

# CANADA'S DEFENCE INDUSTRY:

A Vital Partner  
Supporting Canada's Economic  
and National Interests

Industry Engagement on the  
Opportunities and Challenges  
Facing the Defence Industry  
and Military Procurement



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# EXECUTIVE SUMMARY

The primary responsibility of every national government is the safety of its people and the protection of its country. Governments, therefore, use all assets at their disposal to tackle this challenge.

Canada's own success in defending its sovereign, economic and national security interests depends largely on how two important stakeholders—Canada's military, and its defence and security industries—operate independently and together. Individually, each must be strong; jointly, their efforts must be coordinated. This makes the issues affecting defence procurement efficiency and effectiveness an important public policy issue and a matter of national security interest.

Procurement decisions made by the Government of Canada in the coming years will define our military capability and the capacity and international competitiveness of Canada's defence and security industries for the next 20 years.

Urgent attention and immediate action is required to create a public policy environment and procurement practices and processes that will deliver programs more efficiently and with vastly improved outcomes for the Canadian economy and Canadian workers. Without these changes, Canada's defence industrial

base will decline, relegating Canada to that of a buyer of foreign capabilities for future major procurements. This will adversely affect Canada's ability to protect its sovereignty and to promote jobs in a knowledge-based economy.

In response to the Government's request for advice from Canada's defence industry, the Canadian Association of Defence and Security Industries (CADSI) undertook a 13 week consultation with Canada's defence industrial base to determine how the Government could obtain the equipment needed by the Canadian Forces and achieve an optimal economic return on investment. Within industry, the consultations generated great interest and anticipation of change. There was no shortage of input, no reluctance to share experiences and contribute ideas, and no ambiguity about the overall direction recommended. There was also a sense of urgency about the need to act so as not to lose momentum on the Canada First Defence Strategy (CFDS) or on procurements in the pipeline. This sense of urgency was coupled with a conviction that change could begin immediately.

Three over-riding and inter-related principal recommendations emerged from the consultations:

- First, the consultation process called on the Government to create a defence industrial policy supported by implementation strategies aligned with CFDS procurement priorities and sovereignty and key national economic objectives. This was described as fundamental to leverage optimal economic returns from the \$240B commitment to rebuild the equipment needs of the Canadian Forces. A defence industrial policy would define the industrial capabilities Canada holds to be essential to its strategic defence and economic interests and which must to be nurtured and developed in Canada. It would provide a roadmap for industry to make R&D investments, build new capabilities, establish human resource strategies, establish partnering relationships and plan strategies to win business internationally. And it would provide a framework for Government/industry interactions and metrics for measuring progress and success in policy implementation.
- Second, enabling an environment where the procurement process and its operating culture result in effective program delivery and an optimal economic return to the taxpayer was a dominant consultation theme. Urgent attention was deemed necessary to remedy a procurement process defined by frustration, confusion, inconsistency, layers of built-in redundancy, systemic risk avoidance and a perceived lack of transparency.
- Third, overall accountability for the combined responsibilities of defence equipment and the defence industrial base should reside at the Cabinet level in one Minister. Unlike virtually every other industrialized country, Canada divides

Ministerial accountability for defence equipment and its defence industrial base. Other countries with similarly modest domestic defence markets have made the connection between national interests and indigenous capability. The absence of a single Ministerial point of accountability within Government slows and adds costs to the procurement process and weakens the Government's ability to defend Canada's national interest and achieve a strong economic return on investment. While beyond this study's scope, there are at least three options available to implement this recommendation: a separate defence procurement agency; a new defence production department; or, assigning the joint responsibility with a Minister within the Government's existing departmental structure.

Canada penalizes itself as few other nations do, delaying essential military materials, adding non-value-added costs to itself and to industry, and inhibiting its industrial champions from winning business at home and abroad. The time has come to break down the barriers impeding efficient execution of defence procurements: the status quo is no longer an option.

Many of the recommendations, we believe, could be implemented immediately, with the more strategic elements becoming practice within the coming year. Time is of the essence if Canada is to re-equip the military with the equipment it needs to perform its duties and to do so in a way that builds and sustains a viable domestic defence industrial base.

Industry is ready to do its part and appreciates the opportunity to share its perspective with Government. The full recommendations are detailed at the end of this Report: the next two pages summarize them.



# SUMMARY OF RECOMMENDATIONS

## RECOMMENDATION #1 ESTABLISH AND IMPLEMENT A DEFENCE INDUSTRIAL POLICY

- 1-1 Align defence procurement strategies and processes to support the policy.
- 1-2 Articulate and nurture critical defence industrial capabilities that are needed to support Canada's defence, sovereign and economic interests.
- 1-3 Enable the success of those critical capabilities through 'cluster', R&D, IRB, export and procurement strategies.
- 1-4 Enable the success of those critical capabilities through 'cluster', R&D, IRB, export and procurement strategies.

*Defence and the economy are inter-dependent elements in a sovereign, outwardly-looking and competitive Canada.*

## RECOMMENDATION #2 IMPROVE DEFENCE PROCUREMENT PROCESSES & PRACTICES

Enable an environment where the procurement process and operating culture result in effective program delivery and an optimal economic return to taxpayers by:

- 2-1 **Increasing accountability**
  - a Make managers accountable for program delivery, not just for following the process.
  - b Balance program delivery objectives against legal and contract risk.
  - c Allocate risk between Government and industry where it can best be managed, and reflect this in contract terms and conditions.
  - d Create a cadre of project management and procurement professionals.

