

DEFENCE INNOVATION HUB NEXUS



Insights from Defence Innovation Hubs in Canada and Allied Countries and an Analysis of Southeast Alberta's Defence Innovation Ecosystem

Full Report

Prepared by
Centre for Innovation (C4i), Medicine Hat College

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Defence Innovation Hub Nexus – Insights from Defence Innovation Hubs in Canada and Allied Countries and an Analysis of Southeast Alberta's Defence Innovation Ecosystem

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Executive Summary

Canada's defence and security needs are changing as geopolitical uncertainty, technological advances and supply-chain vulnerabilities increase pressure to develop and deploy capabilities more quickly. Recent defence policy and industrial initiatives place greater emphasis on Canadian production, innovation and participation by small and medium-sized enterprises (SMEs). The challenge is to turn that investment and technical capacity into capabilities that meet defence needs. A promising technology must move through several demanding steps: understanding an operational problem, development, testing, validation, security and procurement requirements, integration, and eventual use by defence organizations. Gaps between those steps can prevent a useful innovation from reaching an end user (Section 1.1).

The **Innovation Hub Nexus study**, a Department of National Defence (DND) Mobilizing Insight in Defence and Security (MINDS) Targeted Engagement project, examined how defence innovation hubs near military installations in Canada and allied countries help connect those steps. It asked what makes a hub useful, which barriers affect firms and technology developers, and how **the lessons could be applied in Southeast Alberta and other semi-urban and rural regions across Canada**. Southeast Alberta was selected as the primary case study because it brings together defence and research institutions, specialized testing conditions, established firms, post-secondary capacity and regional development organizations (Sections 1.1–1.2).

The study combined a literature review, a review of selected models in Canada and allied countries, and **51 semi-structured stakeholder interviews** conducted between April and September 2026.[1] The international review examined models in the Netherlands, United States, South Australia, Norway, South Korea, United Kingdom and Japan, along with NATO's Defence Innovation Accelerator for the North Atlantic (DIANA) and Canadian initiatives. These sources were used to identify recurring practices, barriers and options relevant to Canada and Southeast Alberta. The interviews gathered informed perspectives across the innovation-to-adoption pathway; they were not intended to produce statistically representative findings. The international cases illustrate how initiatives are organized, but the study did not rank their performance (Section 1.3).

Understanding Defence Innovation Hubs

A **defence innovation ecosystem** consists of the organizations, people, infrastructure, policies, funding and relationships that influence how technologies are developed and adopted. Those elements can exist in a region without working together. A **defence innovation hub** connects and coordinates parts of the wider ecosystem. In this study, a hub is an organized platform that brings together defence end users, industry, research institutions, governments, investors and support organizations to address defence and security needs. It helps participants access expertise, services and infrastructure, form partnerships and sustain collaboration beyond one-off introductions or projects (Section 2.1).

[1] Interview participants included 11 from industry and SMEs, 26 from defence, military and federal research organizations, and 14 from associations, post-secondary institutions and local entities.

The purpose of a hub is to **shorten and strengthen the pathway from innovation to operational use**. Its functions may include helping firms understand defence requirements, bringing end users into technology development, supporting market readiness, arranging access to testing, identifying funding and research partners, and connecting SMEs to established suppliers and procurement opportunities. A hub may include physical space, but a new facility is not a defining requirement. Depending on regional needs, its coordinating functions can be delivered through existing organizations and infrastructure, through a dedicated site, or through an integrated model (Sections 2.1–2.3).

The study assessed the conditions for a functioning hub through **proximity, scale and interdependence**. **Proximity** can facilitate interaction among defence users, firms, researchers, and testing facilities, but geographic closeness alone does not guarantee access, collaboration, or meaningful engagement. **Scale** refers to the presence of sufficient complementary expertise, organizations, and infrastructure to support the hub's intended activities; it does not depend on achieving a specific number of firms. **Interdependence** develops when participants derive practical value from shared facilities, talent, suppliers, knowledge, and projects, including relationships that connect technology developers with integrators and end users. An effective hub actively cultivates these connections around defence requirements. It emerges not simply because relevant organizations are located in the same region, but because proximity, scale, and interdependence collectively support sustained collaboration and value creation (Section 2.2).

Lessons from Canada and allied countries

The international examples demonstrate that successful defence innovation hubs are distinguished by their ability to connect innovators with defence users, technical expertise, testing environments, development support, industrial partners, and pathways toward adoption. Across the countries reviewed, common priorities include supporting SMEs, advancing dual-use technologies, strengthening collaboration among industry, research institutions, and defence organizations, and improving the transition of technologies from concept to operational capability. Although governance structures and delivery mechanisms vary, effective systems generally provide clear pathways that help firms navigate defence innovation ecosystems and progress through stages of development, validation, and commercialization (Section 3).

In the **Netherlands**, regional MINDbases are integrated within civilian innovation ecosystems and connect firms directly with defence personnel, while national mechanisms support technology development and industrial coordination. In the **United States**, programs such as DIU and SBIR/STTR link commercial innovation to defined defence requirements through challenge-based funding, prototyping, testing, and potential acquisition pathways. (Section 3.1–3.2)

Australia and **Norway** emphasize sustained collaboration and distributed innovation support. Australia combines industry navigation, collaborative research, workforce development, and technology-transition funding through multiple organizations, while Norway brings military users, researchers, and firms together in testing and experimentation environments that provide early operational feedback. (Section 3.3–3.4)

In **South Korea**, **Japan**, and the **United Kingdom**, defence innovation is increasingly linked to industrial development and regional specialization. South Korea's defence innovation clusters combine testing facilities, commercialization support, and collaboration between large and small firms. Japan has strengthened mechanisms that connect emerging technologies with defence requirements while also addressing manufacturing and supply-chain readiness. The United Kingdom integrates regional innovation networks with national innovation programs, funding streams, and defence entry points to improve access for firms outside traditional defence centres. (Section 3.5–3.7)

At the international level, **NATO DIANA** and emerging **Canadian** defence innovation initiatives demonstrate the value of connecting innovators to broader networks of expertise, testing, and support. DIANA provides access to Allied test centres, accelerator programming, and defence users, while Canadian initiatives such as IDEaS, BOREALIS, and Defence Innovation Secure Hubs (DISHs) support technology development, secure collaboration, and engagement between government, industry, and academia. **These examples suggest that effective defence innovation hubs are less defined by physical infrastructure or organizational form than by their ability to coordinate innovation, testing, industrial development, and procurement pathways across multiple institutions and levels of government** (Section 3.8–3.9).



Policy Recommendations for Strengthening Defence Innovation Hubs

The study identified four priority areas where policy action could strengthen the development of a regional defence innovation hub: **SME access to defence markets, technology transition and adoption, regional ecosystem coordination, and long-term sustainability**. Together, these recommendations address the barriers firms face in entering defence markets, advancing technologies toward operational use, coordinating regional capabilities, and maintaining long-term hub capacity.

1. **Improve SME access to defence markets** by establishing a clear regional entry point that helps firms understand opportunities, navigate defence requirements, assess readiness, and connect with prime contractors, supply chains, and Industrial and Technological Benefits (ITB) opportunities. Additional attention is needed to address systemic barriers related to procurement processes, site access, and contracting mechanisms (Sections 4.1).

2. **Accelerate technology transition and adoption** through earlier engagement with defence end users, clearer challenge statements, coordinated testing pathways, and follow-on support beyond prototype development. Successful innovation requires structured progression from testing and validation to operational evaluation and potential procurement (Section 4.2).

3. **Strengthen regional ecosystem coordination** by creating an accountable coordination function that connects firms, researchers, testing organizations, and economic development partners. Effective coordination should include capability mapping, partner referrals, mission-focused collaboration, and stronger connections to provincial, national, and Allied innovation networks (Section 4.3).

4. **Build long-term sustainability** through accountable leadership, phased implementation, diversified funding, workforce development, and formal partnerships. Future investments in facilities, services, and infrastructure should be guided by demonstrated demand, regional strengths, and measurable outcomes such as technology adoption, contracts, supplier participation, business growth, and investment attraction (Section 4.4).

The following table summarizes the recommended policy actions across these four categories.

POLICY ACTION SUMMARY

Strengthening Defence Innovation Hubs in Canada and Southeast Alberta

Recommended actions across four priorities: SME access to defence markets, technology transition and adoption, regional coordination, and long-term sustainability.

CHALLENGE ONE: SME Access to Defence Markets

RECOMMENDATION	ACTIONS
1. Improve SME access and readiness	Establish a recognizable regional entry point for defence-curious companies, initially delivered through an existing organization or regional partnership, that complements rather than replaces federal procurement, security, or regulatory authorities. Support it with a staged defence-readiness framework and readiness assessment that considers technology and commercial maturity, security requirements, cybersecurity, quality assurance, certification, intellectual property, and procurement readiness.
2. Phase readiness requirements	Align the timing of security and compliance requirements with the firm's stage of engagement where operational and national-security conditions permit. Early engagement could occur through open challenges, capability briefings, commercial validation, and non-sensitive testing, with more stringent requirements applying as firms progress toward sensitive information, controlled technologies, or secure environments, without reducing security or compliance standards.
3. Improve procurement transparency	Provide clearer information about what defence customers require and how technologies may progress toward procurement. Where possible, greater visibility into anticipated timelines would help companies plan investment and manage the financial uncertainty associated with long defence procurement cycles.

4. Strengthen supplier participation	Create structured pathways between SMEs, established defence suppliers, and prime contractors that are connected to identifiable procurement opportunities or capability requirements. Prioritize opportunity-specific matchmaking, capability briefings, supplier-development programs, and mentorship on quality systems, production capacity, delivery performance, and documentation, with the objective of improving the quality of introductions rather than maximizing their number.
5. Increase the value of industrial participation	Use the ITB Policy to connect SMEs more deliberately with opportunities created through major defence programs and prime-contractor obligations, particularly firms outside Canada's largest defence-industrial centres. Place greater emphasis on research and development, intellectual-property development, technology transfer, advanced manufacturing, and sustained production roles so that SMEs become technology partners and specialized subcontractors rather than transactional suppliers.
6. Support commercial resilience	Make intellectual-property considerations part of defence relationships from the outset so that SMEs retain the ability to further develop and commercialize their technologies. Strengthen connections between civilian innovation programs and defence initiatives so that dual-use commercial revenue can help firms retain skilled personnel and sustain product development while defence opportunities develop.
7. Streamline base access	Publish a clear, step-by-step access pathway for industry and research partners, with a single point of contact and indicative processing timelines and consider pre-arranged access for approved projects that require repeated entry. The regional coordination function could help firms prepare complete access requests, while existing security requirements remain in place.
8. Build SME cybersecurity readiness	Incorporate cybersecurity into the staged defence-readiness pathway through awareness sessions, readiness checklists, and referrals to CPCSC guidance, with an emphasis on Level 1 self-assessment for firms entering the market. Federal partners should consider targeted advisory or cost-sharing support for SMEs facing higher certification levels.

9. Update low-dollar purchasing tools	Review acquisition card limits and non-competitive contracting thresholds for DRDC, CAF and DND to determine whether they reflect current costs, including the effects of inflation and tariffs. Consider indexing them with periodic review, consistent with Canada's trade-agreement obligations and appropriate oversight of non-competitive contracting.
10. Strengthen procurement workforce capacity	Assess procurement specialist workloads, classification, and compensation across base and research-centre roles to reduce turnover and pay disparities. Introduce workload benchmarks, structured training pathways, and case-management practices that keep a single accountable contact for each contract or require documented handovers when staff change.
11. Extend agreement terms	Make MOUs and SOAs available for longer terms, such as a two-year base period with options to extend by up to three additional years where the defence client requires it, while preserving the Crown's ability to end agreements that are not performing.
12. Ease fiscal year-end pressure	Allow reasonable delivery windows beyond March 31, for example 60 to 90 days, for contracts where funds are committed before year-end and the work requires it. Examine supporting mechanisms such as multi-year funding and carry-forward flexibility and encourage earlier planning and contract award.
13. Measure SME progression	Measure market progression and the depth of SME participation rather than attendance at programs or events. Early indicators include firms assessed for supply-chain readiness and connected with relevant prime contractors; intermediate indicators include supplier qualification, bids submitted, and technology partnerships; longer-term indicators include contracts secured, participation in major defence programs, and repeat business.

CHALLENGE TWO: Technology Transition and Adoption

RECOMMENDATION	ACTIONS
14. Clarify defence requirements	Complement broad strategic priorities with more specific and clearly communicated challenge statements where security and operational conditions permit. Where possible, challenge statements should identify the problem to be addressed, the capability improvement being sought, and sufficient operational context to guide technology development.
15. Signal near-term priorities	Provide a clearer indication of capabilities that may be important over the next one to two years. This would support more informed decisions about research, product development, testing, and investment, and help funding organizations and regional intermediaries direct resources toward established defence demand.
16. Strengthen end-user engagement	Use challenge briefings, technical exchanges, demonstration days, and mission-focused working sessions to connect innovators with defence end users before the final stages of development. Engagement should be iterative, focus on defined operational problems, and protect national security, intellectual property, and procurement fairness through clear expectations regarding confidentiality.
17. Establish a technology triage	Create a regional triage function to determine whether a technology is sufficiently relevant and mature to justify further engagement with the defence innovation system, without providing technical approval or implying a procurement decision. Assessment should consider problem alignment, technology maturity, evidence of performance, testing requirements, security considerations, commercial maturity, and integration challenges, and should result in a defined next step rather than a general referral.
18. Connect transition pathways	Require innovation programs to identify a defined next step before projects conclude, based on technology maturity, operational relevance, and remaining development needs. Depending on stage, technologies could progress into follow-on research, applied research partnerships, specialized testing, IDEaS Sandboxes and Test Drives, field trials, operational evaluations, or pilot procurement.

19. Coordinate testing and validation	Map regional and national testing assets by capability, eligibility, cost, availability, security requirements, and access conditions, and provide testing referrals and navigation support. Leverage existing infrastructure through shared-use agreements, interregional referrals, and formal access arrangements, and consider new facilities only where sustained demand demonstrates a clear capability gap.
20. Provide follow-on support	Use follow-on, milestone-based, and continuation funding to support engineering, integration, certification, security work, and operational validation when defined technical and operational criteria are met. Linking funding to demonstrated progress reduces the need for firms to repeatedly restart the funding process and helps technologies maintain momentum.
21. Support iterative testing	Allow firms to test technologies, receive technical and end-user feedback, make refinements, and return for further evaluation. IDEaS Sandboxes, Test Drives, demonstration programs, and field trials can provide progressively more realistic validation and identify technical and integration challenges earlier.
22. Bridge testing and procurement	Use Buy and Try, small-scale pilot procurements, field evaluations, and larger operational trials as intermediate steps before large-scale acquisition. Successful pilots should lead to a defined progression decision, such as further development, follow-on funding, expanded evaluation, or an appropriate procurement pathway.
23. Connect transition partners	Maintain stronger connections among regional intermediaries, provincial and national innovation programs, research organizations, testing facilities, and defence organizations. This allows technologies to be referred beyond the region when the appropriate expertise or program is located elsewhere, rather than attempting to provide every service within a single regional hub.
24. Measure technology progression	Track movement toward validation, procurement, and operational adoption rather than program activity alone, using indicators such as time from innovation to trial, technologies tested, follow-on funding secured, pilot procurements, and operational adoption.

CHALLENGE THREE: Regional Ecosystem Coordination

RECOMMENDATION	ACTIONS
25. Establish regional coordination	Establish a recognizable regional coordination function, delivered through a dedicated ecosystem connector or defence liaison, that serves as a front door for companies and external partners. It would receive inquiries, identify the type of support required, coordinate referrals, and convene industry, research, testing, workforce, and economic development partners around defined opportunities, without creating another layer of administration.
26. Clarify roles and referrals	Make one organization accountable for the regional coordination function, including receiving inquiries, maintaining regional information, and coordinating referrals. Participating organizations should identify internal points of contact and establish simple referral protocols, while technical, defence-requirement, funding, and procurement decisions remain with the responsible authorities.
27. Map regional capabilities	Maintain a regional capability map of research expertise, testing and demonstration assets, manufacturing capabilities, specialized services, workforce and training programs, facilities, and industry capabilities. It should function as an operational resource rather than a static directory and include access requirements and appropriate points of contact.
28. Strengthen external connections	Connect the region with provincial and national defence innovation networks so that expertise, infrastructure, programs, or partners located elsewhere can be accessed when needed. This positions the region as an entry point into the wider ecosystem while allowing it to concentrate resources on demonstrated strengths.
29. Organize mission-focused collaboration	Begin collaboration with a clearly identified defence challenge, technology opportunity, supply-chain requirement, research need, or workforce priority, each with defined objectives, participating organizations, responsibilities, and expected outcomes. Use mission-focused working groups that form around execution and conclude when the objective is achieved, rather than permanent committee structures.

30. Validate regional specializations	Use capability mapping and stakeholder engagement to identify where defence infrastructure, industry, research expertise, testing environments, manufacturing capacity, and workforce strengths intersect. Focus research, business development, infrastructure, workforce, and investment activities on these areas, and prioritize the growth and diversification of existing firms with defence-relevant capabilities.
31. Align attraction and investment	Focus business attraction on companies that strengthen established specializations, fill identified capability gaps or add complementary technologies and services. Organize municipal, provincial, and federal engagement around specific opportunities, linking infrastructure requests to identified capability gaps, workforce investment to demonstrated industry requirements, and external messaging to validated capabilities.
32. Measure regional outcomes	Track early measures such as qualified referrals, joint projects, partnerships, and use of regional assets, and longer-term measures such as collaborative technology development, defence supply-chain participation, growth and diversification of existing firms, new investment, and repeated use of regional capabilities.

CHALLENGE FOUR: Long-Term Ecosystem Sustainability

RECOMMENDATION	ACTIONS
33. Establish staged governance	Begin with an existing organization as the accountable lead within a defined partnership structure, with roles for ecosystem coordination, industry engagement, defence relationships, financial oversight, and reporting. Move to a consortium or shared-governance structure as partners contribute significant resources, and consider a separate legal entity only when staffing, financial management, liability, contracting, security, or facility management justifies it.
34. Pilot the regional model	Implement the regional model through a two-year pilot with defined responsibilities, milestones, and outcomes, including time from innovation to trial, technologies tested, follow-on procurement and investment, and supplier readiness. Evidence from the pilot should guide subsequent decisions concerning governance, staffing, secure space, and infrastructure.
35. Build institutional continuity	Use memoranda of understanding, partnership agreements, terms of reference, referral protocols, and documented decision-making processes to create continuity beyond individual relationships and assign key functions to institutions rather than individual staff members. Retain knowledge through documented processes, relationship records, and succession planning, and review governance regularly against project volume, staffing, partner participation, revenue, and demand for services.
36. Diversify funding	Match funding sources to the function being supported: public investment for core ecosystem functions that generate broad benefits; project funding and research agreements for defined technology and research activities; and industry contributions, fee-for-service, membership, or sponsorship where a clear commercial benefit exists. Core navigation and initial referral services should remain broadly accessible so that firms do not face a new financial barrier.
37. Scale capacity with demand	Use phased investment thresholds for new staffing, programs, equipment, and infrastructure, linked to evidence such as sustained utilization, recurring industry demand, committed partners, external funding, or identifiable defence requirements. Use existing infrastructure through shared-use and access agreements before developing new facilities.

38. Strengthen workforce capacity	Conduct a regional defence workforce needs assessment, informed by employers and updated periodically, to identify the occupations and skills constraining defence-related growth. Respond through work-integrated learning, applied research placements, targeted credentials, micro-credentials, and industry-informed training, with employers directly involved in defining competencies.
39. Build national connections	Where demand is too specialized to sustain local programming, use shared training and interinstitutional partnerships with institutions elsewhere in Alberta and Canada. Formal referral relationships, joint research projects, shared testing arrangements, collaborative funding proposals, and cross-regional industry partnerships can give regional firms access to expertise and infrastructure unavailable locally.
40. Coordinate advocacy and investment readiness	Establish a coordinated regional defence advocacy agenda with a limited number of evidence-based priorities, each identifying the government or organization responsible for the decision and the regional partner responsible for advancing it. Maintain a ready-to-activate defence investment package showing available sites, infrastructure, workforce support, research and testing capabilities, potential partners, incentives, and a clear point of contact, and plan enabling infrastructure early enough to respond to credible opportunities.
41. Strengthen regional visibility	Develop a common regional value proposition and evidence base covering regional companies, defence and research capabilities, testing infrastructure, workforce, economic impact, investment opportunities, and identified gaps. Use senior political leadership to reinforce regional priorities with other levels of government, defence organizations, major contractors, and potential investors.
42. Measure long-term sustainability	Track long-term outcomes rather than activity alone, including business expansion, defence contracts, supply-chain participation, technology commercialization and operational adoption, investment attraction, employment and revenue growth, use of regional infrastructure, external funding leveraged, and diversification of the ecosystem's own funding base.

SOUTHEAST ALBERTA DEFENCE INNOVATION ECOSYSTEM

Southeast Alberta has a unique combination of assets that position it as a potential defence innovation hub. The region benefits from the presence of **CFB Suffield**, **DRDC Suffield**, the **Foremost UAS Test Range**, established aerospace and uncrewed-systems companies, and strong energy and agricultural sectors that support dual-use technologies. Together, these assets provide access to military and research expertise, specialized testing environments, large-scale field validation opportunities, and capabilities in autonomy, remote sensing, communications, aerospace, and advanced technologies (Section 5.1).

The assessment found that Southeast Alberta has a promising foundation for hub development based on **proximity, scale, and interdependence**. Regional stakeholders already possess many of the capabilities required to support defence innovation, but stronger coordination, clearer access pathways, and deeper connections with defence users would increase the region's effectiveness. The region's greatest value lies in complementing, rather than duplicating, capabilities available in larger centres such as Calgary and Edmonton (Section 5.2).

Four priorities emerged for future development: **establishing a regional coordinating function**, **focusing on specialized areas of strength** such as uncrewed and autonomous systems, field validation and testing, and dual-use sensing technologies, **formalizing pathways between firms, researchers, testing facilities and defence users**, and **strengthening partnerships with provincial, national, and Allied organizations**. These priorities would help regional firms within broader defence innovation and supply-chain networks (Section 5.3).

A phased implementation approach is recommended, beginning with a services-based hub delivered through existing organizations and facilities. Initial activities would focus on defence liaison, technology triage, testing referrals, SME support, capability mapping, and partnership development. Governance would be built around an accountable lead organization supported by regional partners, with future expansion guided by demonstrated demand, partner commitments, and measurable results (Section 5.4).

Over time, the hub could evolve from a coordination and navigation function into a more integrated ecosystem supported by shared infrastructure, secure collaboration space, specialized technical services, and diversified funding. Success should be measured by firm participation, collaborations, testing activity, follow-on investment, supplier qualification, technology adoption, and progress toward defence contracts and operational use.

Section 1 – Introduction

1.1 BACKGROUND

Canada's defence and security environment is changing rapidly. Geopolitical uncertainty, technological advances, supply chain vulnerabilities and evolving security threats are increasing the need to develop and deploy defence capabilities more quickly. They are also placing greater emphasis on Canadian industrial capacity and stronger connections among the Canadian Armed Forces (CAF), the Department of National Defence (DND), industry and research institutions.

Recent policy developments have reinforced this direction. The 2024 defence policy update, *Our North, Strong and Free*[2], set out renewed defence priorities. At the 2025 NATO Summit, Canada and its allies committed to investing 5% of GDP annually in defence and related security needs by 2035, comprising 3.5% for core defence requirements and up to 1.5% for broader defence and security investments.[3, 4] Canada subsequently established the Defence Investment Agency to improve defence procurement and launched its first Defence Industrial Strategy in 2026 to strengthen domestic capability and industry participation.

The federal government has also introduced the Bureau of Research, Engineering and Advanced Leadership in Innovation and Science (BOREALIS)[5] to better connect defence innovation programs and partners. Its work includes Defence Innovation Secure Hubs (DISH)[6], intended to bring trusted partners together to develop, test and validate emerging technologies. Together, these initiatives highlight a central challenge: **creating a clearer pathway for promising technologies to move from development through testing, procurement and operational use.**

This challenge is increasingly important as defence innovation draws on technologies and expertise developed outside traditional defence organizations and major contractors. Small and medium-sized enterprises (SMEs), technology companies, post-secondary institutions and applied research centres can bring specialized expertise and new solutions to defence challenges. Yet they may struggle to identify defence requirements, navigate procurement and security processes, access testing environments, and build relationships with defence end users and larger industry partners. Addressing these barriers requires better connections among organizations, infrastructure, funding, testing and procurement.

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[2] Our North, Strong and Free: A Renewed Vision for Canada's Defence, https://www.canada.ca/en/department-national-defence/corporate/reports-publications/north-strong-free-2024.html

[3] Prime Minister Carney announces Canada has achieved the NATO 2% defence spending target. https://www.pm.gc.ca/en/news/news-releases/2026/03/26/prime-minister-carney-announces-canada-has-achieved-nato-2-defence

[4] Budget 2025, Chapter 4 - Protecting Canada's sovereignty and security, https://budget.canada.ca/2025/report-rapport/chap4-en.html

[5] Bureau of Research, Engineering and Advanced Leadership in Innovation and Science (BOREALIS) https://www.canada.ca/en/department-national-defence/programs/borealis.html

[6] From innovation to operational advantage: Defence Innovation Secure Hubs

https://www.canada.ca/en/department-national-defence/programs/defence-ideas/element/innovation-networks/challenge/from-innovation-to-operational-advantage-defence-innovation-secure-hubs.html

Defence innovation hubs offer one mechanism for strengthening these connections. A hub may include dedicated physical infrastructure, but its broader role is to coordinate participants, capabilities, information, and services across the defence innovation ecosystem. Hubs can facilitate collaboration among defence, industry, academia, and government; improve access to end users and testing; support SMEs navigating defence markets; and connect innovators with research, investment, and procurement opportunities.

The effectiveness of these hubs is closely connected to the regional ecosystems in which they operate. Regions may contain defence installations, specialized firms, research expertise, testing infrastructure, skilled workers, post-secondary institutions, manufacturers, and support organizations. However, the presence of these assets alone does not create a functioning hub. Their value depends on how effectively they are connected and mobilized to address shared challenges and defence requirements.

The **Defence Innovation Hub Nexus Project** examines hubs in Canada and allied countries to identify common characteristics, challenges, governance approaches and practices that help move innovations toward defence adoption. The study draws lessons from these hubs to identify approaches that regions can adapt to their own strengths, needs and opportunities.

Southeast Alberta provides a case study for applying those lessons. Its defence, research, testing, industrial and educational capabilities provide a foundation for greater participation in Canada's defence innovation ecosystem. The study examines how these assets could be better connected to support a regional pathway from innovation to adoption, with findings that may also **inform comparable semi-urban and rural regions across Canada**.



1.2 RESEARCH QUESTION AND OBJECTIVES

The study was guided by the following central research question:

How do defence innovation hubs located near military installations in Canada and allied countries support innovation and procurement, and what lessons can be applied to Southeast Alberta and other semi-urban and rural regions across Canada?

The study has six objectives:

1. Define the purpose and key characteristics of a defence innovation hub.
2. Identify the conditions that support successful defence innovation ecosystems.
3. Examine defence innovation models in Canada and allied countries and identify transferable practices and lessons.
4. Identify barriers affecting SMEs, technology developers, and other participants in the defence innovation ecosystem.
5. Assess Southeast Alberta's existing assets, gaps, and opportunities and identify actions to strengthen its regional defence innovation ecosystem.
6. Identify lessons and recommendations from the Southeast Alberta case study that may be applicable to other semi-urban and rural regions across Canada.

1.3 SCOPE AND METHODOLOGY

This study focuses on defence innovation hubs and ecosystems located near military installations, and on the mechanisms that connect SMEs, research institutions, testing infrastructure, and defence users with procurement and adoption. Southeast Alberta—centred on Medicine Hat, Canadian Forces Base (CFB) Suffield, Defence Research and Development Canada (DRDC) Suffield and the Foremost UAS Test Range, served as the primary case study.

The study used a qualitative approach comprising three complementary sources of evidence: a literature review, a jurisdictional review and semi-structured stakeholder interviews. The literature established the concepts used to examine hubs; the jurisdictional review provided examples of how different models operate; and interviews explored the barriers, opportunities and regional conditions experienced by participants.

Literature review. The review drew on academic, government, industry and policy sources concerning innovation ecosystems, industry clusters, defence procurement, technology commercialization and SME participation. Sources were selected for their relevance to how organizations connect expertise, infrastructure and defence requirements along the pathway from innovation to adoption. The review informed the study's definition of a defence innovation hub and its analytical framework, including the concepts of scale, proximity and interdependence.

Jurisdictional review. The review examined selected models and initiatives in Canada, NATO's Defence Innovation Accelerator for the North Atlantic (DIANA), the United States, Australia, Norway, South Korea, the United Kingdom, the Netherlands and Japan. With many defence innovation hub models operating worldwide, these cases were chosen to capture a range of regional settings, institutional arrangements, specializations and approaches to collaboration. Drawing on publicly available information, the review identified recurring practices and challenges that could inform Southeast Alberta and comparable Canadian semi-urban and rural regions. The review was not intended to be an exhaustive international inventory or a ranking of individual models.

Stakeholder interviews. Semi-structured interviews were conducted with 51 participants between April and September 2026. Participants represented three groups:

Stakeholder group	Participants
Industry and SMEs	11
Defence, military and federal research organizations	26
Associations, councils, post-secondary institutions and local entities	14
Total	**51**



Participants were selected to bring perspectives from across the pathway from technology development to defence use, including innovators, defence end users, research organizations and regional support organizations. Potential participants were identified through existing project networks and referrals from interviewees. This approach helped the team reach a variety of stakeholders and perspectives. The study did not set out to exclude any stakeholder group, although participation depended on who could be identified and was available to take part. The interviews were intended to gather informed perspectives across these roles, rather than produce a statistically representative sample.

Interviews followed a common guide covering procurement and commercialization barriers, technology transition, access to testing and validation, governance and partnerships, workforce needs, and regional capabilities. Core questions ensured consistency across interviews, while follow-up questions allowed participants to explore issues specific to their experience. The guide is provided in **Appendix A: Semi-Structured Interview Guide**.

