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CAPITAL DEFENCE PROCUREMENT: TRAINING IS NOT THE PROBLEM

Major Paul P. Whalen

JCSP 47

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CANADIAN FORCES COLLEGE – COLLÈGE DES FORCES CANADIENNES

JCSP 47 – PCEMI 47
2020 – 2021

SOLO FLIGHT

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By Major Paul P. Whalen

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CAPITAL DEFENCE PROCUREMENT: TRAINING IS NOT THE PROBLEM

A highly capable, flexible military with the ability to operate closely with allies and partners is an invaluable instrument of Canada's foreign policy. It will reinforce our relations with key partners and allies. And it will support our joint efforts to address global security threats, combat terrorism, and defend our continent.

- Chrystia Freeland, *Strong Secure Engaged*, Message from Minister of Foreign Affairs

INTRODUCTION

This quote by Chrystia Freeland, then Canadian Minister of Foreign Affairs, within the opening pages of Canada's Defence Policy, *Strong, Secure and Engaged*, speaks to the trust that the Government of Canada (GoC) has placed upon the Canadian Armed Forces (CAF) in defence of Canada, North America and the world.

Further reading into the Canadian Defence Policy shows the opening statement from the Minister of Foreign Affairs can only come to realization due to a considerable investment in defence funding and capability acquisition¹. To meet Canada's defence needs at home and abroad over the next 20 years, the GoC will raise annual defence spending from \$17.1 billion in 2016-17 to \$24.6 billion in 2026-27 on an accrual basis. This growth in defence funding leads to an increase in annual defence spending from \$18.9 billion in 2016-17 to \$32.7 billion in 2026-27².

One of the major initiatives of the Defence Policy is investment in capital acquisition. This initiative will allow the CAF to procure overdue capability enhancements, such as 15 Canadian Surface Combatant ships required to replace existing frigates and retired destroyers for

¹ Department of National Defence, *Strong, Secure, Engaged, Canada's Defence Policy* (Ottawa: Department of National Defence, 2017), 13.

² Ibid, 11.

the Royal Canadian Navy (RCN). It will allow the Royal Canadian Air Force (RCAF) to acquire 88 new fighters to replace the CF-18 Hornet fleet. It will allow the Canadian Army (CA) to recapitalize much of its land combat capabilities and ageing vehicle fleets while modernizing its command-and-control systems³. *Strong, Secure, Engaged* identified projects and outlined capital spending totalling \$108 billion on an accrual basis (\$164 billion on a cash basis) over the next 20 years⁴.

The vision found within the Canadian Defence Policy focusing on major capital acquisitions means that an effective defence procurement machine is of the utmost importance in ensuring on-budget, on-scope, and on-schedule delivery of these new capabilities to the respective CAF elements. To ensure effective capability delivery, the defence procurement team, specifically major capital procurements, must be optimized (i.e., the right people are doing the right job with the proper training).

There exists a belief that the capital acquisition team is not optimized to meet the demand placed on it by *Strong, Secure and Engaged*. Optimization of training and experience within capital acquisition teams is required to meet the onus placed on the CAF by Canada's Defence Policy. Some believe that the current defence procurement model is not well equipped or adapted at generating personnel with the proper skill sets and knowledge to manage highly complex acquisition projects. Specialized training and professional competency are required for the defence team to achieve success on the capital acquisition demands placed on the organization by Government⁵.

³ Ibid, 13.

⁴ Department of National Defence, *Defence Investment Plan 2018* (Ottawa: Department of National Defence, 2018), 13.

⁵ Ross Fetterly, "Implementing Strong, Secure, Engaged: The Challenges Ahead", Canadian Global Affairs Institute (January 2018): 6-7.

To prove and fully develop the thesis that the Department of National Defence's (DND) major capital procurement organizations are indeed on the right trajectory concerning training and professional project management development to meet the capability investments and capital project acquisitions outlined in the current Canadian Defence Policy, this paper will examine two elements;

- Training/Professional Competency – this section will briefly examine the current training offered, specifically the Project Management Competency Development (PMCD) programme, to personnel entering the lines of capital defence procurement within DND. The section will provide an overview of the PMCD programme and analyze the relationship between the Project Management Institute's (PMI) Project Management Professional (PMP) certification and the PMCD programme.
- Implications/Potential Issues – this section of the paper will discuss the implications, if any, based on the framework, applicability, and credibility of the PMCD programme. The paper will also touch upon other potential issues that could hinder the management of complex capital acquisition projects if the PMCD programme has been determined to not factor into the disruption of capital acquisition.