## 2-2 Increasing transparency

- a Share annually, with Canadian industry, the ongoing plan to equip the Canadian Forces, including project timing and budgets,
- b Communicate openly with industry early, often, and throughout the process.
- c De-layer the organizational structure and simplify the process.

## 2-3 Shifting the “default” decision making to encourage procurement from qualified Canadian sources – for example:

- a Articulate domestic industrial objectives during the requirement definition stage (i.e. before the procurement strategy is chosen).
- b Shift to rated requirements from mandatory ones in the selection process to ensure overall best value including economic objectives.
- c Shift to indigenous in-service support (ISS) after the warranty period on significant military equipment procured from off-shore sources.
- d Buy what Government has co-developed with Canadian industry.

## RECOMMENDATION #3 STRENGTHEN DEFENCE PROCUREMENT GOVERNANCE

- 3-1 Create a single point of accountability at the Cabinet level responsible for both defence equipment and the defence industrial base.
- 3-2 Create a Defence Industry Advisory Council reporting at the Ministerial level to offer continuing advice to the Government on the creation, implementation and ongoing management of the defence industrial policy.
- 3-3 Create a Joint Industry-Government Procurement Advisory Council reporting at the ADM level to improve the understanding and management of procurement issues between Government and industry.
- 3-4 Report to Parliament annually on the state of readiness and competitiveness of the defence industrial base and its contribution to the national economy.





# 1 PURPOSE

The Canadian Association of Defence and Security Industries (CADSI) is pleased to respond to the Government of Canada's request for advice from Canada's defence industry on how to meet the Government's commitment to re-equip the Canadian military, while also obtaining a strong economic return on its planned investment of \$240B over 20 years.

This Report, including its findings and recommendations, recognizes that defence procurement is complex; that unanimity on the way ahead is improbable either within industry or within Government; that there is no 'silver bullet' to address all issues; and, that Canada is not the only country asking how best to conduct military procurements. We have, therefore, focused on big-picture issues:

- Are the existing public policies 'right' – that is, do they deliver what Canada's defence strategy requires for implementation, while delivering a strong domestic economic return on every dollar invested in defence?
- Are the processes 'right' – that is, do procurement mechanisms and tools efficiently deliver the goods and services required in a way that is widely seen as transparent and effective?
- Are the governance and management structures 'right' – that is, do they facilitate policy execution from a whole-of-government perspective?

Canada's defence industry is convinced that there is a way ahead to a more positive environment that supports effective and efficient military procurements, and that builds industrial capability and capacity in the Canadian economy. Leadership, resolve and effective two-way communication between Government and industry—as exemplified by the Government's engagement of CADSI in this national consultation process—will be essential factors in achieving this success.

*The defence industrial base provides vital support to Canada's defence and economic interests. Industry is playing a growing role as suppliers of key products, technologies and services.*

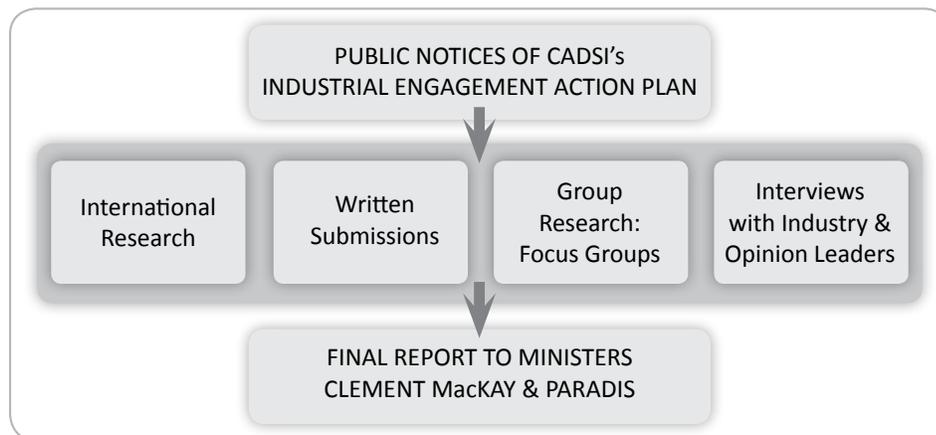
# 2 METHODOLOGY

Ministers Tony Clement (Industry Canada (IC)), Peter MacKay (National Defence (DND)) and Christian Paradis (Public Works and Government Services Canada (PWGSC)) asked CADSI to conduct an Industry Engagement on Canada's military procurement system. A central objective of the Industry Engagement was to determine the factors affecting the procurement process and how best to align domestic industrial objectives with military

procurement priorities. In addition, CADSI was tasked with recommending how to improve the procurement system and produce a better economic return on investment. See **Annex A** for the Statement of Work.

To give all stakeholders an opportunity to provide their input to the Industry Engagement, CADSI used a four-pronged methodology, as shown in Figure 2-1.

FIGURE 2-1 METHODOLOGY OVERVIEW



**Annex B** gives details of the Methodology, which produced the following:

- a comparative International Research report;
- 20 written submissions;
- 8 focus groups during September and October in Calgary, Halifax, Montreal, the National Capital Region, Quebec City, Toronto, Vancouver, and Winnipeg; and
- 20 individual interviews with industry leaders, academic and opinion leaders in parallel with the focus groups.

