





# Case for a Canadian National Tank-Building Program

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### **JCSP 49**

# **Service Paper**

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### PCEMI nº 49

## Étude militaire

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#### CANADIAN FORCES COLLEGE - COLLÈGE DES FORCES CANADIENNES

JCSP 49 - PCEMI n° 49 2022 - 2023

Service Paper – Étude militaire

## Case for a Canadian National Tank-Building Program

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#### CASE FOR A CANADIAN NATIONAL TANK-BUILDING PROGRAM

#### **AIM**

1. The Canadian Armed Forces (CAF) must develop a National Tank-Building Program (NTP) and should accept Any proposal willing to license an existing design and contract the manufacturing to a company in Canada in order to maximize diplomatic, economic, industrial and technological, and supply benefits.

#### INTRODUCTION

- 2. The new war in Ukraine has returned the Main Battle Tank (MBT) to prevalence in military discourse. Allies have donated hundreds of tanks to Ukraine to support their preparation for a counter-offensive against the Russian occupiers. For its part, Canada has already donated four (4) of the eighty (80) tanks held in service, while committing to donating an additional four (4) as well as an Armoured Recovery Vehicle (ARV), which is based on the Leopard 2 chassis. Following the commitment of this donation, Minister Anand confirmed the intention of procuring more tanks for the Canadian Armed Forces.<sup>2</sup>
- 3. The Government of Canada's (GoC) commitment to buy replacement tanks is welcome news; however, the cost, mechanism, and procurement strategy are complex affairs that will take years to determine and resolve. Modelling off the recent successes of the Canadian National Shipbuilding Strategy (NSS), now is the opportune time to develop and implement a National Tank-building Program. The CAF, the Department of National Defence (DND), and the Government of Canada (GoC) writ large must seize the opportunity of increased focus on defence requirements as a way to provide enduring benefit to Canada, including diplomatic, economic, technological, and supply-chain advantages.

#### **DISCUSSION**

#### THE REQUIREMENT

4. There has been frequent debate whether or not Canada needs their own MBTs. In 2003, when the decision was made to pursue the purchase of the Mobile Gun System – a Light

<sup>&</sup>lt;sup>1</sup> 'Arms Transfers to Ukraine - Forum on the Arms Trade', accessed 3 March 2023, https://www.forumarmstrade.org/ukrainearms.html.

<sup>&</sup>lt;sup>2</sup> 'Canadian Military Will Get New Tanks to Replace Leopards Going to Ukraine: Minister - National | Globalnews.Ca', accessed 3 March 2023, https://globalnews.ca/news/9510170/canadamilitary-anand-leopards-ukraine-tanks/.

Armoured Vehicle (LAV) with a 105mm cannon – it spelled the end of the tank for the Canadian Army (CA).<sup>3</sup> The CAF had planned to completely retire the tank fleet - Leopard C2s at the time - with the assumption that conventional warfare was history and the new way of war preferred strategic and operational mobility provided through wheeled platforms. This theory, however, was quickly refuted with the CAF experience in Afghanistan. Although the operation was defined as a Counter-Insurgency (COIN) war, the tanks were deployed to the theatre in 2006. The Leopard C2s' mobility, firepower, and survivability against direct Al Qaida/Taliban engagements were all indispensable.<sup>4</sup> Thus, noting the Leopard C2 limitations in belly armour and air conditioning, the GoC approved a hasty procurement of a replacement platform – the Leopard 2 in both A4 and A6 models.<sup>5</sup> These are the tanks still in service today, though upgraded to the A4M and A6M models respectively, which provided armour protection upgrades.

When the CAF redeployed from Afghanistan in 2014, in around the period of Russia's 5. initial invasion of Crimea, the CA re-oriented from COIN tactics back to conventional warfare, with a focus on the Russian threat. Over the following eight (8) years, the CAF, and the Canadian Army (CA) in particular, has been refining its skillsets and improving readiness in order to be prepared to fulfill our North Atlantic Treaty Organization (NATO) commitments if an Article 5 declaration were to be called. Even prior to the 2022 Russian invasion, the European Defence Agency reiterated in their 2020 CARD report that participating Member States agreed in 2018 to "upgrade, modernise or procure a MBT capability as a credible backbone in conventional high intensity operations as well as crisis management operations." The urgency of this commitment was not stressed until the 2022 Russian invasion of Ukraine. With a renewed fear of an aggressive Russia and the overall threat to the liberal-democratic world order, allied nations rallied around Ukraine in support of their fight against Russia. As the war progressed, it became evident that the Ukrainian forces were going to require offensive capabilities to retake territory illegal annexed by occupying Russian forces. In November 2022, allied nations began to commit the best ground offensive weapon available, the MBT. Although the outcome of the war is still yet to be determined, the dire requests from the Ukrainian forces and the unwavering

