

# **Accelerating Innovation Throughout NATO**

by Tristan Price
March 2025

## **BRIEFING NOTE**

## ACCELERATING INNOVATION THROUGHOUT NATO

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Prepared for Triple Helix Suite 200, 8 York Street, Ottawa, ON K1N 5S6 Canada www.cgai.ca/triple\_helix

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### **Accelerating Innovation Throughout NATO**



For a long time, the perception was that NATO was slow when it came to innovation in defence and security. That was until 2023, when it founded the Defence Innovation Accelerator for the North Atlantic (DIANA), now a "shining star" in the Alliance's efforts to innovate. DIANA focuses on accelerating innovation for NATO's 32 members to ensure that they maintain a competitive edge in defence against foreign adversaries. In its two years of existence, DIANA has proven to be quick and effective in its mission of bringing together industry from across NATO to help the Alliance meet the threats environment of today and tomorrow. While innovation and testing institutions were once seen as something only the U.S. could do, DIANA has opened the door to other NATO countries to benefit and leverage such approaches to defence innovation. DIANA has also allowed for cooperation on innovation amongst NATO members allowing for more flexibility and capacity in enabling startups to deliver.

#### DIANA, COVE, and Canadian Innovation

Thanks to DIANA (based in Halifax, Nova Scotia), Canada has been able to achieve a lot towards closing its defence innovation gap. COVE, a Halifax-based partner to NATO DIANA, is an example of how Canada both contributes to NATO-wide innovation and benefits from it. Since the creation of DIANA, COVE has worked with five companies to innovate on possible solutions for DIANA's critical infrastructure and logistics challenges. By working with these companies through DIANA, which offers a variety of resources, including funding, and a mentor system providing expertise in business, defence, and technology, COVE is able to assist these companies succeed and become competitive.

These companies include Reaction Dynamics, a Canadian rocket company that has been able to solve a long-standing propulsion problem; Material Testing Inc., a company that has designed a mask able to detect problems in real time to prevent welding failures; Honuworks, which builds autonomous underwater vehicles (AUVs) meant to monitor underwater cables and possibly prevent sabotage; and Evitado Technologies, which designs autonomous ground vehicles for airports and runways to decrease risk of accidents and damage caused to aircraft, free up ground crew, and therefore allow for more time for repairing and maintaining aircraft. The most disruptive company COVE has worked with is Elysium Robotics, which is designing a new robotics system to provide cheaper and more flexible high performance, muscle-like technology. Through DIANA, these companies are able to promote their innovative solutions throughout the Alliance. Moreover, thanks to COVE and DIANA, these companies are more likely and have an increased capacity to remain a Canadian company in the face of large investment opportunities from other countries like the U.S. This allows many Canadian innovative defence startups to remain so, and offers a new defence industry ecosystem for Canada in which it can have an increasing number of proud, and domestic partners to fulfill its procurement needs. As such, DIANA and COVE also offer opportunities for the growth of the Canadian economy.

### The Challenges

While DIANA has been a major success for Canada and NATO, there are many parts of the process that need improvement to ensure that the system runs efficiently and can foster innovation. First, an accelerator can only support

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five companies, which is sub-optimal. Such a limited number of innovators not only prevents the expansion of innovation within NATO, but also limits the effects of accelerators like COVE. At this stage, mentors are volunteers; this creates barriers to bringing highly skilled experts as the endeavour requires a significant investment of their time and could impose costs upon them, especially travel. Moreover, sometimes there is a lack of innovators present at these exchanges, making it too small of an audience to justify the mentor's participation. Increasing the number of innovators from 8 to 10 per accelerator would improve the participation rate in the immediate, and therefore innovation across the Alliance in the longer term. The small number of innovators also limits COVE's geographical reach and pull, limiting how well DIANA can help contribute to the growth of Canadian innovation and economy from coast to coast. For COVE, this could translate into reaching to innovators beyond just the city of Halifax.

Another major issue is the lack of organization regarding DIANA testing centers. The roll out of DIANA's testing centers happened too early in its creation that it led to confusion and made these sites harder to access. Until recently, some testing centres were not even aware that they were a DIANA testing site. Potential solutions to this issue could include establishing systems to track testing centers across the Alliance to improve access to these sites. DIANA test centres could also partner and associate in order to coordinate on innovation projects.

However, one of the biggest innovation challenges for Canada is its risk-adverse and slow procurement process. The acquisition of innovative solutions must be prompt and swift to implement, as platforms, systems, and equipment are evolving rapidly and can have already become obsolete by the time they get to the operators' hands. This also means that innovative cutting-edge technology is also a risky investment that could result a negative outcome. Unfortunately, our procurement system greatly punishes failures and does not incentivize to risk-taking. While the government prioritizes mitigating political and budgetary risks with procurement, the result is more strategic risks as Canada may not have the adequate means to defend itself. With the sovereignty and security of Canadians at stake, the government should reframe what procurement risks it is willing to accept, examine the risks of not making a decision, and to not punish those who take risks, especially when it comes to the procurement of new innovations. Regardless of the failure or success of these projects, there is still potential for job creation, economic growth, lessons learned, and the chance to utilise what is produced past their originally intended purposes.

Without innovation in today's age, Canada risks falling behind on ensuring its defence and security. While DIANA has challenges to overcome, the system continues to work towards innovation mandate with its accelerators like COVE leading the way towards the future.

## ► About the Author

**Tristan Price** is an undergraduate student at Carleton University pursuing a BA in Global and International Studies with a specialization in global law and social justice. Tristan founded the Carleton Military and Defence Society at Carleton University and has worked for organizations such as the Canadian Global Affairs Institute and the NATO Association of Canada.

## Canadian Global Affairs Institute

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