**Annex C** includes the workbook produced to guide industry in providing input in the written submissions, focus groups, and interviews. **Annex D** is the background papers made available to all stakeholders. **Annex E** reports input from the focus groups and one-on-one sessions. **Annex F** provides a compendium of the input received in written submissions. **Annex G** is the international research. **Annex H** provides an overview of Canada's Military Procurement Framework. Finally, **Annex I** is a list of participating companies.



## 3 CONTEXT

The Federal Government is at the front end of a 20-year, \$240B investment in rebuilding Canada's military across land systems, aerospace and maritime requirements. This is the most significant investment in a generation and will define not only the capability of the Canadian Forces, but also the shape and viability of Canada's defence industrial base for the next 20 years.

The Government's decisions on defence spending commitments are being made in an environment defined at the international level by the following:

- Multilateral efforts to confront international instability and terrorism, often perpetrated by non-state actors;
  - Standardization, rationalization and the search for inter-operable military solutions among NATO countries driven by the pace and cost of technological change;
  - Sovereign nations using national policies and procurement strategies to protect indigenous industrial capabilities of national security and economic interest;
  - Active foreign government support of defence industry R&D because of its critical role in supporting military operations and industry competitiveness;
  - Open collaboration and cooperation between foreign governments and their domestic industrial base in support of national defence and economic objectives;
- Global industry consolidation producing fewer but larger, vertically integrated corporate actors relying on a supply chain of 'best in class' niche capabilities;
  - Aggressive industrial competition for major platform customers, open-architecture software solutions, systems integration, C4ISR, intelligent systems solutions – the jewels in the defence crown for the next 15 years – and original equipment manufacturers (OEMs) migrating into the in-service support (ISS) business;
  - Defence budgets competing with other public policy priorities in allied nations.

At home, defence decisions are being made in an environment defined by the following:

- Competing interests and trade-offs relative to Government spending priorities;
- Up-tempo operations for the Canadian Forces and important defence procurement programs in the pipeline to improve military preparedness;
- A long-term funding commitment by Government to rebuild Canada's defence capability, largely with commercial and military off-the-shelf solutions from foreign OEMs;
- Significant effort by the current Government to align defence procurement priorities to Canada's economic advantage – e.g. draft DND Defence Economic Framework document; the 2008 Defence Science Advisory Board report; DRDC's Science and Technology report, Industry Canada's Soldier System Technology Road Map; Industry Canada's Strategic Aerospace and Defence Initiative (SADI); Canada's Shipbuilding policy; encouraging statements of intent from the past two federal budgets, Speeches from the Throne and the *Canada First* Defence Strategy;
- A relatively small indigenous defence industrial base and small players, by global standards, with world-class capability driven by technology and export market opportunities, often able to sell abroad more readily than to the Canadian Government;
- A domestic industrial base that produces products, technology and services for both commercial and defence and security markets with two main defence customers – global OEMs and the Canadian Government;
- An increasing role being played by Canada's industrial base as suppliers of direct operational support to military missions (e.g. base and camp logistics; flight training;

simulation training and support across the defence environments; unmanned vehicle and robotics support; and industry reservists in the active operational force in key engineering and technology trades);

- Domestic industry's *de facto* role as stewards of Canada's military equipment for life-cycle support given the rotational nature of the federal public service and the Canadian Forces and the length of time Canadian equipment remains in service – at risk;
- Canada's deeply integrated domestic defence industrial base, with the United States, believes that its technology edge is being weakened by U.S. International Traffic in Arms Regulations (ITAR) and by current domestic R&D funding levels for industry-led defence research, testing and evaluation;
- Failed procurements and companies opting not to compete; program delays and sub-optimal economic outcomes from those defence procurements which have gone forward; and,
- Defence procurement processes and practices described by international and domestic practitioners as burdensome and unnecessarily complex, undermining the procurement system's transparency and integrity.



## 4 GENERAL OBSERVATIONS

Participants recognized the current Government's strong commitment to refurbish the Canadian military and to bring economic value to Canada from spending on defence and appreciated the Government's interest in their views on how to improve procurement to achieve these dual objectives. They recognized the value to industry of long-term, stable federal funding as represented by the Canada First Defence Strategy.

Industry leaders underscored the contribution made by Canada's defence industrial base to jobs, innovation and wealth creation in Canada and export opportunities abroad. The industry employs 70,000 Canadians, and generates \$10B a year in defence and security sales of which 50% is exported. With the majority of companies in the defence sector also selling to commercial markets and supporting domestic supply chains, their direct and indirect contribution to the Canadian economy is much greater than their sales to defence and security customers.

Canada's defence industrial base includes but is not limited to shipbuilding and marine industries, aerospace industry, automotive sector, munitions, electronics, simulation and training, information and communications technologies, textile industry, in-service support and satellite and space technologies. This industrial base produces products, technologies and services across the industrial spectrum that serve to equip, enable, support and protect men and women in Canada's Armed Forces and security agencies to perform the duties assigned to them by the Federal Government as safely

and effectively as possible.

Participants believed that there was considerable room for improvement in Canada's defence procurement system: improvements that would provide the Canadian Forces with the equipment it needs to perform the missions asked of it by Government in a more timely and cost-effective manner while delivering greater economic benefit to Canada. They did not believe that these two objectives were incompatible.

Participants expressed the view that land, sea and air requirements could not be managed the same way and that each required tailored procurement strategies to optimize Canadian industrial participation.

Participants emphasized the urgency for action from the consultation process so that the Government could affect meaningful change before the current spend out of \$240B has worked its way through the system.

