POLICY BRIEF

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The Case for a Reimagined NWS

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The North Warning System (NWS) has always suffered from an identity crisis. The NWS is a series of unmanned (but contractor-maintained), ground-based short and long-range radar stations stretching from Alaska to Greenland. Many of the sites are located in the middle of Canada's northern territory. Its ability to provide adequate warning (restricted to the air domain only) has long been an issue. Finally, its 1980's-era "system" of communication feeds to North Bay, and then to other NORAD-related sites, is modest. It remains, however, NORAD's main air warning asset but it is inadequate given growing geopolitical tensions, changes in technology, the 360 degree and all domain threat possibilities, not to mention environmental concerns. The NWS' capabilities must be reimagined. With what combinational of systems and with what functions, however, are political and operational conundrums.

The world is in the midst of a redistribution of geostrategic power that is not in Canada's favour. Emboldened states, like Russia and China, but also Saudi Arabia, Turkey, Iran, India and Brazil are resorting to power politics to challenge the long-held, US-led, rules-based order. The potential for conflict and confrontation is growing and the risk of miscalculation is rising. This is not just the fault of or solely the result of the actions of these emboldened states; the Western alliance certainly needs to shoulder some of the blame, especially for its lack of attention to credible and persistent deterrence. The need to be able to warn of aggressive action as far away as possible in terms of time and geometry has never been greater, but the NWS is simply not designed for such a task.

At the same, we are witnessing rapid development in technology. The NWS, which was designed to be a trip wire to warn of Soviet-era Bear bombers travelling at a certain speed and altitude, is not suited to deal with drones and hypersonic weapons that travel at very different and varying speeds and altitudes. The 1980's architecture also means that it is both vulnerable to new data exploitation methods and too old for parts to be easily accessible. What is more, there is an opportunity for a reimagined system to think beyond simply 'defence' threats to help monitor and track environmental changes, security challenges and aid in safety scenarios. A new NWS could be multifunctional and provide aid to other departments and agencies.

Closely related to the technological advancements is the fact that Canada must be able to deter, detect and defend against threats emanating from all domains: air, space, land, maritime and cyber simultaneously and from more than just a north-south axis. Currently, the NWS does not "see" as far as the recently "aligned" Canadian Air Identification Zone which leaves Canada and the U.S. unable to monitor air traffic adequately and blind to threats that are not just of the conventional, state-based variety. The NWS is a passive defensive tool that lacks the range to identify, track and most problematic, do anything, to counter unconventional threats by individuals and nonstate actors with greater access to disruptive technology that can emanate from anywhere, at any time and from any domain.

And finally, the NWS, whether replaced or not, is an environmental challenge. Cold weather contributes to metal fatigue which means that the metal of the radar sites will erode and could leach toxic chemicals into the ground and atmosphere. With a reimagined system, that could be a combination of space, land and cyber systems, Canada has the opportunity to show responsible stewardship, to involve local communities, to fulfill its alliance commitments, and advance radar and communication technology all of which will contribute to situational awareness and northern command and control projection. Together, this ensures the continued protection of North America. The need to reimagine the NWS is self-evident.