



Risky Business: Recommending a More Holistic View of Project Risk to Expedite Defence Procurement

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JCSP 49

Service Paper

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PCEMI n° 49

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**Risky Business: Recommending a More Holistic View of
Project Risk to Expedite Defence Procurement**

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RISKY BUSINESS: RECOMMENDING A MORE HOLISTIC VIEW OF PROJECT RISK TO EXPEDITE DEFENCE PROCUREMENT

AIM

1. This paper aims to provide a recommendation to the Government of Canada, specifically the Treasury Board Secretariat (TBS), Public Service and Procurement Canada (PSPC), and the Assistant Deputy Minister for Materiel (ADM(Mat)), that a more inclusive discussion of project risk, specifically one that seeks to better understand residual project risk and risk to the soldier, can lead to a more appropriate project approval framework and thereby an expedited defence acquisition process. This paper does not set out to solve Canadian defence procurement in a few pages. Instead, until such time as transformational change can be implemented such as the government's proposed establishment of a wholly separate department with complete authority for defence procurement, it offers a recommendation for incremental improvement to the current process.¹ The paper will introduce the current project approval process and relevant authorities in Canadian defence procurement, will discuss the role of project risk in delaying the process, and will discuss a possible framework that can be applied to more accurately capture risk. The paper will conclude with a recommendation of how this approach can be applied to a DND program outside of ADM(Mat) to expedite the procurement of cutting-edge defence equipment.

INTRODUCTION

2. As the world re-enters a period of great power competition in both Europe and Asia, Canada faces a future where its next major military conflict may be thrust upon it such as via a NATO Article 5 response to an incursion in Europe. In this event, the Canadian Armed Forces (CAF) would be required to respond with the forces and equipment it has available at the time. Accordingly, it is increasingly important that Canada expedite the modernization and reconstitution of its forces through ongoing initiatives such as those in the defence policy, Strong Secure Engaged (SSE). A key enabler of this effort, and one that is cited for improvement within SSE, is the procurement process for military equipment.²

3. Often repeated in the news and on the Joint Command and Staff Program, Canadian defence procurement is broken.³ Criticism typically relates to the slow pace of procurement and the associated effect on the CAF's material readiness. There are also higher order effects of this slowness however. Operating with modern military equipment that is able to deliver the latest effects whilst also offering operators the latest safety features is an enticing proposal for those currently employed and those looking to join. The inverse is not. Accordingly, the pace of procurement may also affect the CAF's recruitment and retention challenges. The pace of procurement also has an effect on international relations. When one considers how far Canada has fallen behind introducing modern military equipment compared to its closest allies, it is not a stretch to argue this is a contributing factor to why the newly formed AUKUS group is not the CANAUKUS group.⁴ There are many benefits to improving the process.

¹ Martin Auger, *The Evolution of Defence Procurement in Canada: A Hundred-Year History*. Library of Parliament,[2020b]).

² Department of National Defence Canada, *Strong, Secure, Engaged: Canada's Defence Policy*. Her Majesty the Queen in Right of Canada, as represented by the Minister of National Defence,[2017]).pg. 74

³ Despite how often it is referenced on JCSP, and despite the number of students that will go on to work in ADM(Mat), it is surprising that defence procurement is not taught at the Canadian Forces College. It is recommended that a future service paper be written on this topic.

⁴ Arzan Tarapone, "AUKUS is Deeper than just Submarines," *FSI Newsroom*, September 29, 2021.

DISCUSSION 1 – APPROVALS AS A SOURCE OF DELAY

1. The Department of National Defence's (DND) 2022-23 departmental plan reiterated two important planned results for this fiscal year: 1. streamlining of the defence procurement process and 2. the responsible management of defence acquisition programs.⁵ These objectives are inherently linked to the mandate of the Assistant Deputy Minister for Materiel (ADM(Mat)) whose group is responsible for procuring and managing all defence equipment and services on behalf of the CAF.⁶ The reoccurring nature of these objectives in the departmental plan reinforces the continuous effort to achieve increased schedule efficiency and better stewardship of public resources when procuring military equipment. The 2020-21 departmental results towards these objectives reveal that despite progress in some areas, there is still room for improvement. Whilst DND is becoming more accurate at forecasting its complex capital project timelines, the selected key performance indicators do not reveal whether procurement timelines are actually decreasing.⁷ SSE indicates 70% of all defence acquisition projects are delivered late and a separate DND internal audit found that the average capital procurement project takes 15 years to deliver.⁸ It is suggested in recent news that this remains unchanged today.⁹ To better understand this, one must appreciate how procurement *authorities* work in Canada.