<sup>&</sup>lt;sup>3</sup> R D Dove, 'Strategic Foresight in Canadian Forces Force Development of Armour Capabilities: Pursuing the Horizon?', n.d. 33

<sup>&</sup>lt;sup>4</sup> Dove. 56

<sup>&</sup>lt;sup>5</sup> 'Tanks for the Lesson: Leopards, Too, for Canada', accessed 3 March 2023, https://www.defenseindustrydaily.com/tanks-for-the-lesson-leopards-too-for-canada-03208/.

<sup>&</sup>lt;sup>6</sup> European Defence Agency. 2020a. "2020 CARD Report – Executive Summary." Accessed March 2, 2023. https://www.eda.europa.eu/what-we-do/activities/activities-search/card-2020-executive-summary."

<sup>&</sup>lt;sup>7</sup> 'Donated Tanks Headed to Ukraine - Defense One', accessed 3 March 2023, https://www.defenseone.com/technology/2022/11/tanks-headed-ukraine/379366/.

support of allied nations to support their objectives with the donation of tanks proves the continued value and utility of these high-priced assets.<sup>8</sup>

6. Although it is extremely unlikely that Canada has to counter a land-based attack on Canadian soil similar to Ukraine, there is still a requirement for the MBT in accordance with the Canadian Defence Policy. With the document, the vision for the CAF is to be "STRONG in Canada, SECURE in North America, and ENGAGED in the World." It is in this third focus area that the MBT provides the most value. In order to be truly "ENGAGED in the world", the CAF needs to be resourced for the most challenging tasks to ensure appropriate and tangible contribution to stability of the world, including "peace support operations and peacekeeping" while affording as much protection to their personnel as possible; a role perfectly suitable for the MBT!<sup>10</sup> The critical issue, however, is how to procure them.

#### THE SOLUTION: THE NATIONAL SHIPBUILDING STRATEGY MODEL

7. After nearly two decades of neglect, the government decided in 2010 to reinvest heavily in Canada's marine industry. As opposed to simply purchasing vessels for the Royal Canadian Navy (RCN) and Canadian Coast Guard (CCG) on the international market, the GoC determined that they could "maximize economic benefits across the country" by instituting a National Shipbuilding Strategy. This assumption proved true, with Assistant Deputy Minister (ADM) Defence and Marine Procurement, Mr Simon Page reporting as part of the third report on the NSS that "contracts awarded between 2012 and 2021 contributed \$21.2 billion to Canada's gross domestic product and maintained more than 18,000 jobs per year." Many of these jobs are of the mid-to-high paying variety, with Public Service Procurement Canada (PSPC) reporting that the shipyards employ 2.5 times more employees in science, technology, engineering and mathematics (STEM) fields than standard manufacturing and they are paid 30% higher wages on average. This demonstrates that the GoC spending is finding its way back into the pockets of Canadians and shared into the Canadian economy writ large. Overall, the GoC expects to expend approximately \$100 billion over the course of the next three decades, including in-service

<sup>&</sup>lt;sup>8</sup> 'Ukraine War: Give Us Tanks, Says Zelensky, as Western Allies Meet - BBC News', accessed 3 March 2023, https://www.bbc.com/news/world-europe-64341337.

<sup>&</sup>lt;sup>9</sup> Canada. Department of National Defence, *Strong Secure Engaged: Canada's Defence Policy* (Ottawa, ON, CA: National Defence, 2017). 14

<sup>&</sup>lt;sup>10</sup> Canada. Department of National Defence. 14

<sup>&</sup>lt;sup>11</sup> 'National Shipbuilding Strategy (NSS) - Shipbuilding and Industrial Marine', accessed 2 March 2023, https://ised-isde.canada.ca/site/shipbuilding-industrial-marine/en/national-shipbuilding-strategy-nss.

