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## RAPID PROCUREMENT FOR THE RCAF

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#### SERVICE PAPER

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**RAPID PROCUREMENT FOR THE RCAF**

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## **RAPID PROCUREMENT FOR THE RCAF**

### **AIM**

1. This paper recommends the establishment of a Rapid Capability Office (RCO) within the Royal Canadian Air Force. The RCO would have a mandate to conduct rapid procurement and integration for specially selected projects, thereby ensuring the RCAF's access to high technology capabilities in order to fulfil urgent capability requirements.

### **INTRODUCTION**

2. The standard procurement cycle for the acquisition and integration of new technology for the RCAF can be a long and drawn out process. The timeline associated with high technology acquisition varies but, given the speed of technological advancement within the aerospace industry, there is a risk that by the time the procurement process is complete, the technology purchased has been superseded or even rendered obsolete.

3. In order to deliver the right equipment to the Canadian Armed Forces, the Government of Canada has published a Defence Procurement Strategy which has the following three key objectives: delivering the right equipment to the Canadian Armed Forces and the Canadian Coast Guard in a timely manner; leveraging purchases of defence equipment to create jobs and economic growth in Canada; and streamlining defence procurement processes.<sup>1</sup> This paper looks at addressing the third element of the strategy for specifically identified and prioritized projects.

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<sup>1</sup>Public Services and Procurement Canada, "Defence Procurement Strategy," last accessed 22 January 2018, <http://www.tpsgc-pwgsc.gc.ca/app-acq/amd-dp/samd-dps/index-eng.html>.

Whilst acknowledging that a lengthy procurement process is expected for major acquisitions, this paper argues that a more streamlined approach is possible for certain projects and that a new staffing process should be established within the RCAF to lead these projects.

## DISCUSSION

4. The Government of Canada's 2017 comprehensive defence policy, Strong, Secure, Engaged (SSE), is not only a policy document but also a "long-term fully funded plan,"<sup>2</sup> which describes itself as the "most rigorously costed Canadian defence policy ever developed."<sup>3</sup> The policy outlines a rise in spending from \$18.9 billion in 2016-17, to \$32.7 billion in 2026-27. This is a significant statement of intent from the Government of Canada and this level of funding will enable Canadian Armed Forces to "achieve excellence across the full spectrum of military operations."<sup>4</sup> It is now incumbent upon the Armed forces to take this increased financial commitment and prove that they are able to use it to procure the right equipment, in a timely fashion, to meet the government's requirements as laid out in SSE. This will be a challenge, as Maj Gen Lanthier, who is responsible for managing Defence's corporate strategy, said: "The money is coming and our feet are being held to the fire to do what we said we could do."<sup>5</sup>

5. The risk to delivery will be acutely felt within the RCAF, where the technology purchased is increasingly complex. There are currently 48 major acquisitions ongoing in the

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<sup>2</sup>Government of Canada, "Strong, Secure, Engaged: Canada's Defence Policy," last accessed 22 January 2018, <http://dgpapp.forces.gc.ca/en/canada-defence-policy/index.asp>.

<sup>3</sup>*Ibid.*

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

<sup>5</sup>CBC.CA, "Shortage of Procurement Staff identified as top threat to Liberals' defence plan," last accessed 23 January 2018, <http://www.cbc.ca/news/politics/military-procurement-delays-staffing-1.4374008>.

RCAF,<sup>6</sup> ranging from radio crypto modernization to future fighter capability. With such a diverse portfolio of capability development it can be difficult to ensure that those projects which require timely delivery to fill urgent capability requirements are afforded the appropriate level of prioritization. Currently, anticipated timelines are published which vary from 2018 to 2025, depending on the complexity of the procurement concerned. Whilst it is not unreasonable to expect a replacement fighter project to take a considerable amount of time to deliver, the RCAF's procurement policy must also be agile enough to allow less complex, time-critical, requirements to be delivered in a more expeditious manner.

6. A shortage of staff to manage the delivery of increasingly complex projects has already been identified as a major risk,<sup>7</sup> but the recruitment and training of suitable personnel to mitigate this risk will take time. Therefore, the RCAF should look at ways of maximising its existing staff and streamlining the procurement process wherever possible. In order to do this, it is worth reviewing the existing process in order to establish how the RCAF can approach this problem. The current procurement approvals process consists of 5 stages:<sup>8</sup>

a. Stage 1 - Project Identification. This includes an investment proposal which is based on an identified capability deficiency, in which the desired outcome, strategic fit and results of the preliminary options analysis are established.

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<sup>6</sup>National Defence and the Canadian Armed Forces, "DAG 2016 Aerospace Systems Services," last accessed 22 January 2017. <http://www.tpsgc-pwgsc.gc.ca/app-acq/amd-dp/samd-dps/index-eng.html>.