Overall, participants hoped that the consultations would improve industry's operating environment while also competitively meeting the needs of the Canadian military and international customers.

*Industry leaders underscored the contribution made by Canada's defence industrial base to jobs, innovation and wealth creation in Canada and export opportunities abroad.*



# 5 KEY FINDINGS FROM THE CONSULTATIONS

## 5.1 THE DEFENCE INDUSTRIAL BASE AND THE CANADIAN ECONOMY

- **Defence and the economy are critically important to Canada and are inter-dependent, not mutually exclusive** – The defence industrial base provides vital support to Canada’s defence and economic interests. Industry is playing a growing role as direct operators in military missions, and a continuing role as suppliers of key products, technologies and services. It plays an increasingly vital role as ‘stewards’ of defence equipment, given the rotational nature of the federal public service and the Canadian Forces and the length of time and use of Canada’s fleets in service.
- **Defence trade is not free trade: foreign governments intervene to protect and promote industrial capabilities that support their national interests** – This intervention is ubiquitous:
  - Foreign government policies provide direct R&D support to targeted industries; defence equipment is purchased under ‘national security exceptions’;
  - Procurement strategies are chosen that direct business to preferred domestic suppliers;
  - Trade promotion and support for foreign sales;
  - Non-tariff barriers are erected to prevent foreign competition; and
  - Many foreign governments take a formal equity position in their industrial base.
- Foreign government activity in the defence sector is particularly prevalent in countries whose defence market and industrial base is relatively small by international standards, as is the case with Canada.
- **Small defence markets, like Canada’s, require proactive defence procurement strategies to enable domestic participation** – Small markets cannot be self-sufficient across the entire defence sector. Canada should identify key industrial capabilities (those with strategic interest or a clear, sustainable technological or equivalent business advantage), and support them in acquisition and life-cycle support programs. It should also determine what will be important or present opportunities for Canada in the future, and design and implement strategies for indigenous suppliers to contribute to filling identified gaps. Finally, Canada should align its defence procurement strategies and processes to achieve success in these chosen areas. For example, participants asked the Government to enable the formation of ‘capability clusters’<sup>1</sup> in areas identified to be of defence and economic interest to Canada, and to direct procurement strategies to buy from those clusters when they meet the military requirement.

<sup>1</sup> A Capability Cluster is a collection of partners which can include universities, industry, government and non-governmental organizations associated with a focus on a specific capability. They support research and development, commercialization of products and ideas, and the development of significant Canadian business advantages.

- **R&D is a key driver of industrial base competitiveness** – As a market heavily influenced by technology-based solutions, Canada’s defence industrial base sees R&D as a key driver of its competitiveness, and believes that its technology edge is slipping and that Government can and must play a greater funding role in private sector-led defence R&D.

- It understands that access to the important OEM global supply chain market depends on companies being able to offer and sustain leading edge technology, not legacy, solutions. Canada’s defence industrial niche in international markets is in knowledge-based capabilities rather than low-cost commodities. Given the dual-use nature of the defence industrial sector, it believes that federal investment in private sector led R&D will provide a significant return to the Canadian economy in jobs and wealth creation. Because the jewels in the defence crown for the next 20 years will be in knowledge-based defence electronics, hardware, software and systems applications, greater R&D support is critical to Canada’s ability to win in this marketplace.
- It understands that Canada’s industrial base adds significant value to Canadian defence systems acquired from foreign suppliers, a market that cannot be effectively sustained unless such acquisitions include intellectual property (IP) rights to permit Canada’s defence industry to function effectively.
- Participants acknowledged the value of collaborative R&D with the government focused on the operational needs of the Canadian Forces. They believe that background IP should remain the property of the party that brought it to the table.

They called on the government to provide industry with an automatic, royalty free, fully paid up licence to any co-developed IP. Industry believes that it is the best party to exploit co-developed IP’s use in defence and commercial markets.

- **Canada’s defence industrial base relies on international markets to be competitive** – Roughly 50% of defence industrial revenue is earned in international markets due in large part to the competitiveness of Canadian industry.

- As a result of bilateral defence industrial treaties with the United States dating from the 1940s, Canada’s defence industry is deeply integrated into the North American defence industrial market. Today, that traditionally strong export market is adversely affected by ITAR, and other market opportunities are narrowing as Europe turns inward to meet its defence requirements. In short, participants believe that they face increasingly difficult market conditions internationally and that they require the best of Government support to overcome these barriers.
- Participants believe that their efforts to export would be greatly enhanced by Canada being the “first customer” of their technologies because foreign governments are reluctant to purchase equipment that has not been purchased by our own government.