2. Despite it being ADM(Mat)'s primary mandate, defence procurement authority does not rest solely with ADM(Mat). In the Canadian government, authority flows from TBS, to PSPC, to DND, and finally to ADM(Mat).¹⁰ Depending on the value and complexity of the project, still other government departments such as Innovation, Science, and Economic Development (ISED) and Global Affairs Canada (GAC) may gain a formal authority or informal ability through the 2014 defence procurement strategy policy to affect key steps in the defence procurement process, to say nothing of political interventions which can introduce a decade or more of delay.¹¹ This highly dispersed accountability in defence procurement is unique among Canada's closest allies.¹² Obtaining approvals from each of these government organizations, something that may be required multiple times across the five project phases between project identification and close-out, takes considerable time and is a key source of procurement delay (especially TBS, which requires a multi-phase submission process spanning months and less in

⁵ Minister of National Defence, *Department of Defence and Canadian Armed Forces 2022-23 Departmental Plan*. Her Majesty the Queen in Right of Canada, [2022].

⁶ "Defence 101 - Assistant Deputy Minister (Materiel)," last modified September 30, accessed September 20, 2022, <https://www.canada.ca/en/department-national-defence/corporate/reports-publications/transition-materials/defence-101/2020/03/defence-101/adm-mat.html>.

⁷ Ibid, pg 72.

⁸ Ibid, pg 74.

⁹ Jeffrey F. Collins, "Liberals' Defence Procurement Canada is Still Worth a Look," *The Hill Times*, January 26, 2022.

¹⁰ Revised Statutes of Canada, *Defence Production Act, R.S.C., 1985, C. D-1*, 1985); "Directive on the Management of Procurement," last modified April 25, accessed February 27, 2023, <https://www.tbs-sct.canada.ca/pol/doc-eng.aspx?id=32692>.

¹¹ "F-35 Fighter Jets Procurement Weighed Down by Liberal Politics," last modified January 22, accessed February 27, 2023, <https://nationalpost.com/opinion/andre-pratte-less-politics-more-transparency-could-help-fix-canadas-military-procurement>.; "Defence Procurement Strategy," last modified November 3, accessed February 27, 2023, <https://www.tpsgc-pwgsc.gc.ca/app-acq/amd-dp/samd-dps/index-eng.html>.

¹² Martin Auger, *Defence Procurement Organizations Worldwide: A Comparison*. Library of Parliament, [2020a].; David Pugliese, "It's Time to Get Serious about Fixing Defence Procurement." *Ottawa Citizen*. July 18, 2022.

some cases years).¹³ Therefore, finding new ways to delegate authority can reduce the delays associated with seeking these repeat approvals and thereby expedite defence procurement timelines.

DISCUSSION 2 – TARGETING RISK

3. Defence acquisition is governed by standing delegations of authority from TBS downwards in order to facilitate regular business and allow the higher authorities of TBS and PSPC to focus on the riskiest files. This delegation is based on two factors. The first is the procuring department's Organizational Project Management Capacity Assessment (OPMCA) rating.¹⁴ The higher the OPMCA rating, the greater the department is able to manage its project and procurement risks and therefore the more it can be trusted with increased authorities to deliver on projects. The second factor is a combination of project complexity and risk which is formally rated using the Project Complexity and Risk Assessment (PCRA) tool.¹⁵ As shown in Figure 1, it is the combination of OPMCA and PCRA rating which dictates the project approval level required and thus whether the project will be subject to the above-referenced delays associated with seeking approvals from outside the department. In effect, TBS is ensuring that delegations of project authority fall within the balanced command envelope described by Ross Pigeau and Carol McCann in their competency, accountability, responsibility model of command.¹⁶ Therefore, efforts to improve OPMCA rating or decrease PCRA rating enable increased delegations of authority and thereby a reduction in defence procurement timelines.

¹³ "Three Phases of the TB Submission Process," last modified April 1, accessed February 27, 2023, <https://www.canada.ca/en/treasury-board-secretariat/services/treasury-board-submissions/three-phases-submission-process.html>.

¹⁴ "Organizational Project Management Capacity Assessment Tool," last modified May 1, accessed February 20, 2023, <https://www.canada.ca/en/treasury-board-secretariat/services/information-technology-project-management/project-management/organizational-project-management-capacity-assessment-tool.html>.

¹⁵ "Project Complexity and Risk Assessment Tool," last modified November 6, accessed February 20, 2023, <https://www.tpsgc-pwgsc.gc.ca/biens-property/sngp-npms/pcra-ecrp/outil-tool-eng.html>.

¹⁶ Ross Pigeau and Carol McCann, "Re-Conceptualizing Command and Control," *Canadian Military Journal (Ottawa)* 3, no. 1 (2002), 53.

