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## Agile Procurement in the Canadian Armed Forces

Major Ryan Matthies

### JCSP 48

#### Service Paper

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### PCEMI 48

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CANADIAN FORCES COLLEGE – COLLÈGE DES FORCES CANADIENNES

JCSP 48 – PCEMI 48

2021 – 2022

Service Paper – Étude militaire

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# **AGILE PROCUREMENT IN THE CANADIAN ARMED FORCES**

## **AIM**

1. This paper will discuss the challenges of applying agile procurement within the context of National Security for Canada. It will discuss the nature of contracting that is often perceived as time consuming and therefore prohibitive of being able to acquire goods or services that change rapidly, such as technology. It will then discuss some of the aspects of agile procurement and provide an overview of emerging trends of contracting in commercial industry that put greater emphasis on relationships to support procurement. Ultimately, this paper intends to recommend experimentation with new contract ideas to achieve change.

## **INTRODUCTION**

2. The rapid pace of development, technological or other, introduces different threats to the Canadian security environment by adapting quickly. For example, drone technology allows opponents to buy small and simple devices and innovation sees these drones being modified as weapons or reconnaissance platforms. For a CAF expected to meet these threats, the pace of procurement is long and complex and often leads to multiple years to acquire new equipment. Accelerating this process would be appreciated but is not within the means of the CAF because the process is dictated by Treasury Board and managed by Public Services and Procurement Canada (PSPC). Since the pace of acquisition cannot easily be hurried, the CAF needs to experiment with means to make contracts more flexible so that when they are finally awarded, the terms allow the outcome to be adaptable to changing security situations.

3. Since the procurement process is rigid as far as the CAF is concerned, and becomes more politically involved as the cost increases, there is a need to find flexible means. A system that can adapt what is procured in response to a change in demand is considered agile. A common solution to make procurement more agile is reinventing the process to be leaner, thereby allowing organizations to run their procurement cycles quicker and deliver on the demand. Alternatively, the agility could mean producing an agreement that allows parties to modify procurement to meet demand. This second option holds promise for the CAF given that terms of procurement can be easily influenced by the CAF.

4. This service paper will address some of the aspects of contracting and how some companies are modifying their practises. These changes acknowledge there is a degree of relationship and trust between two parties that exists outside the contract which cannot be easily codified. Efforts are developing to codify those relationship principles. The paper will then address the value of procurement and the principles of agility could make procurement more flexible to demand. It will then make comparisons to a UK program intended to acquire innovative solutions to government challenges. Ultimately, principles from these topics will be combined to demonstrate how contract terms could be experimented with to use flexible principles to acquire an outcome that adapts over time.

## DISCUSSION

5. The nature of modern contracting is adversarial. Government contracting is required to follow Treasury Board regulations and seek to remain transparent while acquiring the best value for the money spent or balancing the overall benefits to the Crown and Canadian people.<sup>1</sup> Private industry is profit motivated and usually seeks the greatest profit for the work to be provided. Research has demonstrated that even when contracts are in place and there is clear communication about costs, it is still impossible to consistently ensure and enforce a degree of quality.<sup>2</sup> This sometimes results in parties terminating a contract and having to search for replacement suppliers. The inherent problem with any contract is they can never be perfectly written to forecast the agreement for every potential outcome. The need to attempt to do this arises from risk management: the purchaser wishes to stipulate exactly what their desired requirements are and thereby reduce their risk. This is especially prevalent in public procurement where there is a need to guard against opportunism and demonstrate responsibility with taxpayer dollars.<sup>3</sup> However, despite this concern the same research shows in the case of the US Government that there is a willingness to pursue a risk-sharing framework for the achievement of mission critical project.<sup>4</sup>

6. Procurement is now recognized as a strategic function within any organization in order to provide a competitive edge.<sup>5</sup> Private industries who manage a supply chain develop lists of preferred suppliers and will develop long-term relationships with a few key suppliers. These relationships are based on performance metrics that are valuable to the business such as performance, quality, cost, or reliability to name a few. In managing these supply chains, the purchaser is often willing to invest time and money to develop their suppliers.<sup>6</sup> The investment is a valuable endeavour given that procurement is a significant factor for most businesses. In the case of the CAF, the Capital Investment Fund as of 2019 alone is valued at \$15 billion over 5 years and even greater over a 20-year period.<sup>7</sup> Considering the amount of money at stake, procurement in the CAF should rightfully be considered in strategic decision-making.

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<sup>1</sup> Canada, Treasury Board *Contracting Policy*. Ottawa: Treasury Board (2019) <https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=14494>

<sup>2</sup> Holger Herz, Schmutzler, A. and Volk, A. "Cooperation and mistrust in relational contracts," *Journal of Economic Behavior & Organization*, 166 (2019), 378.

<sup>3</sup> Eckerd, Adam and Amanda M. Girth. "Designing the Buyer-Supplier Contract for Risk Management: Assessing Complexity and Mission Criticality." *The Journal of Supply Chain Management* 53, no. 3 (2017): 60 <https://www.proquest.com/docview/1922410225>

<sup>4</sup> *Ibid.*, 72.

