Slow Procurement is Canada's Greater Risk

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The Royal Canadian Navy (RCN) faces an existential problem. The character of naval warfare is changing faster than Canada can buy and field the systems needed to keep its ships relevant and survivable.

In an August 2026 RCN account, Commander Phillip Durand, one of the navy's experts in maritime counter-drone operations, emphasized the speed of the change. According to him, "[e]ven the observations I share today may be outdated within weeks because the technology is evolving so quickly."[1] He expects the operational battle space to become saturated with aerial, surface and sub-surface uncrewed systems within the next few years.

These systems create an asymmetric challenge. Cheap and expendable aircraft and vessels can be fielded in large numbers, while their small size, unconventional materials and low electromagnetic signatures make them difficult to detect, classify and distinguish from routine activity. Swarms can exploit gaps in layered defence and exhaust limited magazines.

These new technologies threaten the RCN fleet's combat relevance. Canada could continue operating sophisticated and expensive ships while their military value erodes around them. A warship that cannot find, classify and affordably defeat large numbers of autonomous threats may remain seaworthy while becoming increasingly vulnerable. The RCN must adapt its sensors, defensive systems, networks, tactics and training at the pace of the threat. That pace is measured in weeks and months. Canada's purchasing system usually works in years. Canada needs a naval purchasing pathway that can turn an operational problem into a paid field trial in months instead of years.

Canadian companies are developing autonomous vessels, artificial intelligence, resilient navigation, sensors, electronic warfare tools and new propulsion systems. Naval personnel are looking for ways to use these technologies. The missing connection is often a timely purchase contract that allows a promising system to be tested in sustained operations.

Start-up innovators have systems ready for testing. The RCN has operational problems it wants to solve. But once a purchase is required, both sides enter a process the timing of which they largely cannot control.

Rapid experimentation is possible. During Exercise Trident Fury in 2025, the RCN's Advanced Naval Capabilities (ANC) team conducted the 'MAKO' experiment,[2] moving in six weeks from an operational idea to the navy's first live-fire trial of an armed uncrewed surface vessel (USV). The team used equipment that was already available, adapting



*During Exercise Trident Fury in 2025, HMCS **Vancouver** launched a variant of the Hammerhead drone ('Mako') equipped with high explosives to destroy another Hammerhead in the RCN's first live-fire experiment with an armed surface drone. This image shows the drone before (top) and during (bottom) the explosion.*

the Hammerhead USVs which had been used until then for target practice.

MAKO moved quickly because the equipment was already inside the defence system. A different process begins when the RCN needs to purchase a new system from industry. The Department of National Defence (DND) owns the operational requirement, specifications, options analysis, approvals and project budget. Public Services and Procurement Canada (PSPC) develops the procurement strategy, leads the solicitation and manages the contract. This division of responsibility leaves the operational user and the supplier with limited control over the purchasing calendar. The same bureaucracy constrains both groups and breaks the rapid feedback loop that innovation requires.

A naval sponsor may know exactly what it wants to learn from a trial. A start-up may have working equipment and the engineering team required to support it. Months of

productive engagement can still end at the same point: the navy lacks a suitable purchase mechanism, and the company cannot keep supplying equipment and engineering support without a contract. Commander Durand identifies the procurement challenge as the limiting factor in deploying new technology. He notes that "[w]e often produce impressive prototypes, but without a pathway to procurement. If we can't buy the system, field it and put it in sailors' hands, then we haven't created real capability."[3]

The challenge is that the procurement system is driven by risk documentation and bureaucratic compliance, requirements that settle on a solution too early, limited contact between end users and industry, a weak route from innovation programs into fleet capability, and training or policy work that starts too late. The result is the familiar 'valley of death' between a successful prototype and an operational purchase.

For the navy, the cost is lost learning, and the potential loss of a valuable technology supplier. For a start-up, the cost may be survival. Venture-backed technology companies are often financed in increments that provide 12 to 18 months of runway. Before that capital is exhausted, the company must reach milestones that justify another investment round – typically technical progress and credible evidence that customers will buy its product. Defence procurement operates on a different clock. The interval between selecting a company for a project and putting a signed contract in place can extend for 18 to 24 months. During that delay, customer-specific development loses momentum, engineering teams are reassigned or reduced, and investors may conclude that government interest will not translate into revenue. A promising technology can therefore be validated by Canadian defence users but fail commercially before Canada is ready to purchase it. The company may close, pivot away from defence, seek foreign customers or move into a market with a faster route to contract. If Canada is serious about acquiring leading-edge technology, its procurement system must operate at the pace of technology development and venture financing.