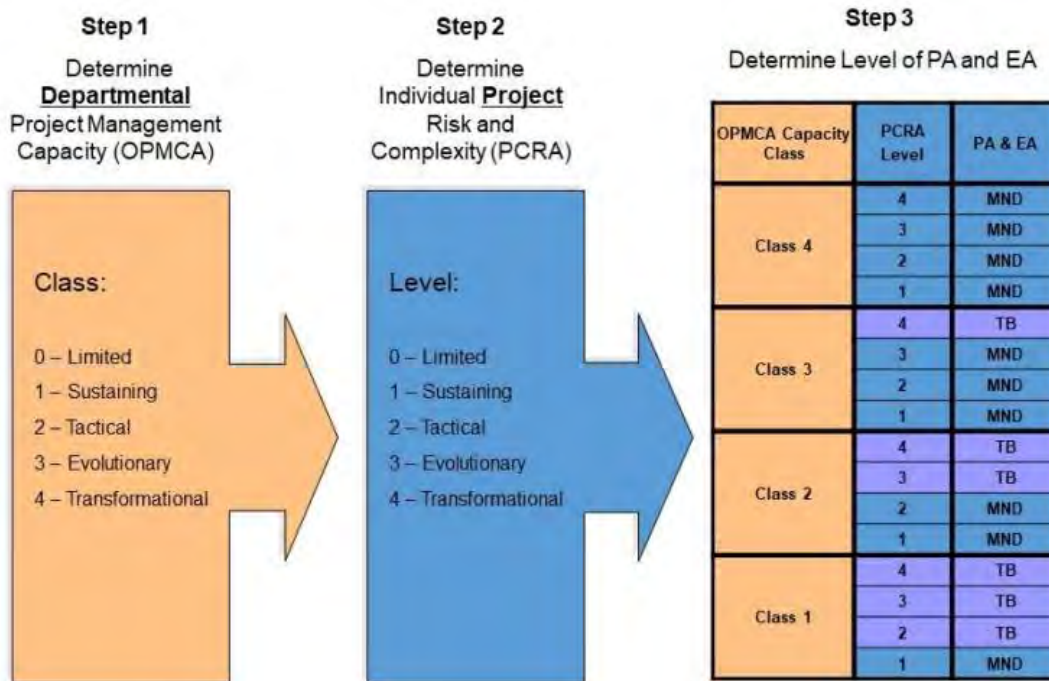


Figure 1 - Relationship between OPMCA, PCRA, and Project Approval Levels¹⁷

4. DND has devoted considerable effort to professionalizing its project management workforce such as through the Project Manager Competency Development program.¹⁸ At time of writing it has earned an OPMCA rating of 3.¹⁹ The focus of this paper is on the second factor and a proposed new view of how to de-risk certain projects, earning a lower PCRA score, and thereby increased delegation of authority. On the surface this seems straightforward however the issue lies in the way the PCRA tool communicates risk to higher authorities. When the tool is used to assess a project, the numerically-derived complexity score builds up based on a multitude of factors that capture *inherent* risks to the project. Any factors that would decrease risk are at best viewed as neutral and at worst are not considered by the tool at all. This means that the PCRA score does not accurately capture a project's *residual* risk.²⁰ This in turn means that despite a host of intentionally implemented or contextually relevant factors that may apply to make a project less risky, the PCRA score does not decrease and projects may be stuck with a higher approval level than is truly warranted thus extending the schedule. It is worth briefly introducing an example of such a factor to amplify the point.

¹⁷ Department of National Defence, *Project Approval Directive*. Government of Canada, 2019). pg. 30

¹⁸ Ibid, pg 30.

¹⁹ "The Department of National Defence Adopts New Training to Propel Project Management Success," last modified (Unavailable), accessed February 27, 2023, <https://www.globalknowledge.com/ca-en/resources/case-studies/the-department-of-national-defence-adopts-new-training-to-propel-project-management-success/>.

²⁰ *Residual* risk refers to the level of risk remaining after actions are taken to alter an *inherent* risk's impact or likelihood of occurring.

5. Consider the importance of experience in determining the level of risk for a defence acquisition project. Under the current construct, if for example the Canadian Special Operations Forces (CANSOF) (who are often an iteration ahead of the CAF in the adoption and fielding of new equipment) compete and procure an equipment capability and have great operational and sustainment success with it, that experience does not factor in to decrease the PCRA level of a subsequent Canadian Army procurement project for the exact same capability. In this same example, even if the Army project were to conduct its own buy-and-try to refine its requirements, evaluate supplier responsiveness, assess the quality, ease of training, or utility of the equipment, this experience also has no effect on the PCRA rating despite the obvious risk-mitigating effects. The same value applies to the experiences of Canada's closest military allies such as the United States who, like CANSOF, may be operating an iteration ahead of the CAF and have operational/sustainment experiences they are willing to share with Canada. Again, such information does not affect the PCRA score despite providing valuable insight into Canada's residual risk exposure. This simple example using the single factor of experience illustrates multiple methods of decreasing a project's inherent risk which are not factored into the current project approval construct.