Interview findings were analyzed by theme and compared with the literature and jurisdictional review. Recurring observations across stakeholder groups were given greater weight than isolated suggestions, while differing perspectives were retained where no clear consensus emerged. Recommendations were developed from areas of convergence across the three sources and assessed in light of Southeast Alberta's context.

Most recommendations address actions that organizations in Southeast Alberta could take together to strengthen the region's defence innovation ecosystem. These partners include defence and research organizations, industry, post-secondary institutions, municipalities and economic development organizations. The recommendations focus on connecting regional capabilities, improving coordination and helping innovators navigate the pathway from development to defence adoption.

Participants also identified procurement, contracting and access barriers arising from federal processes, including base access, cybersecurity requirements, low-dollar purchasing tools, procurement workforce capacity, fiscal year-end pressures and agreement terms. These barriers are discussed where they materially affect regional participation. They are presented as issues for further examination by DND, Public Services and Procurement Canada (PSPC) and the Treasury Board, rather than as fully costed federal policy proposals.

The study does not evaluate individual organizations or programs, rank the jurisdictions examined, assess classified defence requirements, or provide a cost-benefit analysis of specific infrastructure. Interviews were confidential, and findings are reported by stakeholder category and theme rather than attributed to individuals or organizations. Unless otherwise indicated, references to interview findings describe themes raised in multiple interviews.

Several limitations should be noted. Interview findings reflect participants' experiences and perceptions and were not independently verified except where noted. The jurisdictional review relied on publicly available sources, which may describe how initiatives were designed more fully than what they achieved. As a qualitative study centred on Southeast Alberta, the findings are not statistically generalizable. Lessons for other regions should therefore be adapted to local conditions.

Section 2 – Understanding Defence Innovation Hubs

2.1 DEFINITION AND PURPOSE

Definition: In this report, a ***defence innovation ecosystem*** is the wider environment in which defence innovation takes place. It includes the organizations, people, infrastructure, policies, funding and relationships that influence how technologies are developed, tested and adopted. These elements of an ecosystem may be present in a region even when the organizations involved have limited contact or do not work toward shared goals.[7]

A ***defence innovation hub*** provides a way to connect and coordinate parts of that broader ecosystem. For this study, a hub is an organized platform that brings together defence end users, industry, research institutions, governments, investors and support organizations to address defence and security needs. It helps participants access relevant infrastructure, services and expertise, and supports sustained collaboration and technology development.[8]

The distinction between a hub and an ecosystem is one of scope and function. A region's firms, research facilities, defence organizations and other assets form part of its ecosystem. A hub provides the leadership, activities and connections that help those assets work together. Its value lies in building and maintaining long-term connections among participants and resources, rather than one-off projects or interactions. The form of a hub may vary, but this coordinating role is central to the definition used throughout the report.

The Government of Canada's **Defence Innovation Secure Hubs (DISHs)** are a specific type of hub. The government describes DISHs as "*secure, mission-oriented environments where government, industry, and academia can collaborate over time to advance technologies beyond early development and toward defence and security application*".[9] Security is a defining feature of the DISH model because some activities involve sensitive information, technologies or facilities. Other defence innovation hubs may focus on open or unclassified activities and use secure arrangements when their work requires them.[10]

Purpose: At its core, the purpose of these hubs is to shorten the pathway from technology development, testing, validation, and commercialization to

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[7] Granstrand, O., Holgersson, M. (2020). Innovation ecosystems: A conceptual review and a new definition. Technovation, 90-91. http://dx.doi.org/10.1016/j.technovation.2019.102098

[8] European Commission. (n.d.). *European Digital Innovation Hubs*. https://digital-strategy.ec.europa.eu/en/policies/edihs

[9] DISH - From innovation to operational advantage: Defence Innovation Secure Hubs

https://www.canada.ca/en/department-national-defence/programs/defence-ideas/element/innovation-networks/challenge/from-innovation-to-operational-advantage-defence-innovation-secure-hubs.html

[10] Department of National Defence. (2026). *From innovation to operational advantage: Defence Innovation Secure Hubs*. https://www.canada.ca/en/department-national-defence/programs/defence-ideas/element/innovation-networks/challenge/from-innovation-to-operational-advantage-defence-innovation-secure-hubs.html

operational adoption by defence end-users. Its primary objective is to accelerate the transition of innovation from concept and prototype to deployment by the Department of National Defence (DND), the Canadian Armed Forces (CAF), and allied defence partners.

Recognizing that each region possesses unique assets, capabilities, and industry strengths, a Defence Innovation Hub acts as a catalyst for defence innovation by addressing ecosystem barriers and gaps that can slow technology development and adoption.[11] This can be achieved through a variety of mechanisms tailored to regional opportunities and needs, including defence ecosystem navigation, business development support, investment attraction, partnership facilitation, access to specialized infrastructure and testing environments, workforce development initiatives, and other enabling services.

2.2 ELEMENTS OF A DEFENCE HUB

Not every concentration of defence-related organizations constitutes a functioning defence innovation hub. A region may contain defence companies, research institutions, military organizations, and supporting agencies, but **co-location alone does not create a hub**. Research on regional clusters emphasizes that the value of locating near other organizations depends in part on the relationships and shared capabilities that develop among them.[12]

The presence of these organizations provides a foundation for a defence innovation ecosystem. To examine whether that ecosystem could support a functioning hub, this study draws on three related conditions identified in regional cluster research: **proximity, scale and interdependence**.[13] These are analytical considerations, not fixed requirements that every defence hub must meet in the same way.

1. Proximity. Defence innovation benefits from interaction among technology developers, researchers and defence end users. Engagement can help innovators understand operational requirements, obtain feedback, access specialized infrastructure, and test and refine technologies. Geographic proximity can make these interactions easier and more frequent by reducing the time and effort needed to work together.[14, 15]

Regions near military bases, defence research facilities and testing environments may therefore have opportunities to develop closer working relationships with defence organizations. Proximity does not, however, guarantee access. Security requirements, available personnel, organizational priorities and formal agreements can all affect whether collaboration takes place. Where those

[11] Kotila et al. 2023. *Strengthening the defense innovation ecosystem*. RAND Corporation.

[12] Donahue, R., Parilla, J., & McDearman, B. (2018). *Rethinking cluster initiatives*. Brookings Institution. https://www.brookings.edu/articles/rethinking-cluster-initiatives/

[13] Donahue, R., Parilla, J., & McDearman, B. (2018). *Rethinking cluster initiatives*. Brookings Institution. https://www.brookings.edu/articles/rethinking-cluster-initiatives/

[14] Porter, M. E. (1998). Clusters and the new economics of competition. *Harvard Business Review, 76*(6), 77–90. https://hbr.org/1998/11/clusters-and-the-new-economics-of-competition

[15] Donahue, R., Parilla, J., & McDearman, B. (2018). *Rethinking cluster initiatives*. Brookings Institution. https://www.brookings.edu/articles/rethinking-cluster-initiatives/

conditions permit engagement, nearby defence assets can help innovators align their work with operational needs and evaluate technologies in relevant environments. [16]



Figure 1: Overview of Defence Sites and Military Installations in Canada

2. Scale (Critical Mass): A region needs a sufficient combination of organizations, capabilities, infrastructure and expertise to support its intended innovation activities. These assets may include defence and technology firms, military organizations and end users, research institutions, suppliers, manufacturers, investors, economic development organizations and other support entities. Cluster research identifies critical mass as an important consideration, alongside proximity and interdependence. [17, 18]

There is no single numerical threshold that defines critical mass for a defence innovation hub. A large metropolitan region may have many relevant organizations, while a smaller or rural region may

[16] Department of National Defence. (2026). *From innovation to operational advantage: Defence Innovation Secure Hubs*. https://www.canada.ca/en/department-national-defence/programs/defence-ideas/element/innovation-networks/challenge/from-innovation-to-operational-advantage-defence-innovation-secure-hubs.html

[17] Donahue, R., Parilla, J., & McDearman, B. (2018). *Rethinking cluster initiatives*. Brookings Institution. https://www.brookings.edu/articles/rethinking-cluster-initiatives/

[18] OECD. (2020). *Broad-based innovation policy for all regions and cities*. OECD Publishing. https://www.oecd.org/en/publications/broad-based-innovation-policy-for-all-regions-and-cities_299731d2-en.html

have fewer but more specialized assets. What matters is not the absolute number of organizations, but whether the region possesses the combination of capabilities, expertise, infrastructure, and relationships necessary to support innovation.[19]

What matters for this study is whether the region can assemble the capabilities, infrastructure and relationships needed to carry out the hub's proposed functions. For example, as an illustration rather than an established threshold, a region with ten highly connected organizations, access to defence end-users, specialized testing infrastructure, and strong research capabilities may be better positioned to function as a defence innovation hub than a larger region with significantly more organizations but weaker collaboration and fewer supporting assets. Critical mass should therefore be assessed in terms of capability and connectivity, rather than simply the number of organizations present.

3. Interdependence: Arguably the most important condition, interdependence exists when organizations derive tangible benefits from participating in the regional ecosystem. They may share talent, suppliers, infrastructure, specialized facilities, knowledge, networks, or market opportunities. In these environments, organizations are not simply located near one another. Their collective success is strengthened through relationships that create value and capabilities that would be difficult to achieve independently. Cluster research identifies two broad forms of interdependence: **vertical interdependence and horizontal interdependence**.[20, 21]

Vertical interdependence connects organizations across the defence supply chain, linking specialized suppliers, technology developers, manufacturers, integrators, and defence end-users.[22] These relationships create pathways for technologies to progress from development to testing, validation, procurement, and operational adoption. Unlike other forms of collaboration, vertical interdependence is often characterized by direct supplier-customer, contractor-subcontractor, or procurement relationships, where organizations rely on one another to create, integrate, and deliver defence capabilities. For example, a defence technology company may source specialized components from regional suppliers, collaborate with an integrator to embed the technology within a larger platform, and work with a defence end-user to evaluate the capability in an operational environment.

Horizontal interdependence occurs when organizations benefit from shared regional capabilities rather than direct buyer-supplier relationships.[23] Companies gain value from access to common assets such as specialized talent, research expertise, training programs, testing facilities, and supporting institutions. For example, several defence technology firms may draw from the same skilled workforce, collaborate with the same research organizations, or utilize the same testing and demonstration infrastructure. These shared

[19] Merindol, V. and Versailles, D.W., 2020. The (r) evolution of defence innovation models: Rationales and consequences. *Policy Paper*, *60*.

[20] Badinger, H. and Egger, P., 2010. Horizontal vs. vertical interdependence in multinational activity. *Oxford Bulletin of Economics and Statistics*, *72*(6), pp.744-768.

[21] Donahue, R., Parilla, J., & McDearman, B. (2018). *Rethinking cluster initiatives*. Brookings Institution. https://www.brookings.edu/articles/rethinking-cluster-initiatives/

[22] Merindol, V. and Versailles, D.W., 2020. The (r) evolution of defence innovation models: Rationales and consequences. *Policy Paper*, *60*.

[23] Mesquita, L.F. and Lazzarini, S.G., 2008. Horizontal and vertical relationships in developing economies: Implications for SMEs' access to global markets. *Academy of Management journal*, *51*(2), pp.359-380.

resources strengthen the capabilities of all participants within the ecosystem.

Defence innovation hubs are often stronger when both forms of interdependence are present.[24] Vertical interdependence can help create connected supply chains that support the progression of technologies from concept to deployment, while horizontal interdependence may contribute to shared regional capabilities that facilitate innovation, knowledge exchange, and workforce development.

Together, these relationships can help individual organizations function as part of a more connected defence innovation ecosystem. As these networks mature, they may increase a region's capacity to support innovation, attract investment, encourage collaboration, and draw additional firms, talent, and supporting organizations into the ecosystem. In this way, interdependence has the potential not only to strengthen existing capabilities but also to support the hub's growth and evolution over time.

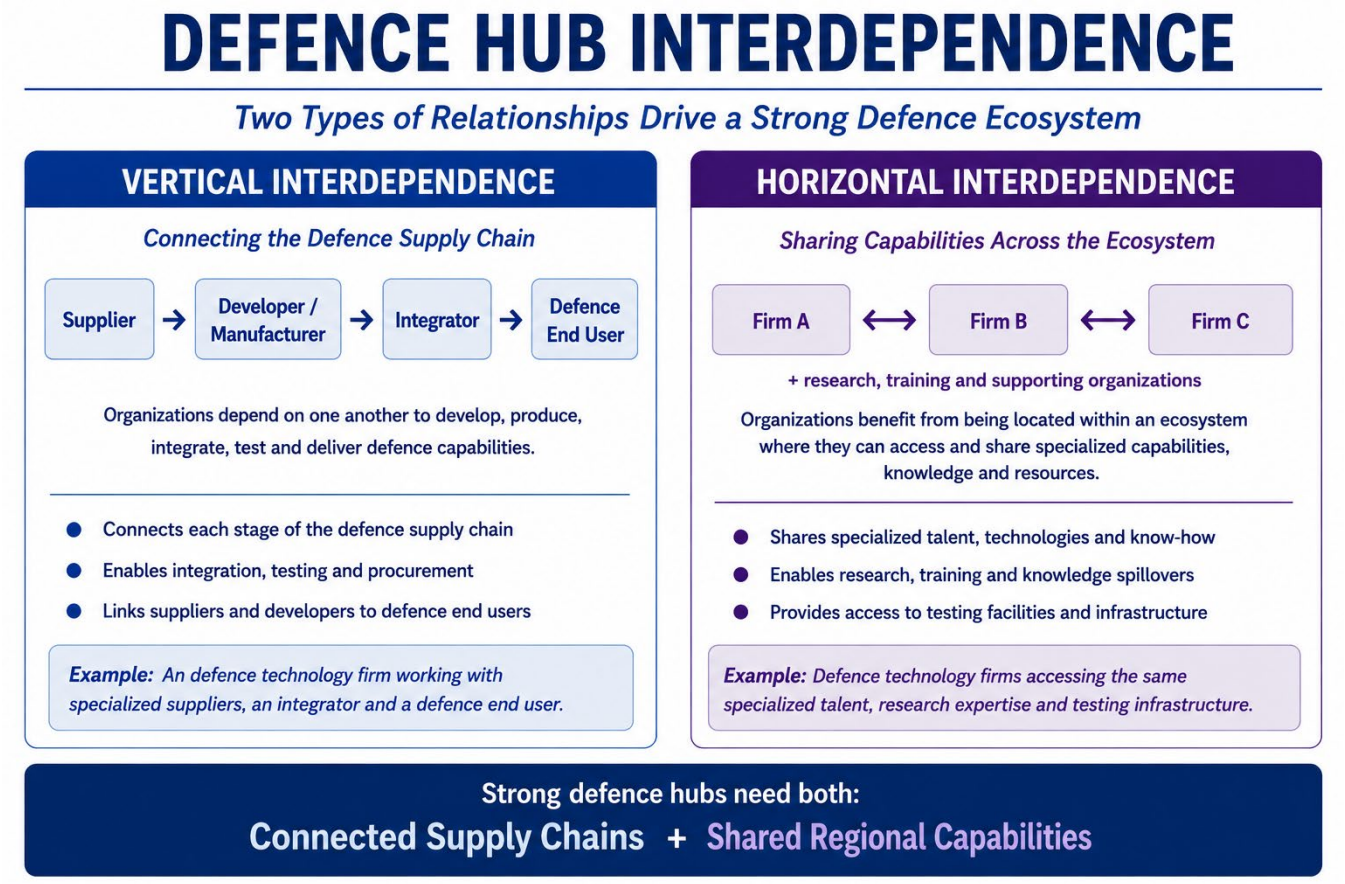


Figure 2: Description of Vertical and Horizontal Interdependence for Defence Innovation Hub

[24] Badinger, H. and Egger, P., 2010. Horizontal vs. vertical interdependence in multinational activity. *Oxford Bulletin of Economics and Statistics*, *72*(6), pp.744-768.

2.3 HUB STRUCTURE AND GOVERNANCE

There is no single organizational structure suited to every defence innovation hub. The appropriate model depends on the maturity of the regional ecosystem and how its capabilities are distributed. It also depends on available leadership, infrastructure, funding and the functions the hub is expected to perform.[25] Two related decisions are therefore needed: **what form the hub should take and how it should be governed.**

2.3.1 Hub Models: Physical, Services, or Integrated

For this study, hub delivery models are grouped into three forms: **physical, services, and integrated physical-and-services**. These are practical categories for comparing how hubs operate, rather than a formal classification taken from a single source.[26]

A **physical hub** provides a recognizable place-based centre where specialized infrastructure and activities are concentrated. Depending on regional requirements, this could include secure collaboration space, laboratories, prototyping and testing infrastructure, demonstration facilities, training environments, and shared equipment. Physical hubs may be particularly appropriate where specialized infrastructure is unavailable elsewhere or where co-location provides significant benefits for collaboration, experimentation, and technology development.[27]

A **services hub** operates primarily as a coordinated network rather than through a dedicated facility. Its functions may include defence procurement navigation, SME readiness, workforce development, industry–research partnerships, access to funding, business development, matchmaking, and coordination among regional organizations. This model can leverage existing facilities and organizations while creating a recognizable entry point into the regional defence ecosystem.[28, 29]

An **integrated physical-and-services model** combines specialized infrastructure with coordinated regional services. A physical centre can provide a focal point for the ecosystem while the broader hub connects firms, defence organizations, researchers, training institutions, governments, investors, and other partners across the region.
The strategic question is therefore not simply whether to build a facility, but what combination of infrastructure and services is required to address demonstrated regional and defence-sector needs.[30, 31, 32]

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[25] Merindol, V. and Versailles, D.W., 2020. The (r) evolution of defence innovation models: Rationales and consequences. *Policy Paper*, *60*.

[26] Confidential stakeholder interviews, 2026

[27] Department of National Defence. (2026). *From innovation to operational advantage: Defence Innovation Secure Hubs*. https://www.canada.ca/en/department-national-defence/programs/defence-ideas/element/innovation-networks/challenge/from-innovation-to-operational-advantage-defence-innovation-secure-hubs.html

[28] European Commission. (n.d.). *European Digital Innovation Hubs*. https://digital-strategy.ec.europa.eu/en/policies/edihs

[29] Confidential stakeholder interviews, 2026

[30] Department of National Defence. (2026). *From innovation to operational advantage: Defence Innovation Secure Hubs*. https://www.canada.ca/en/department-national-defence/programs/defence-ideas/element/innovation-networks/challenge/from-innovation-to-operational-advantage-defence-innovation-secure-hubs.html

[31] European Commission. (n.d.). *European Digital Innovation Hubs*. https://digital-strategy.ec.europa.eu/en/policies/edihs

[32] Confidential stakeholder interviews, 2026

2.3.2 Governance Models

Governance determines who provides strategic leadership, how partners participate in decision-making, how resources are allocated, and who is accountable for hub performance. While the literature identifies a range of governance and cluster-management models, the case studies and interviews conducted for this research point to **three broad governance approaches** that are particularly relevant for regional defence innovation hubs.[33, 34] These models are not necessarily mutually exclusive; rather, they represent practical structures that can be adapted according to regional capacity, institutional strengths, and the maturity of the hub.

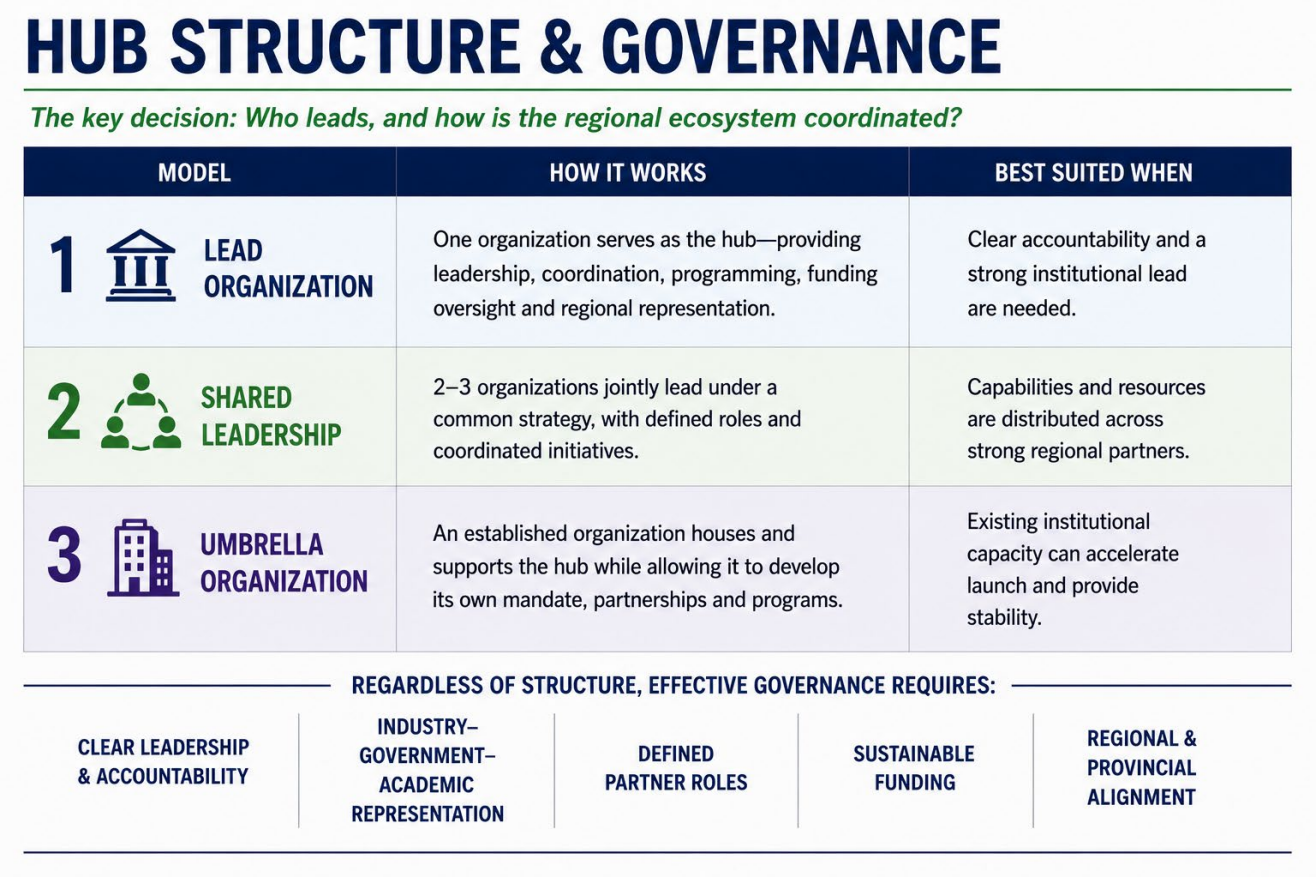


Figure 3: Governance Models for Regional Defence Innovation Hubs

[33] Donahue, R., Parilla, J., & McDearman, B. (2018). *Rethinking cluster initiatives*. Brookings Institution. https://www.brookings.edu/articles/rethinking-cluster-initiatives/

[34] Confidential stakeholder interviews, 2026

Lead Organization Model: Under this structure, one organization serves as the primary institutional lead and provides overall coordination, programming, funding oversight, administration, and regional representation. Other organizations participate as partners or advisors. This model provides a clear point of accountability and may be appropriate where one organization already possesses the mandate, capacity, relationships, and credibility required to coordinate the ecosystem.[35]

Shared Leadership Model: Under a shared model, a small number of organizations jointly lead the hub under an agreed strategy and governance framework. Responsibilities may be distributed according to institutional strengths—for example, one organization may lead industry engagement, another research and innovation, and another economic or workforce development. This approach can be effective where capabilities and resources are distributed across several strong regional institutions but requires clearly defined roles and decision-making processes to avoid duplication or fragmented accountability.[36, 37, 38]

Umbrella Organization Model: A hub may also initially operate within an established organization that provides administrative, financial, governance, and institutional support while the initiative develops its mandate, partnerships, programs, and funding base. This approach can reduce start-up costs and accelerate implementation by using existing organizational capacity rather than immediately establishing a new standalone entity. Over time, the hub may remain within the host organization or transition toward another governance structure as its functions and partnerships mature.[39, 40]

These models are not necessarily permanent. Governance can evolve as the ecosystem develops. An initiative may begin under an established umbrella organization, transition toward shared regional leadership, or eventually establish a dedicated organization if its scale and functions justify doing so.



[35] Provan, K. G., & Kenis, P. (2008). Modes of network governance: Structure, management, and effectiveness. *Journal of Public Administration Research and Theory, 18*(2), 229–252. https://doi.org/10.1093/jopart/mum015

[36] Provan, K. G., & Kenis, P. (2008). Modes of network governance: Structure, management, and effectiveness. *Journal of Public Administration Research and Theory, 18*(2), 229–252. https://doi.org/10.1093/jopart/mum015

[37] Donahue, R., Parilla, J., & McDearman, B. (2018). *Rethinking cluster initiatives*. Brookings Institution. https://www.brookings.edu/articles/rethinking-cluster-initiatives/

[38] Confidential stakeholder interviews, 2026

[39] Provan, K. G., & Kenis, P. (2008). Modes of network governance: Structure, management, and effectiveness. *Journal of Public Administration Research and Theory, 18*(2), 229–252. https://doi.org/10.1093/jopart/mum015

[40] Donahue, R., Parilla, J., & McDearman, B. (2018). *Rethinking cluster initiatives*. Brookings Institution. https://www.brookings.edu/articles/rethinking-cluster-initiatives/

2.3.3 Core Elements of Effective Governance

Regardless of the model, hub governance needs clear leadership, defined partner roles, appropriate representation and reliable resources. It should also connect the hub's work to relevant regional, provincial and national defence priorities. These elements help organizations with different mandates work toward a common strategic direction.[41, 42]

Representation should reflect the hub's functions and priorities. Depending on its mandate, this may include industry, defence and government organizations, post-secondary institutions, researchers, economic development organizations and Indigenous businesses. Meaningful participation by industry and defence stakeholders helps keep innovation activities connected to technological capabilities, operational requirements and market opportunities.[43]

Effective governance should also distinguish between strategic oversight and day-to-day delivery. A governing or advisory body can set priorities, review performance and maintain alignment with broader objectives. A management function can coordinate programs, partnerships, funding, communications and implementation. Studies of innovation networks identify these as distinct but complementary roles.[44]

Roles, responsibilities, and decision-making authority should be clearly defined, particularly where leadership is distributed across multiple organizations. Governance arrangements should establish who leads each activity, who makes decisions, what resources each organization contributes and how results will be assessed. This clarity can reduce duplication, competing priorities and delays.[45]

2.3.4 Indigenous Leadership and Participation

Indigenous participation can strengthen a defence innovation hub by contributing technology, expertise, workforce capacity, infrastructure services, and supply-chain capabilities. Indigenous-owned businesses are increasingly active in Canada's defence, aerospace, and advanced technology sectors and should be engaged as partners in innovation, testing, commercialization, and service delivery. Examples include Nasittuq, which operates and maintains Canada's North Warning System, and COTA Aviation, which participates in aerospace and defence activities. Canada's Defence Drone Initiative also explicitly encourages Indigenous businesses to participate in its supplier ecosystem.[46, 47]

A growing body of international experience demonstrates that Indigenous businesses can play significant roles throughout defence innovation ecosystems. In the United States, tribally owned companies such as Salish & Kootenai provide aerospace logistics, maintenance, repair and overhaul (MRO), supply-chain management,

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[41] OECD. (2022). *Regional governance in OECD countries: Trends, typology and tools*. OECD Publishing. https://www.oecd.org/en/publications/regional-governance-in-oecd-countries_4d7c6483-en.html

[42] Donahue, R., Parilla, J., & McDearman, B. (2018). *Rethinking cluster initiatives*. Brookings Institution. https://www.brookings.edu/articles/rethinking-cluster-initiatives/

[43] Department of National Defence. (2026). *Canada's Defence Industrial Strategy*. https://www.canada.ca/en/department-national-defence/corporate/reports-publications/industrial-strategy/security-sovereignty-prosperity.html

[44] Provan, K. G., & Kenis, P. (2008). Modes of network governance: Structure, management, and effectiveness. *Journal of Public Administration Research and Theory, 18*(2), 229–252.

