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# Advancing Defence Innovation in Canada

**With Dr. Terry Peckham**

Polytechnics help advance defence innovation in Canada by translating strategy into action: developing skilled talent, validating technologies and strengthening industry readiness for real-world deployment. As a NATO Defence Innovation Accelerator for the North Atlantic (DIANA) test centre, Saskatchewan Polytechnic is one of many polytechnics advancing Canada's contribution to allied defence innovation.

Looking back on the [2026 Polytechnic Showcase](#), Polytechnics Canada spoke with Dr. Terry Peckham, Director and Research Chair of Saskatchewan Polytechnic's Digital Integration Centre of Excellence (DICE). Read to learn more about how the institution is strengthening Canada's role in defence innovation.

## **Polytechnics Canada: What does Saskatchewan Polytechnic's role as a NATO Defence Innovation Accelerator for the North Atlantic (DIANA) test Centre entail?**

**Terry Peckham:** Saskatchewan Polytechnic serves as a NATO DIANA test centre through the Innovation Centre of the North (ICON) consortium, contributing applied research and validation expertise.

In this role, it supports innovators developing dual-use technologies by providing capabilities in artificial intelligence, machine learning, digital systems and prototype testing.

Rather than acting solely as a research institution, Sask Polytech functions as part of NATO's broader testing, evaluation, validation and verification infrastructure, helping companies assess the performance, reliability and operational relevance of their technologies as they progress through DIANA accelerator programs.

Leveraging its polytechnic model, Sask Polytech emphasizes hands-on development, industry collaboration and real-world applicability, bridging the gap between early-stage innovation and deployment while contributing to technology maturation, workforce development and adoption within NATO's innovation ecosystem.

## **Polytechnics build the defence talent pipeline through flexible training in fields like advanced manufacturing and robotics.**

### **PC: How do Saskatchewan Polytechnic partners use or contribute to your Centre's expertise?**

**TP:** Our partners play an active role in shaping and strengthening DICE expertise through a collaborative applied-research model. They contribute specialized knowledge, operational insight and access to real-world environments drawn from industry, government and field settings, ensuring that projects remain grounded in practical needs rather than theory alone.

Partners also provide infrastructure, technologies and testing conditions – such as equipment, field sites and operational data – that enable realistic validation of solutions. Their interdisciplinary perspectives further enhance problem-solving

by integrating technical, operational and sector-specific expertise, while joint projects and mentorship activities support knowledge exchange and capacity building.

At the same time, partners benefit from access to the Centre's strengths in applied research, digital innovation, artificial intelligence, prototype development and validation support. This collaboration allows them to de-risk innovation, refine and test technologies in practical settings and accelerate the transition from concept to real-world application.

**PC: Given research security implications of work in defence applications, does the NATO DIANA designation change how DICE works with students and faculty?**

**TP:** Absolutely! Saskatchewan Polytechnic's role in NATO DIANA strengthens and formalizes how DICE involves students and faculty in defence and dual-use research by embedding a more robust research security framework. While its commitment to experiential learning remains unchanged, participation is now guided by clearer safeguards, structured governance and defined access controls based on project sensitivity.

As initiatives like the Bureau of Research, Engineering and Advanced Leadership in Innovation and Science (BOREALIS) Defence Innovation Secure Hubs (DISHs) evolve, projects will incorporate risk assessments, tiered access to information and facilities, secure environments, and enhanced onboarding and supervision to ensure responsible collaboration and information protection.

In practice, students and faculty will continue to play an important role in applied research, but their involvement will be more intentional and tailored to the security requirements

of each project. Overall, the DIANA designation does not limit participation but ensures it is better governed, more secure and aligned with modern defence research expectations.

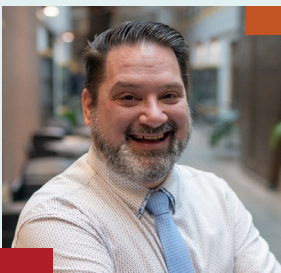
**PC: What opportunities do you see for polytechnics to support Canada's new Defence Industrial Strategy? Are there skills development implications as well?**

**TP:** Polytechnics are well positioned to support Canada's strategy because they operate at the intersection of workforce development, applied research and regional industry engagement – areas central to its goals of strengthening innovation, supply chains and domestic capability.

Their practical, industry-facing approach allows them to quickly translate policy into tangible outcomes such as skilled workers, tested technologies and capable suppliers. In particular, polytechnics can build the defence talent pipeline through flexible training in fields like advanced manufacturing, robotics, cybersecurity and digital systems, while also serving as applied R&D and validation partners that help firms – especially SMEs – prototype, test and de-risk new technologies.

Polytechnics also play a key role in strengthening domestic supply chains and acting as regional ecosystem anchors by connecting local industries, communities and partners to national defence priorities, including in underserved regions.

The skills implications are significant: Canada will need a broader and more specialized workforce capable of designing, producing, integrating and maintaining advanced systems within secure and regulated environments. Overall, the role of polytechnics is not just educational but strategic, helping build the talent, innovation capacity and industrial readiness required for a resilient defence sector.



**About the author**

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