6. Similarly, this risk-based construct fails to adequately consider operational risk in the project approval process. The "urgent operational requirement" (UOR) project designation can greatly facilitate resource allocation and expedite approvals however this designation is reserved for projects with immediate life-saving or mission impact to active operations. In the current construct, there does not appear to be a way to convey to approvers which DND projects fall short of the UOR designation but are still desperately needed by the CAF to reduce operational risks to the soldier and are thus worth accelerating. There is no defined middle ground between UOR and normal projects.²¹ The discussion of risk remains focused on risk to the government only and misses this human consideration entirely. As a result, these projects are stuck following the normal drawn-out project approval process. A more holistic approach to the discussion of risk is suggested.

DISCUSSION 3 – AN EXPANDED APPROACH TO RISK MANAGEMENT

7. The original proposal for this paper was to recommend a pilot project within the current multi-department approval construct that would set approval levels based on a more holistic discussion of risk. Whilst researching this topic however it was uncovered that a comparable initiative has very recently been piloted. The 18-month "risk-based defence procurement pilot" was implemented by TBS, PSPC, and ADM(Mat) with the objective of delegating PSPC increased approval authority over select defence projects.²² Provided ADM(Mat) could justify a lower level of risk, the intent was to expedite a selection of low and medium complexity defence acquisition projects by removing the requirement to seek Treasury Board approval (the long pole in the approval process). Whilst still missing the discussion of soldier risk, this pilot permitted DND to include risk mitigation factors in the discussion thus basing approval on a more accurate level of residual risk than the simple output of the PCRA tool. This also freed up TBS to focus on riskier projects and so was a desirable concept for both departments. The pilot reduced certain DND procurement timelines by as much as a year and the recent report evaluating the program recommended it be extended for a further five years.²³

²¹ Ibid, pg 175-186.

²² "Background: Piloting a Streamlined Approval Process for Defence Procurements," last modified June 10, accessed January 27, 2023, <https://www.tpsgc-pwgsc.gc.ca/app-acq/amd-dp/samd-dps/spamdd-sapfdp-eng.html>.

²³ Public Services and Procurement Canada, *Evaluation of the Risk-Based Defence Procurement Pilot Project*. Government of Canada.

8. The existence of and success of this pilot reinforces the argument that a one-size fits all approach to defence acquisition project approvals is inefficient and that a broader discussion of risk is justified to expedite the process. Building upon the success of the risk-based defence procurement pilot program, it is suggested that this approach to risk/approvals could be extended beyond ADM(Mat) such as to the new DND Innovation for Defence Excellence and Security (IDEaS) program.²⁴ Similar to the Defence Advanced Research Projects Agency (DARPA), the IDEaS program funds industry in the development of cutting-edge technology and equipment to enhance soldier effectiveness and in many cases reduce risk to the soldier. The progressive funding model allows DND to support capability development at very early solution readiness levels through to operational trials at the highest readiness levels.²⁵ At the end of the process however, and regardless of their potential impact, if DND is interested in procuring these now proven capabilities for the CAF, they must still go through the full drawn-out project approval process introduced above.²⁶ This undermines the adoption of cutting-edge capabilities. As discussed in the paragraph 5 example above, experience with equipment and suppliers, such as is provided throughout the IDEaS program, is a factor that can greatly reduce project risk in a number of areas. It is suggested that the IDEaS program may thus be an ideal candidate to take advantage of the now extended risk-based defence procurement pilot and DND should seek still other opportunities to leverage it to achieve procurement expediency.

CONCLUSION

9. Canadian defence acquisition projects are slow in part due to a complicated and lengthy approval framework that relies upon multiple departments outside of the one actually responsible for the procurement. DND/PSPC have earned increased delegations of authority from the TBS based on OPMCA rating and there is opportunity to improve this further through a more holistic discussion of risk with approval authorities that better recognizes residual project risk and risk to the soldier. The risk-based defence procurement pilot program has been successful in presenting residual project risk and has resulted in decreased procurement timelines. Finally, the DND IDEaS program has been identified in this paper as a candidate for inclusion in this pilot going forward.

RECOMMENDATION

10. Now that it has been extended, DND is recommended to explore the feasibility of leveraging the risk-based project approval pilot program to expedite the procurement of proven defence capabilities emerging from the IDEaS program.

²⁴ "How IDEaS Works," last modified November 10, accessed February 23, 2023, <https://www.canada.ca/en/department-national-defence/programs/defence-ideas/how-ideas-works.html>.

²⁵ "Solution Readiness Level," last modified July 21, accessed February 23, 2023, <https://www.canada.ca/en/department-national-defence/programs/defence-ideas/solution-readiness-level.html>.

²⁶ "What Happens After a Test Drive," last modified (Unavailable), accessed February 27, 2023, <https://www.canada.ca/en/department-national-defence/programs/defence-ideas/element/test-drives.html>.

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