a Minerva-driven target acquisition drone challenge in May to give a tool to mortar fire controllers and forward observers.

"We've got things like the [CU173] Raven B and [CU172] Blackjack for target acquisition, but they're older, they're exquisite, you don't really want to lose them," said Lemay. "The idea of Minerva is simple and attritable."

For ground systems, Minerva is prioritizing cargo drones for moving equipment, supplies and casualties, as well as surveillance and breaching systems. Lemay noted that a lot of work has

already been done by industry in all three, "so we just need to refine this for Army specific [applications]."

The third line of effort will begin with two challenges: command-and-control and battle management system integration; and training simulation. The first will seek to address airspace deconfliction when hundreds, or even thousands, of drones share the air with tactical helicopters, and how to integrate with air defence and counter-UAS systems to avoid friendly fire. The second will tackle the challenge of training across a range of trades not normally operating drones.

"What underpins both of those, I would argue, is the modeling part of this," said Lemay. "How do we get the digital twins [for] those kind of systems?"

The second tranche of projects will prioritize additional types of strike drones, which come with policy considerations for arming and fusing munitions, especially on domestic soil, as well as specialist applications such as electronic warfare and other payloads.

The 20 areas of focus were generated by representatives from various units, and "for each one of the Minerva efforts, we're going to be working to identify a sponsor unit [to] be the principal test area, and to guide these along at the very tactical level," said Lemay. "That way it's integrated into their exercises."

That process of consultation across the Army and with industry will be repeated as the initiative builds momentum.

"I don't think Minerva has a distinct end point," he said. "If we show success, this is going to become a way we do business. I hope Minerva is going to provide a real, useful pathway for rapid capability development within the Army." ■



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