*Canada’s defence industrial niche in international markets is in knowledge-based capabilities.*

- Participants believe that Export Development Canada (EDC) and the Department of Foreign Affairs and International Trade (DFAIT) do not effectively support Canada’s defence industry abroad; that the Canadian Commercial Corporation (CCC) could take a higher profile vis à vis domestic industry in international markets; that Canada’s defence attaches should spend more time promoting domestic capabilities abroad; and, that the Government should provide greater support to industrial participation in international defence and security trade shows and missions.
- Participants believe that targeted Government support would create opportunities for Canadian industry in emerging markets, in NATO due to its focus on interoperable solutions, and in the crucial U.S. market if an ITAR solution can be found. They also believe that strategic use of Industrial & Regional Benefits (IRBs) to leverage Canada’s industrial base into OEM supply chains for global platforms, whether Canada is buying that platform or not, is important to growing and sustaining the domestic industrial base.
- **SMEs are not adequately engaged in the defence procurement process** – Domestic defence companies are unhappy with their diminished access to Canadian Government business and see program and contract bundling, procurement strategies and IRB practices as impeding active SME involvement in large capital programs. Many participants said that it was easier to sell in international markets than in Canada. They also expressed frustration at not being able to obtain information in a timely fashion on smaller procurement opportunities, or to identify

who to contact to learn about opportunities and upcoming defence programs. MERX was not seen as an effective tool in this regard. They also believe that they could make a stronger contribution to defence programs in Canada. In this respect, participants expressed Interest in the Government’s Technology Road Map exercise for Soldier Systems and its interest in establishing a ‘capability analysis centre’ as two good, pre-competitive stage ways of bringing SMEs more into the defence procurement arena. It understands that the small and medium enterprise (SME) community is a principal generator of new technology, and identified the U.S. Small Business Innovation Research Program (SBIR) as a useful model for Canada to follow as a key source of funding for start-up companies.

- **ITAR is a critical impediment to Canadian industrial competitiveness** – The United States market accounts for 80% of Canada’s defence exports and the technologies developed by Canadian partners are intertwined with U.S. technology. Canadian companies face an almost impossible task: complying with both ITAR and Canadian human rights and employment laws. If this problem is not addressed, participants were confident that technology-based jobs would continue to be lost, weakening Canada’s industrial base and competitiveness.

*Efforts to export would be greatly enhanced by Canada being the “first customer”*

- **Canada has world-class defence industrial capabilities with defence and economic value to the country which can be nurtured and developed for success through Government policies, procurement strategies and processes** – Participants found that in all areas where Canada identifies industrial capabilities of strategic defence and/or economic value, it should align its R&D, export, IRB and domestic procurement strategies to support those capabilities.
  - Participants identified key domestic industrial capabilities of defence and sovereign interest to Canada that included but were not limited to: munitions; arctic and cold weather capabilities; maritime domain awareness; intelligence and surveillance functions; cyber security; surveillance and control of borders and ports; soldier survivability; C4ISR; and the ability to modify, upgrade and maintain Canadian defence equipment through its life cycle. A recent isolated Government decision with respect to protecting indigenous satellite, remote sensing and space capabilities was seen by participants as an illustration of strategic decision-making for national security reasons, as was the decision taken to contract for simulation and training from Canadian suppliers.
  - Participants identified key domestic industrial capabilities with economic value to Canada that included but were not limited to:
    - Shipbuilding, due to its contribution to regional shipyard employment and to the engagement of hundreds of companies in the domestic marine industry supply chain and in-service support market. Participants found it appropriate for the Government to use its National Shipbuilding Policy to exercise its right to build ships in Canada and to establish a national allocation and production schedule model, in consultation with Canada’s shipbuilding and marine industries, to optimize Canadian industrial participation;
    - A strong aerospace industry including, avionics, composites, engines and landing gear;
    - Robotics and unmanned vehicles, given its market growth potential and applicability to Canadian geographic realities;
    - Cross platform simulation and training;
    - Armoured land vehicles, due to the military effectiveness of current Canadian capability and its popularity in international markets and to the support it provides to hundreds of companies in the domestic supply chain of Canada’s automotive sector from acquisition through life cycle support. They believe that the domestic armoured land vehicle industry should be a preferred supplier where Canada has capability and should be the default prime contractor on government purchases of off-shore solutions; and,
    - In-service support .
  - Participants pointed out that, in many of these areas of strategic and economic interest, a proactive role by government, in the past, helped to create the capability and capacity that today enables Canadian industry to compete successfully at the international level.

- **Among its allies, Canada is unique in not having a defence industrial policy with implementation strategies to guide the relationship between government and its industrial base and to formally align economic objectives to military procurement** – International research conducted as part of the consultation process confirmed that other small defence-market economies align their defence industrial policies to market opportunities and military requirements. Participants were resolute in supporting the creation of a Canadian defence industrial policy:

- To define a framework for industry and Government to work together;
- To establish an improved alignment of other federal policies and programs in support of the defence industrial base and to identify metrics for progress and success;
- To enable domestic industry to invest

in R&D, human resource, program and export market strategies; and

- To strengthen the alignment of defence procurement priorities, strategies and processes with domestic industrial objectives.

They acknowledged that the policy should be a living document that is reviewed and updated regularly to ensure that it remains relevant to changing technology and to Canada's needs. The recently released update to the Australian Defence Industrial Policy was identified as a good template for Canada to consider.

*Participants were resolute in supporting the creation of a Canadian defence industrial policy.*



## 5.2 DEFENCE PROCUREMENT PROCESS

- **The defence procurement process is unnecessarily complex and burdensome, adversely affecting program delivery** – Government policy stipulates that Canada’s defence procurement process must be open, fair and transparent. However, participants report that the current process operates within an overly complex legal and policy framework that creates an environment not seen as open, fair or transparent. The Government’s response to the Gomery Commission has added layers of administrative process through increased use of fairness monitors, increased legal and risk management oversight, and the establishment of a Procurement Ombudsman. Each additional layer makes an already rules-based process more rules-based and increases the risk aversion of those responsible for the process. Participants were convinced that the accumulated effect of these factors has been to create a process that is opaque, not believed to be fair and, in the eyes of many, unworkable. Often, the result is program delays with costs to Government and industry in time, money and reputation, and which jeopardize Canadian Forces readiness.
- **Defence procurement strategies and processes do not sufficiently reflect domestic industrial objectives** – Participants understood that DND’s core mandate is to get the best equipment needed by the troops as quickly and cost-effectively as possible. And, while participants accepted the primacy of the requirement, they believed that domestic industrial objectives must be given greater consideration before a program’s procurement strategy has been chosen and as the defence requirement is being defined. Participants also believed that industry needs to be informed of the future military requirements development process so that they are able to position private investments

in technologies and systems to meet future Canadian Forces needs.