<sup>7</sup>CBC.CA, "Shortage of Procurement Staff identified as top threat to Liberals' defence plan," last accessed 23 January 2018, <http://www.cbc.ca/news/politics/military-procurement-delays-staffing-1.4374008>.

<sup>8</sup>National Defence and the Canadian Armed Forces "Defence Purchases and Upgrades Process," last accessed 23 January 2018. <http://www.forces.gc.ca/en/business-equipment/procurement-projects/procurement.page>.

b. Stage 2 – Options Analysis. An unspecified number of options are analyzed and senior leadership determine the option to proceed with, based on the project business case analysis.

c. Stage 3 – Definition. This marks the transition from determining what should be done to mitigate a deficiency, to determining how the option will be implemented. This includes the standing up of a dedicated project management team, determination of the substantive requirement, cost and scheduling estimates and risk mitigation.

d. Stage 4 – Implementation. Approval enables the Department of National Defence to have the contract awarded through Public Services and Procurement Canada.

e. Stage 5 – Close-Out. At this point, the project has reached its full operational capability and becomes a managed capability. This phase formally documents outcomes against approved objectives and summarizes key lessons for future projects.

7. The RCAF have the potential to speed up the process in stages 1-3, through the establishment of a suitably empowered team. This team, named here as the Rapid Capability Office (RCO), would be established under a Brig Gen who would report directly to Comd RCAF. In keeping with current nomenclature (specifically Director General Air Force Development (DG Air FD)), this BGen is referred to here as Director General Rapid Capability Office (DG RCO). It is envisaged that DG RCO would work in parallel with DG Air FD but with a more focussed remit to rapidly exploit evolving technology. Suitable projects would be

identified for the RCO from across the RCAF but should only be assigned to the RCO from Commander RCAF; this will ensure that only projects deemed suitable for a streamlined approach are assigned. These projects will likely include novel, opportunistic innovations which may allow the exploitation of already available commercial and foreign military equipment.

8. DG RCO would need a suitably experienced and qualified team, who should be specially selected from across the RCAF. These individuals should be from a diverse array of professional trade backgrounds but, importantly, should be experienced procurement staff. The importance of mental agility, positive attitude and potential to innovate should outweigh any specific professional qualifications. However, it would be beneficial to include personnel qualified in finance; approvals; commercial requirements; and science and technology. Recent operational experience would also be beneficial and it is envisaged that the RCO would work closely with the Combined Joint Operations Command (CJOC) to identify suitable projects to meet urgent operational requirements. Representation from Assistant Deputy Minister Material's Air Team within the RCO would further allow a streamlined approach to delivery and implementation.

9. In terms of manning the team, an approach to consider would be to stand-up a skeletal team, consisting of the aforementioned expertise, and augment the team as required with specific technical expertise pertinent to the procurement being delivered. This flexible approach to manning the RCO has advantages and disadvantages. It would allow the team to scale up and down as required and would maximise the use of existing specialist technical knowledge within the RCAF. However, by scaling the team up and down, some of the knowledge and experience gained in innovative procurement practice would be lost as projects ended and personnel were

moved on. This disadvantage would have to be weighed against existing manning shortfalls to determine whether or not this approach is feasible.

10. The RCO will have a remit to challenge traditional approaches to capability enhancements for the RCAF. In part, it will do this by understanding and exporting best practices from commercial and industrial partners for mutual benefit. Military procurement is historically, and justifiably, intent on obtaining the best possible solution. However, there are occasions where capability can be traded for timeliness, under the assumption that ‘good is good enough.’ It is under these circumstances that a more agile, streamlined team with a chain of command linked directly to Comd RCAF can be utilised to good effect. The RCO could, for example, purchase equipment which meets minimal capability requirements for a specific operation, but can still be upgraded to meet a more fulsome set of requirements at a later date.

11. It is accepted that streamlined procurement will not always work and there is currently no intent to change the entire procurement policy of the RCAF. The procurement of high end complex military equipment, such as a replacement fighter, is a substantial investment and should not be undertaken without the requisite due diligence. However, there are occasions where such a protracted policy is a hindrance to the timely delivery of less complex capabilities to meet operational requirements. There are also occasions where the exploitation of emerging technology will only provide tangible operational benefits if it can be purchased and integrated in a timely manner. As operations move increasingly towards involvement in non-traditional hybrid warfare it is incumbent upon the Canadian Armed Forces to maintain technological superiority (or at the very least parity) over those who would seek to harm Canadian interests.



This requires the kind of agile and innovative approach to procurement which the RCO would bring to bear.