[45] Confidential stakeholder interviews, 2026

[46] Department of National Defence. (2023). *Indigenous relations*. https://www.canada.ca/en/department-national-defence/corporate/reports-publications/proactive-disclosure/secd-april-24-2023/indigenous-relations.html

[47] Department of National Defence. (2026). *Defence Drone Initiative*. https://www.canada.ca/en/department-national-defence/news/2026/07/defence-drone-initiative.html

warehousing, and distribution services for military and civilian customers, while also supporting NASA-related activities. Similarly, PCI Aviation, owned by the Poarch Band of Creek Indians, operates in aerospace engineering, aviation services, and defence technology. In Australia, Indigenous-owned firms such as Alkira Fuel support defence operations while creating employment, training, and business opportunities for Indigenous communities.[48]

These examples demonstrate that Indigenous participation can extend well beyond employment or procurement opportunities. Indigenous businesses can serve as technology developers, prime contractors, specialized suppliers, infrastructure operators, and commercialization partners. At the same time, Indigenous governments and communities have distinct rights, interests, and responsibilities, particularly where defence-related activities intersect with their lands, communities, or economic priorities. Engagement should therefore recognize Indigenous communities as partners and rights holders, rather than solely as potential suppliers.[49, 50]

In Southeast Alberta, Indigenous-owned companies such as COYWOLF Technologies already contribute capabilities relevant to defence and dual-use applications, including uncrewed aerial systems (UAS), counter-drone services, infrastructure inspection, environmental monitoring, and emergency response. These capabilities align with emerging defence priorities in areas such as border surveillance, autonomous systems, critical infrastructure protection, and situational awareness. Meaningful Indigenous participation can strengthen regional innovation capacity while supporting economic development, community benefits, domestic intellectual property development, and long-term ecosystem resilience.[51, 52]

2.3.5 Match Governance to Hub Function and Regional Capacity

The governance model should follow from what the hub needs to accomplish and what capacity already exists in the region. Partners should first identify the shared gaps the hub will address. They should then assess the services and infrastructure required, the organizations already doing related work, and where new coordination or capacity is needed.[53]

This assessment can guide the choice of model. Where one organization has the mandate, relationships and administrative capacity to coordinate the work, a lead or umbrella approach may be a practical starting point. Where expertise and resources are distributed across several organizations, shared leadership may be more suitable. In either case, the structure should build on existing strengths and avoid duplicating services.[54, 55]

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[48] Department of National Defence. (2026). *Canada's Defence Industrial Strategy*. https://www.canada.ca/en/department-national-defence/corporate/reports-publications/industrial-strategy/security-sovereignty-prosperity.html

[49] Department of National Defence. (2023). *Indigenous relations*. https://www.canada.ca/en/department-national-defence/corporate/reports-publications/proactive-disclosure/secd-april-24-2023/indigenous-relations.html

[50] Department of National Defence. (2026). *Canada's Defence Industrial Strategy*. https://www.canada.ca/en/department-national-defence/corporate/reports-publications/industrial-strategy/security-sovereignty-prosperity.html

[51] Department of National Defence. (2023). *Indigenous relations*. https://www.canada.ca/en/department-national-defence/corporate/reports-publications/proactive-disclosure/secd-april-24-2023/indigenous-relations.html

[52] Department of National Defence. (2026). *Defence Drone Initiative*. https://www.canada.ca/en/department-national-defence/news/2026/07/defence-drone-initiative.html

[53] Confidential stakeholder interviews, 2026

[54] Provan, K. G., & Kenis, P. (2008). Modes of network governance: Structure, management, and effectiveness. *Journal of Public Administration Research and Theory, 18*(2), 229–252. https://doi.org/10.1093/jopart/mum015

[55] Donahue, R., Parilla, J., & McDearman, B. (2018). *Rethinking cluster initiatives*. Brookings Institution. https://www.brookings.edu/articles/rethinking-cluster-initiatives/

As mentioned earlier, governance may change as the hub develops. A new standalone organization should be established when its functions justify the additional administrative capacity, rather than treated as a requirement for starting a hub.[56]

Ultimately, governance should provide clear leadership, accountability and coordination without adding unnecessary administrative complexity. It should help the hub connect and mobilize existing regional capabilities. It should also provide a clear point of contact for industry, defence organizations and research institutions. Through the hub, these partners can connect with government programs, testing infrastructure, investment and procurement opportunities.

2.4 GUIDELINES FOR BUILDING AND STRENGTHENING DEFENCE INNOVATION HUBS

Proximity, scale and interdependence can provide a foundation for a defence innovation hub, but they do not guarantee its success. Research on regional clusters suggests that effective initiatives build on existing firms, talent, infrastructure, research capacity and institutional relationships.[57, 58, 59] For a defence innovation hub, the task is to strengthen these assets and connect them to defence needs. This may require better coordination, new capabilities or changes to the conditions that enable organizations to work together.

Several practical guidelines emerge from the literature, comparative case studies, and stakeholder interviews.

2.4.1 Build on Existing Regional Strengths

Successful innovation hubs are rarely created from scratch. They tend to develop where relevant firms, skills, research capacity, infrastructure, customers or institutional relationships already exist. Hub development should therefore begin with an assessment of the region's capabilities and **areas of comparative advantage**.[60, 61]

For a defence innovation hub, this assessment should look beyond the number of defence firms. It should also consider military installations, defence research, testing environments, dual-use industries, post-secondary institutions, skilled workers, infrastructure and existing relationships with defence organizations. Together, these assets can support greater specialization and stronger connections among participants.

A hub should build on capabilities the region can demonstrate. Infrastructure investment or business attraction alone is unlikely to establish an entirely

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[56] Merindol, V. and Versailles, D.W., 2020. The (r) evolution of defence innovation models: Rationales and consequences. *Policy Paper*, *60*.

[57] Provan, K. G., & Kenis, P. (2008). Modes of network governance: Structure, management, and effectiveness. *Journal of Public Administration Research and Theory, 18*(2), 229–252.

[58] Donahue, R., Parilla, J., & McDearman, B. (2018). *Rethinking cluster initiatives*. Brookings Institution. https://www.brookings.edu/articles/rethinking-cluster-initiatives/

[59] Merindol, V. and Versailles, D.W., 2020. The (r) evolution of defence innovation models: Rationales and consequences. *Policy Paper*, *60*.

[60] Donahue, R., Parilla, J., & McDearman, B. (2018). *Rethinking cluster initiatives*. Brookings Institution. https://www.brookings.edu/articles/rethinking-cluster-initiatives/

[61] OECD. (2020). *Broad-based innovation policy for all regions and cities*. OECD Publishing. https://www.oecd.org/en/publications/broad-based-innovation-policy-for-all-regions-and-cities_299731d2-en.html

new specialization. A clear focus on particular technologies or defence needs can help concentrate limited resources and define the region's value to potential partners.[62]

2.4.2 Strengthen Connections and Address Shared Gaps

The presence of regional assets does not mean they function as a connected innovation ecosystem. Firms, researchers, military organizations, government agencies, investors and support organizations may work in the same region but know little about one another's capabilities. A hub can strengthen these connections and identify gaps that affect several participants.[63]

Shared gaps may include limited access to defence end users, testing facilities, procurement expertise, secure environments, skilled workers, financing and commercialization support. **Access to defence end users remains a persistent challenge.** A hub can help create opportunities for engagement and clarify how to work together. Access still depends on defence organizations' time, priorities and security requirements.[64, 65]

Partners should distinguish between capabilities that are missing and those that already exist but are difficult to access. Where a suitable facility, service or organization is available, the hub can improve coordination rather than duplicate it. New investment should respond to demonstrated demand and a clearly identified gap.[66]

Strong networks are particularly important in defence innovation. Technologies often require input from operational users, researchers, developers, manufacturers, regulators and procurement organizations. Working relationships, joint projects and demonstrations can strengthen supply chains and collaboration among organizations facing shared challenges.[67]

2.4.3 Connect Innovation to Defence Demand

Defence innovation hubs should remain connected to defence and security requirements. A recurring challenge in innovation systems is the development of technologies without a sufficiently clear pathway to a customer, operational requirement, or procurement opportunity.[68]

Effective hubs can help translate defence priorities into problems that researchers and companies can address. Early and sustained engagement with military end users can provide feedback on operational needs, technical performance, integration and potential uses. This feedback can help innovators refine a solution before committing further resources.[69]

Testing, demonstration, simulation and validation are also important. Defence-relevant environments allow technologies to be assessed under realistic

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[62] Confidential stakeholder interviews, 2026

[63] Donahue, R., Parilla, J., & McDearman, B. (2018). *Rethinking cluster initiatives*. Brookings Institution. https://www.brookings.edu/articles/rethinking-cluster-initiatives/

[64] Kotila, B., et al. (2023). *Strengthening the defense innovation ecosystem*. RAND Corporation. https://www.rand.org/pubs/research_reports/RRA1352-1.html

[65] Department of National Defence. (2026). *From innovation to operational advantage: Defence Innovation Secure Hubs*. https://www.canada.ca/en/department-national-defence/programs/defence-ideas/element/innovation-networks/challenge/from-innovation-to-operational-advantage-defence-innovation-secure-hubs.html

[66] Confidential stakeholder interviews, 2026

[67] Grounds, K. (2025). *Industry insights on fostering Canadian defence innovation: Perspectives from Ottawa-based companies* [Briefing note]. Triple Helix, Canadian Global Affairs Institute. https://www.cgai.ca/th_bn_industry_defence_innovation

[68] Confidential stakeholder interviews, 2026

[69] Confidential stakeholder interviews, 2026

conditions. The results can inform further development and, where applicable, later procurement decisions.[70]

Sensitive applications may require secure facilities and information-management arrangements. Hubs should identify which activities can be conducted openly and which require controlled or classified environments. This allows appropriate collaboration while meeting applicable national security requirements.[71]

2.4.4 Support the Full Innovation-to-Adoption Pathway

A hub's role should extend beyond research and early technology development. A persistent challenge in defence innovation is moving promising technologies from demonstration to procurement and operational use.[72]

Hubs can help by connecting innovators with appropriate funding, technical expertise, testing facilities, military users, prime contractors and commercialization partners. Navigation and concierge functions can be particularly valuable for SMEs and non-traditional defence suppliers. These companies may have limited capacity to navigate procurement, security requirements, certification and government programs.[73]

Support should reflect the maturity of both the technology and the firm. Early-stage innovators may need research partners and technical validation.

More established firms may need demonstrations, procurement preparation, supply-chain connections, investment or export support. Hub services should therefore follow the **innovation-to-adoption pathway**, rather than operate as disconnected programs.[74]

2.4.5 Develop Talent and Specialized Capabilities

Defence innovation draws on scientific, engineering, technical, manufacturing, business, regulatory and operational expertise. Universities, colleges, training providers, industry and defence organizations can each contribute to developing and retaining these skills.

Defence innovation also benefits from operational knowledge. Engagement with serving and former military personnel, defence researchers, procurement specialists, and other subject-matter experts can help ensure technologies are developed with an understanding of operational environments and defence requirements.[75]

Regional workforce initiatives should align with the hub's areas of specialization. Training should respond to demonstrated industry and defence needs, rather than develop broad capabilities without a clear connection to regional demand.[76]

2.4.6 Invest According to Demonstrated Need

Physical infrastructure may be important where firms need specialized testing, prototyping, simulation,

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[70] Grounds, K. (2025). *Industry insights on fostering Canadian defence innovation: Perspectives from Ottawa-based companies* [Briefing note]. Triple Helix, Canadian Global Affairs Institute. https://www.cgai.ca/th_bn_industry_defence_innovation

[71] Confidential stakeholder interviews, 2026

[72] Grounds, K. (2025). *Industry insights on fostering Canadian defence innovation: Perspectives from Ottawa-based companies* [Briefing note]. Triple Helix, Canadian Global Affairs Institute. https://www.cgai.ca/th_bn_industry_defence_innovation

[73] Confidential stakeholder interviews, 2026

[74] European Commission. (n.d.). *European Digital Innovation Hubs*. https://digital-strategy.ec.europa.eu/en/policies/edihs

[75] Grounds, K. (2025). *Industry insights on fostering Canadian defence innovation: Perspectives from Ottawa-based companies* [Briefing note]. Triple Helix, Canadian Global Affairs Institute. https://www.cgai.ca/th_bn_industry_defence_innovation

[76] Confidential stakeholder interviews, 2026

demonstration or secure collaboration space. Establishing a hub does not, however, always require a new facility.[77]

Infrastructure decisions should follow an assessment of demand and existing regional capacity. If a suitable facility already exists, better access, equipment or coordination may provide more value than new construction. Targeted investment may be justified where a significant shared gap remains.[78]

The resulting hub may be a service-based network, a physical centre or an integrated model. Its form should follow the functions it needs to deliver.

2.4.7 Plan for Long-Term Sustainability

Defence innovation hubs need sustained relationships, staff capacity and resources. Short-term funding can help establish activities or facilities, but dependence on one funding source can threaten continuity.[79]

Sustainability should be considered during initial hub design. Possible sources of support include public and private funding, institutional contributions, industry participation, collaborative research and appropriate fee-for-service activities. The funding approach should reflect the hub's functions and its regional, provincial and national priorities.[80]

Performance should be assessed through outcomes as well as activity. Measures such as events held or organizations contacted can demonstrate engagement. Longer-term measures can examine collaborations formed, technologies tested, firms entering defence markets, investment attracted, supply-chain participation and workforce development.[81] Progress toward procurement and operational use is also relevant, while recognizing that a hub does not control those decisions.

Overall, the objective is not to manufacture a defence innovation cluster or duplicate existing capabilities. A hub's role is to connect participants, improve access to capabilities, address shared gaps and support sustained work on defence requirements.



[77] Donahue, R., Parilla, J., & McDearman, B. (2018). *Rethinking cluster initiatives*. Brookings Institution. https://www.brookings.edu/articles/rethinking-cluster-initiatives/

[78] Confidential stakeholder interviews, 2026

[79] Confidential stakeholder interviews, 2026

[80] Grounds, K. (2025). *Industry insights on fostering Canadian defence innovation: Perspectives from Ottawa-based companies* [Briefing note]. Triple Helix, Canadian Global Affairs Institute. https://www.cgai.ca/th_bn_industry_defence_innovation

[81] Confidential stakeholder interviews, 2026

Section 3 – Allied Defence Innovation Models and Their Relevance to Canada

In recent years, Canada and its allies have revised their defence innovation strategies to strengthen domestic capabilities and respond to changing security needs. Their approaches share several features, including closer collaboration with industry, greater attention to dual-use technologies and earlier engagement with defence end users. They differ, however, in how they organize partnerships, fund development and connect innovations to procurement.

This section examines approaches in **seven jurisdictions** with different geographic, institutional and industrial settings: the Netherlands, the United States, South Australia, Norway, South Korea, the United Kingdom and Japan. It also examines NATO's Defence Innovation Accelerator for the North Atlantic (DIANA) and assesses these models in the context of Canada's approach. **The aim is to identify practices and challenges relevant to Canada, particularly to semi-urban and rural regions near military installations.** The cases are not ranked. This section describes how the programs work but does not assess their success, as comparable data on their outcomes are not readily available.

The comparison focuses on the **pathway from innovation to adoption**. Funding, accelerators and facilities can help develop and test technologies. Moving them into defence use also requires sustained end-user engagement, a potential customer, a procurement route and, where needed, the capacity to produce, integrate and maintain the resulting capability.

3.1 THE NETHERLANDS

The Netherlands combines regional innovation ecosystems with national coordination mechanisms designed to connect emerging technologies to defence priorities, industrial capacity and, potentially, procurement pathways. Rather than creating entirely separate defence innovation centres, the Dutch approach embeds defence organizations within established civilian innovation networks and then links those regional activities to broader national initiatives focused on innovation, production and strategic capability development.

Defence within regional innovation ecosystems. The Netherlands places defence personnel within civilian innovation environments through regional outposts known as Military Innovation by Doing (MINDbases). Located within established technology ecosystems, MINDbases provide a direct interface between defence organizations, technology firms, start-ups, research institutions and regional economic-development partners. Eindhoven's MINDbase, for example, operates within the High Tech Campus environment and connects innovators to both national defence stakeholders and wider allied innovation networks through the NATO DIANA accelerator.[1] [2] [3]

The role of MINDbases extends beyond providing physical workspace. In Limburg, a regional business desk helps entrepreneurs identify defence

opportunities, locate project partners, form consortia and explore funding options. This arrangement demonstrates how a regional hub can act as a navigator within a broader innovation ecosystem, helping firms understand where their capabilities may align with defence needs while reducing barriers to engagement.[4] [5]

Regional initiatives also reflect local industrial strengths. In Eindhoven, Brainport Innovation and Technology for Security (BITS) brings together public and private organizations focused on dual-use technologies. In Den Helder, the Maritime Emerging Technologies Innovation Park (METIP) supports maritime innovation through collaboration with the Royal Netherlands Navy.[6] [7] [8] These examples illustrate how defence innovation activities can build upon existing regional expertise rather than attempting to recreate capabilities that already exist elsewhere.

National coordination and technology transition. Regional engagement is complemented by national initiatives intended to connect innovation activities with defence priorities. The Dutch government's Defence Strategy for Industry and Innovation 2025–2029 emphasizes strengthening domestic research, innovation and production capabilities in strategically important sectors.[9] [10]

A central element of this strategy is Orchestrating Defence Innovation Netherlands (ODIN), which is developing a national network of regional innovation partnerships. ODIN's regional teams bring together defence organizations, economic-development agencies, research institutions and industry representatives, including SMEs and start-ups. These teams help identify regional expertise, facilitate engagement with defence stakeholders and improve awareness of defence requirements across the country.[11]

The Dutch model recognizes, however, that identifying promising technologies is only one stage in a longer pathway. Regional networks can help innovators connect with defence organizations, but successful adoption also requires testing, validation, production capacity and procurement decisions. ODIN therefore functions as a coordination mechanism rather than a procurement system, helping connect innovators to subsequent stages of development and decision-making.

Supporting SMEs and strengthening industrial capacity. The Netherlands employs several mechanisms that support firms at different stages of the innovation pathway. The Defence Materiel Development Committee (CODEMO) allows firms to propose defence-related product-development projects. For approved initiatives, the Ministry of Defence may contribute up to 50 percent of development costs, helping reduce financial barriers associated with defence innovation. However, support for development does not guarantee future procurement, highlighting the distinction between prototype funding and acquisition decisions.[12]

At the broader industrial level, Defport brings together government departments, industry, financial institutions and research organizations to strengthen defence innovation and production capacity. Its activities are intended to accelerate innovation, expand manufacturing capability and improve coordination across the defence-industrial ecosystem.[13]

The Netherlands also uses industrial-participation requirements in certain major defence procurements. Foreign suppliers involved in larger defence contracts may be required to undertake activities such as co-production, research and development collaboration, technology transfer or supply-chain partnerships with Dutch firms. These arrangements can create opportunities for SMEs and research institutions to participate in defence supply chains while strengthening domestic industrial capabilities.[9] [13]

Together, ODIN, CODEMO and Defport demonstrate how innovation, industrial development and production capacity can be linked through complementary mechanisms. They also illustrate an important lesson: innovation funding alone is insufficient if firms lack pathways to manufacturing, integration and long-term participation in defence supply chains.

Relevance and limits for Canada. The Dutch approach offers a useful example of how regional innovation ecosystems can be connected to national defence priorities through coordinated governance and multiple support mechanisms. MINDbases provide local entry points into the defence sector, ODIN connects regional activities to national priorities, CODEMO supports technology development and Defport addresses broader industrial-capacity requirements.

For Southeast Alberta, the principal lesson is the value of establishing a **clear regional entry point that is connected to national defence organizations, testing opportunities, funding mechanisms and industrial partners**. A regional hub could help firms and researchers identify defence applications for existing technologies, locate appropriate collaborators and understand the next steps required to advance a technology toward evaluation and adoption.

The Dutch experience also highlights an important limitation. Strong regional collaboration and prototype funding can accelerate innovation activity, but they do not by themselves ensure procurement or operational use. Successful defence innovation ultimately requires sustained engagement with end users, validation against operational requirements, production readiness and clear acquisition pathways. A regional hub can improve access to those processes, but it cannot replace the procurement and capability decisions that determine whether an innovation is ultimately adopted.

3.2 UNITED STATES

The United States combines geographically concentrated defence innovation ecosystems with national mechanisms that connect emerging technologies to military requirements, testing opportunities and potential acquisition pathways. While major regional clusters bring together military organizations, research institutions, prime contractors, specialized suppliers and testing infrastructure, their effectiveness depends on mechanisms that help innovators identify defence problems, validate solutions and navigate procurement processes.

Regional defence ecosystems and industrial concentration. Across the United States, major defence clusters have developed around military installations and research centres, creating environments where defence users, industry and research organizations interact more frequently. Examples include Colorado Springs, Dayton, Hampton Roads, Huntsville and San Diego, where defence organizations are co-located with contractors, suppliers, universities and testing facilities. [82] These ecosystems demonstrate the value of proximity, but their contribution extends

[82] Michael E and Alejandra, R. 2024. Strengthening America's defence industrial base, Brookings, June 20, Available at: https://www.brookings.edu/articles/strengthening-americas-defence-industrial-base/

beyond physical concentration. Their strength lies in the networks, expertise and institutional relationships that connect technological capabilities to operational requirements and defence customers. Regional specialization often builds on nearby military capabilities, attracting firms, researchers and skilled workers with relevant expertise. [83]

Problem-led innovation and technology transition. The Defense Innovation Unit (DIU) provides a national mechanism for connecting commercial technologies to defence needs. Through Commercial Solutions Openings (CSOs), DIU invites firms to propose solutions to defined operational challenges rather than funding technology development in the abstract. Selected companies may receive prototyping agreements that allow technologies to be evaluated with potential defence users in operationally relevant settings. Where statutory and program conditions are satisfied, successful prototypes may proceed to follow-on production agreements, although advancement beyond the prototype stage is not guaranteed.

This approach illustrates the importance of linking innovation activities to clearly defined defence problems and identified end users. Regional ecosystems can help firms develop technologies and establish relationships, but national acquisition mechanisms provide the pathway through which promising solutions can be tested, evaluated and potentially adopted.

Supporting small firms through staged development. The Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs provide phased support for eligible small businesses pursuing research and technology development. [84] These programs typically begin with technical feasibility assessments and progress through successive stages of research, development and commercialization. [85] STTR additionally requires collaboration with a research institution during its initial phases, reinforcing connections between industry and academia. [86] These programs complement regional innovation ecosystems by providing structured support as technologies mature. A regional hub can help firms identify relevant defence challenges, locate research and testing partners, prepare proposals, and understand the evidence required to support military evaluation. At the same time, the U.S. experience demonstrates that receiving innovation funding represents only one stage in a longer process. Firms must also prepare for manufacturing, financing, certification and the demands of potential defence customers beyond an initial award. [87, 88]

Relevance and limits for Canada. The U.S. model highlights the value of combining regional innovation ecosystems with national mechanisms that connect innovators to defence problems, testing environments and potential acquisition pathways. Regional clusters create opportunities for collaboration and specialization, while programs such as DIU, SBIR and STTR provide routes for

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[83] Kleymeyer, J. R. 2026. The Symbiotic Relationship Between Aerospace Manufacturers and Military Bases, *Trade & Industry Development,* Available at: https://www.tradeandindustrydev.com/industry/aerospace-defence/symbiotic-relationship-between-aerospace-35981

[84] U.S. Small Business Administration. (n.d.). *Apply*. SBIR.gov. https://www.sbir.gov/apply

[85] Defense Innovation Unit. (n.d.). *Work with us: Commercial companies*. https://www.diu.mil/work-with-us/commercial

[86] Kleymeyer, J. R. 2026. The Symbiotic Relationship Between Aerospace Manufacturers and Military Bases, *Trade & Industry Development,* Available at: https://www.tradeandindustrydev.com/industry/aerospace-defence/symbiotic-relationship-between-aerospace-35981

[87] Defense Innovation Unit. (n.d.). *Work with us: Commercial companies*. https://www.diu.mil/work-with-us/commercial

[88] U.S. Small Business Administration. (n.d.). *Apply*. SBIR.gov. https://www.sbir.gov/apply

identifying requirements, supporting development and evaluating technologies.

For Southeast Alberta, the principal lesson is that successful defence innovation hubs require more than co-location or networking opportunities. Firms need support in understanding defence requirements, accessing testing and research partners, preparing evidence for end users and identifying plausible pathways toward procurement.

The U.S. example demonstrates how regional ecosystems can contribute to innovation and supplier development when connected to structured mechanisms for problem identification, prototyping and acquisition. However, participation in innovation programs does not guarantee procurement, underscoring the need for realistic expectations and clear planning for production, financing and long-term adoption.

3.3 AUSTRALIA

Australia illustrates how defence innovation hub functions can be distributed across industry intermediaries, research partnerships and workforce-development initiatives rather than concentrated within a single organization. South Australia provides a useful regional example, where multiple institutions work together to support firms from initial engagement through research collaboration, technology development and workforce preparation.

Industry navigation and research collaboration. South Australia's Defence Teaming Centre (DTC) serves as an industry intermediary that helps SMEs participate in defence supply chains through capability-development programs, referrals to prime contractors, training opportunities and industry advocacy. Alongside DTC, the Defence Innovation Partnership (DIP) connects the state government, the Defence Science and Technology Group (DSTG), universities and industry partners in collaborative research activities. DIP's Activator Fund further supports the translation of innovative technologies.[89] toward Australian Defence Force capability requirements, helping bridge the gap between research and practical application.[90] Importantly, these organizations perform different but complementary functions within the innovation pathway. DTC primarily serves as an industry navigator, helping firms understand defence-market opportunities and build relationships with primes and government stakeholders, while DIP focuses on research collaboration and technology transition. Together, they create a clearer progression from initial industry engagement to capability-oriented research and development.

Together, these mechanisms demonstrate how industry associations and research partnerships can support different stages of the innovation pathway. DTC helps firms understand defence opportunities and build industry connections, while DIP provides a framework through which researchers, government and industry can collaborate on technology development aligned with defence priorities.

[89] Defence Innovation Partnership. (n.d.). *Building connections for defence and space research, development and innovation*. https://www.defenceinnovationpartnership.com/

[90] Defence SA. (n.d.). *Defence Teaming Centre*. https://defencesa.com/industry/industry-directory/defence-teaming-centre/

Building workforce capacity alongside innovation. South Australia's model also recognizes workforce development as a component of defence capability. The Defence Industry Connection Program (DICP) combines scholarships with industry placements, helping students gain relevant experience while providing firms with access to future talent.[105] Workforce initiatives complement technology-development programs by helping address skills shortages and strengthening connections between educational institutions and defence employers.

The Defence Science and Technology Group (DSTG), located within South Australia's Lot Fourteen innovation district, further contributes to this ecosystem through its extensive research and technology activities. The co-location of defence, research, technology and industry organizations creates opportunities for collaboration while supporting workforce development through training, student engagement and industry participation. This arrangement illustrates how innovation ecosystems can benefit from combining research capability, industry engagement and talent-development activities within a connected regional network.

Coordinating support across the innovation pathway. The South Australian model demonstrates that successful defence innovation ecosystems do not necessarily depend on a single hub delivering every service. Instead, responsibilities are distributed across organizations with specialized mandates, creating a coordinated network that supports firms at different stages of development.

The South Australian model demonstrates how different institutions can assume responsibility for distinct functions while contributing to a broader defence innovation ecosystem. DTC provides industry navigation and advocacy, DIP supports collaborative research and technology transition, and workforce initiatives help develop future talent. DSTG contributes scientific expertise and provides an important connection between defence requirements and research activities.
Rather than relying on a single organization to deliver all services, the Australian approach distributes responsibilities among complementary institutions. This can help firms identify relevant opportunities, access research partners, understand defence needs and connect with potential workers. The effectiveness of the system, however, depends on coordination among participating organizations and clear pathways that allow firms to move from initial engagement toward technology demonstration, adoption and potential procurement.

Relevance and limits for Canada. The principal lesson for Southeast Alberta is the value of connecting industry navigation, research partnerships, technology transition and workforce development through shared priorities and clearly defined referral pathways.[91] A regional hub does not necessarily need to deliver every function itself. Instead, it can coordinate existing organizations, ensuring that firms have access to the appropriate expertise, facilities, funding mechanisms and workforce supports at different stages of development.
The Australian example also demonstrates the importance of sustained collaboration between government, industry and research institutions. While these arrangements can help reduce barriers to participation and strengthen regional capability, successful technology development still depends on testing opportunities, end-user engagement and acquisition decisions that occur beyond the

[91] Australian Industry Group. (n.d.). *Defence Industry Connection Program*. https://dicp.australianindustrygroup.com.au/

innovation-support system itself. As with other international examples, participation in innovation programs can facilitate technology development and industry engagement, but it does not guarantee eventual procurement or operational adoption.

3.4 NORWAY

Norway connects defence innovation, industrial capability and military readiness through sustained cooperation among the Armed Forces, research institutions and industry. As a country with a long Arctic coastline, a border with Russia, and terrain characterized by mountains and fjords, Norway faces operational challenges that share certain similarities with those encountered in northern regions of Canada.[92] These geographic conditions have influenced the development of defence capabilities tailored to Arctic and maritime environments, including investments in air-defence systems, precision-guided munitions and technologies designed for distributed operations rather than large-scale platform-intensive forces.

Defence innovation and industry collaboration. Norway's defence industrial base is characterized by close interaction among military users, research organizations and defence firms. This collaboration has supported the development of specialized capabilities aligned with national defence priorities and operational requirements. The Norwegian approach demonstrates how a relatively small population can sustain advanced defence capabilities by concentrating expertise in strategic areas and maintaining strong connections between defence organizations and industry.

Recent changes in the European security environment have reinforced this approach. Norway has announced significant long-term investments in defence capability, infrastructure and readiness, creating opportunities for domestic firms and international partners in areas such as advanced technologies, cybersecurity, digital infrastructure and military modernization.[93] The country's defence partnerships also extend beyond national borders. For example, cooperation with the United Kingdom on maritime capabilities illustrates how industrial collaboration can contribute to both defence readiness and production capacity.[94]

Innovation support and technology transition. In addition to close collaboration among defence organizations, industry and research institutions, Norway has developed dedicated mechanisms that help connect emerging technologies to military users. A notable example is ICE worx, the innovation centre of the Norwegian Defence Research Establishment (FFI), which provides a platform through which companies, researchers and defence organizations can collaborate on solving operational

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[92] Magnuson, Stew. 2025. Norway Defence Industry Part of Trend to Boost European Capacity, National Defence Magazine, Available at: https://www.nationaldefencemagazine.org/articles/2025/6/27/norway-defence-industry-part-of-trend-to-boost-european-capacity

[93] Office of the Prime Minister & Ministry of Defence. (2026, March 27). *Government to provide additional NOK 115 billion to strengthen Long-term Defence Plan* [Press release]. Government.no. https://www.regjeringen.no/en/whats-new/government-to-provide-additional-nok-115-billion-to-strengthen-long-term-defence-plan/id3155063/

[94] Defence Investment Agency. 2025. *Secretary of State Fuhr visits Norway and Germany to strengthen defence partnerships and advance industry engagement.* Available at: https://www.canada.ca/en/defence-investment-agency/news/2025/12/secretary-of-state-fuhr-visits-norway-and-germany-to-strengthen-defence-partnerships-and-advance-industry-engagement.html

challenges and testing potential solutions. By creating opportunities for experimentation and user engagement, such initiatives help bridge the gap between technical innovation and defence application.

This element of the Norwegian system highlights an important feature of defence innovation ecosystems: sustained interaction with military users throughout the development process. Innovation support is not limited to funding or networking but also includes mechanisms that enable firms to understand operational requirements, demonstrate technologies and receive feedback from potential end users before procurement decisions occur.