<sup>5</sup> Johnson, P.F., & Flynn, A. E. *Purchasing and supply management*. 15<sup>th</sup> ed. McGraw-Hill Higher Education (2015)

<sup>6</sup> Johnsen, Thomas E., Mickey Howard, and Joe Miemczyk. *Purchasing and Supply Chain Management: A Sustainability Perspective*. 2nd ed. Milton: Routledge, (2019): 31-32.

<sup>7</sup> Canada. National Defence, *Update 2019 Investing in Canada's Defence*. Ottawa: National Defence (2019) <https://www.canada.ca/en/department-national-defence/corporate/reports-publications/defence-investment-plan-2018/2019-dip-investing.html>

7. Agile procurement is about responding to market demand, not necessarily about quicker contracting processes.<sup>8</sup> Changes in market demand can result from new technology, disruptions in supplies and increased expenses, or relationships between organizations. The CAF is not immune to this aspect as the demand comes from the various services and the nature of the potential threats from opponents. Our opponents adapt and the very purpose of this investigation is that they can adapt quicker than present procurement purposes can react. It is because of this that most organizations recognize the need for agile procurement processes because the nature of procurement is changing.

8. One of the principles of agility includes adopting lean processes.<sup>9</sup> Canadian government procurement is assigned to the department of Public Services and Procurement Canada (PSPC) and expenditures are strictly controlled above specified values, based on the good or service. Treasury Board approval is required for expenditures of certain value or risk and impose certain time delays. The contracting process can also include the department of Innovation, Science and Economic Development (ISED) for bid evaluation, while political concerns will often expect regional spin offs.<sup>10</sup> As a result, the processes for contracting are outside the strict purview of DND meaning the timelines to meet major or sensitive projects are not routinely a concern of the agencies involved. This does change with the pressure of a crisis such as in the procurement of the C-17 fleet. Presently, there is recognition of DND's need and a pilot project to manage risk is being implemented within PSPC.<sup>11</sup> Work towards a leaner procurement process is in the works that will allow more adaptation to demand. The high value of DND capital procurement will surely continue to draw significant scrutiny and it is unknown what efficiencies this pilot project will deliver.

9. Another principle of agility is the use of automation such as e-procurement practises.<sup>12</sup> Fortunately, PSPC employs several e-procurement practises such as posting their documents for a wide market to access and leaving communication about the requirements in a public forum. Unfortunately, the process is still long and complicated to award a contract. During master's research on CADPAT supply chain, Directorate Soldier Systems Program Management (DSSPM) revealed an average of 18-24 months to award a CADPAT contract. This is a contract that is relatively simple, routine and issued regularly. The overhead costs of this contract process involve a minimum of 5 personnel

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<sup>8</sup> Rane, S.B., Narvel, Y.A.M., and Bhandarkar, B.M. "Developing strategies to improve agility in the project procurement management (PPM) process," *Business Process Management*, 26 no. 1 (2019): 259. <https://doi.org/10.1108/BPMJ-07-2017-0196>

<sup>9</sup> Nicolette, Bernardo. *Agile Procurement*. Cham: Springer International Publishing, (2017): 2.

<sup>10</sup> Richardson, William. *Toward Agile Procurement for National Defence* Canadian Global Affairs Institute (2020): 6.

<sup>11</sup> Canada, Public Services and Procurement Canada. *Delivering a simpler, more responsive and more accessible procurement system*. (12 January 2022) <https://www.tpsgc-pwgsc.gc.ca/app-acq/ma-bb/offsysapp-delprosys-eng.html>

<sup>12</sup> Nicolette, *Agile Procurement...*, p. 2

between DND and PSPC on a regular basis. This is expensive in terms of time and personnel workload. Even with e-procurement tools, contract processes are lengthy and laborious.

10. An emergent trend in business and academia is the concept of the relational contract. A relational contract is one where the benefits of upholding the contract are sufficiently large for each party to cooperate based on norms that are common knowledge.<sup>13</sup> This requires a set of principles to act as the founding document and then the specifics of the project are detailed separately. Relational contracting might seem inherently contradictory to the principles of contracting since it is based on clarity and credibility instead of well-defined articles that are defensible in court.<sup>14</sup> Clarity means both parties have a similar understanding of expectations and credible being that each party will provide what is expected. Regardless, the greatest benefit of relational contracting is the idea of contracting for things that cannot be specified in advance.<sup>15</sup>

11. The list of preferred suppliers discussed earlier are sometimes ranked in a hierarchy. Suppliers earn their ranking objectively over time by building up their trustworthiness as a result of meeting criteria. However, there is a subjective aspect to trust building as well: legitimate trust based on intentions.<sup>16</sup> For example, a supplier might perceive short-term opportunism because of changes beyond their control. This includes a lack of labour, defects in raw materials, and taking short-cuts which may not be attributed to manufacturing. These could be opportunities to reduce the quality without having to reduce the cost to the customer and is considered opportunistic behaviour. Suppliers who avoid opportunistic behaviour build up their trust levels.

