



National Office
#801 – 1350 Kingston Road
Toronto, Ontario M1N 1C8

Northern Branch
736 Igluik Drive PO Box 2323
Iqaluit, Nunavut X0A 0H0

www.arctic360.org
+1 (647) 620-4411

Prepared Remarks for House of Commons' Standing Committee on National Defence:

Study on North American Aerospace Defense Command (NORAD) modernization

7 October 2025: 15:30 – 17:30

Dr. Jessica M. Shadian
President and CEO, Arctic360
jessicashadian@arctic360.org

Bonjour et merci for the kind invitation to speak today.

Assuming it is not for my expertise on defence weaponry, I will focus on two specific items:

1. Infrastructure
2. Greenland

The new government has made clear - Canada will be strong on defence and strong on the economy. The approach to fast tracking nation-building infrastructure merges the two. Critical infrastructure tied to NORAD modernization fits squarely here. It spans digital infrastructure, data storage—plus ports, airports, roads, energy...and on.

Several Arctic projects are regularly named for fast-track approval. Missing, however, is the part about innovation – whether costs, necessity, or opportunities. Innovation is core to every dual-use asset and what we mean by 'NORAD modernization'.

Before specifics my conclusion up front is this:

Infrastructure discussions on NATO modernization cannot be independent of a broader national Arctic infrastructure investment strategy designed for next generation transportation Systems (not last generation) and tethered to the innovation, defence, and updated critical-minerals strategies — for national security and, per the new defence procurement office, to build Canadian-made technologies. These must be what the new Major Projects Office business-development teams use to build its business case from.

In Partnership with



National Office
#801 – 1350 Kingston Road
Toronto, Ontario M1N 1C8

Northern Branch
736 Igluik Drive PO Box 2323
Iqaluit, Nunavut X0A 0H0

www.arctic360.org
+1 (647) 620-4411

Add in an updated Arctic foreign policy and all under, as Vincent Rigby and others have repeated a strategic national foreign-policy umbrella. The vision - who we are, our role as Arctic nation, and in the world. And, how we will get there.

In perspective:

No single Arctic project stands on its own. Each—big or small—depends on every other. Fibre needs reliable, affordable energy. Energy requires high-speed internet for data collection, cybersecurity, efficiency, and operations. Transportation—roads to ports—connects energy to grids and supply chains.

Critical infrastructure must be sensor and AI-embedded to guard against cyberattacks and, in the Arctic, to measure and monitor everything from permafrost melt, subsea activity, and infrastructure interoperability

Yet all is for naught if Canada's Arctic sovereignty doesn't include data sovereignty. In other words: future-proofing. Not least, to defend and protect Canada from our adversaries. With China, it is not future proofing it is today proofing to meet their emerging defence technologies that every other adversary may soon adopt in toe. Yet, we are stuck at saying multi-purpose. And, what?

It is also about opportunity. What should be low hanging fruit is Canada's potential as a world leader in cold weather technology. When we do build Arctic infrastructure, we often use U.S. cold-weather IP. We are laggards, but not for a lack of Canadian expertise or competence. It is the lack of a national vision, will, and foreign policy strategy.

Our NATO allies are well ahead. Finland's VTT Technical Research Centre has a dedicated cold-weather marine R&D program based in the Arctic, not Helsinki. Pilot testing covers infrastructure and digital portals, sensors and systems for cold climate operations, modelling and predicting ice behaviour for shipping and offshore structures in icy seas.

Canada has launched the BOREALIS program focused on frontier tech—from AI and robotics to quantum and space. It should live up to its name, be rooted in the Arctic and develop the cold-weather frontier tech needed for NATO modernization, Arctic security, mining, and critical infrastructure—from housing to energy for Canada and for export.

As a hub - CHARS comes to mind - driving industry, researchers, Northerners, and private capital north to innovate out of the North. This is how NORAD modernization enables defence R&D in the Arctic. It may also be the ROI for Arctic nation-building projects. Again, vision and strategy.

In Partnership with





National Office
#801 – 1350 Kingston Road
Toronto, Ontario M1N 1C8

Northern Branch
736 Igluik Drive PO Box 2323
Iqaluit, Nunavut X0A 0H0

www.arctic360.org
+1 (647) 620-4411

My second point:

Times are tough for our U.S. relationship. Defence diversification should always have been an aim. But it is about leverage as much as diversification. Canada–U.S. Arctic cooperation will remain critical to Canadian and North American Arctic security and defence and to supporting our transatlantic NATO commitments.

Canada's North American Arctic is also bookended by Alaska and Greenland. Greenland sits at the intersection of NORAD and NATO.

As we consider how to best proceed with our bilateral NORAD commitments – whether strengthening, maintaining, or retreating - we should also consider our other North American Arctic ally- Greenland/Denmark. Sharing an Arctic maritime border is reason enough for defence and security cooperation – Greenland is also part of NATO.

On NORAD infrastructure - we should consider opportunities for dual-use, critical-infrastructure cooperation including under the legally binding Arctic Coast Guard Cooperation.

Again, vision, will, and national foreign policy strategy.

In Partnership with