

QUICK IMPACT



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Beginning NORAD's Next Chapter?

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Yesterday, Minister of National Defence Anita Anand made a once-in-a-generation defence announcement, committing to a [six-year, \\$4.9 billion plan](#) to upgrade Canada's continental defence systems. Situating the need for more robust defences to counter "new threats" from strategic competitors like Russia and China, [Anand assessed in a speech last month](#) that "we do live in a world at the present time that appears to be growing darker." She continued that "in this new world, Canada's geographic position no longer provides the same protection that it once did. And in this new world, the security environment facing Canada is less secure, less predictable and more chaotic." Hence the promise of this new money over and above the \$8-billion increase in Canada's defence spending announced in the [latest federal budget](#).

The foundation of the plan is Canada's ongoing commitment to the North American Aerospace Defence Command (NORAD) – a binational relationship with the United States which Anand characterized as "our most important ally, our strongest partner, and our closest friend." Building on a joint [announcement last year with our American partners to modernize NORAD](#), the lion's share of the promised investments will [modernize the technology supporting the binational command](#). This is the first major modernization since the 1980s and the upgrading of the 1950s-era Distant Early Warning (DEW) Line to the current Northern Warning System. Whilst NORAD was founded in 1957 "against the backdrop of the Cold War and the threat of a Soviet-era air attack," Anand emphasized that it "has continually adapted and evolved in responses to new threats" that now included a "pressing need" to address hypersonic weapons, advanced cruise missiles, and other means wielded – or soon to be wielded – by strategic competitors who might wish to hold North America hostage. This required "turn[ing] another page and begin NORAD's next chapter."

NORAD's next chapter – and continental defence more generally – is to be oriented around two major components. First, Canadians will be provided with four overlapping layers of [situational awareness to detect threats passing through the Arctic](#) on their way to Northern American cities in the south. Investments in a new Northern Approaches Surveillance System will contain three core elements:

- 1) An Arctic over-the-horizon (OTH) radar system to provide early warning and threat tracking across Canada, from the southern border with the United States to the Arctic Circle;

- 2) A Polar OTH radar system to provide an early warning function well past the Canadian Arctic Archipelago far out into the northern most approaches to North America, enabling monitoring of the entirety of the [Canadian Air Defence Identification Zone](#) (CADIZ); and
- 3) A new system dubbed “Crossbow” which is a network of other sensors – and their supporting communications infrastructure – distributed across Northern Canada as another layer of detection.

This “state-of-the-art” system will enable a clearer picture of future threats for officials. This new spending will also build on the space-based surveillance project outlined in 2017’s [Strong, Secure, Engaged](#) (SSE) that will use new satellites to provide Canadians with a global intelligence gathering and threat tracking capability, further Canada’s situational awareness.

The tremendous amounts of data these new layers of awareness will generate will be [ingested by new “technology-enabled decision-making” capabilities](#), the second major component of NORAD modernization. “It is crucial,” Anand declared, “that commanders and policymakers have a comprehensive and accurate operating picture that integrates data from all domain sensors and uses machine learning, quantum and cloud computing, and artificial intelligence.” These technological initiatives include:

- 1) Modernizing the CAF’s command and control (C2) information systems;
- 2) Expanding Canada’s contribution to the NORAD Pathfinder initiative that takes advantage of cloud based computing and machine learning “to ensure that NORAD commanders can make informed and rapid decisions.” This also builds upon [existing DND/CAF efforts to devise innovative solutions to support the compilation of a consistent common operational picture in constrained environments](#) through the efficient exchange and processing of data and information originating from multiple distributed sources.
- 3) Modernizing the Canadian Combined Air Operations Centre;
- 4) Constructing a new positioning, navigation, and timing capability to assist with air navigation in remote (northern) areas;
- 5) Renewing the CAF’s hi and low frequency radio capabilities;
- 6) Enhancing satellite communications across the Arctic (central to the CAF’s search and rescue and emergency responses to protect Canadians); and
- 7) Procuring and installing new digital radios and network equipment.

Together the new sensor systems to collect and the machine learning to process data will lead to what NORAD Command General Glen van Herck has deemed “[decision superiority](#)”: making better decisions, quicker, to help limit the threat to North Americans.

Chief of the Defence Staff General Wayne Eyre elaborated that a modernized NORAD will also [expand the strategic deterrence](#) that it current provides to Canadians. The binational command was originally built around providing early warning of an incoming Soviet nuclear attack, allowing US strategic forces to respond in kind. This “deterrence by punishment” is about imposing the cost of nuclear annihilation on adversaries. Modern threats like hypersonic glide vehicles can threaten North America below the nuclear threshold, however, thus calling into question the credibility of nuclear punishment. General Eyre explained that developing the “ability to intercept” these threats will grant a “deterrence by denial” capability – to raise the costs of an adversary’s

action for attacking. Ultimately, the integration of these two approaches to deterrence will yield a more comprehensive and more credible defence of Canada and of North America.

The Minister's comments also reinforced her "resolute" commitment to work with Indigenous peoples and cooperate "towards meaningful reconciliation" through smart investments that benefit both the Defence Team and Indigenous rightsholders. In the case of continental defence, this includes new infrastructure and economic opportunities that benefit Northern and Indigenous communities. This builds upon [Anand's previous announcement, as Minister of Public Services and Procurement in August 2021](#), of new measures to increase federal procurement opportunities for Indigenous businesses pursuant to the government's commitment to providing increased economic opportunities to First Nations, Inuit and Métis. An indication of what this looks like came in [January 2022, when DND announced that Nasittug](#), an Inuit company, had won the seven-year, \$592 million maintenance contract to operate and maintain the current North Warning System.

Overall, Minister Anand said that her announcement represents "the most significant upgrade to NORAD from a Canadian perspective in almost four decades." This follows on the heels of Prime Minister Justin Trudeau and Minister Anand's June 2022 [meetings with U.S. Defense Secretary Lloyd Austin and NORAD officials in Colorado](#), and Anand's anticipation of an "[upward trajectory](#)" in Canada's defence spending during a brief at the Pentagon the month before. The Government of Canada appears ready to act on its long-awaited commitments to the NORAD modernization process, which will require an estimated \$40 billion in additional spending over the next 20 years. These investments will reinforce our longstanding continental defence relationship with the United States. According to Anand, they will also support the Trudeau Government's Indigenous agenda by providing new funding to enable Indigenous partners to meaningfully agree and engage with the Government of Canada as it delivers these initiatives. Although we still await the "unwritten" North American defence chapter of *Strong, Secure, Engaged* to articulate a fuller policy basis for NORAD modernization and continental defence renewal, money speaks louder than words – and these investments appear to open a new chapter in NORAD's history and of the Canada-US continental defence partnership more generally.