12. Legitimate mistrust is not the opposite of trust, nor is it out of place in relational contracting. Mistrust arises when a party has an obligation to keep that is blatantly against their self-interest.<sup>17</sup> Overcoming this mistrust through time is one of the purposes of trust building. Additionally, incentive measures such as posting a bond for certain activities can serve to align interests between parties when the natural inclination may be to oppose each other.

13. Public procurement under Treasury Board does not allow the development of trust relationships in order to appear impartial and offer fair competition. Firm processes for contracts are established. Despite this established regime, it may be possible to adapt some of the measures discussed by experimenting with the terms of what is contracted, similar to a program that exists for public procurement of innovation in the UK.

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<sup>13</sup> Herz, *Cooperation and Mistrust*..., p. 1.

<sup>14</sup> *Ibid.*, p. 2.

<sup>15</sup> Gibbons, Robert, and Rebecca Henderson. "Relational Contracts and Organizational Capabilities." in *Organization Science*, 23 no. 5 (2012): 1350–1351.

<sup>16</sup> Lindenberg, Siegwart. "It Takes both Trust and Lack of Mistrust: The Workings of Cooperation and Relational Signaling in Contractual Relationships." *Journal of Management & Governance* 4, no. 1-2 (2000): 13 <https://www.proquest.com/docview/200628824>

<sup>17</sup> *Ibid.*, p. 12.

14. The UK employs a model that is like the PSPC style of Requests for Proposal (RFP) that seeks for industry to submit ideas to solve a particular requirement. Formally called the Forward Commitment Procurement (FPC), the process announces the need and commits to the procurement if a solution can be provided that meets certain requirements.<sup>18</sup> This commitment to procurement is important as to private industry. Industry had perceived that a barrier to innovative research and development (R&D) for government project existed due to excessive risk with time. The more time passed, the greater the likelihood of governments losing interest in the procurement thus elevating the risk of investment. The result would be investment into R&D for which there was insufficient demand. Canadian defence contracting has seen several investments in R&D only to be cancelled by replaced governments.

15. The FPC is regulated by governing bodies like Canada. The business case must be developed to analyse the opportunity or challenge and provide a basis upon which can be developed the “Total Cost of Ownership, life cycle, and duty requirements of the solution. It also considers the trend and anticipated changes...”<sup>19</sup> It will include consultation with industry to announce the requirement and solicit interest and potential suppliers. This can help shape bid evaluation in the future. The greatest value of the FCP framework is that it focuses on specific outcomes as opposed to products.

16. A focus on contract outcomes offers the opportunities to be vague about what is required, while still being very specific about the desired end state for Treasury Board. When the terms are described as covering a certain length of time this offers the opportunity of a longer-term, almost partnership-like approach to solving problems. Use an example of cyber-security where the outcome over a 10-year period is to work with the CAF to secure deployed information systems against cyber-attack. The supplier would have to maintain a continuously updated set of tools for the CAF operators to employ. This differs from a specific term contract to provide a good or service that cannot be easily modified.

17. The CAF could also explore a relational contract with some service providers. The relational contract which codifies behaviour between the businesses offers the opportunity to work closely in an outcome-oriented contract, such as cyber security. Both parties share the mutual interest of defeating cyber-attacks. The CAF has the active interest in employing cyber tools to defend networks. The contracted partner is interested in demonstrating their ability to continue to react to changes in threats. Under a relational contract, the CAF needs to develop a safe environment to exchange knowledge about the threats and environment while the partner provides the modifications to react.

## CONCLUSION

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<sup>18</sup> Whyles, Gaynor, Hendrik van Meerveld & Joram Nauta, "Forward Commitment Procurement: a practical methodology that helps to manage risk in procuring innovative goods and services, Innovation", *The European Journal of Social Science Research*, 28 no. 3, (2015): 294.

<sup>19</sup> *Ibid.*, p. 298

18. Canada's procurement of technology-based goods or services is too long to be relevant and will continue to deliver yesterday's solutions to tomorrow's problems. DND does not own the process and does not have sufficient influence to impose the desired speed. The principles of agile procurement offer a solution if DND can work with PSPC to experiment with contracting for outcomes based on mutual principles. Already, some of these principles are present in procurement practises. Experimenting further, the overhead investment of time and personnel will not likely change; however, the result could produce terms that are flexible to changes in strategic situations or specific threats. This is significantly different concept that is likely to receive significant bureaucratic opposition to Treasury Board rules. However, if innovative ideas are not experimented with then DND will continue to victimize itself in face of continue process over results.

### **RECOMMENDATION**

19. It is recommended the CAF work with ADM(Mat) to explore the use of outcome-based contracts in a limited application. These contracts should be focused on high technology requirements. In any experimentation process there is a learning element so the initial use of this style should commence with low-dollar values. Given this fact, failures should be anticipated and embraced.

20. There is value to investigating the use of relational contracts. This offers the most viable option in the near-term to create more agile procurement that could help the CAF meet its future security obligations. This strategy, if attempted, needs to start small and validate the trust-building considerations.



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