- **Requirements are defined in an overly prescriptive manner with too many mandatories, leading to failed procurements, companies not bidding and program delays** – Participants recognized the problem of responding to ‘bottom up’ defined requirements that were ‘platform’ rather than ‘outcome’ or ‘performance’ specific. Industry believes that this practice limits industry innovation and its ability to propose alternative approaches to meeting DND’s requirement. In some cases, companies have been obliged to bid less than their best product because the requirement as defined was out of date and called for obsolescent technology.
  - Companies found that ‘best value’ is not achieved when there are too many mandatory selection criteria. For instance, participants identified cases where almost all requirements except price were mandatory with the result that the “lowest price compliant” bidders were the inevitable winner of the competition. This means that the government does not have the option of accepting a proposal which may cost more but that on balance has more capability and offers greater benefit to Canada.
  - They also described examples where companies acknowledged as world leaders in the required capabilities were unable to satisfy all mandatories. Finally, in some cases, industry’s response to mandatory Request for Proposal (RFP) requirements exceeded the budget envelope and the Government chose not to proceed with the program.
  - Companies believe that the government has great difficulty in costing its projects and that this poses a real problem for companies.

- **System is risk averse and does not reward program delivery** – Companies believe that the procurement process’ legal and contract priorities are more important than program success, which can be hampered by delays, cost increases or non-delivery. PWGSC issues tens of thousands of contracts annually, of which about half are covered by one or more trade agreements and, thus, could be appealed to the Canadian International Trade Tribunal (CITT). Annually about 50 cases are appealed and in fewer than half is the Department found to be at fault. Common sense and creative outcomes have a place in the procurement system. The system is less accountable and less transparent because of its inherent aversion to risk.
- **Industry is required to take on risk that is better managed by government** – Participants observed that overall project risk is minimized when each risk is allocated to the party best equipped to manage it. Current Government procurement practices have diverged from this accepted norm, resulting in industry being asked to assume risk beyond its control and competence. This results in industry either over-pricing risk or declining to participate in such imbalanced procurements.
  - For instance, companies described procurements where the Government’s position on 3rd party liability indemnification was so onerous that companies chose not to bid. However, since the Government steps in and underwrites damages in cases of catastrophic failures, industry wonders why Government increases its program costs by requiring industry to build that risk into their proposals.
- **The Government’s decision-making criteria do not achieve effective program delivery and optimal participation by Canadian industry in defence spending** – Participants talked

about a “culture” of risk aversion in defence procurement. They believe that this culture results in officials making decisions based on minimizing their personal accountability (something which came to be called the “default option” during the consultation) which may not achieve effective program delivery or optimal results for Canadian industry. Two examples from the consultation process illustrate this point:

- First, when the Government co-invests with the private sector in R&D to develop capabilities it ultimately intends to buy, it should then buy that product from the co-investor through a non-competitive process. At the moment, the default button is to compete the requirement which leaves industry feeling that the Government is turning its back on its private sector partner. Some cited examples of being disqualified from competing because their involvement in the development process could have been interpreted as an unfair competitive advantage.
- Second, the Government’s policy to use “firm fixed-price contracts” creates an illusion of risk avoidance. Industry believes that, for some projects, using open book accounting and the Government’s profit policy may provide a better long-term solution to effective program delivery and cost management. Since this approach is not the norm, procurement staff would have to justify using it as the contracting tool and would also assume greater responsibility and accountability for managing that contract.

*Industry needs to be informed of the future military requirements...*

- **An overly thin layer of experienced and knowledgeable defence procurement, contract and program managers in Government is decreasing defence program transparency, accountability and consistency, and increasing risk avoidance and redundant layers of process and management to compensate** – Participants remembered the Government’s Program Review process from the mid-1990s which identified DND, IC and PWGSC as “most affected”. Many people left those Departments and a hiring freeze was imposed on entry-level personnel. Today, the consequence of these actions is seen in too few officials with defence procurement knowledge and experience. This is compounded by retiring baby-boomers in senior management positions and a concomitant shortage of middle management to assist in training new public service personnel. In addition, even public servants with procurement knowledge do not, for the most part, have experience on major capital purchases because of the paucity of such purchases in the last 20 years. Participants also believed strongly that there was insufficient knowledge within the public service of domestic industrial capabilities and of the importance to the economy of profitable businesses in the defence industrial base. For example, in more than one case, participants advised that they had been told by PWGSC’s cost analysts that a profit of 0% was appropriate. Participants

called on the government to launch a Human Resources program to recruit and train a new generation of procurement professionals.