TRAINING/PROFESSIONAL COMPETENCY

Project Management Competency Development (PMCD) Overview

Before examining whether the PMCD criteria and training are adequate in content and are optimal in imparting the knowledge necessary for an individual to manage a complex capital acquisition project effectively, the paper will provide an overview of the PMCD programme for context.

The PMCD programme formalizes project managers' professional development and qualifications in DND. The programme is reactive to the Treasury Board (TB) necessity that projects are managed in a means that is constant with the evaluated level of complexity and risk for the respective project. The PMCD programme assesses the knowledge and experience of project managers, determines their qualification level and the level of projects, in terms of complexity and risk, for which they are qualified to manage. The PMCD programme outlines a footprint for learning, experience, and professional development for project managers to reach the next level of qualification⁶.

For each level of PMCD qualification (DND Project Manager (PM) 1, DND PM 2, and DND PM 3), specific requirements must be attained. For each level of qualification, requirements are specified in terms of ⁷;

- Work experience;
- Training and education;
- Indicators of competence; and
- Leadership capacity and suitability for the PM role.

⁶ Department of National Defence, A-PD-002-000/AG-002, *Standard for Project Manager Competencies* (Ottawa: Department of National Defence, April 2016), 3.

⁷ Ibid, 9.

As an example, for an individual to meet the work experience requirement to obtain DND PM 1, they must have three or more years on a project that meets the following criteria⁸;

- The project is undertaken within an organization that has formally approved and published processes related to project management (not restricted to the GoC or DND);
- The project had a defined start and finish and was undertaken to deliver a unique capability, system, equipment, service or business transformation;
- The Project Sponsor (PS) issued direction for the project in the form of a Project Charter or equivalent document;
- There were vital project stakeholders outside of the organization (director/unit level), in which the project implementation staff were based;
- The project had defined, documented, and approved scope, budget and schedule against which formal performance reporting was conducted;
- Risks were identified, analyzed, and controlled on an ongoing basis; and
- The total project cost, including direct costs and indirect costs such as salaries, was one million dollars or more.

Such criteria as that depicted above for the required work experience to obtain DND PM 1 are also established for the three other previously identified categories (training and education, indicators of competence and leadership capacity and suitability for the PM role). This criterion is well established for all levels (DND PM 1, DND PM 2 and DND PM 3) and can be found in the *A-PD-002-000/AG-000 (Standard for Project Managers Competencies)* publication.

As can be ascertained from the example above, a considerable amount of time, development and effort has enabled the PMCD programme to provide project managers with the proper tools to manage major projects at all risk complexities effectively. The development of requirements for each DND PM levels speaks to the robustness and validity of the PMCD framework. So much importance has been placed on developing project managers within DND

⁸ Ibid, 10.

that a directorate, Directorate Project Management Support Operations, has been stood up within ADM(Mat) to manage the PMCD programme for both public servants and military personnel⁹.

One could argue that training, education, and indicators of competency established in the PMCD programme are great tools for project managers. However, they do very little for both public servants and military personnel that are just starting to manage major capital projects. While this may be true, and it is true in any case in which an individual is just starting their career in a specific realm, they indeed will not have the experience outlined in the PMCD programme. Nevertheless, they will be mentored and will work for individuals with this PMCD programme insight and who will have the experience and the right competencies to manage complex projects; this is invaluable mentorship. This argument will be further discussed in the implications section of this paper.

We have examined the structure, criteria, requirements, and framework of the PMCD programme to provide the reader context. The paper will now compare the PMCD programme with the Project Management Institute's (PMI) Project Management Professional (PMP) certification to ascertain whether the PMCD framework is a credible tool to provide project managers within DND the requisite skills to navigate the complex project realm.

Project Management Certification Comparison

Before delving into the implications of the training and professional development framework created for project managers within DND capital procurement, this paper will add

⁹ "Material Acquisition and Support Officer Development Program", accessed April 16, 2021, <https://www.canada.ca/en/department-national-defence/corporate/job-opportunities/civilian-jobs/civilian-job-opportunities/students-and-new-grads/materiel-acquisition-support-officer-development-program.html>

credence to the established PMCD governance framework by comparing it to the Project Management Institute's (PMI) Project Management Professional (PMP) certification.

First and foremost, PMI's PMP is considered the gold standard in Canada and even the world concerning certification for project managers. PMI's PMP is recognized and sought after in project managers by organizations around the globe. The PMP certification validates one's competence to perform, lead and direct projects. It has been shown through the recent release of PMI's survey "Earning Power: Project Management Salary." that there is a significant potential for higher salaries for project managers that hold a PMP certification compared to those who do not. The survey states that project managers with a PMP certification, on average, report a 22% higher mean salary¹⁰. Besides increasing one's earnings, the PMP certification is regarded as a project management resource/accreditation that allows a project manager to know everything related to a project and increases the manager's competency and enhances one's productivity¹¹.