<sup>&</sup>lt;sup>12</sup> Robert Kitchen, 'Supplying Canada's Armed Forces and Coast Guard with the Right Equipment: An Interim Report', n.d. 38

<sup>13 &#</sup>x27;About the National Shipbuilding Strategy - National Shipbuilding Strategy - Sea - Defence Procurement - Buying and Selling - PSPC', accessed 2 March 2023, https://www.tpsgc-pwgsc.gc.ca/app-acq/amd-dp/mer-sea/sncn-nss/apropos-about-eng.html.

support, with direct disbursements divided between Nova Scotia, Quebec, and British Columbia. He commitment demonstrates the GoC's willingness to spend federal funds when they see a tangible return on their investment of Canadian taxpayer dollars. Most importantly, however, as of September 2<sup>nd</sup> 2022, the RCN has received three Arctic and Offshore Patrol Ships (AOPS) while the CCG has received their three Offshore Fisheries Science Vessels (OFSV), satisfying a few of Canada's national security capability gaps. 15

8. By replicating the NSS's approach, the CAF should encourage the development of a National Tank-building Program (NTB) to generate similar benefits, including satisfying a capability requirement to support Canada's Defence Policy and the CAF's ability to "Engage in the World", the economic development and creation of jobs and the solidification of internal supply-chain.

#### **BENEFITS: DIPLOMACY**

- 9. Canada is a significant industrialized nation with a growing economy that seeks to play an increasingly important role in global affairs. In the Minister of Foreign Affairs and Minister of Defence mandate letters, they were tasked to lead their departments in expanding, enhancing, and/or promoting peace and security throughout the world, alongside our partners and allies. As Canada looks to take on this bigger role, the GoC must be willing to resource the force appropriately to fulfill the commitments made.
- 10. As a founding member of the NATO alliance, Canada has an important role to play in promoting greater cooperation and coordination between member states. At the 2016 Warsaw NATO Summit, Canada volunteered and was selected by NATO to be a Framework Nation for

<sup>14</sup> 'Defence and Marine Procurement: Standing Committee on Government Operations and Estimates—June 10, 2022 - PSPC', accessed 2 March 2023, https://www.tpsgc-pwgsc.gc.ca/trans/documentinfo-briefingmaterial/oggo/2022-06-10/p10-eng.html.

<sup>16</sup> 'Minister of Foreign Affairs Mandate Letter', accessed 3 March 2023, https://pm.gc.ca/en/mandate-letters/2021/12/16/minister-foreign-affairs-mandate-letter; Minister of National Defence Mandate Letter', accessed 3 March 2023, https://pm.gc.ca/en/mandate-letters/2021/12/16/minister-national-defence-mandate-letter.

<sup>15 &#</sup>x27;Arctic and Offshore Patrol Ships: Royal Canadian Navy - Large Vessel Shipbuilding Projects - Shipbuilding Projects to Equip the Royal Canadian Navy and the Canadian Coast Guard - National Shipbuilding Strategy - Sea - Defence and Marine Procurement - Buying and Selling - PSPC', accessed 2 March 2023, https://www.tpsgc-pwgsc.gc.ca/app-acq/amd-dp/mersea/sncn-nss/npea-aops-eng.html; 'Offshore Fisheries Science Vessels - Large Vessel Shipbuilding Projects - Shipbuilding Projects to Equip the Royal Canadian Navy and the Canadian Coast Guard - National Shipbuilding Strategy - Sea - Defence and Marine Procurement - Buying and Selling - PSPC', accessed 3 March 2023, https://www.tpsgc-pwgsc.gc.ca/app-acq/amd-dp/mer-sea/sncn-nss/halieutique-fisheries-eng.html.

the Battle Group (BG) in Latvia as part of the enhanced Forward Presence.<sup>17</sup> Inherent in that BG leadership responsibility was the expectation that capability gaps were to be filled by the Framework Nation. In their chapter *More Teeth for the NATO Tiger*, Claudia Major and Christian Molling argue that the Framework Nation Concept should extend into the industrial domain, with lead nations being responsible to support their subordinate partners from their domestic industrial base to fulfill capability gaps within the deploy force package.<sup>18</sup> Canada has failed in that regard on multiple fronts. Due to Canada's troop cap numbers, the decided BG structure consisted of a mechanized infantry company, combat support and combat service support companies, and a large headquarters element. Contributing nations, such as Italy and Spain on the other hand, deployed with integral combat teams, including infantry fighting vehicles as well as their national variant of Leopard tanks.<sup>19</sup> Thus, they deployed with more fighting power than Canada, who was supposed to be the leader and framework nation. In order to deploy any tanks to Latvia, however, the CA would have had to deplete their national holdings and greatly limiting the degree to which CA members train as combat teams in Canada. This essentially became a numbers game.