International partnerships and industrial cooperation. Norway's defence ecosystem also highlights the importance of collaboration among allies. In December 2025, Canada's Secretary of State (Defence Procurement) visited Norway and Germany to strengthen defence relationships and explore opportunities for industrial cooperation. During the Norwegian visit, engagements included Haakonsvern Naval Base, Kongsberg Defence & Aerospace and Nammo, organizations that play important roles in Norway's defence-industrial capacity and innovation ecosystem.[95]

These engagements reflect Canada's broader efforts to strengthen defence-industrial partnerships with allied countries and identify opportunities to enhance supply-chain resilience, capability development and procurement cooperation. They also demonstrate how international partnerships can complement domestic innovation efforts by connecting firms to established defence manufacturers, specialized expertise and potential export opportunities.[96]

Defence industry participation and entry barriers. Despite Norway's collaborative approach, participation in the defence sector requires firms to navigate a complex regulatory environment. Companies seeking to operate within defence markets must often address security clearances, procurement requirements, technical standards, export-control regulations and national-security restrictions.[97] While these requirements are broadly comparable to those found in other allied countries, they can create significant barriers for smaller firms that lack experience with defence procurement processes. This highlights an important distinction between innovation support and market access. Strong relationships among industry, researchers and military organizations can help firms identify opportunities, but participation in the defence sector also requires practical guidance on regulatory compliance, contracting requirements and security obligations. Without clear entry points and advisory support, smaller firms may struggle to translate technical capabilities into defence business opportunities.[98]

Relevance and limits for Canada. Norway offers a useful example of how defence innovation can be linked to operational requirements, industrial capacity and international partnerships within an Arctic context. The Norwegian model demonstrates the value of continuous collaboration among military users, industry and research organizations, while

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[95] ibid

[96] Norwegian Defence Research Establishment. (n.d.). *ICE worx—FFI's innovation centre for the defence sector*. https://www.ffi.no/vare-tjenester/iceworx

[97] Norwegian Defence Research Establishment. (n.d.). *ICE worx—FFI's innovation centre for the defence sector*. https://www.ffi.no/vare-tjenester/iceworx

[98] Government of Norway. (n.d.). *Roadmap for expanding production capacity in the defence industry*. https://www.regjeringen.no/en/documents/roadmap-for-expanding-production-capacity-in-the-defence-industry/id3058492/

also recognizing the importance of production capacity and allied cooperation in maintaining readiness. For Southeast Alberta, the principal lesson is the need to combine innovation support with practical assistance that helps firms navigate defence-sector requirements. A regional hub could facilitate connections to defence users, research partners and industrial collaborators while helping firms understand procurement, security and regulatory expectations. As seen in Norway, strong collaboration can accelerate the development and testing of technologies, but successful participation in the defence sector ultimately depends on a firm's ability to meet operational, production and compliance requirements beyond the initial innovation stage.

3.5 SOUTH KOREA

South Korea connects regional innovation ecosystems to national defence priorities through a highly centralized governance structure led by the Defence Acquisition Program Administration (DAPA). DAPA holds primary responsibility for defence planning, acquisition and technology development, providing a single institutional framework through which defence innovation, procurement and industrial policy are coordinated. This arrangement allows innovation initiatives, defence research and capability development to be linked more directly to identified military requirements and long-term industrial objectives.

Regional defence clusters and multi-stakeholder participation. Since 2020, South Korea has used a national defence innovation cluster program to strengthen regional specialization and expand participation in the defence sector. The program partners with competitively selected regional governments, with participating sites receiving approximately US$18 million over five years, while local governments contribute at least 30 percent of project costs. This co-investment requirement encourages long-term regional commitment and ensures that local stakeholders have a direct interest in the success of the cluster. The cluster program brings together local governments, SMEs, major defence firms, universities and research institutions around regional industrial strengths. National Defence Venture Centres provide start-up support, SME navigation services and industry-university connections, while industry-university institutes foster defence talent, support entrepreneurship and help commercialize emerging technologies. These institutes are jointly managed by regional industry-promotion agencies and the Korea Industrial Complex Corporation, creating formal structures that connect defence requirements with education, research and business development.

A distinguishing feature of the Korean model is its emphasis on specialization. Rather than encouraging every region to pursue the same capabilities, clusters focus on distinct technological and industrial strengths, reducing duplication and promoting differentiation. This approach links regional economic-development strategies with national defence priorities while strengthening resilience across the broader defence-industrial base.[99]

[99] Ministry of SMEs and Startups. (2026, February 23). *Roadmap sets 2030 targets for defense startup growth and dual-use innovation*. https://www.mss.go.kr/site/eng/ex/bbs/View.do?bcIdx=1065749&cbIdx=244&parentSeq=1065749

South Korea's cluster model also emphasizes regional commitment through competitive selection and cost-sharing requirements. Local governments must contribute a portion of project costs, creating incentives for sustained participation and investment. The model encourages regions to develop specialized capabilities instead of duplicating efforts, helping align regional industrial strengths with national defence priorities. Support for SMEs within defence supply chains further connects regional economic development objectives with defence-industrial resilience.

Connecting innovation, production and defence capability. South Korea's defence innovation ecosystem is closely integrated with national manufacturing strengths in semiconductors, shipbuilding, automotive production and advanced electronics. Continued security concerns on the Korean Peninsula, combined with growing uncertainty in the international security environment, have reinforced investments in dual-use technologies and domestic industrial capacity. These connections allow defence manufacturers to draw upon existing commercial supply chains, production facilities and technical expertise when developing and scaling military capabilities. The country's defence-industrial strategy has contributed to significant domestic production capacity. Approximately **70 percent of South Korea's defence equipment is sourced domestically**, while arms imports have declined by approximately 24 percent as domestic capabilities have expanded.[100] The integration of innovation policy, supply-chain development and SME participation has helped connect technology development with manufacturing and production readiness rather than treating them as separate policy objectives.

Government support and public-private collaboration. South Korea increasingly describes its approach as a private-led defence model, in which government, military organizations and private firms have distinct but complementary roles. Government institutions provide strategic direction, policy coordination, financial incentives and research support, while private firms assume a larger role in technology development, production and commercialization.

Support mechanisms include defence research incentives, financing programs, export support and initiatives designed to strengthen domestic technological capabilities.[101] The military remains a critical source of operational requirements and demand signals, while industry partners contribute technical expertise and production capacity. This arrangement creates a closer relationship between technology development and industrial scaling than is often observed in innovation systems that focus primarily on research and prototype development. International partnerships also complement domestic capability development. Cooperation with allied countries allows South Korea to expand technology collaboration, strengthen industrial relationships and support defence exports while maintaining a strong domestic production base.

Relevance and limits for Canada. South Korea provides a useful example of how regional innovation ecosystems can be connected to national defence priorities through coordinated governance, shared investment and clear specialization. The competitive

[100] Asian Pacific Defense Reporter. 2025. South Korea's defence technology export boom explained, Available at: https://asiapacificdefencereporter.com/south-koreas-defence-technology-export-boom-explained/

[101] Wooyeal, Paik, 2024. South Korea's Emergence as a Defense Industrial Powerhouse. *French Institute of International Relations (IFRI)*, (138). Available at:

designation of cluster locations encourages local commitment, while co-investment requirements ensure that regional governments have a stake in long-term success. For Southeast Alberta, the principal lesson is the value of building on existing regional strengths while connecting firms, researchers and local institutions to broader national defence objectives. A regional hub could help coordinate industry participation, research partnerships and workforce development while linking innovators to testing, procurement and industrial opportunities. South Korean also highlights the importance of considering production capacity and supply-chain requirements alongside technology development. However, strong innovation performance depends not only on regional collaboration but also on sustained demand, clear governance structures and mechanisms that connect successful innovations to defence users and acquisition pathways.

3.6 UNITED KINGDOM

The United Kingdom is restructuring its defence innovation ecosystem to create a more integrated pathway between innovation, capability development and procurement. Through **UK Defence Innovation (UKDI)**, the government has consolidated several previously separate innovation functions, including the Defence and Security Accelerator (DASA), elements of the former Defence Innovation Unit and innovation activities within Defence Equipment & Support (DE&S).[102] This reorganization is intended to simplify access to defence innovation programs, strengthen support for dual-use technologies and improve connections among SMEs, industry, research organizations, investors and defence customers.

National Coordination of Defence Innovation. The United Kingdom's recent reforms seek to address a common challenge within defence innovation systems: ensuring that promising technologies can progress from concept development to operational use. UKDI serves as a central entry point for innovators while connecting regional innovation networks, defence stakeholders and procurement organizations. Particular emphasis has been placed on technologies such as artificial intelligence, autonomy, quantum technology, biotechnology and cybersecurity, reflecting both defence requirements and broader economic priorities. The 2025 Strategic Defence Review reinforced this approach by committing approximately **£400 million annually** to accelerate the delivery of innovative technologies for the Armed Forces while supporting economic growth, industrial development and high-skilled employment in dual-use sectors.[103] The review positions defence innovation not only as a military capability issue but also as part of a wider industrial strategy designed to strengthen national competitiveness and technological capacity.

Supporting SMEs Through Multiple Pathways. A distinguishing feature of the UK model is the range of mechanisms available to support firms at different stages of development. Through competition-based challenges, accelerator programs and targeted

[102] Ministry of Defence. (2025). *A new era for defence innovation: DASA, DIU and DE&S FCI unite under UK Defence Innovation (UKDI).* https://www.gov.uk/guidance/a-new-era-for-defence-innovation-dasa-diu-and-des-fci-unite-under-uk-defence-innovation-ukdi

[103] Ministry of Defence. *Launch of new body to harness innovative tech for the UK's Armed Forces,* Government of the United Kingdom, Available at: https://www.gov.uk/government/news/launch-of-new-body-to-harness-innovative-tech-for-the-uks-armed-forces

funding calls,[104] UKDI and DASA help attract non-traditional suppliers, SMEs, academic researchers and commercial technology companies into the defence sector.[105] Many of these initiatives are organized around defined defence problems rather than broad technology categories. For example, recent efforts have focused on challenges such as the detection and defeat of optically controlled uncrewed aerial systems (UAS), encouraging firms to develop solutions that respond to identified operational requirements.[106] This problem-led approach helps connect innovation activities to defence users while providing innovators with clearer pathways to testing and evaluation.

The UK also complements grant-based programs with financing mechanisms designed to support commercialization. Defence Innovation Loans provide eligible SMEs with access to funding between **£100,000 and £1 million** for innovations with potential defence applications and commercial viability.[107] These loans are intended to help firms bridge development and commercialization stages while advancing solutions that address recognized defence challenges.

Incentivizing Research, Commercialization and Industrial Growth. Beyond innovation funding, the UK uses a range of tax and investment incentives to strengthen defence-related research and technology development. Research and Development (R&D) tax relief supports firms undertaking eligible scientific and technological innovation, including activities related to cybersecurity, communications systems, surveillance technologies, protective equipment, autonomous systems and advanced defence capabilities.[108]

Additional measures focus on encouraging commercialization and long-term investment. The Patent Box regime provides tax advantages for income derived from eligible patents, incentivizing firms to develop, retain and commercialize intellectual property within the United Kingdom. Similarly, Research and Development Capital Allowances permit qualifying organizations to claim enhanced deductions for eligible research investments, helping reduce the cost of innovation-related infrastructure and equipment.[109] These mechanisms demonstrate that innovation support extends beyond grant programs. The UK approach recognizes that firms often require access to financing, commercialization support and investment incentives if technologies are to progress beyond the prototype stage.[110]

Connecting Research, Testing and Capability Development. The Ministry of Defence also maintains longer-term relationships with the research community through the Defence Science and

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[104] Ministry of Defence. (2026). *Competition document: Defence Innovation Loan FY26/27 Cycle 1.* https://www.gov.uk/government/publications/competition-defence-innovation-loans-fy2627-cycle-1/competition-document-defence-innovation-loan-fy2627-cycle-1

[105] Ministry of Defence. 2025. *Launch of new body to harness innovative tech for the UK's Armed Forces,* Available at: https://www.gov.uk/government/news/launch-of-new-body-to-harness-innovative-tech-for-the-uks-armed-forces

[106] Ministry of Defence. *UKDI seeks innovations to detect and defeat fibre optically controlled UAS,* Government of the United Kingdom, Available at: https://www.gov.uk/government/news/ukdi-seeks-innovations-to-detect-and-defeat-fibre-optically-controlled-uas

[107] Defence and Security Accelerator. (2025, October 28). *Defence Innovation Loans Cycle 5: Enhanced support for commercialising defence technology*. GOV.UK. https://www.gov.uk/government/news/defence-innovation-loans-cycle-5-enhanced-support-for-commercialising-defence-technology

[108] HM Revenue & Customs. 2024. *Guidance: Check if you can claim Research & Development (R&D) tax relief,* Government of the United Kingdom, Available at: https://www.gov.uk/guidance/corporation-tax-research-and-development-rd-relief

[109] Ministry of Defence. 2025. Competition Document: Defence Innovation Loan, Available at: https://www.gov.uk/government/publications/competition-defence-innovation-loans/competition-document-defence-innovation-loan

[110] Ministry of Defence. (n.d.). *Live funding opportunities.* https://www.gov.uk/government/collections/live-funding-opportunities

Technology Laboratory (Dstl), which serves as an important bridge between defence organizations, universities and research institutions. Dstl supports scientific research and capability development while providing a pathway for academic and industry partners to contribute to future defence requirements. Combined with accelerator programs and challenge-based competitions, these arrangements create multiple entry points for innovators while helping ensure that research activities remain connected to operational needs.[111] However, as with other defence innovation systems, participation in innovation programs does not guarantee procurement. Successful technologies must still satisfy testing, capability and acquisition requirements before adoption by defence organizations.

Relevance and Limits for Canada. The United Kingdom offers an example of how regional innovation networks can be connected to a more coordinated national defence innovation system. UKDI, DASA, Dstl and associated funding mechanisms each perform different functions while contributing to a broader pathway that links innovation, testing, commercialization and potential procurement. For Southeast Alberta, the principal lesson is the value of providing firms with multiple routes into the defence sector that are matched to their stage of development. Challenge calls, accelerator programs, research partnerships, commercialization support and procurement-oriented funding can collectively reduce barriers to participation while helping innovators understand defence requirements.[112] A regional hub could play a similar navigation role by connecting firms with relevant programs, research partners and testing opportunities while identifying the next decision point required to advance a technology toward operational evaluation and potential acquisition.

3.7 JAPAN

Japan is strengthening the connection between civilian innovation and defence capability through reforms designed to accelerate technology adoption, streamline procurement processes and expand the role of dual-use technologies. Rather than creating a separate defence innovation system, Japan increasingly seeks to draw upon expertise, technologies and firms operating in the broader civilian economy. This approach reflects a growing emphasis on reducing barriers between commercial innovation and defence applications while improving the speed at which emerging technologies can move from development to operational use.[113]

Integrating Civilian Innovation into Defence Capability. A central feature of Japan's recent reforms is the prioritization of dual-use technologies that can serve both civilian and military purposes.

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[111] Ministry of Defence. 2025. *Launch of new body to harness innovative tech for the UK's Armed Forces,* Available at: https://www.gov.uk/government/news/launch-of-new-body-to-harness-innovative-tech-for-the-uks-armed-forces

[112] Ministry of Defence. (2026). *How to work with UK Defence Innovation (UKDI).* https://www.gov.uk/guidance/how-to-work-with-uk-defence-innovation-ukdi

[113] Sasaki. R. 2025. "Building Faster: Institutional Pathways for Agile Defence Acquisition in Japan," in Defence Procurement Reform: International Perspectives and Best Practices, *Conference of Defence Associations Institute, Volume 36*. Available at: https://cdainstitute.ca/wp-content/uploads/2025/09/On-Track-Volume-26-Sept-2025.pdf

Through the Ministry of Defense and the Acquisition, Technology and Logistics Agency (ATLA), the government has sought to expand engagement with start-ups, research institutions and commercial technology companies while improving pathways for defence adoption. These efforts aim to strengthen connections between technology developers and defence users while ensuring that innovation activities remain aligned with identified capability requirements. By leveraging technologies developed in the civilian sector, Japan seeks to broaden its access to emerging innovations without relying solely on traditional defence suppliers.

Procurement Reform and Faster Technology Adoption. Japan's reform agenda places particular emphasis on reducing the time required to transition technologies from development to operational deployment. Recent initiatives have focused on streamlining contracting processes, shortening acquisition timelines and creating mechanisms that allow defence organizations to adopt promising technologies more rapidly. One element of this approach is the introduction of specialized contracting provisions designed to support rapid acquisition. These measures seek to accelerate the movement of technologies from concept demonstration and prototyping toward validation, production and operational deployment. The government has also established clearer development and evaluation processes to help firms understand the requirements necessary for defence adoption. Once technologies achieve appropriate levels of technical maturity and demonstrate their performance against operational requirements, acquisition processes can proceed more efficiently than under traditional procurement timelines**.** This focus on procurement reform illustrates an important distinction within defence innovation policy. Support for research and development alone may not be sufficient if government acquisition processes cannot adopt technologies at a pace consistent with technological change. Japan's reforms therefore attempt to address both innovation and acquisition as connected parts of the same pathway.

Strengthening Industrial Capacity and SME Participation. Despite these reforms, Japan continues to face challenges associated with industrial scaling and production readiness. Policymakers have identified gaps between technical feasibility, pilot projects and the ability to manufacture technologies at scale. These challenges can be particularly significant for SMEs, which may possess innovative technologies but lack the resources necessary to expand production or navigate defence-market requirements.[114] Japan has increasingly sought to involve SMEs in defence manufacturing and technology development in order to strengthen industrial capacity and diversify participation in the sector. However, firms continue to face barriers related to production costs, financing requirements and entry into defence markets. These challenges highlight the importance of connecting innovation support with broader measures aimed at commercialization, manufacturing readiness and supply-chain development.[115] The Japanese experience demonstrates that successful innovation systems require more than technology development programs. They also depend on mechanisms that help firms transition from prototypes and demonstrations to sustainable production and long-term participation in defence supply chains.

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[114] Japan Ministry of Defense. (2026, February 27). *Press conference by Defense Minister Koizumi.* https://www.mod.go.jp/en/article/2026/02/62f5a4a335985e156ec16321c63cae8be012b0e8.html

[115] Japan Ministry of Defense. (2025). *FY2026 budget request: Major projects.* https://www.mod.go.jp/en/d_act/d_budget/pdf/fy2026_20250924a.pdf

Building Long-Term Industrial Resilience. Japan has also recognized the importance of providing industry with greater visibility regarding future defence requirements. Effective procurement frameworks must not only support the acquisition of new technologies but also provide sufficient certainty for firms to invest in production capacity, workforce development and long-term capability maintenance. The **2023 Defence Industrial Base Reinforcement Act** was introduced in part to address these concerns by strengthening industrial resilience, supporting production capacity, and addressing structural weaknesses within the defence-industrial base. The legislation reflects a broader recognition that innovation, procurement and industrial capacity must be considered together if emerging technologies are to translate into enduring defence capabilities.

Relevance and Limits for Canada. Japan offers a useful example of how procurement reform can complement defence innovation policies. Its recent initiatives recognize that accelerating innovation requires not only research and technology development but also acquisition mechanisms capable of adopting new technologies quickly and predictably. For Southeast Alberta, the principal lesson is the importance of connecting innovation support with clear pathways toward testing, production and procurement. A regional hub could help firms understand defence requirements, identify opportunities for dual-use technologies and connect with relevant research and manufacturing partners. The Japanese experience also highlights the importance of considering production capacity and industrial readiness early in the innovation process. While accelerated procurement and technology-development initiatives can improve the transition from concept to capability, successful adoption ultimately depends on the ability to manufacture, sustain and upgrade technologies over time.

3.8 NATO DIANA

The Defence Innovation Accelerator for the North Atlantic (DIANA) was established by NATO to strengthen the Alliance's ability to identify, develop and adopt emerging and disruptive technologies with defence and security applications. Rather than functioning as a single innovation hub, DIANA operates as a distributed innovation network that connects governments, universities, innovators, industry partners, researchers and defence users across Allied countries. This model reflects a growing recognition that many critical technologies originate in the commercial sector and that accelerating their adoption requires coordination across multiple institutions and national innovation ecosystems.[116]

Connecting Allied Innovation Ecosystems. DIANA's primary role is to connect dual-use innovators with operational defence challenges identified by NATO and Allied nations. Through challenge programs, accelerator support and testing opportunities, the organization provides selected firms with access to expertise, facilities and potential end users. The objective is not only to support technology development but also to help innovators understand military requirements and demonstrate

[116] NATO. 2026. Defence Innovation Accelerator for the North Atlantic (DIANA), Available at: https://www.nato.int/en/about-us/organization/nato-structure/defence-innovation-accelerator-for-the-north-atlantic-diana

the potential relevance of their technologies to defence organizations. This approach illustrates how innovation ecosystems can be organized around clearly defined security needs rather than solely around research funding or technology development. By identifying priority capability areas and issuing challenge calls, NATO creates a mechanism through which commercial innovators can engage with defence users while retaining access to civilian markets and investment opportunities.

Distributed Infrastructure for Collective Defence. A distinguishing feature of the DIANA model is its distributed network of accelerator sites and test centres located throughout Allied countries. Rather than concentrating resources in one location, DIANA draws upon existing expertise, facilities and infrastructure across the Alliance. Accelerator sites and testing centres operate as components of a broader network, providing innovators with access to specialized facilities, technical expertise, mentoring, defence users and evaluation environments.[117] This structure allows participating firms to benefit from capabilities that may not exist within their home regions while supporting collaboration among Allied governments, military organizations, researchers and industry partners. The network also helps reduce duplication by leveraging national investments and specialized expertise already present within member countries. In practice, firms can access testing environments, workshops, mentorship programs and user feedback that support the refinement and validation of dual-use technologies before potential adoption.

Accelerating Development and Adoption. Selected participants receive funding, accelerator support and opportunities to engage directly with defence stakeholders. Beyond technology development, the program seeks to help innovators navigate technical validation, understand operational requirements and establish relationships with potential users and investors. The organization also focuses on emerging technologies considered strategically important to Allied security, including artificial intelligence, machine learning, autonomy and other disruptive capabilities. By connecting innovators with military and civilian experts from across NATO, DIANA creates opportunities to test whether technologies can address operational challenges and contribute to broader defence objectives. Importantly, participation in DIANA does not guarantee procurement or military adoption. Successful technologies must still demonstrate operational value and satisfy acquisition requirements established by participating nations. The program's contribution lies in helping firms generate evidence, access testing opportunities and build the relationships needed to support future adoption decisions.

Canadian Participation and Opportunities. Canada plays an important role within the DIANA network. Halifax hosts one of the organization's accelerator sites, while Canadian test centres contribute specialized infrastructure and expertise to the broader Alliance network.[118] These connections provide Canadian firms with access to multinational innovation programs, defence users, investors and testing environments that may otherwise be difficult to access. The distributed nature of the network means that innovators can draw upon expertise and infrastructure located across Allied countries rather than relying solely on local facilities.[119] The network

[117] see NATO. 2026. Innovation and technology adoption, Available at: https://www.nato.int/en/what-we-do/deterrence-and-defence/emerging-and-disruptive-technologies

[118] NATO DIANA. (n.d.). *Accelerator programme*. https://www.diana.nato.int/accelerator-programme.html

[119] Department of National Defence. (2026, March 12). *Canada advances defence innovation through NATO DIANA*. https://www.canada.ca/en/department-national-defence/maple-

of accelerator sites and more than 200 test centres provides Canadian SMEs, researchers and innovation hubs with opportunities to participate in challenge programs, access testing infrastructure and develop relationships with defence partners across the Alliance. These connections can help firms strengthen evidence of performance, refine technologies and explore potential pathways toward Allied adoption and procurement. [120]

Relevance and Limits for Canada. DIANA provides a useful example of how a defence innovation ecosystem can connect regional expertise to national and international defence priorities. Its combination of challenge-based innovation, accelerator programming, testing infrastructure and end-user engagement creates a pathway through which dual-use technologies can be evaluated and refined for military applications. For Southeast Alberta, the principal lesson is the value of connecting regional innovators to broader networks rather than attempting to replicate all capabilities locally. A regional hub could help firms identify relevant DIANA challenges, access Canadian and Allied testing facilities, build partnerships and prepare technologies for evaluation by defence users. The DIANA experience also highlights the importance of linking innovation support with practical pathways toward adoption. While access to accelerators, mentors and test centres can strengthen technology development, successful outcomes ultimately depend on whether innovations meet operational needs and progress toward acquisition decisions within Allied defence organizations.

3.9 CANADA

Canada's defence innovation approach is increasingly focused on turning defence investment into stronger military capabilities and a more resilient domestic industrial base. Regional innovation hubs can contribute to this objective by connecting local expertise, firms and testing infrastructure with national defence priorities, procurement opportunities and supply-chain development.

A Strategic Commitment to Defence Capability and Economic Growth. Canada is strengthening its defence innovation ecosystem through reforms designed to integrate procurement, industrial development, innovation and national security objectives. The Defence Industrial Strategy (DIS), released in 2026, responds to increasing geopolitical competition, technological disruption and growing pressure on domestic defence-industrial capacity. [121] Its policy significance lies in connecting the modernization of the Canadian Armed Forces (CAF) with the development of Canadian technological and industrial capabilities.

As Canada increases defence spending, the strategy seeks to align procurement, industrial capacity, intellectual property development and supply-chain resilience within a more coordinated national framework. It is intended to position Canadian firms

leaf/defence/2026/03/canada-advances-defence-innovation-through-nato-diana.html

[120] Department of National Defence. (2024, March 15). *Canadian test centres and accelerators join NATO DIANA network*. https://www.canada.ca/en/department-national-defence/news/2024/03/canadian-test-centres-and-accelerators-join-nato-diana-network.html

[121] Government of Canada. 2026. Canada's Defence Industrial Strategy, Available at: https://www.canada.ca/content/dam/dnd-mdn/documents/reports/industrial-strategy/defence-industrial-strategy-update-en.pdf

to participate more effectively in defence investment while strengthening capabilities critical to sovereignty, readiness and economic growth. The Government of Canada has identified approximately $180 billion in defence procurement opportunities and $290 billion in defence-related capital investment over the next decade.[122] These investments create significant opportunities for Canadian industry, while increasing the importance of mechanisms that connect regional capabilities with national requirements.

Translating Defence Challenges into Innovation Opportunities. Canada's defence innovation ecosystem combines scientific expertise, challenge-based innovation programs and emerging secure collaboration networks. Defence Research and Development Canada (DRDC) provides scientific and technical expertise to the Department of National Defence and allied partners. Innovation for Defence Excellence and Security (IDEaS) complements this capacity as a major federal defence innovation program.[123]

IDEaS supports innovation through five complementary mechanisms: competitive projects, innovation networks, contests, sandboxes and Test Drives. These mechanisms create opportunities for SMEs, universities, colleges, research organizations and non-traditional suppliers to engage with defence challenges and demonstrate potential solutions. Their different functions support progression from research and technology development to prototype demonstration and readiness assessment.[124]

The policy value of this approach lies in organizing innovation around identified defence needs. It helps connect emerging technologies with operational requirements while generating evidence for testing, evaluation and potential adoption. For regional hubs, these mechanisms provide opportunities to help firms identify relevant challenges, assemble partnerships and prepare for engagement with defence users. Advancement into operational use still requires subsequent capability and acquisition decisions; participation in Test Drives, for example, does not guarantee full-scale procurement.

Building Secure Collaborative Innovation Ecosystems. Canada has also recognized that defence innovation requires secure collaboration among government, industry and academia. Through BOREALIS, with the 2026 call for proposals delivered through IDEaS, the government has introduced Defence Innovation Secure Hubs (DISHs). These hubs provide protected, mission-oriented environments where researchers, firms and government organizations can collaborate on technologies relevant to defence and national security.[125]

DISHs extend support beyond individual innovation projects to the infrastructure and relationships required for collaborative technology development. They are intended to facilitate testing, validation, integration and knowledge sharing through secure facilities and sustained engagement with defence stakeholders and end users. This approach seeks to provide clearer pathways from promising research to defence-relevant capabilities while strengthening domestic innovation capacity, military readiness and

[122] ibid

[123] Department of National Defence. (n.d.). *IDEaS—How it works.* https://www.canada.ca/en/department-national-defence/programs/defence-ideas/how-ideas-works/ideas-how-it-works.html

[124] Department of National Defence. (n.d.). *IDEaS—How it works.* https://www.canada.ca/en/department-national-defence/programs/defence-ideas/how-ideas-works/ideas-how-it-works.html

[125] ibid

sovereignty.[126]
https://www.canada.ca/en/department-national-defence/news/2026/02/government-of-canada-launches-call-for-proposals-to-establish-defence-innovations-secure-hubs-for-quantum-and-uncrewed-system-technologies.html?utm_source=chatgpt.com

For regional hub development, DISHs illustrate the importance of treating security arrangements, specialized infrastructure and end-user access as connected policy requirements. Research funding can support technological progress, but innovators also need environments in which solutions can be developed and evaluated under conditions relevant to defence use.

Leveraging Procurement to Strengthen Canadian Industry. Canada's Industrial and Technological Benefits (ITB) Policy complements innovation programs by linking major eligible defence procurements to domestic economic activity. Under the policy, successful contractors must undertake business activities in Canada equal to 100 percent of the awarded contract value. These obligations are intended to support research and development, technology transfer, supply-chain participation and industrial growth.[127]

The ITB framework also encourages SME participation through Value Proposition requirements. These provisions create incentives for large contractors to work with smaller firms and support their participation in defence supply chains, technology development and research partnerships. This industrial-development role aligns with the DIS's Build-Partner-Buy framework, which seeks to strengthen Canadian participation in major defence projects, domestic intellectual property and industrial capabilities.[128]
The ITB Policy therefore functions as an industrial-policy instrument through which procurement can generate broader economic and technological benefits. **Figure 2 (Appendix B)** illustrates the distribution of ITB activities across Canada's regions. For regional hubs, the practical opportunity is to connect local firms and research institutions with these activities by strengthening supplier readiness, identifying relevant capabilities and developing relationships with prime contractors.

Connecting Regional Defence Innovation Ecosystems. Canada's defence innovation capacity is distributed across regional ecosystems that combine military organizations, research institutions, industry and innovation-support programs. Examples include Calgary's aerospace and dual-use technology ecosystem, the Ottawa Defence Innovation Hub, Halifax's NATO DIANA accelerator, the Centre for Ocean Ventures and Entrepreneurship (COVE), and Alberta's growing concentration of defence and autonomous-systems capabilities.