12. The concept of an RCO is not completely new and untested; it is currently in use by the United Kingdom's Royal Air Force (RAF) in a manner similar to that described above. After the UK's Strategic Defence and Security Review in 2015,<sup>9</sup> the RAF was in a position not unlike the RCAF is in now, in that it was given additional funding to deliver an array of new equipment. The RAF's capability development personnel realised that their procurement policies were hindering the exploitation of emerging technology. Compounding this was the acknowledgement that civilian companies were in many ways leading development, thus highlighting the futility of setting cast iron requirements against an unknown future. The RAF decided to harness the innovation of its personnel to address this challenge. The establishment of a RCO has, since its initial operating capability in 2016, allowed RAF personnel to challenge traditional approaches to capability enhancements and the results are already impressive.

13. Whilst many of the achievements of the RAF's RCO are subject to national caveats which prevent them from being discussed in this paper, there is one notable exception worthy of mention. BriteCloud Expendable Active Decoy,<sup>10</sup> is a compact, active countermeasure which has the capability to defeat the majority of Radio Frequency (RF) guided surface-to-air and air-to-air threat systems. The system is technologically advanced, commercially available and, as it is deployed from standard chaff and flare dispensers, requires minimal integration. The RAF

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<sup>9</sup>Gov.UK, "National Security Strategy and Strategic Defence and Security Review 2015," last accessed 23 January 2018, <https://www.gov.uk/government/publications/national-security-strategy-and-strategic-defence-and-security-review-2015>.

<sup>10</sup>Leonardocompany.com, "BRITECLOUD Digital RF Memory Countermeasure," last accessed 23 January 2018, <http://www.leonardocompany.com/en/-/britecloud-3>.

acquired this technology through their RCO and estimate that by taking this approach they were able to complete the project a year earlier than conventional procurement procedures would have allowed. This is an excellent example of a high technology capability, which could be purchased by the RCAF and integrated quickly into front line aircraft, to deliver a tangible operational benefit in a short space of time.

14. Another aspect of defence procurement which is currently being examined is spending authority. The current limit of spending authority held by the Department of National Defence (DND) is \$25000,<sup>11</sup> this is a woefully low amount and hinders the department's ability to streamline procurement processes. Public Works and Government Services Canada are working with the DND to explore options to increase the amount of authority for the procurement of defence supplies, and an increase to \$5million seems likely.<sup>12</sup> Should this increased authority be approved, it would allow the department to speed up the procurement process in smaller projects. The RCAF needs to be ready to make best use of this increased authority, and the establishment of a RCO would be an excellent way to ensure that the process for the delivery of technical capability which falls within this limit is as streamlined as possible.

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<sup>11</sup>Public Services and Procurement Canada, "Increased Authority for National Defence to purchase defence supplies," last accessed 23 January 2018, <http://www.tpsgc-pwgsc.gc.ca/app-acq/amd-dp/samd-dps/autorite-authority-eng.html>.

<sup>12</sup>Ottawa Citizen, "Defence Department to get boost in amount of spending it can do on its own," last accessed 23 January 2018, <http://ottawacitizen.com/news/politics/defence-department-to-get-boost-in-amount-of-spending-it-can-do-on-its-own>.

## CONCLUSION

15. This paper outlined a policy change within the RCAF which would improve the procurement of high technology capability through the establishment of a Rapid Capability Office.

16. The publishing of SSE in 2017 presents a major opportunity for Defence, and for the RCAF, by outlining a government pledge to increase defence spending from \$18.9 billion in 2016-17 to \$32.7 billion in 2026-27. However, this increase in funding comes with a responsibility to deliver the capabilities outlined within the policy, and there is significant risk associated with that delivery. The highly technological, complex nature of procurement within the aerospace domain, along with the already identified shortfall of project delivery personnel, compounds this risk for the RCAF. It is therefore incumbent upon the RCAF to look for innovative ways to deliver these capabilities as efficiently as possible.

17. The establishment of a Rapid Capability Office, headed by a 1-star General with direct access to Comd RCAF, will enable a more streamlined procurement process for specifically identified capability requirements. This team should be agile and innovative in its methodology, challenging traditional approaches in order to ensure the rapid delivery of high technology capability to meet urgent operational requirements. The selection criteria for projects which the RCO could deliver will have to be stringent and controlled by Comd RCAF in order to ensure that only those projects with the potential for rapid delivery are chosen.

18. The RCO construct is already proven in the UK and, whilst the exact methodology may not be fully applicable to Canada, engagement with the RAF would help establish its utility for the RCAF. Therefore, engagement is encouraged to share knowledge and establish best practice for the mutual benefit of both nations.

### **RECOMMENDATION**

19. It is recommended that Comd RCAF appoint a Brigadier General as Director General Rapid Capability Office, with a mandate to establish a team of suitably qualified and experienced personnel in order to streamline the delivery of specially selected procurement projects.

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