New Defence & Space Economy Roundtable Backgrounder

Led by Brian Gallant, CEO of Space Canada

How Canada can strengthen defence and space capabilities

Today's threats to sovereignty and security are not the ones that Hollywood war films call to mind. They are increasingly complex and defending against them requires military, economic and digital strength. Modernized defence and space capabilities are urgent national priorities, requiring unprecedented coordination between government, industry, and educational institutions to meet skill and innovation needs that support Canadian security and economic prosperity.

Canada is making historic investments in defence, technology, and national security—investments that demand more than simply infrastructure or equipment. What should anchor Canada's national defence and space strategies? What talent models will ensure the next generation of scientists, engineers, and technicians are ready to lead?

Session Goal: Enable our post-secondary institutions and companies to deliver the skilled workforce and technologies needed to strengthen our defence and space capabilities.

Why Now?

- **Historic investments**: Canada committed to a ~$9 billion defence investment in 2025–2026 and pledged to raise defence spending to 5% of GDP (est. $150B) annually by 2035.
- **Space is paramount:** Canada's security and prosperity is increasingly dependent on space infrastructure – including satellite systems that we use daily for communication and navigation, and that governments rely on for environmental monitoring.
- **Defence needs people:** Making good on Canada's defence spending commitments and protecting Canadian sovereignty effectively will require a broad, modern definition of defence capabilities (including resilient infrastructure, supply chains, and human resources) and significant skill development and reskilling.
- **Dual-use is here:** Colleges and universities can conduct critical research that advances Canadian security and prosperity by advancing dual-use technology (e.g. AI with both defence and civilian applications).

SWOT Snapshot: The Canadian Defence and Space Context

Strengths

- Global research reputation and trusted public institutions
- Canadian Space Agency and existing industrial base
- LEAP and STDP funding programs providing initial support
- Strong aerospace heritage (Canadarm, RADARSAT)
- Network of defence research centers (DRDC labs)
- Dual-use technology capabilities in AI, quantum, biosecurity, cyber, satellites

Weaknesses

- Commercialization roadblocks and limited government coordination on space and defence
- Long procurement timelines (average 15+ years for major acquisitions)
- Lack of support for Canadian space companies vs. global competitors
- Critical recruitment shortfalls: 15,780 personnel gap in 2023, 5,026 departures in 2024-25
- Limited PSE-defence industry collaboration pathways

Opportunities

- Massive new defence spending Canada to meet NATO targets by 2035
- Dual-use: space surveillance, wildfire detection, Arctic connectivity
- New BOREALIS agency to mirror US DARPA
- Growing space economy ($1.8T globally by 2040)
- International partnership, e.g. Kepler's $1.3M optical laser link with General Atomics
- Co-investment and research partnerships between government, industry, and universities (like Australia Defence Trailblazer and Space Trailblazer)
- $4.27B in global PE- and VC-backed investments in aerospace and defence (Jan-Mar 2025)

Threats

- International allies and competitors (US, EU) provide faster and larger grants to their industries e.g. US DoD invests $1.6B in university defence research, $201M in space; Australia Defence and Space Trailblazer $420M to PSE projects
- Systemic barriers in workforce development limiting talent pipeline
- Inter-departmental gaps and procurement inefficiencies risk slowing adoption
- Arctic sovereignty challenges from competing nations
- Risk of falling behind NATO targets and goals
- Global land grab in space - e.g. Echostar dropped a $1.8B deal with Canada's MDA for SpaceX, highlighting US protectionism versus Canadian interests.

Strategic Focus: Now to 2035

Let's reflect on where we are now and systems we must build to lead globally by 2035.

Defence and space talent competitiveness will depend on our ability to produce, attract, and retain the right volume and mix of talent. **We likely need structural reforms which could include:**

- Creating stronger pathways between PSEs and national defence
- Establishing work-integrated learning for defence and space applications
- Developing specialized programs for defence, cyber, and space technologists
- Leveraging PSEs to train and reskill workers for critical defence supply chains, e.g. shipbuilding, drone assembly, satellites, and advanced manufacturing

Making choices on defence innovation is essential, because we don't have the capacity to win on everything. We'll have to prioritize. **For example, we could:**

- Focus on dual-use technologies where Canada has competitive advantages
- Create innovation sandboxes for experimentation (coupled with intentional design of BOREALIS model)
- Establish pathways linking early-stage research with defence procurement
- Build sector-specific strategies (e.g., Arctic surveillance, space systems, cyber)

Key Questions for Discussion

This session is not about consensus. It's about surfacing high-impact opportunities for action and Canadian leadership. **The chair could seed discussion with questions such as:**

- **Talent Pipeline:** How do we establish clear PSE-defence industry collaboration pathways to address the 15,780 personnel gap and modernize military skills for tech-enabled operations and industrial transformation?
- **Regional Hubs:** Should Canada create 5 Defence Innovation Hubs at strategic PSE locations, focusing on dual-use technologies where Canada can compete globally? What would make them successful? How does that link with industry?
- **Accountability:** What metrics should we establish for 2025-2030? For example:
  - Closing 50% of the military recruitment gap through PSE partnerships
  - Achieving $5B in dual-use technology commercialization
  - Establishing 10 new space tech and defence companies with PSE origins
  - Meeting NATO readiness standards in all capability areas

The core challenge remains: how do we ensure Canadian defence innovations and talent contribute to sovereign capability when procurement timelines average 15+ years and international competitors offer faster, larger support?