Southeast Alberta offers a distinct combination of assets through CFB Suffield, DRDC Suffield and regional field-testing, validation and autonomous-systems capabilities. These assets create opportunities for technologies related to autonomous systems, sensors, uncrewed platforms and other dual-use applications. Elsewhere in Alberta, the

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[126] Department of National Defence. (2026). *Defence Innovation Secure Hub (DISH) Industry Day: What We Heard Report.* https://www.canada.ca/en/department-national-defence/programs/borealis/what-we-heard-report.html

[127] Innovation, Science and Economic Development Canada. (2026). *Industrial and Technological Benefits Policy.* https://ised-isde.canada.ca/site/ised/en/procurement-services/defence-and-marine-procurement/industrial-and-technological-benefits-itb/industrial-and-technological-benefits-policy

[128] Innovation, Science and Economic Development Canada. (2026). *Industrial and Technological Benefits Policy.* https://ised-isde.canada.ca/site/ised/en/procurement-services/defence-and-marine-procurement/industrial-and-technological-benefits-itb/industrial-and-technological-benefits-policy

University of Calgary's Space-Defence Technologies Alberta (SDTech AB) program and the University of Alberta's Dual-Use Ecosystem for Future Engineering, National Defence and Sovereignty (DEFENDS) initiative demonstrate additional ways regional research capabilities can contribute to national defence objectives.

Together, these ecosystems illustrate the importance of connecting local strengths with national programs, procurement opportunities and defence users. Canada has an opportunity to coordinate these contributions more effectively through clearer regional roles and stronger connections among innovation actors.

International examples offer relevant policy mechanisms. South Korea's competitive defence cluster program and the Netherlands' ODIN network **(Section 3.1)** demonstrate different approaches to linking regional strengths with national defence priorities. Their relevance lies in coordinated governance, regional specialization and institutional connections that enable local capabilities to contribute to wider defence objectives.

Addressing Gaps Between Innovation, Industrial Development and Adoption. Despite significant reforms, Canada's defence ecosystem continues to face coordination challenges. Historically fragmented procurement processes and limited connections among innovation, procurement and end-user communities have made it difficult for firms to navigate opportunities and transition technologies into operational use. [129]

Integrating regional ecosystems into a coherent national framework remains a related challenge. Research institutions, military organizations, procurement authorities and industry participants frequently operate through separate programs and networks. Firms may therefore struggle to identify a clear pathway from research and development to testing, acquisition and production.

These barriers highlight the importance of implementation alongside policy design. Although the ITB Policy includes SME participation objectives, concerns remain about the extent to which smaller firms secure roles in higher-value activities, including intellectual property creation, advanced research and development, and production. Greater coordination, stronger supplier-development mechanisms and improved technology-transfer arrangements may be necessary to help SMEs capture meaningful, long-term benefits from defence investment.

For regional hubs, this creates a role beyond promoting programs or convening stakeholders. Hubs can help firms understand the requirements at successive stages of development, connect with the appropriate organizations and prepare for the transition from innovation support to industrial participation.

Relevance and Opportunities for Southeast Alberta. Canada's defence innovation ecosystem provides a strong foundation for regional hub development. DRDC contributes scientific expertise, IDEaS creates opportunities to engage with defence challenges, DISHs support secure collaboration, and the ITB Policy links procurement to industrial development. Together, these mechanisms address different stages of the innovation pathway, from concept development to supplier participation.

[129] Guzman, D. 2025. Prime Minister Carney launches new Defence Investment Agency to rebuild, rearm, and reinvest in the Canadian Armed Forces faster, Office of the Prime Minister of Canada, Available at: https://www.pm.gc.ca/en/news/news-releases/2025/10/02/prime-minister-carney-launches-new-defence-investment-agency-rebuild

For Southeast Alberta, the principal opportunity is to position regional assets within this national framework. A regional hub could serve as a formal intermediary connecting DND, DRDC, IDEaS, industry, research institutions, investors, Indigenous communities and SMEs. It could help firms navigate defence programs, identify ITB-related opportunities, access testing facilities, establish research partnerships and engage earlier with defence users.

Building on existing strengths in drones, uncrewed technologies, sensors, space-related applications and autonomous systems would support a distinct regional specialization while complementing national capabilities. Organizing these assets around clearly defined defence priorities could help bridge gaps between technology development, procurement and operational requirements. The hub's contribution would depend on practical access arrangements, sustained partnerships and connections to the organizations responsible for evaluation and acquisition.

Canada's approach combines challenge-based innovation programs, secure collaboration networks, industrial-benefit policies and regional ecosystems within a broader national defence framework. Recent reforms demonstrate a commitment to strengthening domestic industrial capacity, reducing dependence on foreign procurement and expanding Canadian firms' participation in defence investment.
The country has established many of the necessary building blocks for a stronger defence innovation ecosystem. Lessons from allied countries and stakeholder interviews nevertheless indicate that implementation remains a critical challenge. Long-term success will depend on connecting innovation, testing, industrial development and procurement more effectively, while ensuring that regional ecosystems have sustained access to national priorities and decision-makers.

Section 4 – Recommendations

The literature review, jurisdictional analysis, and stakeholder interviews identified a consistent set of challenges affecting the development and effectiveness of defence innovation ecosystems. These challenges centre on:

1. SME Access To Defence Markets
2. The Transition of Technologies from Development to Adoption
3. Coordination Across the Defence Innovation Ecosystem, and
4. Long-Term Sustainability

The following recommendations address barriers within each area and identify practical actions to strengthen the connections, capabilities, and pathways needed for a more effective regional defence innovation ecosystem.

4.1 IMPROVE SME ACCESS TO DEFENCE MARKETS

A resilient and innovative defence industrial base depends on the participation of firms of all sizes. SMEs are particularly important in specialized, emerging, and dual-use technologies, but they often face greater barriers to entering defence markets. The literature, jurisdictional review, and stakeholder interviews identified challenges related to market navigation, security and compliance requirements, long procurement timelines, business readiness, and access to established defence supply chains. The following recommendations focus on two related priorities: improving SME access and readiness for defence markets, and creating stronger pathways for SMEs to participate in defence supply chains.

In addition to these two priorities, Section 4.1.3 addresses procurement, contracting, and access barriers within the defence system itself, which stakeholders identified as limiting SME participation regardless of firm readiness.

4.1.1 Improve Defence Market Access and Readiness

Problem

Defence markets can be difficult for SMEs to navigate. Industry participants reported challenges identifying relevant programs and procurement opportunities. They also described uncertainty about security and regulatory requirements and difficulty finding the appropriate points of contact within the defence ecosystem. [130]

[130] Confidential stakeholder interviews conducted for the Defence Innovation Hub Nexus Project, 2026. Interviews involved 51 participants from industry and SMEs; defence, military, and federal research organizations; and associations, councils, post-secondary institutions,

These challenges become more significant as firms begin preparing for defence opportunities. Defence readiness can require substantial investment in security clearances, cybersecurity, quality assurance, certifications, and supplier registration. The Controlled Goods Program may introduce additional requirements. While these processes serve important national-security and operational purposes, smaller firms may have limited capacity to address them alongside ongoing product development and commercial activities. [131]

The timing of these investments creates a particular challenge for SMEs. Firms may need to hire specialized personnel, purchase equipment, or complete certifications before the viability of an opportunity is clear. Long procurement timelines can extend this period of uncertainty and place additional pressure on firms with limited working capital. As a result, companies may invest too early or decide that the cost and uncertainty of pursuing the defence market are too high.

This risk is greater when firms enter the market without a clear understanding of defence requirements or their own readiness. Stakeholders noted that some companies pursue opportunities before establishing whether their technology addresses a credible customer need or is sufficiently mature. SMEs, therefore, need clearer pathways into the defence market. Early guidance can help firms assess their readiness, understand defence requirements, and make informed decisions before committing significant time and resources.**Error! Bookmark not defined.**

Policy Response

Establish a **recognizable regional entry point for defence-curious companies**. This function could initially be delivered through an existing organization or regional partnership. It would provide SMEs with a clear starting point for navigating the defence market. It could help firms identify relevant opportunities and connect with appropriate programs and organizations. The function would complement, rather than replace, federal procurement, security, or regulatory authorities. [132]

This regional entry point is the central recommendation of this report. Industry participants consistently described difficulty knowing where to start, whom to contact, and which requirements applied to them. A single, recognizable starting point would address this directly and would also serve as the foundation for most other recommendations in this section, including readiness support, supplier introductions, technology triage, and base-access navigation. Section 4.3.1 describes how the entry point would operate as part of a broader regional coordination function, and Section 5.5 sets out when it would be established.

The regional entry point should be supported by a **staged defence-readiness framework**. Support should reflect the maturity of the company and its technology. Early-stage firms may first need to determine whether their technology addresses a credible defence requirement. More mature firms may require support with testing, certification, or supplier registration. Companies that are further advanced may be ready to engage with prime contractors or pursue procurement opportunities.

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and local entities. Findings are reported in aggregate to preserve participant confidentiality.

[131] Confidential stakeholder interviews, 2026

[132] Government of the Netherlands, Defence Strategy for Industry and Innovation 2025–2029 (2025)

A **defence-readiness assessment** could help determine where a company sits along this pathway. The assessment should consider technology and commercial maturity as well as relevant security requirements. It should identify cybersecurity, quality assurance, and certification needs. Intellectual-property considerations and procurement readiness should also be assessed. Where relevant, the process could identify testing requirements, financing needs, and opportunities for dual-use commercialization.

This staged approach would help SMEs identify readiness gaps before committing significant resources. It would also support more informed investment decisions. Firms could determine when additional staff, certifications, testing, or product development are necessary based on their stage of market readiness.

Security and compliance requirements should follow a similar **staged approach where operational and national-security conditions permit**. Firms should not necessarily need to complete every potentially applicable process before the relevance of a defence opportunity has been established. Early engagement could occur through open challenges or capability briefings. Commercial validation and non-sensitive testing could provide additional opportunities to demonstrate relevance. More stringent requirements would apply as firms progress toward sensitive information, controlled technologies, or secure environments. [133]

This approach would not reduce security or compliance standards. Instead, it would align the timing of those requirements with the firm's stage of engagement. This could reduce unnecessary early costs while allowing promising companies to assess defence-market potential before making substantial compliance investments.

Greater **transparency around procurement requirements and timelines** would further strengthen this pathway. SMEs need clearer information about what defence customers require and how technologies may progress toward procurement. Where possible, greater visibility into anticipated timelines would help companies plan investment and manage the financial uncertainty associated with long defence procurement cycles. 133

Dual-use commercialization should provide a complementary pathway. Many emerging technologies have applications in both civilian and defence markets. Commercial markets can provide an earlier route to customers and revenue while defence opportunities continue to develop. This can be particularly important for SMEs navigating lengthy defence procurement cycles. Agriculture offers a relevant example for Southeast Alberta. Technologies developed for precision agriculture, such as drone-based crop monitoring, remote sensing, autonomous vehicles, and ruggedized sensors, share underlying capabilities with defence applications in surveillance, autonomous ground systems, and operations in remote environments. A firm could build revenue and a performance record in agricultural markets while adapting the same technology for defence evaluation.

Commercial revenue can help firms retain skilled personnel and sustain product development. It can also provide evidence of market viability and technology performance. Stronger connections between civilian innovation programs and defence initiatives could help firms build commercial

[133] Confidential stakeholder interviews, 2026

resilience while continuing to pursue defence opportunities. In turn, this would support a stronger and more sustainable Canadian defence industrial base.133 [134] [135]

4.1.2 Strengthen SME Participation in Defence Supply Chains

Problem

Defence readiness alone does not guarantee meaningful participation in defence markets. An SME may have a relevant technology and meet key regulatory requirements but still lack a practical route to customers. Many smaller firms do not have established relationships with prime contractors or major defence suppliers. They may also have limited visibility into upcoming supply-chain requirements. For some firms, securing a direct government contract may not be the most realistic initial pathway into the defence market. [136]

Participation in established defence supply chains can provide an important alternative. SMEs can contribute specialized technologies, niche expertise, and advanced manufacturing capabilities to larger defence programs. Subcontracting and technology partnerships can also provide an entry point. These relationships allow smaller firms to build defence-market experience and demonstrate their capabilities within established programs. Over time, successful participation can position SMEs for larger contracts and more strategic roles. 136 [137]

However, **access to these opportunities is not automatic**. SMEs need to understand where their capabilities fit within a larger defence program and what prime contractors require from potential suppliers. They also need opportunities to demonstrate their capabilities to relevant decision-makers. This requires more than general networking. Broad industry events can build awareness, but they may produce limited commercial value when they are not connected to a specific procurement opportunity or capability requirement.136

The **quality and durability of SME participation are equally important**. Industrial participation policies can generate business opportunities for Canadian firms, but participation does not necessarily translate into long-term capability development. SMEs may remain peripheral suppliers or receive short-term work that provides limited opportunity for technology development and business growth.

Greater strategic value can be created when Canadian SMEs participate in higher-value segments of defence supply chains. This includes research and development and intellectual-property creation. Technology transfer and advanced manufacturing can build specialized domestic capabilities. Longer-term production roles can provide greater certainty and support sustained business growth. These activities can also strengthen Canada's domestic defence industrial capacity by retaining technical expertise and productive capability within the country.136 137

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[134] Innovation, Science and Economic Development Canada, *Canada's National Quantum Strategy* (Ottawa: Government of Canada, 2023), https://ised-isde.canada.ca/site/national-quantum-strategy/en/canadas-national-quantum-strategy

[135] Department of Finance Canada, "Remarks by the Deputy Prime Minister on Securing Canada's AI Advantage," Government of Canada, April 7, 2024, https://www.canada.ca/en/department-finance/news/2024/04/remarks-by-the-deputy-prime-minister-on-securing-canadas-ai-advantage.html

[136] Confidential stakeholder interviews, 2026

[137] Government of Canada. 2026. Industrial and Technological Benefits Policy, Available at: https://ised-isde.canada.ca/site/ised/en/procurement-services/defence-and-marine-procurement/industrial-and-technological-benefits-itb/industrial-and-technological-benefits-policy

The policy challenge is therefore twofold. SMEs need stronger pathways into established defence supply chains, but they also need opportunities to progress toward higher-value and longer-term roles once they enter those supply chains.

Policy Response

Regional defence initiatives should create **structured pathways between SMEs, established defence suppliers, and prime contractors**. These pathways should be connected to identifiable procurement opportunities or capability requirements. The objective should be to move beyond general business networking and create relationships with a credible potential for commercial or technology collaboration. [138] [139]

A structured supplier-development approach could begin by identifying regional companies with capabilities relevant to defence requirements. Firms could then receive support to understand the technical and commercial expectations of prime contractors. Where a credible match exists, regional intermediaries could facilitate targeted introductions to appropriate procurement teams, technology leads, or supply-chain representatives.

Opportunity-specific matchmaking should be prioritized. For example, engagement with a prime contractor could be organized around an identified technology requirement or an anticipated supply-chain need. Capability briefings could allow selected SMEs to demonstrate how their technologies address that requirement. Supplier-development programs could then help promising firms address remaining gaps before pursuing a formal opportunity.

Regional defence industry days could provide a practical vehicle for this approach. Rather than general networking events, these would include pre-arranged, opportunity-specific meetings between SMEs and prime contractors or defence buyers, organized around identified requirements. A coordinated regional presence at national events such as CANSEC could be used in the same way.

Mentorship can provide additional support. Companies with limited defence experience may benefit from guidance on how major defence suppliers assess potential partners. This could include expectations related to quality systems and production capacity. Firms may also need to understand delivery performance and documentation requirements. This type of practical supplier-development support can help SMEs move from general interest in defence toward credible participation in a defence supply chain. [140] 138

A **regional intermediary** could provide the coordination needed to support this pathway. The intermediary could maintain an understanding of regional industrial capabilities and identify firms with potential defence applications. It could also assess whether companies are sufficiently prepared for supplier engagement. Firms that require further development could be directed back to the defence-readiness pathway before being introduced to potential customers. The Netherlands provides a comparable model through its Defence Innovation

[138] Confidential stakeholder interviews, 2026

[139] Government of Canada. 2026. Industrial and Technological Benefits Policy, Available at: https://ised-isde.canada.ca/site/ised/en/procurement-services/defence-and-marine-procurement/industrial-and-technological-benefits-itb/industrial-and-technological-benefits-policy

[140] Government of the Netherlands. 2025. 2025-2029 Defence Strategy for Industry and Innovation, Available from: https://www.defensie.nl/site/binaries/site-content/collections/documents/2025/04/04/defensie-strategie-voor-industrie-en-innovatie-2025-2029/Defence%2BStrategy%2Bfor%2BIndustry%2Band%2BInnovation%2B2025-2029%2BENG%2Bsummary.pdf

Team, helping stakeholders navigate the complexity of defence institutions and their relevant requirements or asks 140. Implementing this in the Canadian context would strengthen the connection between **SME readiness and market access**. The objective should not be to maximize the number of introductions. It should be to improve the quality of those introductions and increase the likelihood that they lead to substantive business relationships.

The **Industrial and Technological Benefits (ITB) Policy** provides an important national mechanism for strengthening Canadian SME participation in major defence procurements. Regional supplier-development efforts should therefore connect SMEs more deliberately with opportunities created through major defence programs and prime-contractor obligations. [141]

Available ITB administrative data show that industrial activity is unevenly distributed across Canada (Table 1). Across credits achieved from 2019 to 2023 and commitments to 2035 from obligations active in 2024, Ontario accounts for 34 percent of ITB industrial activity, Quebec for 31 percent, Western and Northern Canada for 22 percent, and Atlantic Canada for 13 percent. [142] The data do not isolate Alberta or Southeast Alberta, nor do they distinguish SME participation from that of larger firms. They nonetheless show the importance of ensuring that firms outside Canada's largest defence-industrial centres can identify and access ITB opportunities. An early task for the regional coordination function would be to request province- and SME-level ITB data from ISED to establish a baseline for Alberta's participation.

The focus of regional supplier-development efforts, and of ITB implementation more broadly, should extend beyond the volume of business directed to Canadian SMEs. Greater emphasis should be placed on the **strategic value of SME participation**. Opportunities that build Canadian research and development capacity can generate benefits beyond an individual contract. Participation in intellectual-property development and technology transfer can strengthen domestic expertise. Advanced manufacturing and sustained production roles can build capabilities that remain in Canada over the longer term.

This approach could also **encourage deeper relationships between prime contractors and Canadian SMEs**. Rather than engaging smaller firms only as transactional suppliers, major defence programs can provide opportunities for SMEs to become technology partners and specialized subcontractors. Where appropriate, Canadian companies could also be integrated into broader supply chains that extend beyond a single Canadian procurement. This would provide stronger opportunities for business growth and export development.

Intellectual-property considerations should form part of these relationships from the outset. SMEs often derive a significant share of their commercial value from proprietary technologies and specialized knowledge. Participation in a major defence program should therefore provide appropriate mechanisms to protect that value. Where SMEs retain the ability to further develop and commercialize their technologies, defence participation can become a platform for broader growth rather than a single

[141] Government of Canada. 2026. Industrial and Technological Benefits Policy, Available at: https://ised-isde.canada.ca/site/ised/en/procurement-services/defence-and-marine-procurement/industrial-and-technological-benefits-itb/industrial-and-technological-benefits-policy

[142] Innovation, Science and Economic Development Canada, *Disclosure Package: Access to Information Request A-2025-01812* (Ottawa: Government of Canada, 2025): See Appendix B

contractual opportunity. [143] The regional coordination function could support this in three ways: by flagging intellectual-property considerations early through the defence-readiness assessment; by referring firms to IP advisory and funding support available through federal and provincial innovation programs; and by encouraging SMEs to agree on clear IP terms before entering teaming or subcontracting arrangements with prime contractors.

Regional initiatives should also help SMEs understand the different routes available within defence supply chains. Not every firm needs to become a direct government supplier. For some companies, becoming a qualified supplier to an established defence contractor may provide a more achievable pathway. Others may be better positioned as technology partners or specialized subcontractors. Recognizing these different pathways would allow support to reflect the capabilities and ambitions of individual firms. [144]

Finally, performance measurement should focus on **market progression and the depth of SME participation**, rather than the number of firms that attend programs or networking events. Early indicators could include companies assessed for supply-chain readiness and firms connected with relevant prime contractors. Readiness plans and qualified supplier introductions could demonstrate progress toward market participation.

Intermediate measures should examine whether these connections develop into concrete opportunities. Relevant indicators could include supplier qualification and requests for proposals. Bids submitted and technology partnerships could provide further evidence of progression. Longer-term measures should examine contracts secured and participation in major defence programs. Sustained supply-chain relationships and repeat business would provide stronger evidence of lasting impact.

This progression-based approach would provide a clearer measure of whether regional initiatives are helping SMEs move from defence readiness to market entry, and from initial market entry to sustained participation in Canada's defence industrial base.

4.1.3 Reduce Procurement, Contracting, and Access Barriers

Problem

Stakeholders also identified barriers that arise not from SME readiness, but from the administrative processes through which defence organizations engage and contract with suppliers. Although these barriers originate in federal rules and practices rather than regional conditions, they directly affect whether regional firms can participate in defence opportunities.

Base access. Participants described the process for obtaining access to the base as difficult to navigate and slow. Firms delivering services, conducting trials, or supporting research activities may require timely access to secure sites, yet the steps, responsible offices, and expected timelines are not always clear. Access delays can postpone testing and delivery and are particularly costly for small firms working to fixed schedules.

Cybersecurity readiness. Participants noted that many small companies lack the knowledge or internal capacity to meet defence cybersecurity expectations. This gap is becoming more significant as the Canadian Program for Cyber Security Certification (CPCSC) is phased into defence

[143] Confidential stakeholder interviews, 2026

[144] Confidential stakeholder interviews, 2026

contracts, with certification requirements appearing in select National Defence contracts from summer 2026 and higher certification levels introduced gradually from 2027. Without early support, SMEs may be excluded from opportunities for which they are otherwise technically qualified.

Low-dollar purchasing tools. Participants reported that acquisition card limits and the threshold for non-competitive contracting constrain the timely purchase of lower-value goods and services. Acquisition cards serve as a stop-gap for smaller purchases, but spending limits restrict their usefulness. Participants also noted that the $25,000 threshold for contracting without soliciting bids has not kept pace with the effects of inflation and tariffs, so routine purchases such as training increasingly exceed it. The threshold for goods contracts under the Government Contracts Regulations has remained at $25,000 since at least 2006.

Procurement workforce capacity. Participants described significant pressure on procurement specialists, who take several years to train and may each manage 300 to 400 contracts a year. This workload contributes to burnout and turnover. Participants also identified classification and pay differences between procurement positions at the base and at DRDC, which can draw experienced staff away from base-level roles. Turnover means that a contract is not always managed by the same specialist from start to finish, which disrupts continuity and extends timelines.

Fiscal year-end pressure. Vendors repeatedly described pressure created by the end of the federal fiscal year on March 31. Contracts awarded late in the fiscal year can require delivery within a compressed period, regardless of the time reasonably required to complete the work, forcing firms to accept unrealistic delivery schedules or forgo opportunities.

Agreement terms. Participants noted that memoranda of understanding (MOUs) and standing offer agreements (SOAs) are commonly limited to two years. Short terms require frequent renewal, create uncertainty for firms and partners planning investment, and add administrative work to relationships intended to be ongoing.

Taken together, these barriers show that SME participation depends not only on firm readiness and market access, but also on the capacity and flexibility of the procurement system itself.

Policy Response

Streamline base access. DND and base authorities should publish a clear, step-by-step access pathway for industry and research partners, identify a single point of contact, and set indicative processing timelines. Pre-arranged access for approved projects that require repeated entry could reduce recurring delays. The regional coordination function (Section 4.3.1) could help firms prepare complete access requests before submission. These measures should operate within existing security requirements rather than reduce them.

Build SME cybersecurity readiness. Cybersecurity should be incorporated into the staged defence-readiness pathway described in Section 4.1.1. Regional partners could provide awareness sessions, readiness checklists, and referrals to CPCSC guidance, with an emphasis on Level 1 self-assessment for firms entering the market. Federal partners should consider targeted advisory or cost-sharing support for SMEs facing higher certification levels.

Update low-dollar purchasing tools. The federal government should review acquisition card limits and non-competitive contracting thresholds to determine whether they reflect current costs, including the effects of inflation and tariffs, and consider indexing them with periodic review. Any changes should remain consistent with Canada's trade-agreement

obligations and appropriate oversight of non-competitive contracting.

Strengthen procurement workforce capacity. DND should assess procurement specialist workloads, classification, and compensation across base and research-centre roles to reduce turnover and pay disparities. Measures could include workload benchmarks, structured training pathways, and case-management practices that keep a single accountable contact for each contract, or require documented handovers when staff change.

Ease fiscal year-end pressure. Where funds are committed before year-end, contracts should allow reasonable delivery windows beyond March 31, for example 60 to 90 days, where the work requires it. Federal authorities should examine supporting mechanisms such as multi-year funding and carry-forward flexibility, and encourage earlier planning and contract award to reduce the concentration of contracts at year-end.

Extend agreement terms. MOUs and SOAs should be available for longer terms, such as a two-year base period with options to extend by up to three additional years where the defence client requires it, while preserving the Crown's ability to end agreements that are not performing.



4.1.4 Recommended Policy Actions

1.	Improve SME access and readiness by establishing a recognizable regional entry point to help SMEs navigate defence opportunities and connect with relevant programs and partners, supported by a staged defence-readiness pathway that aligns support with company and technology maturity.
2.	Phase security and compliance requirements where operational and national-security conditions permit to reduce unnecessary early investment.
3.	Improve transparency around defence requirements, procurement pathways, and anticipated timelines to support informed SME investment decisions.
4.	Strengthen opportunity-specific connections between SMEs, established defence suppliers, and prime contractors through targeted supplier development and matchmaking.
5.	Use the Industrial and Technological Benefits (ITB) Policy to promote meaningful SME participation in research and development, intellectual-property creation, technology transfer, advanced manufacturing, production, and long-term supply chains.
6.	Support commercial resilience by protecting SME intellectual property and supporting dual-use commercialization, helping SMEs sustain technology development, generate commercial revenue, and grow while navigating longer defence-market timelines.
7.	Streamline base access through a clear access pathway, a single point of contact, and indicative processing timelines, while maintaining existing security requirements.
8.	Build SME cybersecurity readiness by incorporating cybersecurity into the staged defence-readiness pathway and supporting SMEs in preparing for CPCSC requirements.
9.	Update low-dollar purchasing tools by reviewing acquisition card limits and non-competitive contracting thresholds to reflect current costs, with periodic indexation.
10.	Strengthen procurement workforce capacity by addressing workload, classification, and retention, and by maintaining continuity of contract management from award to completion.
11.	Extend agreement terms for MOUs and SOAs through longer base periods with optional extension years.
12.	Ease fiscal year-end pressure by allowing reasonable delivery windows beyond March 31 for contracts where funds are committed before year-end.
13.	Measure SME progression through supplier qualification, partnerships, bids, contracts, and sustained participation in defence supply chains rather than participation in programs alone.

4.2 ACCELERATE TECHNOLOGY TRANSITION AND ADOPTION

A strong defence innovation system must do more than support the development of promising technologies. It must also create effective pathways for those technologies to reach operational users. Research and prototype funding can advance technical development, but technologies must still move through testing, validation, procurement, and operational evaluation. Comparable defence innovation ecosystems use challenge-based programming and demonstration environments to strengthen this transition. Iterative testing and staged procurement provide additional mechanisms for moving technologies toward adoption. [145] [146] [147]

The following recommendations focus on two related priorities: strengthening the connection between technology development and defence requirements and creating clearer pathways from testing and demonstration to operational adoption.

4.2.1 Strengthen Alignment with Defence Requirements and End Users

Problem

A persistent challenge in defence innovation is the **gap between broad strategic priorities and the level of operational detail needed to guide technology development**. Priority areas such as artificial intelligence, autonomy, sensors, cybersecurity, space, and uncrewed systems identify important areas of interest. However, these broad categories do not always indicate which specific capabilities are required, or which operational problems are most urgent.

This creates uncertainty for companies and researchers deciding where to invest limited resources. **Technology development can require substantial investment** before a product is ready for defence evaluation. Without a clear understanding of the underlying defence need, innovators may pursue technologies that align with a broad priority but do not address a sufficiently defined operational requirement. This increases the risk of misalignment between innovation activity and defence demand. [148]

The challenge is particularly significant for SMEs. **Smaller firms generally have less capacity to pursue multiple technology pathways** while waiting for customer requirements to become clearer. They may need to make early decisions about product development, specialized personnel, testing, or financing. Uncertainty about near-term defence priorities can make these decisions more difficult and increase the commercial risk associated with defence innovation. [149]

Limited access to defence end users compounds this problem. Companies reported difficulty obtaining timely feedback on operational requirements. Defence and research participants identified the problem from the opposite direction. Technologies may be presented before they are sufficiently mature or without an adequate understanding of the conditions in which they would be used.

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[145] Government of Canada, *From Innovation to Operational Advantage: Defence Innovation Secure Hubs* (2026)

[146] Tai Ming Cheung, "A Conceptual Framework of Defence Innovation," *Journal of Strategic Studies* 44, no. 6 (2021): 775–801

[147] See Sections 3.1, 3.6, 3.8, and 3.9 of this report concerning IDEaS, NATO DIANA, United Kingdom Defence Innovation, and the Netherlands defence innovation model.

[148] Confidential stakeholder interviews, 2026

[149] Confidential stakeholder interviews, 2026

This disconnect can affect technology development in several ways. A product may perform well technically but fail to address an important operational constraint. Innovators may underestimate integration requirements or the conditions in which the technology must operate. They may also invest in performance improvements that are less important to the end user than other capability requirements.

The result can be a cycle of **misaligned technology development and late-stage feedback**. Companies invest resources before receiving sufficient operational input. Defence users then encounter technologies that may require significant modification before they are suitable for further evaluation. This can increase development time and cost for industry while also creating inefficiencies for defence organizations assessing technologies that are not yet aligned with operational needs.

The lack of operational specificity also makes it more difficult for organizations that support defence innovation. Regional intermediaries and research institutions may receive inquiries from companies without having enough information to determine whether the technology is relevant to an identified defence problem. Funding organizations face a similar challenge when broad priorities encompass a wide range of possible technologies.