This paper, through its research, has determined that the PMCD programme developed by DND for project managers is partially based on the PMI's PMP certification, more specifically the PMI Project Management Body of Knowledge (PMBOK) as well as the PMP Examination Specification and the PMP Role Delineation Study but as applied in the unique DND environment¹².

To further add to the PMPs certifications credibility and subsequently the PMCD programmes credibility, the PMI's PMP certification is aligned to international standards such as

¹⁰ Project Management Institute, "PMI Salary Survey: Project Management Practitioners with PMP Certification Earn More", Close Up Media (February 2020): 1.

¹¹ Project Management Institute, "Why Consider a PMI Certificate to Enhance your Managerial Skills", Newstex (February 2019): 4.

¹² C. Cartwright and M. Yinger, "Project Manager Competency Development Framework", PMI Global Congress (2007): 1.

ISO 17024 (Conformity Assessment – General Requirements for Bodies Operating Certification of Persons) and ISO 21500 (Guidance on Project Management)¹³. Being aligned with such an international standard as ISO adds instant credibility to the PMP certification and the PMCD programme used by DND¹⁴.

For DND, the PMCD programme provides a “framework” of the skills and behaviours required of project managers to successfully manage a complex project within DND from the cradle to the grave. The PMCD framework can identify what skills a project manager has, and the framework can identify where the gaps are in the project managers experience and knowledge¹⁵. As a result of these identified gaps, a path can be laid out for the project manager to acquire the missing competencies.

One could argue that the PMCD framework is only based on a portion of the requirements and work of the PMIs PMP certification. One could also state that there are several areas not addressed by the PMCD framework. For example, the PMCD would not address application-specific competencies for very technical projects. However, this is not the intent of the PMCD programme. The PMCD programme intends to provide a generic foundation for project managers concerning project competencies. Project managers can then choose to supplement the PMCD competencies with additional project-specific competencies to complement their specific needs¹⁶.

The paper has now demonstrated that the PMIs PMP certification is one of the most prestigious project manager certifications in the world. The paper has also shown that the PMCD

¹³ Ibid, 3.

¹⁴ Department of National Defence, A-PD-002-000/AG-002, *Standard for Project Manager Competencies* (Ottawa: Department of National Defence, April 2016), 3.

¹⁵ Ibid, 7.

¹⁶ Ibid, 4-5.

programme used by DND is based on specific aspects of the PMIs PMP certification. This basis easily allows one to deduce that the PMCD framework used and implemented for project managers by DND is of high quality and adds valuable competency to all who follow it.

The paper has scrutinized the training provided to DND project managers and has established that the PMCD framework implemented by DND is based on specific aspects of PMIs PMP certification. This fact immediately lends to the credibility and applicability of the PMCD programme for project managers within DND. The validity of the project management training provided to DND project managers has been demonstrated. The paper will now discuss the subsequent implications to the management and delivery of the capital acquisitions outlined in Canada's Defence Policy. The paper will identify what issues within the DND project management world, now that professional training and competency have been deemed adequate, must be tackled to deliver on-time, on-scope, and on-budget projects.

IMPLICATIONS/POTENTIAL ISSUES

As stated, this paper has demonstrated that the PMCD programme provided by DND to its project management practitioners is robust, well developed, credible and provides project managers with the tools necessary to manage complex acquisition projects for the CAF. Furthermore, in the scenario, the project manager lacks the experience, knowledge, or training the PMCD framework outlines what is missing. The project manager and their organization can then address these gaps and fill them in as required. Now that it has been determined that the PMCD programme provides the proper training and guidance to its project managers, this paper will examine the implications of this in delivering the capital projects outlined in *Strong, Secure and Engaged*.

As determined, the training provided to project managers will not be the issue that prevents capital acquisitions on-time, on-scope and on-budget delivery. The potential issues to cause concerns will be such things as the delivery time of the project management training, the selection method for individuals (military personnel specifically) going into DND Project Management positions, and the posting duration in project management positions for military personnel¹⁷.

Though it has been said that the training found within the PMCD programme provides project managers with the proper training and experience to manage complex capital projects, the time frame in which project managers receive this training is problematic. Based on the current delivery method of the training and the associated courses, there will always be a delta in the courses identified in the PMCD programme, when they are required and when they are offered¹⁸. When posted or assigned to a capital project management position, most new project managers will not have any experience in the project management realm and, as a result, will not have completed any of the requisite training outlined in the PMCD programme. For example, training such as Project Management and Development, a required course for applying to DND PM 1, will not be offered to the individual until they have been in their position for some time¹⁹. This will result in the project manager taking longer to come up to speed and contribute in a meaningful manner to the project.