The Defence Investment Agency (DIA) may help close this gap. The DIA is a special operating agency created within PSPC in 2025 with a mandate to centralize expertise, streamline decisions and test faster procurement approaches. The agency has greater autonomy and contracting authority, and its stated mandate includes reducing administrative delay, engaging industry earlier and testing new procurement models. Its position within PSPC gives it a chance to align capability, industrial and contracting decisions more closely. A useful measure of progress will be the time between a naval unit identifying a problem and a Canadian company receiving a paid contract to put equipment in the water.

Conventional procurement asks government to define a requirement, compare suppliers, document risk, establish val-ue for money, and protect the integrity of the competition. That discipline is essential for major acquisitions and mature systems.

Emerging technology develops through a different sequence. Operators use an early system, engineers observe its weaknesses, the concept of employment evolves and requirements become more precise. Each cycle improves both the product and the navy's understanding of the problem. A detailed statement of requirement written before this learning occurs can preserve assumptions that later prove wrong. An early statement of requirement can also prevent industry from proposing an approach the navy had not considered. By the time a competition finishes, the technology may have moved through several generations.

Procurement officials are working within incentives created by policy, audit and public accountability. A contract that fails is visible and attributable. An experiment that never takes place leaves little trace. The second outcome may carry the greater operational cost, yet it rarely appears in a project risk register. This imbalance encourages delay. More analysis, another approval and a more prescriptive requirement can reduce the apparent risk of the purchase. At the same time, the threat continues to evolve and the navy loses opportunities to learn.

A failed five-million-dollar operational trial has a bounded cost and produces evidence. A five-year delay produces no equipment, no operator experience and no clearer understanding of the requirement. Delay may also leave a



A computer-generated graphic of a hydrofoil uncrewed vehicle proposed by the author's company.

Canadian company without the capital to remain in the market, which is a loss to both Canadian enterprise and defence operators who were depending on delivery of the new technology.

The purchasing system needs to recognize two forms of risk. Contract risk concerns fairness, cost, performance and compliance. Operational delay risk concerns the capability the navy will lack if the purchase takes too long. Both belong in the decision.

The Navy Needs Paid Operational Trials

Canada has several programs that fund research, prototypes and demonstrations. Those programs have helped companies reach the point where they can show working technology. The next stage requires the government to act as a customer.

A one-day demonstration can establish that a system functions under selected conditions. However, such a demonstration offers little evidence about sustained reliability, operator workload, maintenance, training, logistics, communications resilience or integration with naval systems. These questions emerge through repeated use. For a small uncrewed maritime system, a useful trial might involve five or 10 vessels, operator stations, payloads, communications equipment, training, spares and technical support. Sailors would operate the systems over several months in changing weather and sea conditions. The trial would measure mission effect, reliability, maintenance burden, integration and the ability of the supplier to support a small fleet.

The contract should define the decision that follows. A weak result could end the project. A promising result could lead to another development cycle or a larger operational trial. A system that meets agreed operational and production milestones could proceed to an initial acquisition. Continuity preserves the knowledge, trust and technical progress created by each phase. Restarting the procurement process after every successful trial discards much of that value and weakens the commercial meaning of success. For private investors, a paid operational contract demonstrates that a real customer exists. The contract gives investors evidence that technical progress can lead to revenue. That evidence can unlock the capital required for production, hiring and further product development.

The United States and Ukraine show what faster cycles can achieve. The US Defense Innovation Unit (DIU) has built a procurement route around short problem statements, commercial proposals, prototype contracts and a direct path to follow-on production. DIU aims to award prototype agreements within 60 to 90 days, with its current average closer to 120 days. A successful prototype can move into a production contract without another full competition.


Credit: Huntington Ingalls

Under the US Navy's Lionfish program, up to 200 REMUS 300 uncrewed underwater vehicles could be purchased.

The US Navy's Lionfish program provides a useful example. More than 30 companies submitted proposals for a new small uncrewed underwater vehicle. Sailors participated in live demonstrations and provided operational feedback. Two companies received prototype agreements. The selected system later moved into a (US) $19 million production contract with a ceiling of (US) $347 million. The competitive prototype process, user testing and production pathway formed one continuous acquisition effort.

Ukraine has compressed the cycle further. Through the DOT-Chain Defence marketplace, military units select equipment against current operational needs while the procurement agency handles contracts, payment and logistics. In July 2026, Ukraine's Ministry of Defence reported an average delivery time of nine days for in-stock equipment ordered through the platform.