11. Although Canada's deployment of troops and equipment to the eFP BG demonstrates that Canada remains committed to NATO, it does not absolve the GoC from its previous commitment to achieve military spending of 2%, of which 20% is dedicated to equipment procurement. All NATO Defence Ministers agreed to this target back in 2006 and re-iterated this commitment following Russia's invasion of Crimea in 2014.<sup>20</sup> This baseline financial commitment is intended to ensure that the alliance, collectively, has the necessary capabilities to defend all of its members. As of 2022, but corrected back to inflation of 2015, Canada's military spending sits at 1.27% and our equipment portion sits at 18.7%, which is 6<sup>th</sup> last and 3<sup>rd</sup> last respectively.<sup>21</sup> By spending funds and developing an NTP, the GoC could fulfill its commitment to this target, thereby solidifying Canada's position on the international stage as a key contributor, analogous with the nations' relative wealth.

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<sup>&</sup>lt;sup>17</sup> 'Prime Minister Attends NATO Summit in Warsaw | Prime Minister of Canada', accessed 3 March 2023, https://pm.gc.ca/en/news/news-releases/2016/07/09/prime-minister-attends-nato-summit-warsaw.

<sup>&</sup>lt;sup>18</sup> Claudia Major and Christian Mölling, 'More Teeth for the NATO Tiger', in *NATO and Collective Defence in the 21st Century*, ed. Karsten Friis, 1st ed. (Abingdon, Oxon; New York, NY: Routledge, 2017.: Routledge, 2017), 33–40, https://doi.org/10.4324/9781315227856-5. 39

<sup>&</sup>lt;sup>19</sup> Details of the eFP Battle Group Structure stem from the author's experience while deployed to Latvia as the J5 of the inaugural Task Force Latvia.

<sup>&</sup>lt;sup>20</sup> 'NATO - Topic: Funding NATO', accessed 3 March 2023, https://www.nato.int/cps/en/natohq/topics 67655.htm.

<sup>&</sup>lt;sup>21</sup> NATO Public Diplomacy Division, 'Defence Expenditure of NATO Countries (2014-2022).Pdf', 27 June 2022,

 $https://www.nato.int/nato\_static\_fl2014/assets/pdf/2022/6/pdf/220627-def-exp-2022-en.pdf.$ 

#### **BENEFITS: ECONOMY**

- Ironically, by spending more on defence, and in particular by developing an NTP, the 12. GoC is likely to increase Canada's overall wealth, then requiring even greater defence spending to continue to satisfy the NATO 2% spending standard. As exemplified with the NSS, GoC investments in defence, when tightly controlled, have a direct impact on the economies where equipment is manufactured or services are delivered. According to a joint Innovation Science and Economic Development (ISED) and Canadian Association of Defence and Security Industries (CADSI) State of Canada's Defence Industry Report, the "defence industry contributed \$9.2 billion in Gross Domestic Product (GDP) and 78,000 jobs across the Canadian economy in 2020". 22 A new NTP could be structured in a similar way to the NSS, with a plant installation in a new region, separate from when the NSS has already propped up the economy. There are several options of locations where tank modifications have been done in Canada before, such as Saint-Jean-sur-Richelieu, Quebec (Rheinmetall) or Bathurst New Brunswick (Flensburger Fahrzeugbau Gesellschaft (FFG) Canada/Industrial Rubber Company Ltd Inc). Alternatively, a new site could be selected and constructed from scratch, such as the prairies or North-Central Ontario.
- 13. As for the viability of an NTP, the operational output of General Dynamics Land Systems Canada (GDLS-C) in London, Ontario is a perfect example of the capabilities of Canadian defence manufacturing. At the height of the LAV 6.0 production run, GDLS-C was capable of completing 12-18 LAV 6.0s per month. The company's facility in London employs approximately 1,700 people who work on manufacturing Canadian Armoured vehicles, namely the Armoured Combat Support Vehicle and LAV Reconnaissance vehicle right now; however, they also serve the international market, which generates 85% of their revenues. This demonstrates significant opportunity to further exploit the lucrative defence export market.
- 14. In addition to the direct economic benefits, increasing the Canadian military industrial complex with a NTP would provide an additional local market to explore further development such as processing and refining materials, such as armour ballistics, advanced electro-optics, and complex propulsion systems. These opportunities created present a gateway for follow-on benefits.