Regional organizations also have clear limits to the role they can play. They cannot determine whether a technology meets a defence requirement on behalf of DND or CAF. Without sufficiently clear information about defence needs, however, even an initial assessment of relevance becomes difficult. This can result in unsuitable referrals reaching defence organizations while potentially relevant technologies struggle to identify the appropriate pathway.

Taken together, these findings point to a broader **demand-signalling problem**. Innovators need sufficient information to understand where defence demand exists, while defence organizations need technologies that are mature and relevant enough to warrant further engagement. Weak connections between these two sides of the innovation system can delay technology development and reduce the likelihood that promising innovations progress toward operational use. [150]

Policy Response

Defence organizations should provide **more specific and clearly communicated challenge statements where security and operational conditions permit**. Broad strategic priorities remain important for signalling long-term areas of interest, but they should be complemented by more focused descriptions of operational problems and capability needs. Where possible, challenge statements should identify the problem to be addressed, the capability improvement being sought, and sufficient operational context to guide technology development.

Challenge statements should be led by defence, since DND and the CAF own operational requirements and are best placed to define the problem. They should nonetheless be informed by industry, whose questions and capabilities can show where more detail would be most useful. The regional coordination function would have a defined role in this process: gathering recurring questions from regional firms, convening sessions at which DRDC and CAF representatives present challenges, and using the regional advocacy agenda described in Section 4.4.4 to press for regular publication of

[150] Confidential stakeholder interviews, 2026

challenges relevant to the region's specializations. BOREALIS, whose stated purpose includes focusing federal innovation efforts on mission needs, provides a natural national channel for this engagement. [151]

Greater visibility into **near-term defence priorities** would further strengthen this approach. Companies and researchers often make technology-development decisions well before a formal procurement opportunity emerges. A clearer indication of capabilities that may be important over the next one to two years would support more informed decisions about research, product development, testing, and investment. It would also help funding organizations and regional intermediaries' direct resources toward areas with more clearly established defence demand. [152]

More specific challenge statements should be complemented by **structured and earlier engagement with defence end users**. Challenge briefings, technical exchanges, demonstration days, and mission-focused working sessions could help innovators better understand operational requirements and assess the relevance of their technologies before reaching the final stages of development.

End-user engagement should also be **iterative rather than limited to a single interaction**. Early engagement could help establish whether a technology addresses a relevant operational problem, while subsequent feedback could inform technology refinement, performance requirements, and integration considerations. This would reduce the risk of significant investment in technologies that are poorly aligned with operational needs.

Earlier interaction would also benefit defence organizations by providing greater visibility into emerging technologies without creating an implied procurement commitment. It could help identify technologies that warrant further development while allowing poorly aligned concepts to be redirected earlier in the development process.

Engagement should focus on **defined operational problems rather than general technology promotion**. Broad technology showcases can increase awareness, but mission-focused engagement creates a stronger connection between innovation activity and defence requirements. This would allow technology developers and defence users to focus discussions on specific capability needs and potential applications.152

These mechanisms must protect **national security, intellectual property, and procurement fairness**. Operational information should only be shared at an appropriate level, and engagement should not provide an inappropriate advantage in future competitive procurement. Clear expectations regarding confidentiality and intellectual property would provide additional certainty for participating companies and research organizations.

A **regional technology-triage function** should complement these national and defence-led mechanisms. The purpose of triage would not be to determine whether DND or CAF requires a particular technology. Nor would it provide technical approval or imply a future procurement decision. Instead, it would help determine whether a technology is sufficiently relevant and mature to justify further engagement with the defence innovation system.

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[151] See more on the Borealis program: https://www.canada.ca/en/department-national-defence/programs/borealis.html

[152] Confidential stakeholder interviews, 2026

Technology **triage should consider several dimensions of readiness**. An initial assessment could examine the problem the technology is intended to address and its alignment with an identified defence priority or challenge. It could also consider technology maturity and available evidence of performance. Testing requirements, security considerations, commercial maturity, and potential integration challenges could be identified at this stage. This would provide a more complete picture of whether the technology is ready for defence engagement and what additional development may be required.

The assessment should result in a **defined next step rather than a general referral**. Early-stage technologies may require additional research or commercial validation before defence engagement is appropriate. Some firms may benefit from an applied research partnership to address technical gaps. Others may need access to specialized testing or demonstration infrastructure. More mature technologies could be referred to relevant defence innovation programs, end-user engagement opportunities, or potential procurement pathways.

Regional intermediaries could also **maintain stronger connections with provincial and national innovation programs, research organizations, testing facilities, and defence organizations**. This would allow technologies to be referred beyond the region when the appropriate expertise or program is located elsewhere. The objective should be to connect companies with the most appropriate capability rather than attempting to provide every service within a single regional hub.

A structured triage process would also improve the quality of referrals reaching defence organizations. Rather than forwarding every defence-related technology inquiry, regional intermediaries could help companies establish basic relevance and readiness first. This could reduce poorly aligned approaches while allowing defence organizations to focus limited technical and operational expertise on technologies with a stronger potential fit. [153]

Taken together, clearer demand signals, earlier end-user engagement, and structured technology triage would create a more deliberate connection between defence requirements and technology development. Innovators would have better information for directing investment and refining technologies. Regional intermediaries would be better positioned to identify appropriate pathways. Defence organizations would receive more mature and relevant technologies for consideration. The result would be a more efficient pathway from an identified defence problem to technology development, evaluation, and potential operational use.

4.2.2 Strengthen Testing and Technology-Transition Pathways

Problem

A major challenge occurs after a technology has demonstrated initial technical promise. Stakeholders identified a persistent gap between successful research or prototype development and operational adoption. A technology may perform well in an initial demonstration but still lack a clear route to operational evaluation, follow-on funding, or procurement.

This gap reflects the **fragmented structure of the technology-transition process**. Research, testing, validation, and procurement may be administered through different organizations and programs with different requirements and decision-making

[153] Confidential stakeholder interviews, 2026

processes. Successful completion of one stage, therefore, does not necessarily provide a pathway into the next.

This fragmentation is particularly challenging for **SMEs and emerging technology companies**. Firms may need to secure new funding, partners, or programs as technologies progress. Changing technical requirements, security conditions, and evaluation criteria can consume resources and disrupt development momentum.

The challenge is greater when responsibility for **technology transition is unclear**. A research or innovation program may end after a successful prototype or demonstration, while further engineering, testing, validation, or integration is still required. Without a clear next-stage pathway, firms may be left to finance and manage these activities themselves.

This creates a **funding and commercialization gap between demonstration and adoption**. Technologies can require significant additional investment before they are ready for operational use. Products may need to be adapted for defence environments, integrated with existing systems, or undergo further engineering, certification, and security work. For SMEs, continued investment without a predictable next step can increase commercial risk and cause promising technologies to lose momentum.[154] [155]

Access to testing and demonstration infrastructure creates another barrier. Companies may not know which facilities can accommodate their technology or how to access them. Eligibility, cost, availability, regulatory conditions, and security requirements may also be unclear. Testing capabilities may also be distributed across different organizations and regions. Technologies can require laboratory testing at one stage and specialized infrastructure or operationally relevant environments at another. The challenge is therefore not simply whether testing facilities exist, but whether innovators can access the **right capability at the right stage of development**.

The **timing and nature of testing** are equally important. Testing late in development may identify problems when they are more expensive to correct. Technologies that perform successfully under controlled conditions may encounter technical, environmental, or integration challenges in realistic operating environments. Limited opportunities for repeated testing can restrict technology refinement and validation.

A further gap exists between successful testing and procurement. Demonstrating that a technology works does not necessarily establish operational readiness. Defence users may require stronger evidence of reliability, operational performance, and integration with existing systems before supporting a larger procurement decision.

[154] Confidential stakeholder interviews, 2026

[155] Government of Canada, *From Innovation to Operational Advantage: Defence Innovation Secure Hubs*; Cheung, "A Conceptual Framework of Defence Innovation."

This creates a critical transition point between prototype and procurement. Innovators may have demonstrated technical feasibility, while defence organizations still require evidence of operational utility and reduced implementation risk. Without effective mechanisms for intermediate evaluation, promising technologies can remain caught between successful demonstration and formal procurement. [156] [157]

The cumulative effect is a **technology-transition gap**. The challenge is not necessarily a lack of innovation activity, but the absence of sufficiently connected pathways between development, testing, operational evaluation, procurement, and adoption.

Policy Response

Establish **clearer technology-transition pathways from research to operational evaluation and procurement**. Innovation programs should identify a defined next step before projects conclude, based on technology maturity, operational relevance, and remaining development needs. Depending on the stage of development, technologies could progress into follow-on research, applied research partnerships, specialized testing, IDEaS Sandboxes, Test Drives, technology demonstrations, field trials, operational evaluations, or pilot procurement. More mature technologies could move into Buy and Try or similar small-scale procurement mechanisms, allowing defence users to evaluate technologies before larger acquisition decisions. Successful demonstrations should therefore lead to a defined next-stage decision rather than becoming the endpoint of an innovation project. [158] 156

Responsibility for these pathways should be clear. Decisions about funding, evaluation, and procurement remain with the programs and authorities that hold them, such as IDEaS, BOREALIS, DRDC, and the relevant procurement authority. The regional coordination function's role would be to agree on a next step with each regional firm at the outset of a project, track progress against it, and connect the firm with the organization responsible for the following stage. Each technology would then have a named point of follow-up rather than leaving firms to find the next stage on their own.

For these pathways to function effectively, they must also address the **funding gap between demonstration and operational readiness**. Technologies that successfully complete an initial research or demonstration project may still require engineering, integration, certification, security work, or operational validation before they can progress. Follow-on funding, milestone-based funding, and continuation mechanisms for successful projects could support these transition activities when defined technical and operational criteria are met. Linking funding more closely to demonstrated progress would reduce the need for firms to repeatedly restart the funding process and help promising technologies maintain momentum toward operational use.156 [159]

A stronger transition pathway also requires coordinated **access to testing and demonstration infrastructure**. Regional and national testing assets should be mapped by capability, eligibility, cost, availability, security requirements, and access conditions. Regional intermediaries could provide testing referrals and navigation support, helping firms

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[156] Confidential stakeholder interviews, 2026

[157] See also Sections 3.8 and 3.9 of this report concerning IDEaS testing mechanisms and NATO DIANA's accelerator and test-centre network.

[158] See Section 3.1 of this report concerning the Innovation for Defence Excellence and Security program, including Sandboxes and Test Drives

[159] see Sections 3.2, 3.3, 3.7, and 3.8 of this report concerning staged innovation support and transition mechanisms in NATO DIANA, the United States, the United Kingdom, and the Netherlands.

identify the appropriate facility as their technologies progress. This would create a more deliberate testing pathway from laboratory validation and controlled testing to specialized demonstrations, field trials, and operationally relevant environments.

Within this approach, regional ecosystems should **leverage existing infrastructure before investing in new specialized facilities**. Not every region needs to replicate every testing capability. Regional intermediaries should identify local assets and connect firms with specialized capabilities elsewhere in Alberta or Canada when required. Shared-use agreements, interregional referrals, research partnerships, and formal access arrangements could expand access to existing infrastructure and expertise. New facilities should be considered where sustained demand demonstrates a clear capability gap that cannot reasonably be addressed through existing assets. [160]

Access to infrastructure should be accompanied by **iterative testing and development rather than testing only as a final evaluation**. Firms should be able to test technologies, receive technical and end-user feedback, make refinements, and return for further evaluation where appropriate. Mechanisms such as IDEaS Sandboxes, Test Drives, demonstration programs, and field trials can provide progressively more realistic forms of validation as technologies mature. This approach would identify technical and integration challenges earlier while generating stronger evidence of reliability, performance, and operational utility. [161] [162]

As technologies demonstrate stronger technical and operational performance, the pathway must provide a **bridge between successful testing and procurement**. Buy and Try, small-scale pilot procurements, field evaluations, and larger operational trials can provide this intermediate step, allowing defence organizations to evaluate promising technologies without immediately committing to large-scale acquisition. These mechanisms can reduce risk for both innovators and defence organizations by generating operational evidence before larger investment and procurement decisions are made.161 162

Successful pilots should then lead to a **defined progression decision** rather than another gap in the transition process. Depending on the evidence generated, the next step could involve further development, follow-on funding, expanded operational evaluation, a larger trial, or progression toward an appropriate procurement pathway. This would make testing and pilot procurement part of a continuous transition process rather than a series of disconnected innovation activities.162

Together, these mechanisms would create a **staged technology-transition pathway** from research and development through testing, refinement, operational validation, pilot procurement, and potential adoption. The objective is not simply to support more innovation projects, but to ensure that technologies demonstrating technical and operational value have a credible route forward and do not lose momentum between disconnected programs.

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[160] See Sections 2.4.2 and 2.4.6 of this report concerning coordination of existing capabilities and investment according to demonstrated need; confidential stakeholder interviews, 2026

[161] See Section 3.9 of this report concerning IDEaS Sandboxes and Test Drives

[162] Confidential stakeholder interviews, 2026

4.2.3 Recommended Policy Actions

14.	Translate broad defence priorities into specific operational challenges and near-term capability needs.
15.	Improve visibility into near-term defence priorities to better align technology development and investment with defence demand.
16.	Establish earlier and iterative engagement between innovators and defence end users while protecting security, intellectual property, and procurement fairness.
17.	Establish regional technology triage to assess relevance, maturity, readiness, and appropriate next steps.
18.	Create connected technology-transition pathways from research and demonstration through operational evaluation and procurement.
19.	Coordinate access to regional and national testing infrastructure and prioritize existing capabilities before investing in new facilities.
20.	Provide staged and follow-on funding to support promising technologies through the transition to operational readiness.
21.	Support iterative testing and progressively realistic validation as technologies mature.
22.	Strengthen pathways from successful testing and demonstration to pilot procurement, operational evaluation, and adoption.
23.	Strengthen connections among regional intermediaries, defence organizations, research institutions, testing facilities, and innovation programs.
24.	Measure technology progression toward procurement and operational adoption rather than program activity alone.



4.3 STRENGTHEN REGIONAL ECOSYSTEM COORDINATION

A strong regional defence innovation ecosystem requires more than a concentration of assets. Regional capabilities create greater value when organizations are connected and can collaborate around shared priorities and opportunities. Proximity can support these relationships, but effective coordination is needed to translate regional strengths into practical outcomes. [163]

The jurisdictional review shows that successful ecosystems tend to build on established regional strengths and areas of specialization rather than attempting to support every area of defence innovation. The following recommendations, therefore, focus on establishing a clear regional coordination function and strengthening collaboration around demonstrated regional capabilities and defined missions. [164]

4.3.1 Establish a Recognizable Regional Coordination Function

Problem

Regional defence innovation ecosystems often include a range of relevant organizations and capabilities, but these assets may operate through separate institutional networks, mandates, and access processes. Geographic proximity does not necessarily create coordination. Without a recognizable coordination function, the ecosystem can remain a collection of individual organizations rather than an integrated network.

A central challenge is **fragmented information and access**. Companies may have limited visibility into available research expertise, testing infrastructure, specialized facilities, workforce programs, funding support, or defence-market services. Even when appropriate capabilities exist, it may be unclear which organization to approach, who the relevant contact is, or what requirements must be met to access the resource.

This creates a particular **barrier for SMEs and organizations without established defence relationships.** Navigating the ecosystem may depend heavily on personal networks and prior knowledge. Firms can spend significant time approaching multiple organizations before reaching the appropriate partner. External defence, industry, or research organizations may face similar difficulties when trying to identify regional capabilities or potential collaborators.

Fragmentation also creates **challenges between organizations within the ecosystem**. Organizations may have limited awareness of complementary capabilities held by other partners. Similar inquiries may be handled independently, outreach activities may be duplicated, and opportunities requiring multiple capabilities may not have a clear organization responsible for bringing the necessary partners together.

The problem becomes more significant when an opportunity crosses institutional boundaries. A technology project may require research expertise, testing infrastructure, industry participation, workforce support, and connections to defence organizations. No single organization may hold all of these capabilities or have a mandate to coordinate the complete pathway. As a result, potentially valuable opportunities can stall between

[163] World Economic Forum. 2026. Intelligent Industrial Ecosystems: Turning Proximity into Intelligence, August 2026.

[164] See the NATO DIANA, South Australian, and Netherlands models examined in Sections 3.1, 3.3, and 3.8 of this report.

organizations even when the required capabilities exist within the broader ecosystem. [165]

This fragmentation can ultimately reduce the **collective value of regional assets**. The challenge is therefore not simply whether a region possesses relevant capabilities, but whether those capabilities can be identified, accessed, connected, and mobilized around specific defence innovation opportunities. [166]

Policy Response

Establish a **dedicated regional ecosystem connector or defence liaison** that provides a recognizable point of access to the defence innovation ecosystem. The function should simplify navigation and strengthen connections among existing organizations rather than create another layer of administration. The liaison would operate at two levels. Locally, it would work with DRDC Suffield Research Centre on research partnerships and access to testing, and with CFB Suffield on base access, range scheduling, and local procurement. Nationally, it would maintain working relationships with the organizations that set demand, fund innovation, and control procurement, including IDEaS, the BOREALIS Joint Program Office within DRDC, the Defence Investment Agency for procurements valued at $100 million and above, and PSPC's Industrial Security Program [167]. The liaison would not represent DND or the CAF, but it would give regional firms a reliable route to the right office at each level.

The **connector would serve as a regional front door** for companies and external partners. It could receive initial inquiries, identify the type of support required, and connect organizations with the appropriate regional or external partner. For example, a company seeking to test a technology could be directed to an appropriate testing facility, while a firm requiring applied research support could be connected with a post-secondary or research partner. Where several capabilities are required, the connector could coordinate referrals across multiple organizations.

This referral role should extend to a **convening function for multi-partner opportunities**. Defence challenges, technology demonstrations, research projects, and supply-chain opportunities may require expertise from several organizations. The connector could bring together the appropriate industry, research, testing, workforce, and economic development partners around a defined opportunity, rather than requiring companies to establish these relationships independently. [168]

For this model to work, **clear ownership and responsibilities are essential**. One organization should be accountable for the coordination function, including receiving inquiries, maintaining regional information, and coordinating referrals. Participating organizations should identify appropriate internal points of contact and establish simple referral protocols. This would provide continuity, reduce duplication, and prevent inquiries from circulating between organizations without resolution. [169]

The coordination function should **not create another approval process or duplicate existing mandates**. Technical decisions should remain with technical

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[165] Confidential stakeholder interviews, 2026

[166] World Economic Forum, *Intelligent Industrial Ecosystems*.

[167] For more info see: https://www.canada.ca/en/public-services-procurement/services/acquisitions/defence-marine/procurement-strategy.html

[168] See the NATO DIANA, South Australian, and Netherlands models examined in Sections 3.1, 3.3, and 3.8 of this report; confidential stakeholder interviews, 2026.

[169] Confidential stakeholder interviews, 2026

organizations. Defence requirements should remain with DND and CAF, while funding and procurement decisions should remain with the responsible authorities. The connector's role should be to navigate, connect, and convene, not to assume the responsibilities of existing organizations.

This regional coordination function would also serve as the regional entry point described in Section 4.1.1, the supplier-development intermediary described in Section 4.1.2, and the technology-triage function described in Section 4.2.1. These roles are presented separately to describe distinct services, not separate organizations.

A **regional capability map** should provide the information base for this coordination function. It should identify research expertise, testing and demonstration assets, manufacturing capabilities, specialized services, workforce and training programs, relevant facilities, and industry capabilities. Rather than functioning as a static directory, it should be maintained as an operational resource that supports referrals, partnership development, and identification of capability gaps.

The capability map should also explain **how regional assets can be accessed**. Some capabilities may be publicly available, while others may require commercial agreements, research partnerships, security approvals, or specific eligibility conditions. Including access requirements and appropriate points of contact would allow the connector to make more effective referrals and provide companies and external partners with a clearer understanding of available pathways. 169

Finally, the coordination function should connect the region with **provincial and national defence innovation networks**. Not every capability needs to exist locally. Where appropriate expertise, infrastructure, programs, or partners are located elsewhere, the connector should facilitate access beyond the region. This would position the hub as an effective entry point into the wider defence innovation ecosystem, while allowing the region to concentrate its resources on capabilities where it has demonstrated strengths. [170]

4.3.2 Build Collaboration Around Regional Strengths and Defined Missions

Problem

Regional defence innovation ecosystems can lose focus when collaboration becomes too broad. General networking and ecosystem-building activities can strengthen relationships and awareness, but these activities do not necessarily translate into technology development, procurement, investment, or business growth. Organizations may participate in the same regional network without developing sustained collaboration around specific defence opportunities.

This challenge is particularly significant in **smaller and semi-urban regions with limited institutional and financial capacity**. Specialized infrastructure, technical expertise, workforce development, and business-support services require sustained investment. Attempting to build capacity across too many areas can disperse resources and make it difficult to achieve sufficient depth in areas where the region has a genuine advantage.

Broad positioning can also weaken a region's **value proposition within the wider defence ecosystem**. A region that presents itself as capable across many areas of defence innovation may struggle to

[170] See the NATO DIANA, South Australian, and Netherlands models examined in Sections 3.2, 3.4, and 3.8 of this report.

demonstrate where it offers distinctive expertise, infrastructure, or operating conditions. Without credible areas of specialization, it can be more difficult for defence organizations, companies, researchers, and investors to understand why they should engage with the region.

The challenge is therefore not only identifying regional assets but understanding how those assets reinforce one another. Defence infrastructure, industry capabilities, research expertise, testing environments, manufacturing capacity, and workforce skills may each provide value independently. Their strategic value is greater where several capabilities intersect around a common technology area, operational requirement, or industrial opportunity.

A further challenge is the difference between having regional assets and mobilizing them around outcomes. A testing facility, research institution, manufacturer, and defence organization may exist within the same region without routinely working together. Organizational mandates, priorities, and timelines may differ. Opportunities that require several capabilities can therefore be difficult to advance even when the necessary assets exist locally.

This can result in **fragmented regional development**. Research projects may remain disconnected from industry opportunities. Testing capabilities may not generate corresponding business or investment activity. Workforce initiatives may not align with emerging industry requirements. Economic-development efforts may promote regional capabilities without sufficient connection to defence demand or technology-development pathways.

The result is an ecosystem with significant individual assets but limited collective specialization and market visibility. The central challenge is to translate regional capabilities into areas of sufficient depth, connectivity, and relevance to generate sustained defence innovation and economic activity. [171] [172] [173]

Policy Response

Regional collaboration should be organized around **defined missions and demonstrated capabilities**. Rather than establishing broad partnerships without a specific purpose, collaboration should begin with a clearly identified defence challenge, technology opportunity, supply-chain requirement, research need, or workforce priority. Each initiative should have defined objectives, participating organizations, responsibilities, and expected outcomes.

Use **mission-focused working groups** to mobilize the required capabilities around these opportunities. A working group could support a technology demonstration or applied research project and conclude when the objective has been achieved. Other groups could respond to a supply-chain opportunity, workforce requirement, infrastructure need, or major funding call. This creates a flexible model in which partnerships are formed around execution rather than permanent committee structures. 173

Regional priorities should be grounded in **demonstrated areas of specialization**. Capability mapping and stakeholder engagement can identify where defence infrastructure, industry, research expertise, testing environments, manufacturing capacity, and workforce strengths intersect. These areas can then provide the basis for targeted

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[171] World Economic Forum, *Intelligent Industrial Ecosystems*.

[172] Confidential stakeholder interviews, 2026

[173] See also Section 3 of this report.

research, business development, infrastructure, workforce, and investment activities. 173

Regional development should also prioritize the **growth and diversification of existing firms**. Companies already operating in Southeast Alberta provide an established base of technical capability, employment, infrastructure, and commercial experience. Firms with defence-relevant capabilities can be supported in identifying defence applications, establishing research partnerships, accessing testing, strengthening defence readiness, and entering defence supply chains. This builds defence capacity from an existing industrial foundation. 172

Business attraction should complement the development of existing firms. Targeted attraction should focus on companies that strengthen established areas of specialization, fill identified capability gaps or add complementary technologies and services. This creates a stronger basis for investment attraction than attempting to recruit companies across unrelated areas of defence innovation.

Regional positioning should reinforce this specialization. **External messaging should be based on validated capabilities and a clear regional value proposition.** It should identify what the region does particularly well, the assets that support those capabilities, and how companies and partners can access them. It should also demonstrate how regional strengths connect with complementary capabilities elsewhere in Alberta and Canada. [174]

Government engagement should be aligned with the same priorities. **Municipal, provincial, and federal engagement should be organized around specific opportunities and demonstrated needs.** Infrastructure requests should be linked to identified capability gaps or sustained demand. Workforce investments should respond to demonstrated industry requirements. Research and innovation funding should reinforce areas where regional capabilities and defence demand intersect. This creates a stronger basis for public investment than broad requests for defence-sector support. 174 [175]

Finally, performance measurement should focus on **outcomes rather than networking activity alone**. Early measures can track qualified referrals, joint projects, partnerships, and use of regional assets. Longer-term measures should examine collaborative technology development, defence supply-chain participation, growth and diversification of existing firms, new investment, and repeated use of regional capabilities. The objective is to determine whether regional coordination is creating deeper specialization, stronger industry participation, and sustained defence innovation activity.

[174] See also Section 3 of this report.

[175] Confidential stakeholder interviews, 2026

4.3.3 Recommended Policy Actions

25.	Establish a recognizable regional coordination function to connect organizations, capabilities, and opportunities.
26.	Define clear ownership, points of contact, and referral pathways across participating organizations.
27.	Develop and maintain a regional capability map that identifies available assets and access requirements.
28.	Connect regional firms and organizations with complementary capabilities and defence innovation networks across Alberta and Canada.
29.	Organize regional collaboration around defined missions, demonstrated capabilities, and specific opportunities.
30.	Prioritize areas of regional specialization and support the growth and diversification of existing firms.
31.	Align business attraction, government engagement, and investment with demonstrated regional strengths and capability gaps.
32.	Measure practical outcomes, including joint projects, use of regional assets, industry growth, investment, and defence supply-chain participation.

4.4 BUILD LONG-TERM SUSTAINABILITY

A defence innovation ecosystem requires sustained institutional capacity beyond individual projects or funding cycles. Long-term viability depends on governance, financial capacity, specialized talent, and connections to wider defence and innovation networks.

These considerations are particularly important in smaller urban and rural regions, where organizations may have fewer specialized staff, smaller operating budgets, and less capacity to absorb the cost of new programs or infrastructure. The following recommendations focus on sustainable governance, diversified funding, workforce capacity, and national connections.

4.4.1 Establish Sustainable Governance and Institutional Capacity

Problem

Defence innovation initiatives are often established through **time-limited projects, grants, or individual partnerships**. These mechanisms can generate early activity and demonstrate regional potential, but they do not necessarily create the institutional capacity required to sustain an ecosystem over time. When project funding ends, dedicated staff positions, coordination functions, industry relationships, and specialized programming may also end.

This creates a particular challenge for activities that depend on continuity and institutional knowledge. Relationships with defence organizations, industry partners, research institutions, and funding agencies often develop over several years. Knowledge of procurement pathways, regional capabilities, security requirements, testing resources, and partner networks also accumulates over time. Frequent changes in personnel or organizational responsibility can weaken these relationships and require new staff to repeatedly rebuild knowledge and networks.

Dependence on a single organization creates another form of institutional risk. Defence innovation can involve economic development, applied research, industry support, workforce development, testing, commercialization, and defence engagement. These functions may cross several organizational mandates. A single organization may have the capacity to lead an initiative initially, but may not have the mandate, expertise, or financial resources to sustain every function as the activity expands.

Dependence on individual champions creates similar vulnerability. Strong leaders can establish partnerships, attract resources, and generate momentum. However, when relationships and institutional knowledge are concentrated in particular individuals, staff turnover or changing organizational priorities can disrupt the initiative. Informal arrangements may work during early development but become increasingly difficult to sustain as the number of partners, projects, and responsibilities grows.

Governance requirements can also change as an ecosystem matures. An initiative coordinating a small number of referrals and partnerships requires relatively limited administration. A larger initiative managing staff, funding agreements, shared facilities, intellectual property, security requirements, or significant infrastructure creates substantially greater financial, legal, and operational responsibilities. A governance model that works at one stage may therefore become inadequate at another.

The underlying challenge is to **create institutional continuity** without introducing unnecessary administrative complexity. Governance must be sufficiently stable to preserve relationships, knowledge, and accountability while remaining

proportionate to the scale and functions of the ecosystem. [176] [177]

Policy Response

Governance should **evolve with demonstrated demand and operational complexity**. During early development, an existing organization could serve as the accountable lead within a defined partnership structure. Roles should be established for ecosystem coordination, industry engagement, defence relationships, financial oversight, and reporting.

Use **formal partnership mechanisms** to create continuity beyond individual relationships. Memoranda of understanding, partnership agreements, terms of reference, referral protocols, and documented decision-making processes can clarify responsibilities without immediately requiring a new organization. Key functions should be assigned to institutions rather than individual staff members.

A **staged governance model** should allow the structure to change as activity grows. An existing organizational home may be appropriate when the initiative primarily coordinates partnerships and services. A more formal consortium or shared-governance structure may become appropriate when several organizations contribute significant resources. A separate legal entity should be considered only when the scale of staffing, financial management, liability, contracting, security, or facility management justifies it. 177

Institutional knowledge should also be deliberately retained. **Documented processes, relationship records, capability information, partnership agreements, and succession planning** can reduce disruption when staff change. Responsibility for key external relationships should be formally assigned, with organizational contacts established where possible.

Governance should also include **regular review points**. The model could be reviewed against indicators such as project volume, staffing requirements, partner participation, revenue, infrastructure responsibilities, and demand for services. This would allow governance to evolve in response to actual activity rather than creating a complex structure before it is required.

Initial implementation should proceed through a two-year pilot with defined responsibilities, milestones, and outcomes, including time from innovation to trial, technologies tested, follow-on procurement and investment, and supplier readiness. Evidence from the pilot should guide subsequent decisions concerning governance, staffing, secure space, and infrastructure.