Canada needs a model suited to its own laws, institutions and peacetime obligations, but these examples still establish a useful benchmark. Weeks and months are achievable when operators, procurement authorities and suppliers work through a standing mechanism with money already attached.

New Canadian initiatives could provide the mechanism. The Defence Drone Initiative (DDI), launched in July 2026, creates a competitive supply arrangement for Canadian uncrewed and autonomous systems, including surface and underwater systems. Qualified suppliers may compete for research, prototypes, testing, limited acquisitions and potential production work. Qualification alone, however, does not guarantee a contract.

The Procurement and Operationalization of Innovation and New Technology (POINT) framework is a specialized pathway under Canada's Innovation for Defence Excellence and Security (IDEaS) program that funds dual research and development (R&D) projects, and offers DND an explicit option to buy successful military tech at scale.

A company that successfully completes the R&D phase may, at Canada's discretion, receive a contract to supply the resulting innovation at scale for operational use. PSPC oversees the competitive process.[4]

The value of these programs will be determined by the number, speed and size of the contracts issued through them. A qualified-supplier list creates access. Operational learning begins with a purchase order. The DDI should allow a navy sponsor to take a defined problem, select several qualified suppliers, fund a meaningful field trial and expand a successful contract without returning to the beginning of the process. Funding and contracting authority need to be available when the operational sponsor is ready.



Prime Minister Mark Carney announces the establishment of the Defence Drone Initiative Marketplace Supply Arrangement during a joint press conference in Calgary with President of Ukraine Volodymyr Zelenskyy on 10 September 2026.

Canada should create a standing experimental procurement lane for emerging naval technology. The Defence Investment Agency could house an integrated team drawn from the RCN, Director Navy Requirements (DNR), PSPC, Defence Research and Development Canada (DRDC) and Innovation, Science and Economic Development Canada (ISED). Each trial would begin with a named naval sponsor. That sponsor would own the operational problem, provide end users and commit a unit to conducting the trial. The solicitation would describe the desired effect, the operating environment and the relevant constraints, while leaving companies room to propose different technical approaches.

PSPC and the DIA could prequalify suppliers for security, financial capacity and technical competence. Standard contract terms would then be reused across projects. The target should be an award within 60 to 90 days of publishing the problem, with parallel awards when testing several approaches would produce better evidence.

The purchase would include enough systems, training, spares, integration work and technical support to expose operational and logistical weaknesses. The contract would also set the milestones for termination, further development, expanded testing or initial production. Funding approval and the contracting route for the next phase would be prepared while the trial is underway.

Program performance should be measured through time to contract, systems placed with operators, operational lessons produced, successful transitions to production, Canadian intellectual property retained and private investment attracted. Audits should examine those portfolio outcomes alongside compliance with contracting rules.

The government should manage these experiments as a portfolio. Some projects will fail because the technology is immature, the mission value is weak or the supplier cannot deliver. Those outcomes are useful when they are discovered early and documented honestly. Well-governed failure should carry no career penalty. Avoidable delay should receive the same scrutiny as a failed contract.

The Greater Risk

The RCN faces a future in which cheap, numerous and increasingly autonomous systems can threaten ships, ports and critical infrastructure. Some will operate with little electromagnetic signature. Many will cost far less than the weapons traditionally used to defeat them. Their software, tactics and production methods will change quickly. Canadian innovators are building solutions to those future threats. But Canada cannot answer the challenge if constrained by a procurement cycle that consumes a significant share of the five-to-10-year warning period.

The safer course is a larger number of bounded experiments, each with a real operational sponsor, a paid contract and a defined route forward. Weak solutions can be tested and terminated quickly. Strong systems can reach sailors while the capability is still relevant. A failed experiment supports the innovation ecosystem and produces knowledge for the RCN. A fleet that cannot adapt at the current rate of innovation may cost lives, ships and strategic relevance. That is the greater risk.

Notes

1. Government of Canada, Royal Canadian Navy (RCN), "How Canada's Navy is Preparing to Fight Drones," 4 August 2026.
2. For more information and explanation on the MAKO experiment, see Government of Canada, RCN, "RCN Tests First Armed Uncrewed Vessel," 31 July 2025.
3. Government of Canada, RCN, "How Canada's Navy is Preparing to Fight Drones."
4. See Government of Canada, Department of National Defence, "Procurement and Operationalization of Innovation and New Technology (POINT)," and "Innovation for Defence Excellence and Security (IDEaS)" programs.

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