- **Single Point of Accountability on air fleet acquisitions and ISS is not a good procurement model for Canada or for Canadian industry** – The ability to modify, upgrade and maintain military equipment is seen as a critical domestic capability of sovereign countries and Canada’s ISS community has become its real stewards. The domestic ISS community provides knowledge-based, high value jobs which is good for the economy across the country. Given the length of time and the harsh conditions under which Canada flies its fleets, the value of ISS contracts exceed acquisition contract value. Canada has a strong ISS base that has been able to export based on innovative approaches to fleet management and sustainment developed over the past 40 years. However, if there is no change to the current model, existing capability and capacity in the ISS aerospace community will be lost. Participants identified the Australian and British models as useful alternative procurement strategies. In these models the government mandates the OEM for ISS through an initial warranty period and, during that initial period, runs a competition to select domestic prime(s) to manage the purchased fleet through its full life-cycle.



### 5.3 GOVERNANCE

- Fragmented governance contributing to slow program delivery and sub-optimal economic return on investment – The consultations found that the fragmented departmental approach to defence procurement slowed defence program delivery and produced sub-optimal industrial outcomes. While they were equally convinced that there were other inter-related factors that impeded successful procurements including process and behavioural practices, participants observed that Canada is unique among NATO countries in managing its defence procurements through multiple federal departments, and in separating the mandates of those responsible for defence equipment from those overseeing the domestic industrial base.
  - Industry participants highlighted the costs, time, risk and uncertainty to them and to the Government in their efforts to respond to defence programs characterized by multiple departmental expectations and operating cultures.
  - To enable effective defence program delivery and optimal domestic industrial outcomes from defence spending, participants found there to be value in a single point of accountability at the Cabinet level for defence equipment and Canada’s defence industrial base.
- No obvious champion for Canada’s defence industry at the federal level – Participants noted that there were several federal departments influencing defence procurements and domestic industry’s role in them:
  - PWGSC is responsible for the domestic industrial base in support of Canada’s defence material needs under Section 12 of the seldom-referenced Defence Production Act;
  - IC has responsibility for the IRB program;
  - DND plays a role through the Director General International and Industry

Programs (DGIIP) in ADM Materiel; and

- EDC, CCC and DFAIT also have supporting roles.

But they were not convinced that the defence industrial base enjoyed an obvious champion able to leverage support across Government to nurture and develop the sector in accordance with the country’s defence and economic objectives.

- Government policies, programs and defence procurement strategies not aligned to achieve optimal economic advantage for Canada – Participants acknowledged that there was Government effort to promote Canadian industrial competitiveness. They were, however, concerned that the lack of operational alignment of the Government’s existing policies, programs and human resources would make it difficult to achieve the desired outcome in the defence environment.
- The absence of formal communications mechanisms decreases transparency and increases misunderstanding between industry and Government – Participants expressed grave concerns about what they perceived to be Government’s low level of understanding of, and appreciation for, the depth and breadth of domestic defence industrial capabilities. They expressed the view that there appears to be much greater cooperation and collaboration between foreign governments and their industrial base than exists in Canada. And they found that there was an insufficient mutual understanding and appreciation of supplier and customer pressures and responsibilities.
  - They found that poor communication between Government and industry hampers effective program delivery and reduces industry’s confidence in procurement system integrity and transparency. They found there to be a need, consequently, for more formal communication mechanisms between Government and Canada’s defence industry.



# 6 DETAILED RECOMMENDATIONS

## RECOMMENDATION #1

### ESTABLISH AND IMPLEMENT A DEFENCE INDUSTRIAL POLICY

Participants recommend that Government establish a Defence Industrial Policy aligned to the CFDS and national economic priorities, supported by procurement and implementation strategies, and with the following attributes:

- Articulating critical defence industrial capabilities that support Canada's defence, sovereign and economic objectives, and establishing programs and practices to nurture and develop those capabilities through indigenous suppliers;
  - Establishing which industrial capabilities will be of importance or present opportunities for Canada in the future, and designing and implementing strategies for indigenous suppliers to develop those capabilities;
  - Committing to increased Government funding of private-sector-led R&D as a key competitiveness driver of the industrial base for both defence and commercial applications, with the following specific provisions:
    - Commit an amount equal to 5% of DND's capital budget to collaborative private-sector-led research in critical capability areas;
    - Open up other Make federal R&D funding mechanisms to support targeted SME research in areas of defence and economic interest – e.g. the Strategic Aerospace and Defence Initiative (SADI);
    - Use IRBs to incentivize offshore defence suppliers to invest in critical Canadian defence industrial capabilities through banking and multipliers;
- Buy what Government has co-developed with Canadian industry if when the Canadian Forces need that capability.
  - Ensure that all defence procurements from foreign suppliers which include software or hardware systems of strategic or sovereign importance include provisions to obtain sufficient IP to allow Canada to customize, maintain and enhance those systems, using domestic sources, throughout their life-cycle; and
  - Recommit financial support to, and Canadian engagement in, the Defence Development Sharing Agreement with the United States.
- Aligning the policy and programs of federal departments to promote the growth and competitiveness of Canada's defence industrial base;
  - Enabling the formation of 'industrial capability clusters' in areas of strategic national interest, using them as preferred suppliers when buying those capabilities and promoting them through R&D, IRBs and export strategies into OEM global supply chains;
  - Adopting aggressive export strategies that increase access to, and success in, the international defence marketplace for Canada's defence industrial base. Specific measures should include the following:

- Use Canada's IRB program to leverage Canada's defence and security industries into global OEM supply chains for OEM programs whether Canada is a buyer of that program or not (recent changes to the IRB program now make this possible);
  - Participate in multilateral defence programs from their inception, where they respond to Canada's economic and defence interests; Mandate EDC and CCC to proactively support Canada's defence and security industries in riskier markets across the full range of defence capabilities;
  - Elevate Canada's defence and security industries as a priority sector in DFAIT and increase support to, and Government engagement in, international defence trade shows and missions;
  - Ensure that Canadian defence attaches actively promote Canadian defence capabilities when posted abroad; and
  - Find a solution, urgently, to the U.S. ITAR's destructive impact on Canada's defence industry competitiveness.
- Supporting greater SME involvement in defence procurements through the following actions:
    - Be the 'first customer' and commit to 'buy and try' programs;
    - Establish a 'capability analysis centre' in Canada, similar in design to Australia's Rapid Prototyping, Development & Evaluation (RPDE) program, and encourage Canadian SMEs to participate;
    - Continue to use Technology Road Maps (TRMs), similar to the Soldier System TRM currently underway, as a way of engaging the SME community in defence-related activities;
    - Amend SADI to make it more accessible to SMEs in defence and securities industries; and
    - Consider the introduction of an Small Business Innovation Research (SBIR) program for Canada and/or a small business set-aside program



## RECOMMENDATION #2

### IMPROVE DEFENCE PROCUREMENT PROCESSES & PRACTICES

Participants recommend that Government improve defence procurement processes and practices through the following actions:

- Aligning defence procurement policy and practices to the CFDS and the defence industrial policy to achieve effective program delivery and optimum economic benefit;
  - Articulating domestic industrial objectives before the procurement strategy is chosen and as the program requirement is being defined;
  - Identifying and eliminating from the defence procurement process all Government policies or programs not directly related to the military equipment required and associated economic benefits;
  - Enhancing flexibility, transparency and efficiency of program delivery by reducing administrative redundancy, complexity and layers of oversight;
  - Using capability clusters as the default procurement option (preferred supplier status) when they meet the military requirement, and removing the contractual and procurement policy roadblocks that impede their formation and access to markets;
  - Creating a communication environment that is open, collaborative, and continuous with industry throughout the procurement process;
- Defaulting to Canadian solutions when they meet the military requirement;
  - Rating Canadian content and strategic capabilities in the RFP evaluation;
  - Assigning program, business and contract risk responsibility to the party best suited to manage that risk;
  - Balancing the pursuit of a fool-proof contract with the risks of an undelivered program;
  - Choosing a contract model that best aligns with the program's risk profile;
  - Drafting requirements defined by performance, rather than platform specifications;
  - Reducing the number of mandatory requirements in favour of rated requirements to achieve 'best value'; and
  - Developing a cadre of procurement professionals by establishing a professional development system for Government contract and program managers responsible for defence procurements and encourage joint training programs on contract and program management for industry and Government workers.



### RECOMMENDATION #3

## STRENGTHEN DEFENCE PROCUREMENT GOVERNANCE

Participants recommend that Government strengthen defence procurement governance through the following actions:

- Creating a single point of accountability at the Cabinet level responsible for both defence equipment and the defence industrial base. Although implementation is beyond the scope of this Report, the consultation process identified at least three options available to implement this recommendation:
  - Create a separate defence procurement agency reporting through a single Minister;
  - Consolidate procurement, industrial, contracting and trade mandates into one new department, like a Defence Production Department, reporting to a Minister; or
  - Combine the responsibilities for defence equipment and Canada's defence industrial base under one existing entity.
- Creating a Defence Industry Advisory Council reporting at the Ministerial level to offer continuing advice to Government on the formation, implementation and ongoing management of defence industrial policy and its implementing strategies;
- Creating a Joint Industry-Government Procurement Advisory Council reporting at the ADM level to improve the understanding and management of procurement issues between Government and industry; and
- Producing an annual Report to Parliament on the state of readiness and competitiveness of the defence industrial base and its contribution to the national economy.



# 7 CONCLUSIONS

The consultation process and this report provide the government with ample evidence of the need for change to Canada’s defence procurement strategies, processes and practices. Participants to the consultations were appreciative of the government for its expression of interest in their views. Expectations have now been raised within Canada’s defence industrial base for change.

Participants found that progress on policy, process and governance must be achieved at the same time, as each was an integral part of the overall solution. Progress in one area without progress in the other two, participants believed, would not result in real change.

Participants believed that implementing a defence industrial policy would enable wealth creation, knowledge-based jobs and export opportunities in the defence industrial base in areas critical to Canada’s sovereign and defence interests. Similarly, participants believed that important improvements to Canada’s procurement processes and practices would improve the timing, costs and risk associated with defence program delivery. And, they believe that a stronger governance structure would improve the Government’s operating efficiency.

\$240B in planned defence spending over the next 20 years provides a golden opportunity for the government to rebuild the Canadian Forces and to create and sustain Canada’s defence industrial base – a vital partner supporting Canada’s economic and national interests. Defence and the economy are inter-dependent

elements in a sovereign, outwardly-looking and competitive Canada.

Bold action is needed urgently to move forward aggressively and effectively on defence programs waiting in the pipeline and to deliver a strong and strategic economic return on defence spending.

The issues described in this report are not new and, with continuing leadership, conviction and resolve from the government, improvements can be achieved quickly. Canada’s defence industry is ready to work with the government to optimize defence spending for the Canadian Forces, jobs in Canada and our national economy.

*Bold action is needed urgently to move forward aggressively and effectively on defence programs waiting in the pipeline and to deliver a strong and strategic economic return on defence spending.*



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