<sup>&</sup>lt;sup>22</sup> Innovation, Science and Economic Development Canada, 'State of Canada's Defence Industry Report - Spring 2022', 6,

https://www.defence and security. ca/UserFiles/Uploads/publications/reports/files/document-39.pdf.

<sup>&</sup>lt;sup>23</sup> Based on the author's experience working as a Deputy Project Director (2012-2014) and subsequently Project Director (2021-2022) of the LAV Reconnaissance Surveillance System Project.

<sup>&</sup>lt;sup>24</sup> 'About Us – General Dynamics Land Systems', accessed 3 March 2023, https://www.gdlscanada.com/about-us/.

#### **BENEFITS: TECHNOLOGY**

- 15. An NTB could allow the GoC to leverage the industry technical benefits through the application of the Industrial and Technological Benefits (ITB) policy. Of particular interest are the five value propositions:
  - a. Work in the Canadian Defence Industry: sp long-term growth and sustainability of industry;
  - b. Canadian Supplier Development: Small and Medium Business (SMB), primes and suppliers;
  - c. Research and Development (R&D): Innovation through R&D in Canada;
  - d. Exports; and
  - e. Skills Development and Training: Fill skills and trg gaps in Cdn economy.<sup>25</sup>
- 16. The NSS imposed a 0.5% ITB value proposition of the total value of the contract and mandated specific investment in human resources development, technology investment, and industrial development.<sup>26</sup> This policy ensures tangible contributions to enduring societal benefits. Leveraging this ITB policy, an NTB could mandate value proposition focus areas on R&D specifically through environmental and greening initiatives, simultaneously addressing other government concerns and initiatives.

#### **BENEFIT: SELF-SUFFICIENCY**

17. The coronavirus 2019 has highlighted the world's susceptibility to supply chain disruptions. This has been further exacerbated by the war in Ukraine which has seen nations reinvest heavily in defence spending and equipment acquisition.<sup>27</sup> Case-in-point is the backlog of M1A2 Abrams tanks at the GDLS production facility in Lima, Ohio, the only tank production facility in the United States (US). GDLS already has orders for over 350 Abrams M1A2s, with

<sup>&</sup>lt;sup>25</sup> 'Industrial and Technological Benefits', accessed 2 March 2023, https://isedisde.canada.ca/site/industrial-technological-benefits/en.

<sup>&</sup>lt;sup>26</sup> 'About the National Shipbuilding Strategy - National Shipbuilding Strategy - Sea - Defence Procurement - Buying and Selling - PSPC'.

<sup>&</sup>lt;sup>27</sup> 'World Military Expenditure Passes \$2 Trillion for First Time | SIPRI', accessed 3 March 2023, https://www.sipri.org/media/press-release/2022/world-military-expenditure-passes-2-trillion-first-time.

the initial ones set for delivery not before 2024. GDLS is currently only capable of producing 12 Abrams per month, thus any new orders would not be delivered until 2026 at the earliest. <sup>28</sup>

18. By establishing an NTB, the GoC could shorten the Canadian defence industry supply chain, keeping them focused in North America, which would make them more resilient to global events or economic shocks. Canada would be less reliant on foreign suppliers overseas, which can be subject to geopolitical risks and supply chain disruptions.

<sup>&</sup>lt;sup>28</sup> 'U.S. to Send Ukraine More Advanced Abrams Tanks — but No Secret Armor - POLITICO', accessed 3 March 2023, https://www.politico.com/news/2023/01/26/us-sends-ukraine-advanced-abrams-tanks-00079648.

#### **CONCLUSION**

- 19. Canada should develop a national tank building program similar to the NSS primarily to satisfy the operational requirement of a mobile, lethal, and survival platform in a global military industrial complex environment that we do not control. The secondary benefits to Canada writ large are the increase to Canadian diplomatic powers through the ability to project hard power, the return on investment for the economy, both regional and national, the potential for technological innovation, and lastly, the development of a resilient national defence supply chain.
- 20. As a G7 nation and a world power and with strong convictions to promote world peace and security, Canada must leverage its domestic financial might to strengthen its other instruments of power. From a military perspective, the CAF needs to approach procurement in the same vein as it approaches modern operations: through a whole of government lens. It is only through awareness, careful consideration and finally a comprehensive understanding of the social, political, and economical realities and the CAF can ever succeed in effectively communicating its requirements versus limitless other governmental priorities.

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