4.4.2 Develop a Diversified and Scalable Funding Model

Problem

Long-term dependence on a **single grant, contribution agreement, or institutional partner** creates financial vulnerability. Project funding is typically designed to deliver defined activities over a fixed period. It may support research, demonstrations, events, or infrastructure development, but it does not necessarily provide stable funding for ongoing ecosystem coordination, specialized staff, partnership development, or business-support functions.

This creates a mismatch between **short funding cycles and long ecosystem-development timelines**. Building defence relationships,

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[176] Tai Ming Cheung, "A Conceptual Framework of Defence Innovation," *Journal of Strategic Studies* 44, no. 6 (2021): 775–801

[177] Confidential stakeholder interviews, 2026

developing industry readiness, establishing research partnerships, and moving technologies toward procurement can take several years. Organizations may therefore need to maintain capabilities between individual projects even when dedicated project funding is unavailable.

The challenge is greater for smaller regions because participating organizations may have **limited capacity to absorb operating costs**. Maintaining specialized personnel, secure systems, technical expertise, testing services, or dedicated facilities can require substantial recurring expenditure. If these costs are absorbed by one institution, the initiative can become vulnerable to changes in organizational budgets or priorities.

Specialized infrastructure presents an additional financial risk. Secure collaboration environments, laboratories, testing facilities, specialized equipment, and technical staff can require significant capital investment and continuing operating costs. Infrastructure may appear strategically valuable but remain financially underused if actual industry or defence demand is insufficient.

Revenue generation also presents limitations. Some ecosystem services create broad public or regional benefits but do not generate an obvious commercial transaction. Companies, particularly SMEs, may be reluctant or unable to pay significant fees for initial navigation or referrals. Conversely, highly specialized technical or commercial services may provide sufficient private benefit to justify direct charges.

The financial challenge is therefore not simply securing more funding. It is creating a model capable of supporting core ecosystem functions while scaling specialized expenditures with demonstrated demand. [178]

Policy Response

Develop a **diversified funding model** that combines funding sources according to the function being supported. Public investment can support core ecosystem functions that generate broad regional or national benefits. Federal and provincial programs can support defined innovation, research, workforce, infrastructure, or commercialization initiatives. Regional institutions can contribute where activities advance shared economic-development objectives.

Potential sources include federal programs such as IDEaS, BOREALIS, NRC IRAP, and PrairiesCan; Budget 2025 measures under the Defence Industrial Strategy, including $656.9 million over five years for dual-use technology development and a $1 billion Defence and Security Business Mobilization Program at BDC, providing loans and investment for defence and security SMEs [179]; provincial support through Alberta Innovates and venture funding through Alberta Enterprise Corporation; and allied mechanisms such as NATO DIANA challenges and the NATO Innovation Fund [180], which Canada has entered negotiations to join. Each source serves a different function, reinforcing the need to match funding to the activity being supported.

Use **project-based funding and research agreements** for defined technology and research activities. Applied research agreements, collaborative R&D projects, demonstration projects, and industry-sponsored research can bring external

[178] Confidential stakeholder interviews, 2026

[179] For more information: https://www.bdc.ca/en/about/mediaroom/news-releases/bdc-allocates-1-billion-under-defence-platform-to-strengthen-canada-defence-investment-ecosystem

[180] For more information: https://www.pm.gc.ca/en/news/backgrounders/2026/07/08/prime-minister-carney-secures-new-defence-partnerships-2026-nato

resources into the ecosystem while connecting funding directly to identifiable outcomes.

Introduce **industry contributions and fee-for-service mechanisms** where a clear commercial benefit exists. Customized research, specialized training, project management, technical testing, secure facility access, or specialized advisory services may support partial or full cost recovery. Membership or sponsorship models could also support specialized programming where industry demand is sufficiently established.

At the same time, **core navigation and initial referral services should remain broadly accessible**. Firms should not face a new financial barrier simply to identify appropriate defence programs, partners, facilities, or support. Cost recovery should focus on specialized services rather than basic ecosystem access.

Use **phased investment thresholds** for new staffing, programs, equipment, and infrastructure. Expansion should be linked to evidence such as sustained utilization, recurring industry demand, committed partners, external funding, or identifiable defence requirements. This creates a practical decision point between maintaining an existing capability and making a larger investment.

Existing infrastructure should be used before new infrastructure is developed. **Shared-use agreements, institutional partnerships, interregional referrals, and access agreements** can provide lower-cost access to specialized capabilities elsewhere in Alberta or Canada. New infrastructure should proceed where a persistent capability gap and sufficient demand justify both the capital investment and ongoing operating costs. [181] [182]

4.4.3 Strengthen Workforce Capacity and National Connections

Problem

Long-term ecosystem sustainability depends on reliable access to **specialized technical and professional talent.** Stakeholders identified shortages in engineering, technical occupations, manufacturing, and skilled trades. These constraints can limit companies' ability to expand production, undertake specialized technical work, or pursue new defence opportunities.

The challenge can be greater in **smaller urban and rural regions**, where specialized labour pools are smaller and attracting and retaining experienced workers can be difficult. At the same time, not every specialized skill requirement can support a dedicated local training program. Creating programs without sufficient long-term demand can result in underused capacity.

Regional ecosystems also cannot maintain every type of expertise, training, research capability, or testing infrastructure locally. Limited connections outside the region can restrict access to specialized capabilities and reduce opportunities for collaboration, referrals, and participation in larger defence initiatives.

The challenge is therefore to maintain sufficient local workforce capacity in areas of regional strength while remaining connected to specialized expertise and capabilities elsewhere.

[181] See also Section 3 of this report.

[182] Confidential stakeholder interviews, 2026

Policy Response

Workforce development should be **demand-driven and aligned with regional specialization**. Regional partners should regularly identify the occupations, technical competencies, and emerging skills that are constraining defence-related business growth. A **regional defence workforce needs assessment**, informed by employers and updated periodically, could provide the evidence base for training and workforce investment.

Training responses should then be matched to the **scale and duration of demonstrated demand**. Post-secondary institutions can use work-integrated learning, applied research placements, targeted credentials, micro-credentials, and industry-informed training to respond to identified needs. Employers should be directly involved in defining competencies and providing practical learning opportunities so that training remains connected to actual workforce requirements.

Where demand is too specialized to sustain local programming, the region should use **shared training and interinstitutional partnerships rather than duplicate existing capacity**. Agreements with institutions elsewhere in Alberta and Canada could provide access to specialized courses, technical expertise, instructors, and training facilities while allowing local institutions to concentrate resources in areas of regional strength.

Workforce development should also be connected to a **broader national network of defence capabilities**. Formal referral relationships, joint research projects, shared testing arrangements, collaborative funding proposals, and cross-regional industry partnerships can connect regional firms with expertise and infrastructure unavailable locally. This would allow companies to access specialized capabilities without requiring every resource to be developed within the region.

These mechanisms should ultimately support **business growth and regional specialization**. Workforce investment should be assessed by whether it helps firms expand, develop new capabilities, participate in defence supply chains, and pursue larger research and commercial opportunities. The objective is not to build every capability locally, but to develop sufficient depth in areas of regional strength while creating reliable pathways to specialized expertise elsewhere. [183] [184]

Attracting and retaining specialized talent will also require deliberate effort. Regional partners could connect transitioning CAF members and their families at CFB Suffield with local defence-sector employers; retain graduates through work-integrated learning and applied research placements that lead to local employment; help employers sponsor security clearances for new hires; promote the region's cost of living and quality of life in recruitment; and use hybrid arrangements with partners in Calgary and elsewhere to access specialists who cannot be recruited locally. A detailed analysis of Southeast Alberta's workforce gaps was beyond the scope of this study and is recommended as follow-on work through the regional workforce needs assessment described above.

4.4.4 Build Political Commitment and Investment Readiness

Problem

Long-term sustainability depends not only on funding and institutional capacity, but also on **sustained political and regional commitment**. Defence industrial development intersects with infrastructure,

[183] Confidential stakeholder interviews, 2026

[184] See also Section 3 of this report.

workforce, research, economic development, investment attraction, and procurement. These responsibilities often span municipal, provincial, and federal jurisdictions.

Without sustained political attention, regional defence priorities can remain **fragmented across programs and institutions**. Individual projects may receive support without addressing the broader conditions required for long-term industry growth. Regional priorities may also struggle to gain visibility within provincial and national defence and economic-development agendas.

Political visibility is particularly important because **defence investment is increasingly competitive across regions**. Regions are seeking to attract companies, research activity, infrastructure investment, and participation in major defence programs. A region may possess strong technical capabilities but still struggle to translate those assets into investment if its priorities are not consistently represented to government, industry, and defence decision-makers.

Investment attraction creates a related challenge. Stakeholders described a **"chicken-and-egg" problem** around enabling infrastructure. Regions may be reluctant to invest in industrial space, specialized infrastructure, housing, or other capacity before demand is confirmed. Companies considering relocation or expansion, however, may operate within short decision timelines and expect key conditions to already be available.

This creates an **investment-readiness gap**. A region may have relevant research, testing, industrial, and defence capabilities but still be unable to respond quickly to a major investment opportunity. If available sites, infrastructure, workforce, partnerships, incentives, and approval pathways cannot be clearly demonstrated, companies may pursue locations that are better prepared to respond.

The challenge is therefore to convert regional capability into sustained political support, investment readiness, and the enabling conditions required for long-term defence-sector growth.

Policy Response

Establish a **coordinated regional defence advocacy agenda** supported by municipal, provincial, institutional, industry, and other regional partners. The agenda should identify a limited number of priorities, the government or organization responsible for each decision, and the regional partner responsible for advancing it.

Advocacy should be **opportunity-specific and evidence-based**. Rather than broadly requesting defence investment, regional partners should advance clearly defined priorities related to infrastructure, workforce, research and testing capacity, investment opportunities, procurement barriers, or access to provincial and federal programs.

Develop a **common regional value proposition and evidence base** to support this engagement. Government and regional representatives should have consistent information on regional companies, defence and research capabilities, testing infrastructure, workforce, economic impact, investment opportunities, and identified gaps. This creates a common narrative when engaging governments, defence organizations, primes, and investors.

Political leadership should also be used to **raise the visibility of regional capabilities and advance specific opportunities**. Senior political representatives can reinforce regional priorities in discussions with other levels of government, defence organizations, major contractors, and potential investors. Ontario's recent use of senior political leadership alongside a provincial defence strategy and dedicated defence representation provides one model of how political advocacy can be

institutionalized rather than relying solely on individual projects.

At the same time, develop a **ready-to-activate defence investment package**. When a company considers locating or expanding in the region, partners should be able to quickly demonstrate available sites and space, infrastructure, workforce support, research and testing capabilities, potential partners, relevant programs and incentives, and a clear point of contact.

Address enabling infrastructure through **forward planning and staged investment**. Regional partners should identify infrastructure constraints that could prevent foreseeable defence-sector growth and determine which require site preparation, partnerships, advance planning, or investment. New infrastructure should remain tied to demonstrated market signals, but planning should occur early enough that the region can respond when credible opportunities emerge.

Finally, sustainability should be measured through **long-term outcomes rather than activity alone**. Indicators should include business expansion, defence contracts, supply-chain participation, technology commercialization and operational adoption, investment attraction, employment and revenue growth, use of regional infrastructure, external funding leveraged, and diversification of the ecosystem's own funding base.

The overall model should remain **phased, evidence-based, and scalable**. Political advocacy, infrastructure planning, workforce development, business attraction, and institutional investment should reinforce the same areas of regional specialization. This creates a stronger foundation for sustained defence-sector growth than pursuing these activities independently. [185] [186]



[185] See also Section 3 of this report.

[186] Confidential stakeholder interviews, 2026

4.4.5 Recommended Policy Actions

33.	Establish a staged governance model that evolves with demonstrated demand and operational complexity.
34.	Pilot the regional model over two years with defined responsibilities, milestones, and outcomes, and use the evidence to guide decisions concerning governance, staffing, secure space, and infrastructure.
35.	Build institutional continuity through formal partnerships, documented responsibilities, succession planning, and regular governance reviews.
36.	Develop a diversified funding model combining public investment, project funding, research partnerships, industry contributions, and appropriate fee-for-service activities.
37.	Scale staffing, programming, and infrastructure according to demonstrated demand and leverage existing capabilities before creating new capacity.
38.	Align workforce development with verified defence and industry needs through employer-informed training, work-integrated learning, and targeted credentials.
39.	Use interinstitutional and national partnerships to access specialized skills, expertise, testing, and infrastructure that cannot be sustained locally.
40.	Coordinate advocacy and investment readiness by establishing a regional defence advocacy agenda focused on clearly defined priorities, opportunities, and policy barriers, and by maintaining a ready-to-activate defence investment package with enabling infrastructure planned in advance of credible business attraction and expansion opportunities.
41.	Develop a common regional value proposition and use political leadership to strengthen visibility with governments, defence organizations, industry, and investors.
42.	Measure long-term sustainability through business growth, defence contracts, supply-chain participation, technology adoption, investment, employment, and diversification of the ecosystem's funding base.

Section 5 – Southeast Alberta Defence Innovation Ecosystem

Southeast Alberta contains a notable concentration of defence, research, testing, industrial, educational and economic-development assets. Centred around Medicine Hat, CFB Suffield and the Foremost UAS Test Range, these assets provide a strong foundation for a regional defence innovation ecosystem. Their significance lies in the potential to connect complementary functions across research, technology development, testing, manufacturing, workforce development and business support. Anchored by DRDC Suffield and CFB Suffield, the region has the potential to develop as a nationally significant corridor for defence testing, training and field validation.

The region is also home to established defence contractors and spin-off companies with strong connections to DRDC Suffield. These firms contribute technical expertise, commercialization experience and industry relationships that can support both defence innovation and regional economic development. Existing stakeholder engagement, together with targeted funding, provides a foundation for strengthening these connections and expanding the region's contribution to Canada's defence industrial base.

These assets offer promising conditions for hub development, although their presence alone does not establish an integrated defence innovation hub. As discussed earlier in this report, geographic concentration becomes more valuable when organizations can combine knowledge, infrastructure, talent and market relationships. Southeast Alberta has an opportunity to strengthen these connections and make its collective capabilities more accessible to innovators and industry partners.

This section examines the regional asset base, identifies strengths and areas for development, and considers the region's readiness against the three hub success factors of proximity, scale and interdependence.

SWOT Analysis of Southeast Alberta Region. The following SWOT analysis summarizes the internal strengths and areas for development, alongside external opportunities and threats, that may influence the region's capacity to build a coordinated and sustainable defence innovation ecosystem. It draws on the regional asset review and stakeholder interviews presented in this section. Opportunities are listed in priority order, with the corresponding development priorities discussed in Section 5.4. [187, 188]

[187] Medicine Hat Economic Development. (2025). *State of the industry: Aviation, aerospace & defence in Southeast Alberta—2024 business retention & expansion–industry specific.*

[188] Medicine Hat Economic Development. (2026). *Southern Alberta's aerospace & defence development hub.*

Southeast Alberta's Defence Innovation Ecosystem
SWOT Analysis

STRENGTHS

- **Defence anchors:** Proximity to DRDC/CAF and BATUS Suffield, Canada's largest army training area; access to 5,100 km² of Class F restricted airspace; and South Alberta Light Horse Army Reserve connections.
- **Testing infrastructure:** Foremost UAS Test Range (BVLOS), Medicine Hat Regional Airport and uncongested airspace.
- **Industry capacity:** Established UAV firms and defence commercialization experience, supported by manufacturing, fabrication, logistics, supply-chain capabilities and industrial land for growth.
- **Post-secondary institutions:** Medicine Hat College, connections to the University of Lethbridge and Lethbridge Polytechnic, and strong ties with Calgary and Edmonton post-secondary institutions.
- **Regional support organizations:** Economic-development, business-support and innovation networks connect defence, testing, industrial and educational assets, supporting hub coordination and industry engagement.
- **Quality of life:** Affordable living and safe communities support talent attraction and retention.

WEAKNESSES AND AREAS FOR DEVELOPMENT

- **Ecosystem scale:** Opportunities to deepen industrial diversity, research breadth, investment networks and specialized services.
- **Coordination and visibility:** A clearer regional entry point could improve understanding of capabilities, services and opportunities.
- **Shared priorities:** A clearer understanding of the hub's focus, priorities and next steps could strengthen alignment.
- **Collaborative activity:** Recurring research, testing, supplier and workforce relationships remain developing.
- **Specialized capacity:** Additional procurement, certification, cybersecurity, commercialization and investment expertise could strengthen SME readiness.

OPPORTUNITIES

- **Uncrewed and autonomous systems:** Defence demand for flight testing, operational evaluation, target systems and aerospace manufacturing.
- **Military field validation:** CBRNE defence and realistic testing aligned with DRDC/CFB Suffield capabilities, subject to mandates and access.
- **Dual-use technologies:** Agriculture, energy and other industries offer applications in sensing, geospatial technologies, autonomy, AI, robotics, communications and energy management.
- **Defence supply-chain participation:** Prime-contractor relationships and ITB opportunities for manufacturing, fabrication and industrial services.
- **National defence investment:** Increased spending and NORAD modernization may create demand for surveillance, sensing, command-and-control and supporting capabilities.
- **Wider innovation partnerships:** NATO DIANA connections in Calgary and Edmonton, plus post-secondary, accelerator and investment networks.

THREATS AND EXTERNAL RISKS

- **Investment and project competition:** Larger Canadian centres and allied locations may attract firms, funding and defence activity.
- **Talent competition:** External demand may constrain specialized recruitment and retention.
- **Supply-chain and cost pressures:** Disruptions, tariffs and rising costs may affect development, production and delivery.
- **Funding uncertainty:** Changing priorities and unclear eligibility, timing or continuity may complicate planning.
- **Procurement complexity:** Lengthy processes and uncertain purchases may strain SME resources and cash flow.
- **Technological change:** Rapid innovation and evolving defence requirements may increase adaptation costs.
- **Compliance demands:** Security, certification and cybersecurity requirements, including CPCSC, may stretch SME capacity.

Figure 4: SWOT analysis of Southeast Alberta's defence innovation ecosystem, highlighting regional strengths, areas for development, opportunities and external risks

The analysis suggests that Southeast Alberta's strongest proposition lies in connecting its distinctive research, testing and industrial capabilities. Clearer navigation, practical engagement pathways and access to specialized support could help the region build on these strengths. Partnerships with larger innovation centres may also offer a way to expand regional capacity while managing competition for talent, investment and projects.

5.1 REGIONAL ASSETS

Southeast Alberta's assets fall into five broad categories: defence and research institutions, testing and aerospace infrastructure, industrial and commercial capabilities, post-secondary and workforce capacity, and regional support organizations. Together, they provide capabilities relevant to major stages of the innovation process.

Defence and Research Institutions. Canadian Forces Base Suffield provides a direct institutional connection to Canada's defence establishment and a substantial military training and operating environment. The base contributes to the region's defence identity and offers a potential source of operational knowledge about military conditions, constraints and requirements.

Defence Research and Development Canada Suffield is another significant regional anchor. It contributes federal scientific expertise, specialized facilities and experience in defence and security research. Its presence creates potential opportunities for scientific exchange, collaborative research and technical evaluation aligned with its mandate.

Both organizations operate within formal operational, institutional and security frameworks. Engagement opportunities are therefore best considered through arrangements that respect their responsibilities and clarify what forms of collaboration may be feasible. Their regional value lies in the specialized knowledge and defence activity they bring, together with the potential for appropriately structured access to personnel, facilities, information and testing environments.

The co-location of a major military establishment and a federal defence research centre gives Southeast Alberta an institutional foundation that would be difficult to reproduce through municipal or regional investment alone. These organizations can anchor the wider ecosystem while continuing to fulfil primary mandates that extend beyond regional economic development.

Testing and Aerospace Infrastructure. The Foremost UAS Test Range provides an established environment for testing uncrewed aircraft systems. It supports activities related to remotely piloted aircraft, autonomy, sensors, communications and associated aerospace technologies. Its operating environment is particularly relevant to firms seeking suitable airspace and controlled conditions for testing and demonstration.

The wider region also contains airport infrastructure, industrial land and operating environments that could support selected forms of field experimentation. These conditions may be valuable for technologies designed for remote, dispersed or demanding environments. Exploring their use for defence innovation would involve identifying suitable activities and working through applicable regulatory, safety, infrastructure and property requirements.

Other regional facilities may support different stages of development and evaluation, including research facilities, post-secondary infrastructure, private industrial sites and company-owned equipment. Together, these assets offer several potential environments for research and testing, with different capabilities, mandates and access conditions.

This diversity provides an opportunity to develop a more connected regional testing offer. Mapping which facilities can support particular technologies and development stages, alongside their access arrangements, could help firms and external partners identify appropriate options. Such an approach would build on complementary capabilities across the region without assuming that they already operate as an integrated testing system.

Industrial and Commercial Capabilities. Southeast Alberta has established firms and SMEs working in manufacturing, engineering, aerospace, technology development, logistics, maintenance and industrial services. Aerospace is a particularly important component of this base. The Medicine Hat area supports companies involved in uncrewed aircraft systems, remotely piloted aircraft, aviation training, flight operations, maintenance, and defence-related testing and evaluation. This activity is reinforced by proximity to CFB Suffield, DRDC Suffield, the Foremost UAS Test Range and Medicine Hat Regional Airport.

Several regional firms demonstrate the depth of these capabilities. They design and manufacture uncrewed systems for training, testing and evaluation by Canadian and international customers, and provide aerospace training, testing and evaluation services. Alongside other aviation businesses, these firms show that the region's aerospace presence includes established product development, manufacturing and operational expertise as well as supporting infrastructure.

The regional economy also has substantial experience in energy, agriculture, construction and resource-based activity. These sectors contain capabilities with potential defence and dual-use relevance, including remote sensing, communications, autonomous operations, energy management, equipment maintenance, fabrication and logistics. They also bring experience in developing and operating technologies for difficult environments. Connections among civilian, aerospace and defence applications could allow firms to diversify their markets while maintaining a broader commercial base.

Companies with previous defence and aerospace experience offer an initial source of sector knowledge and connections to national and international supply chains. They could contribute as suppliers, testing partners, collaborators or mentors to firms exploring defence opportunities. Their experience may also help newer participants understand expectations concerning quality, documentation, security, contracting and delivery.

A broader assessment of regional industry could reveal additional capabilities beyond firms that already identify as defence or aerospace suppliers. Including aviation service providers and companies serving agriculture, energy, construction and other commercial sectors could help identify adaptable technologies, specialized expertise and potential partners for defence-related development.

Post-secondary and Workforce Capacity. Medicine Hat College provides local capacity in technical education, work-integrated learning, applied research and industry engagement. Its potential contributions include student projects, applied solutions to industry problems, targeted training and stronger workforce pathways for employers.

Relationships with post-secondary and research institutions elsewhere in Alberta can extend this capacity. Such partnerships may provide access to specialized faculty, equipment, laboratories and academic programs that would be difficult to sustain locally. Developing these relationships alongside local capacity could broaden the region's knowledge base and connect firms with expertise suited to their needs.

Southeast Alberta also has an established workforce in scientific, technical, industrial and skilled-trades occupations. This provides a foundation for defence-related activity where requirements overlap with existing industries. More specialized needs could be addressed through a combination of targeted training, recruitment and partnerships with institutions outside the region.

Regional Support Organizations. Municipalities, economic-development organizations, business associations and regional partnerships provide a further category of assets. Their potential contributions include business development, investment attraction, regional promotion, workforce initiatives, convening and connections to provincial and federal programs.

These organizations are also positioned to help address barriers beyond the authority or mandate of individual defence, research or industry participants. Coordinated engagement could connect defence innovation priorities with wider regional economic-development and investment activities.

Southeast Alberta therefore possesses assets relevant to several stages of defence innovation, with particularly notable institutional anchors and specialized testing capabilities. Strengthening their depth, accessibility and connections could help translate this asset base into sustained collaboration and broader regional benefits.



5.2 REGIONAL STRENGTHS, GAPS AND OPPORTUNITIES

Southeast Alberta's principal strength is the functional complementarity of its assets. Defence and research institutions are located near specialized testing infrastructure, established industry, post-secondary capacity and regional development organizations. Connecting these functions provides a stronger foundation for ecosystem development than any individual asset could offer independently.

The region's wider industrial economy adds to this foundation. Energy, agriculture, manufacturing, construction and logistics rely on technologies and expertise associated with durable equipment, remote operations, sensing, communications, automation, maintenance and worker safety. Some of these capabilities may be transferable to defence and security applications. Technologies developed for defence may likewise find civilian applications within the region. This potential for dual-use development could help firms diversify revenue and reduce exposure to a single customer or market.

The regional operating environment may provide further advantages for activities requiring land, airspace, industrial facilities or field experimentation. Such conditions can be more difficult and costly to secure in larger metropolitan areas. Connections to Calgary, Lethbridge and the wider Alberta innovation ecosystem also offer potential access to expertise and services beyond the region.

Strengthening Coordination and Navigation. An opportunity for development lies in making the regional ecosystem easier to understand and navigate. Firms and external partners may be aware of relevant organizations without having a clear picture of their roles, services or access requirements. Information remains distributed across institutions, and a single, recognizable function for guiding firms among business support, research, testing and defence engagement does not yet appear to be established.

Building on existing stakeholder relationships, a clearer coordination function could help connect these activities. This might include shared information about regional capabilities, agreed referral pathways and a recognizable entry point for firms seeking assistance. Such arrangements could improve visibility and continuity while drawing on the expertise of existing organizations.

Clarifying Access to Defence and Research Assets. A second opportunity concerns practical access to major defence and research assets. Proximity creates potential for engagement, although access to defence users, facilities, testing environments and procurement opportunities depends on institutional mandates and security requirements. [189]

[189] Confidential stakeholder interviews, 2026

Clearer engagement processes could help firms understand what collaboration is feasible, whom to approach and what preparation may be needed. Working with institutional partners to distinguish viable opportunities from activities outside their responsibilities could support more productive engagement and realistic expectations.

Expanding Specialized Support and Workforce Pathways. Additional capacity in defence procurement, commercialization, cybersecurity, certification, investment and defence-specific business development could help regional firms pursue opportunities with greater confidence. Workforce development may offer another area for targeted support, particularly in specialized engineering, technology, advanced manufacturing and selected skilled trades.

These capacity needs are common in regions of Southeast Alberta's size. They suggest an opportunity to combine local service development with reliable access to external expertise. Partnerships, targeted training and referral arrangements could help firms obtain specialized support without requiring every service to be delivered locally.

A promising development approach would therefore connect distinctive regional assets with complementary capabilities elsewhere in Alberta and Canada. This could involve identifying firms with credible technical and commercial potential, improving pathways to research and testing, strengthening supply-chain relationships and developing partnerships suited to specific needs.

Building on Distinctive Comparative Advantages. Applying the approach outlined in Section 2.4.1, Southeast Alberta's strongest comparative advantages lie in combinations of assets that would be difficult to reproduce elsewhere. Four stand out:

1. **Co-located military and defence research institutions.** CFB Suffield and DRDC Suffield combine a substantial military operating environment with federal defence research capacity in a way few regions can offer.

2. **Land, airspace and controlled testing environments.** Regional facilities, including the Foremost UAS Test Range, offer conditions for testing and field experimentation that may be more difficult and costly to secure in metropolitan areas.

3. **Established uncrewed-systems and aerospace capabilities.** Regional firms already connect product development, manufacturing, testing and evaluation, providing a commercial foundation for further specialization.

4. **CBRNE expertise and large-scale field experimentation.** DRDC Suffield's expertise in chemical, biological, radiological, nuclear and explosives defence has military and dual-use relevance, creating potential for appropriately structured research and evaluation partnerships.

These advantages differ from those of Calgary and Edmonton, which offer greater research breadth, investment networks and specialized services. Southeast Alberta could strengthen its value proposition by developing complementary relationships with these centres and contributing capabilities that add to the wider provincial and national ecosystem.

Exploring Areas of Specialization. Candidate areas include uncrewed and autonomous-systems testing and evaluation, aerospace and target-system manufacturing, remote sensing and geospatial technologies, and dual-use applications drawn from the energy and agricultural sectors.

These areas reflect identifiable regional capabilities and provide a useful starting point for further discussion. Their potential could be explored with defence users, industry and research partners to assess demand, industrial capacity, research relevance, testing requirements and commercial opportunity. This would help the region select priorities that build on existing strengths and offer credible pathways to sustained activity.

5.3 ASSESSMENT AGAINST HUB SUCCESS FACTORS

5.3.1 Scale

Scale refers to the concentration and diversity of organizations, capabilities, expertise and activity that can sustain an innovation ecosystem. Beyond the number of firms, the relevant consideration is whether participants collectively provide sufficient depth to support recurring innovation and commercial activity.

Southeast Alberta has an identifiable core of defence, research, testing, industrial, post-secondary and economic-development organizations. The presence of nationally relevant institutions gives the region substantial capacity relative to the size of its commercial economy.

The region's capabilities are concentrated in selected areas, providing a promising foundation for focused specialization. Compared with established metropolitan hubs, opportunities remain to broaden industrial diversity, research connections, investment networks and specialized services. Partnerships could help extend this capacity and support a wider range of defence innovation activities over time.

Southeast Alberta can therefore be assessed as possessing an emerging scale with a strong foundation for a focused initiative. Concentrating on a limited number of areas, while drawing on external partners for complementary capabilities, could help the region develop greater depth and sustained activity.

5.3.2 Proximity

Proximity is the region's strongest success factor. Relevant defence, research, testing, industrial, educational and business-support assets are located within the same regional economy. This creates favourable conditions for recurring interaction and provides a coherent geographic basis for collaboration.

Geographic proximity is well established, with opportunities to strengthen organizational connections. Differences in institutional mandates, security requirements, operating processes and access procedures shape how participants engage. The distances among Medicine Hat, Suffield and Foremost also give the ecosystem a regional character rather than one based on direct co-location.

The region can therefore be assessed as having **strong geographic proximity, with relational and organizational proximity continuing to develop**. Regular channels for communication, referral and collaboration could help participants realize more of the advantages offered by their location.

5.3.3 Interdependence

Interdependence describes the extent to which participants derive value from capabilities and relationships within the ecosystem. A mature ecosystem enables firms and institutions to undertake activities that would be more difficult, costly or time-consuming in isolation.
Southeast Alberta has a foundation for these relationships. Firms may benefit from research expertise, testing environments, industrial suppliers and workforce programs. Defence and research organizations may gain exposure to relevant technologies and qualified industrial capabilities. Post-secondary and development organizations may contribute through training, applied research and business-growth support.

These complementary roles create opportunities to develop a more consistent pipeline of collaborative activity. Existing assets and relationships provide a starting point for strengthening the practical connections through which participants benefit from one another.

Interdependence therefore represents **the greatest opportunity for further development** among the three success factors. Shared projects, supplier relationships, research collaboration, workforce initiatives and testing activities involving multiple regional participants could strengthen these connections and provide evidence of a more integrated ecosystem.**Error! Bookmark not defined.**

5.4 PRIORITY AREAS FOR DEVELOPMENT

Four areas offer opportunities to strengthen the regional ecosystem.

First, a regional coordinating function could improve visibility and access. This function could maintain an inventory of capabilities, receive and qualify inquiries, coordinate referrals, and convene organizations around defined defence and security challenges. Its purpose would be to make the existing ecosystem easier to understand and navigate while building on the work of regional partners.

Second, the region could validate and prioritize a focused set of specializations. Based on the assets identified in this study, three candidate areas stand out, in order of priority.
The first is uncrewed and autonomous systems, including testing and evaluation, target systems and aerospace manufacturing. This area builds on the Foremost UAS Test Range, CFB Suffield's operating environment and the region's established uncrewed-systems firms.

The second is field validation of military and dual-use technologies at DRDC Suffield, including chemical, biological, radiological, nuclear and explosives (CBRNE) defence. The research centre's proving grounds and co-location with CFB Suffield offer a distinctive combination of capabilities.
The third is remote sensing, geospatial and autonomy technologies drawn from the region's energy and agricultural sectors. These capabilities offer opportunities for dual-use development and greater commercial resilience.

Further assessment against defence demand, industrial capability, research relevance, testing advantages and dual-use market potential could help confirm these priorities. Concentrating activity in selected areas could allow the region to develop greater depth and a clearer external identity.

Third, clearer pathways could strengthen connections across the innovation process. More formal arrangements among firms, researchers,

testing environments, defence users and supply chains could make engagement easier to navigate. These pathways could explain requirements, identify appropriate contacts and help firms and technologies prepare for productive referrals.

Fourth, wider partnerships could extend regional capacity. Connections with post-secondary institutions, accelerators, investment networks, prime contractors, government programs, and national or allied initiatives could provide complementary capabilities. A distributed model would allow Southeast Alberta to retain a focused regional mandate while participating actively in the wider defence innovation system.
Continental defence priorities reinforce the relevance of these opportunities. Canada's plan to modernize NORAD commits $38.6 billion over 20 years to surveillance, command and control, air defence and supporting infrastructure, creating demand for innovations that can progress into deployable capability. DRDC Suffield's co-location with CFB Suffield provides a setting in which scientists, operators and technology partners can test and adapt solutions in realistic conditions.

There is therefore value in exploring additional testing capacity at DRDC Suffield for military-only and dual-use technologies. If successful, Suffield could also provide a model for how other DRDC research centres located alongside military infrastructure help connect innovation with capability acquisition. Assessing expansion through the demand-based approach discussed in Section 4.4.2 could help align investment with demonstrated needs.

Early progress could be assessed through tangible activity, including qualified referrals, collaborative research, testing projects, supplier relationships, workforce initiatives and participation in defence innovation programs. Evidence from these activities could inform subsequent decisions about governance, staffing, secure space and other infrastructure under the proposed hub model.



5.5 IMPLEMENTATION ROADMAP

The recommendations in Section 4 identify functions that could support a regional defence innovation hub. This section outlines a proposed operating model, governance approach and sequence of activity for Southeast Alberta (Figure 5).

Operating Model. A services hub (Section 2.3.1), delivered through existing organizations and facilities, offers a practical starting point. Initial services could include liaison with DRDC and the CAF, technology triage, testing referrals and expert support for SMEs. An integrated physical-and-services model could be explored in Phase 3 if demand for secure space or shared infrastructure is demonstrated.

Governance. Applying the assessment in Section 2.3.4 to Southeast Alberta, relevant expertise and resources are distributed across several organizations. This provides a foundation for partnership, alongside an opportunity to establish clearer responsibility for ecosystem coordination (Section 5.2).

In the near term, a lead organization or umbrella model (Section 2.3.2) could provide a practical starting point. An established regional organization with appropriate administrative capacity could host the hub and provide a clear point of accountability. Other partners could contribute expertise in defined areas such as research, testing, industry engagement and workforce development.

As activity grows and partner contributions expand, governance could evolve toward shared leadership in Phase 3. Stand-alone hub governance could be considered in Phase 4 if the scale of activity supports it. Consistent with the staged approach in Section 4.4.1, building on existing mandates and complementing regional services could help make effective use of available capacity.

Sequence. The following phases offer a flexible structure for development, with progression informed by participation, resources and demonstrated demand.

- **Phase 1 — Next six months:** Build on the Defence Stakeholder Workshop to establish a formal name and identity, an initial governance structure, participation by key stakeholders and agreement on priority areas.
- **Phase 2 — First year:** Identify resources and develop a clear plan and proposal for supporting innovators, including business investment and attraction.
- **Phase 3 — Years two to three:** Explore infrastructure development and service expansion where demand has been demonstrated.
- **Phase 4 — Years three to five:** Strengthen long-term sustainability through diversified funding and, where appropriate, stand-alone governance.

The two-year pilot recommended in Section 4.4.1 would span Phases 1 and 2 and the first part of Phase 3. Its results could help determine the appropriate timing and scale of infrastructure investment and governance development.

A detailed options analysis comparing alternative operating and governance models, including costs and potential lead organizations, could provide a valuable basis for follow-on work and regional decision-making.

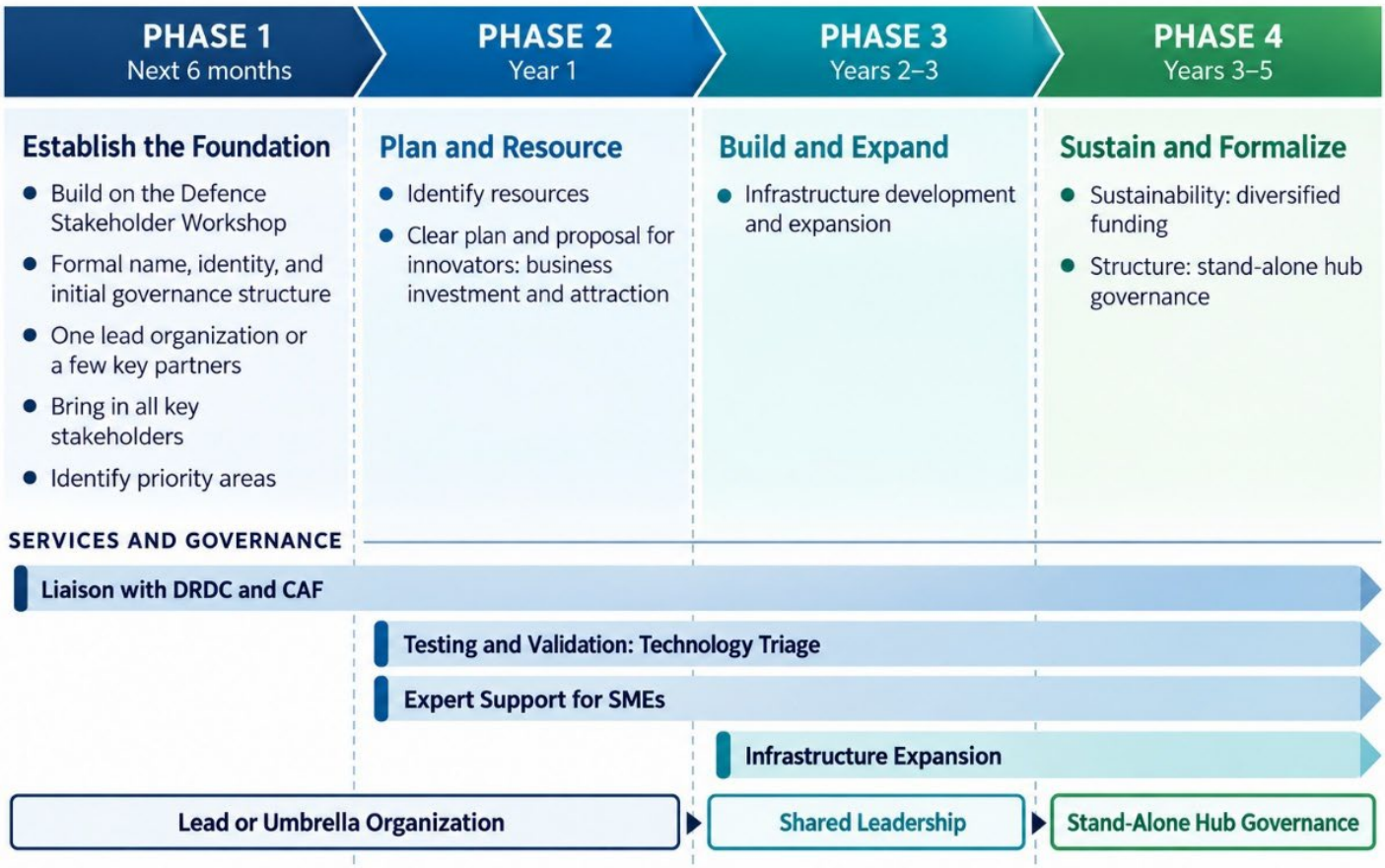


Figure 5:Phased Roadmap for Developing a Defence Innovation Hub in Southeast Albert

Section 6 – Conclusion

Strengthening Canada's defence capabilities and domestic industrial base will depend on how effectively investment is connected to operational needs, innovation and procurement. Growing defence commitments, the Defence Industrial Strategy and the ITB Policy create opportunities for Canadian firms, research institutions and regions. Realizing these opportunities, however, requires more than increased spending. This study identifies a need for coordinated reforms, more agile procurement, targeted investment and sustained collaboration among government, industry, academia, research institutions, Indigenous communities and allied partners. Defence innovation hubs can contribute by connecting organizations, capabilities and services around defined defence needs and helping promising technologies progress through testing, procurement and operational adoption.

This study examined how defence innovation hubs located near military installations support innovation and procurement, and what lessons could apply to Southeast Alberta and comparable semi-urban and rural regions. The literature, jurisdictional review and stakeholder interviews suggest that effective hubs do more than bring participants into geographic proximity. They provide a recognizable entry point for firms, translate defence priorities into defined challenges, connect innovators with end users and testing environments, and support staged pathways toward procurement. They build on demonstrated regional strengths and sustain their activities through clear governance, reliable funding and durable partnerships. No jurisdiction offers a model that can be reproduced directly, but the examples illustrate how deliberate coordination can connect regional capabilities with defence innovation and industrial opportunities.

Proximity emerged as Southeast Alberta's strongest hub success factor. CFB Suffield, DRDC Suffield, the Foremost UAS Test Range, Medicine Hat Regional Airport, established aerospace and industrial firms, post-secondary institutions and regional development organizations provide a distinctive foundation within a single regional economy. The opportunity is to strengthen the organizational relationships that make these assets more accessible and effective together. Institutional mandates, security requirements and access processes shape collaboration, while interdependence offers considerable scope for further development. Clear engagement arrangements, defined referral pathways and a recognizable coordination function could help translate geographic proximity into sustained collaboration and a durable regional advantage.

Southeast Alberta's emerging scale provides a foundation for a focused initiative that builds on existing capabilities and complements larger centres such as Calgary and Edmonton. Candidate specializations include uncrewed and autonomous systems testing and evaluation, target systems and aerospace manufacturing; military field validation at DRDC Suffield, including chemical, biological, radiological, nuclear and explosives (CBRNE) defence; and remote sensing, geospatial and autonomy applications drawn from agriculture, energy and other industries. Further validation against defence demand, industrial capacity, research relevance and commercial opportunity could help establish shared priorities. Partnerships elsewhere in Alberta and Canada could extend access to expertise, investment and services while allowing the region to deepen its distinctive capabilities.

The recommendations address four interconnected priorities: SME access to defence markets, technology transition and adoption, regional ecosystem coordination, and long-term sustainability. A practical starting point could be a services hub hosted by an established regional organization, providing DRDC/CAF liaison, technology triage, testing referrals and specialized SME support. Clearer pathways among firms, researchers, testing environments, defence users and supply chains could support collaboration around defined missions and validated specializations. A two-year pilot with agreed responsibilities, milestones and outcomes could assess this approach, with evidence from early activity informing subsequent decisions about governance, staffing, secure space and infrastructure. Initial investment could improve access to existing assets, followed by secure collaboration space or shared capabilities where demand is demonstrated.

Regional coordination would benefit from complementary changes at the national and institutional levels. Stakeholders identified barriers involving base access, cybersecurity readiness, low-dollar purchasing tools, procurement workforce capacity, fiscal year-end pressures and agreement terms. These issues extend beyond the authority of a regional hub. Engagement from DND, PSPC and the Treasury Board would therefore be important to strengthen the connection between supplier readiness, technology validation and contracting opportunities. Regional services and national reforms could reinforce one another, helping firms prepare for defence participation while making opportunities more accessible and responsive to operational needs.

The lessons extend beyond Southeast Alberta. Many semi-urban and rural communities across Canada host military installations, specialized firms, and research or testing assets that could contribute more fully through stronger ecosystem connections. The findings suggest an approach grounded in mapping existing capabilities, establishing clear coordination, focusing on demonstrated strengths and connecting with national and allied networks. Governance and infrastructure could then develop in response to evidence of demand, collaborative activity and results.

For Southeast Alberta, the opportunity is to turn a strong regional foundation into a coordinated pathway for defence innovation. Sustained partnerships, practical services, targeted investment and responsive institutional support could help firms and researchers contribute to deployable capability, stronger domestic supply chains and lasting regional economic benefits. Success would be demonstrated through technologies validated against operational needs, productive supplier relationships and sustained collaboration—not simply through the establishment of a hub.



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Appendices

APPENDIX A: SEMI-STRUCTURED INTERVIEW GUIDE

A. CFB and DRDC Suffield

No.	Question	Rationale
1	**Can you briefly describe your current role and responsibilities within your organization?**	**Role and organizational context**
1.1	Which aspects of your work relate to procurement, innovation, technology adoption, or partnerships?	Role and organizational context
2	**Can you describe your organization's procurement process, particularly for high-value or complex purchases?**	**Procurement processes**
2.1	What is your level of involvement in this process?	Procurement processes
2.2	Which stages require your input or approval?	Procurement processes
3	**What policies, regulations, or organizational requirements shape the procurement of high-value purchases in your organization, and how do they affect the process?**	**Policies and frameworks**
3.1	Which aspects of these policies or processes work well?	Policies and frameworks
3.2	Where do these policies or processes create barriers, inefficiencies, or delays?	Structural barriers
4	**In practice, what operational challenges do you encounter when procuring large items, advanced technologies, or specialized services?**	**Operational barriers**
4.1	Where do bottlenecks most commonly occur during implementation?	Operational barriers
5	**Does your organization currently procure technologies or services from small and medium-sized enterprises (SMEs), start-ups, or other innovative suppliers?**	**SMEs and innovators**
5.1	If so, what types of products or services are typically procured?	SMEs and innovators

5.2	What factors influence your decision to work with smaller or emerging suppliers?	SMEs and innovators
6	**What changes, improvements, or best practices would you recommend to improve your organization's procurement process?**	**Structural barriers**
7	The Government of Canada recently introduced the Defence Industrial Strategy (DIS) to improve the transition from prototype development to operational adoption and deployment. How do you expect this strategy to affect procurement and innovation within your unit or organization? Probe: procurement efficiency, innovation adoption, collaboration with external partners	Policy
8	**In your experience, which industry–academia–government partnership models are most effective in supporting innovation?**	**Partnerships**
9	**If a regional or provincial defence innovation hub were established to support procurement and innovation, what would an effective model look like?** **Probe: How should a local or regional team best help businesses secure government contracts and develop new technologies?**	**Defence hub: model**
9.1	What key problems should such a hub solve for your organization or team?	Defence hub: priorities
9.2	How would the hub align with your organization's strategic priorities, and what benefits would it bring?	Defence hub: benefits
9.3	What level of risk would your organization accept when piloting or testing innovative technologies? Probe: How comfortable are you with the possibility that a new solution may not work as intended?	Risk tolerance
9.4	Which approval or administrative processes should be streamlined to make it easier for innovators and entrepreneurs to engage?	Structural barriers
10	**Which industries, technology areas, or capability gaps should an innovation hub prioritize initially?**	**Defence hub: priorities**
10.1	Are there particular sectors, technologies, or innovation domains that require immediate attention?	Defence hub: priorities
11	**Who would be the most important partners or stakeholders for such a hub to engage?**	**Defence hub: partners**

11.1	Which organizations, agencies, industry partners, academic institutions, or government entities would add the most value?	Defence hub: partners
12	**What role, if any, do colleges or post-secondary institutions currently play in supporting your work or organizational priorities?**	**Post-secondary institutions**
12.1	How do you currently engage with post-secondary institutions?	Post-secondary institutions
12.2	What types of collaboration would you like to see more or less of?	Post-secondary institutions
13	**How should the success of a procurement or innovation hub be measured?**	**Defence hub: success**
13.1	Which outcomes would be most valuable to you? Probe: reduced procurement timelines, increased innovation adoption, pilot project success, cost savings, improved vendor access, pre-approved supplier pathways, stronger communication with innovators	Defence hub: success
14	**What would success look like for this initiative within the first 12–24 months?**	**Defence hub: success**
15	**Is there anything else you would like to share that we have not discussed but that you believe is important for developing a defence innovation or procurement support hub?**	**Closing**

B. Industry, SMEs, and Start-ups

No.	Question	Rationale
1	**Can you briefly describe your current role and responsibilities within your organization?**	**Role and organizational context**
1.1	Which aspects of your work relate to innovation, technology development, procurement, business development, partnerships, or commercialization?	Role and organizational context
2	**How would you describe your organization's experience working with defence organizations, military customers, or defence contractors?**	**Defence experience**

2.1	Have you pursued defence contracts directly, indirectly through prime contractors, or both?	Market pathways
3	**How prepared is your organization today to pursue defence-related opportunities?** **Probe: technology readiness, manufacturing readiness, security requirements, quality systems, regulatory compliance**	**Defence readiness**
3.1	What capabilities would your organization need to develop before pursuing additional defence opportunities?	Readiness barriers
4	**How would you describe your organization's experience navigating defence procurement pathways?**	**Market pathways**
4.1	What has worked well in your experience?	Best practices
4.2	What challenges or barriers have you encountered? Probe: procurement complexity, security clearances, long timelines, limited visibility of opportunities, contracting requirements, resource constraints	Structural barriers
5	**Which procurement or partnership entry points have been most effective for initiating engagement with defence organizations or government buyers?**	**Market access**
5.1	Have particular programs, channels, or relationships been especially useful?	Market access
6	**How do defence procurement timelines influence your product development, commercialization strategy, and investment decisions?**	**Structural barriers; commercialization**
7	**Which technologies, infrastructure, services, or regional resources would most help your company succeed as a defence innovator?**	**Resource needs**
7.1	What are the biggest barriers to scaling your technology or manufacturing capacity? Probe: missing testing, prototyping, certification, manufacturing, or validation resources; capital; customers; talent; facilities; supply-chain limitations; secure facilities; drone test ranges; manufacturing space; prototyping equipment; shared laboratories; digital infrastructure	Growth barriers; infrastructure gaps
7.2	Do you face workforce challenges that affect your ability to innovate, manufacture, or grow?	Workforce

7.3	How important are dual-use technologies to your business strategy? Probe: civilian-to-defence transitions, defence-to-commercial applications, market diversification	Dual-use
8	**To what extent do you view Southeast Alberta as a competitive location for innovation, manufacturing, testing, or commercialization?**	**Southeast Alberta: strengths**
8.1	Which regional advantages are most valuable to your company?	Southeast Alberta: strengths
9	**To what extent do you view proximity to DRDC Suffield as an advantage for your business?**	**DRDC Suffield**
9.1	Does this proximity create opportunities for collaboration, testing, demonstration, or customer engagement?	DRDC Suffield: opportunities
9.2	Are there barriers to access, engagement, collaboration, or facility use that should be addressed?	DRDC Suffield: barriers
10	**Which incentives, funding mechanisms, or procurement tools most influence your willingness to invest in defence-related innovation? Probe: matching grants, pilot funding, milestone payments, procurement commitments, tax incentives, commercialization funding**	**Policy tools**
10.1	What challenges do companies like yours face in accessing capital or investment for defence-related projects?	Investment barriers
10.2	What one policy change and one process change would most improve the ability of SMEs, start-ups, and innovative firms to participate in defence markets?	Policy priorities
11	**If a defence innovation hub were established in Southeast Alberta, what should its primary objectives be?**	**Defence hub: priorities**
11.1	Which industries, technology areas, or capability gaps should the hub prioritize during its first one to two years?	Defence hub: priorities
11.2	Which services would create the greatest value for your organization? Probe: procurement navigation, technology validation, partnership matchmaking, proposal development, business development, security clearance support, investment attraction	Defence hub: benefits
11.3	How would your organization ideally engage with the hub?	Engagement model

12	**What governance model would be most effective for a regional defence innovation hub?**	**Defence hub: governance**
12.1	Who should have a seat at the table, and which organizations must be involved for the hub to be credible and successful? Probe: organizations, agencies, industry partners, academic institutions, government entities	Defence hub: governance
12.2	Which organizations are best positioned to champion and coordinate this initiative, and why?	Defence hub: governance
13	**What are the most significant challenges, risks, or barriers to establishing and sustaining a regional defence innovation hub? Probe: access to defence procurement opportunities, SME awareness and readiness, talent attraction and retention, infrastructure and facility limitations, access to capital, security clearance requirements, regulatory and compliance complexity, industry participation, long-term funding, regional coordination and governance, distance from major markets or decision-makers**	**Defence hub: challenges**
13.1	What strategies could address these challenges and improve the likelihood of long-term success? Probe: new partnerships or collaboration models, workforce development, infrastructure investment, dedicated innovation or procurement support services, improved access to testing and demonstration, government incentives and funding, regional coordination mechanisms, SME capacity-building and mentorship	Policy tools
14	**What role, if any, do colleges or post-secondary institutions currently play in supporting your work or organizational priorities?**	**Post-secondary institutions**
14.1	How do you currently engage with post-secondary institutions?	Post-secondary institutions
14.2	What types of collaboration would you like to see more or less of? Probe: applied research, workforce development, student placements, technology commercialization, training programs, joint funding applications	Post-secondary institutions
15	**How should the success of an innovation and procurement hub be measured?**	**Defence hub: success**
15.1	Which success measures would you prioritize within the first 12–24 months?	Defence hub: success

	Probe: industry participation, new projects, partnerships, funding leveraged, pilot projects, procurement wins	
15.2	If this initiative is highly successful, what would Southeast Alberta's defence innovation ecosystem look like in 10 years?	Defence hub: success
16	**What advice would you give a company entering the defence innovation or procurement ecosystem for the first time?**	**Lessons learned**
17	**Is there anything else you would like to share that we have not discussed but that you believe is important for developing a defence innovation or procurement support hub?**	**Closing**

C. Municipal and Regional Stakeholders

No.	Question	Rationale
1	**Can you briefly describe your current role and responsibilities within your organization?**	**Role and organizational context**
1.1	Which aspects of your work relate to procurement, innovation, technology adoption, business development, or partnerships?	Role and organizational context
2	**What are your organization's priority sectors for economic development and innovation?**	**Organizational context**
3	**How do defence, dual-use technologies, advanced manufacturing, and innovation align with your organization's broader economic development strategy and priorities?**	**Organizational context; defence**
4	**What role do you see a defence innovation hub playing in the Southeast Alberta region, and what should its primary objectives be?**	**Defence hub: objectives**
4.1	Which industries, technology areas, or capability gaps should the hub prioritize during its first one to two years?	Defence hub: priorities
5	**Is Southeast Alberta a suitable location for a defence innovation and procurement hub? Why or why not?** **Probe: How should the region differentiate itself from other innovation hubs in Alberta and Canada?**	**Defence hub: Southeast Alberta**

5.1	How prepared is the region today to support defence innovation, testing, commercialization, and procurement? What is missing, and what could be strengthened?	Defence hub: Southeast Alberta
5.2	Which infrastructure investments would have the greatest impact on attracting defence and dual-use technology companies to the region? Probe: R&D facilities, secure workspaces, prototyping facilities, testing and validation space, broadband and digital infrastructure, transportation and logistics	Defence hub: Southeast Alberta
6	**What governance model would be most effective for a regional defence innovation hub?**	**Defence hub: governance**
6.1	Who should have a seat at the table, and which organizations are essential to ensure credibility and long-term success? Probe: organizations, agencies, industry partners, academic institutions, government entities	Defence hub: governance
6.2	Which organizations are best positioned to champion and coordinate this initiative, and why?	Defence hub: governance
6.3	What leadership gaps currently exist within the regional innovation ecosystem?	Defence hub: challenges
7	**How could your organization contribute to or support the development of a regional defence innovation and procurement hub?** **Probe: convening stakeholders and industry partners, infrastructure or facility access, land development, funding or investment support, policy alignment and advocacy, workforce development and training, business attraction and cluster development**	**Organizational role in hub**
8	**Which incentives, funding mechanisms, programs, or procurement tools does your organization currently offer to support talent development, business growth, and innovation capacity?**	**Policy tools**
8.1	Are there existing or potential resources within your organization specifically directed at helping SMEs enter, navigate, and grow within the defence innovation and procurement ecosystem?	SMEs
8.2	What one process change or one policy change would most improve the ability of SMEs, start-ups, and innovative firms to work within the defence ecosystem?	SMEs; policy tools

	Probe: Which aspects of innovation and procurement create the greatest challenges for regional SMEs?	
9	**What are the most significant challenges, risks, or barriers to establishing and sustaining a regional defence innovation hub? Probe: access to defence procurement opportunities, SME awareness and readiness, talent attraction and retention, infrastructure and facility limitations, access to capital, security clearance requirements, regulatory and compliance complexity, industry participation, long-term funding, regional coordination and governance, distance from major markets or decision-makers**	**Defence hub: challenges**
9.1	What strategies could address these challenges and improve the likelihood of long-term success? Probe: new partnerships or collaboration models, workforce development, infrastructure investment, dedicated innovation or procurement support services, improved access to testing and demonstration, government incentives and funding, regional coordination mechanisms, SME capacity-building and mentorship	Policy tools
10	**To what extent do you view Southeast Alberta's proximity to DRDC Suffield as an advantage for your organization?**	**DRDC Suffield**
10.1	Are there barriers to access, engagement, collaboration, or facility use that should be addressed?	DRDC Suffield: barriers
11	What role, if any, do colleges or post-secondary institutions currently play in supporting your work or organizational priorities?	Post-secondary institutions
11.1	How do you currently engage with post-secondary institutions?	Post-secondary institutions
11.2	What types of collaboration would you like to see more or less of? Probe: applied research, workforce development, student placements, technology commercialization, training programs, joint funding applications	Post-secondary institutions
12	If a regional innovation hub were established, how would your organization ideally engage with it?	Engagement model
12.1	What level of involvement would you expect to have with the hub? Probe: governance participation, strategic advisory roles, business development support, technical expertise, networking and matchmaking, workforce development, procurement navigation	Engagement model

12.2	Which services or outcomes would be most valuable to your organization? Probe: reduced procurement timelines, increased innovation adoption, pilot project support, improved access to testing facilities, cost savings, improved vendor access, pre-qualified supplier pathways, stronger connections with innovators	Defence hub: benefits
13	**Looking ahead five to ten years, which technologies or market opportunities should the region begin preparing for now?**	**Defence hub: Southeast Alberta**
14	**How should the success of an innovation and procurement hub be measured?**	**Defence hub: success**
14.1	Which success measures would you prioritize within the first 12–24 months?	Defence hub: success
14.2	If this initiative is highly successful, what would Southeast Alberta's defence innovation ecosystem look like in 10 years?	Defence hub: success
15	**Is there anything else you would like to share that we have not discussed but that you believe is important for developing a defence innovation or procurement support hub?**	**Closing**

APPENDIX B: REGIONAL DISTRIBUTION OF INDUSTRIAL AND TECHNOLOGICAL BENEFITS (ITB) ACTIVITY IN CANADA

Region	Share of ITB Industrial Activity in Canada 2019–2035 credits and commitments	Canadian Demultiplied Dollar Value of ITB Industrial Activity in Canada 2019–2035 credits and commitments
Western and Northern Canada	22%	$5,902,045,303
Ontario	34%	$9,204,593,846
Quebec	31%	$8,234,347,399
Atlantic Canada	13%	$3,473,559,233
Total	**100%**	**$26,814,545,781**

Source: ITB administrative data (2019–2023 credits and 2024–2035 commitments from ITB obligations active in 2024), 2025.

NOTE: Data were obtained from Innovation, Science and Economic Development Canada (ISED) through an Access to Information request (file A-2025-01812), submitted on March *Note:* These data were obtained from Innovation, Science and Economic Development Canada (ISED) through an Access to Information request (file A-2025-01812), submitted on March 16, 2026, with a response received on September 17, 2026. The request sought the dollar value of ITB obligations by region and the share attributable to small and medium-sized businesses (SMBs) for 2014–2024.

ISED indicated that the data were not available in the requested format. It instead provided figures covering 2019–2035, consistent with the 2025 ITB Annual Report. For obligations active in 2024, the table combines credits earned from completed activity in 2019–2023 with commitments identified for planned activity in 2024–2035. **The figures therefore include both completed activity and future commitments; they do not represent benefits already delivered in full.** Values reflect actual dollar amounts, excluding the multipliers used to calculate ITB credits.

The response did not include separate figures for Alberta, data on the concentration of ITB activity among SMBs, or contractor-level breakdowns. ISED cited commercial confidentiality as the reason for withholding contractor-level data.

Source: Innovation, Science and Economic Development Canada, ITB administrative data released under the *Access to Information Act*, file A-2025-01812, September 17, 2026.

NOTES







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