¹⁷ David Perry, "Defence Procurement Canada: Opportunities and Constraints", Canadian Global Affairs Institute (December 2019): 3.

¹⁸ Department of National Defence, *Project Management Competency Development Programme: Record of Learning and Professional Development*, (Ottawa: Department of National Defence, January 2020), 2.

¹⁹ Ibid, 3.

A second potential issue that may hinder the delivery of capital acquisitions from the Defence Policy is the method of selection for personnel being assigned or posted into DND capital project positions. As the writer is highly familiar with the Aerospace Engineering Officer (AERE) trade, a heavily relied upon trade within ADM(Mat), the AERE trade is the example that will be used in outlining this issue. As of right now, the AERE SCRIT (Scoring Criteria), specifically at the junior Captain level, does not lend itself to making individuals want to go into position within ADM(Mat). Those at the junior Captain level are the individuals one wants to get in to project management early to build this experience, knowledge, and competency. Though the AERE SCRIT awards the same number of points at the Captain level for a position in the field (i.e. flying Squadron, maintenance Squadron) as it does for a position within ADM(Mat), extra “high value” points are assigned to the field positions. The AERE community has deemed field positions of more importance than ADM(Mat) positions²⁰. As one can see, this would deter young AERE officers who want to get promoted and further their careers quickly from selecting an ADM(Mat) position to that of a position on a Wing.

Further, to eventually hold a command position within the AERE community, one must have had the requisite field experience. ADM(Mat) experience does not come in to play as a factor²¹. The AERE Council Directive - AERE Occupation Management Principles also states that to reach Colonel, operational/field tours are required. The guiding principles also state that maintenance operation tours (field tours) at the most valued AERE employment area²².

²⁰ Department of National Defence, *AERE Scoring Criteria*, (Ottawa: Department of National Defence, April 2016).

²¹ Department of National Defence, *AERE Selection Board Guidance*, (Ottawa: Department of National Defence, April 2016), 2.

²² Department of National Defence, *AERE Occupation Management Principles*, (Ottawa: Department of National Defence, April 2016), 6.

Once again, this paper will be using the AERE community to identify a final potential issue that may obstruct the delivery of capital projects. Since the PMCD programme provides the proper guidance, training, and knowledge to project managers, the final potential issue to derail the delivery of capital projects is the duration military personnel will fill and remain in project management positions. In most cases, the individual would be there for a short period. Based on the AERE Occupation Management Principles, it is expected that an AERE Captain will remain in an ADM(Mat) project management position for three to four years²³. An individual will just have built up the requisite time to meet the PMCD programme DND PM 1 requirements and will then be posted to a new position, more than likely outside ADM(Mat). There is very little return on investment. The individual will depart the organization just as they become invaluable and contribute optimally toward the project.

CONCLUSION

This paper has demonstrated that the major capital procurement team is on the right trajectory concerning training and professional project management development to meet the capability investments and capital project acquisitions outlined in the current Canadian Defence Policy.

The paper has done this by examining the structure, criteria, requirements, and framework of the PMCD programme. The paper's examination has shown that an incredible amount of time and effort has gone into developing the PMCD programme, providing project managers with a more than adequate and robust framework to develop their knowledge and competency. Not only has an extreme amount of work been put into the PMCD framework, but

²³ Ibid, 7.

ADM(Mat) has also established an organization to govern the PMCD program to ensure its flexibility, currency, applicability, and longevity.

To add further credence to the PMCD programme, its foundation was compared against the Project Management Institute's (PMI) Project Management Professional (PMP) certification. During this comparison, it was determined that the PMCD framework used by DND is based on specific components of the PMI PMP certification process. Those components include; the PMI Project Management Body of Knowledge (PMBOK) and the PMP Examination Specification, and the PMP Role Delineation Study. This adds instant credibility to the DND PMCD programme as the PMI's PMP certification is world-renowned. Project managers holding the PMP certification are highly sought after by companies globally. PMI PMP certification and subsequently the PMCD programme is also IAW specific ISO standards, ISO 17024 (Conformity Assessment – General Requirements for Bodies Operating Certification of Persons) and ISO 21500 (Guidance on Project Management), further enhancing the legitimacy of the PMCD programme.

Finally, after demonstrating the applicability and usefulness of the PMCD programme in developing project managers in DND, it was determined that this framework would not be the limiting factor in delivering on-time, on-budget, on-scope capital project acquisitions. Other potential issues were highlighted: delivery time of the project management training, selection method for individuals (military personnel specifically) going into project management positions, and the posting duration in project management positions for military personnel.

Now that the PMCD programme has been determined to be effective in its mandate, it is recommended to further examine DND procurement's inability to meet capital project delivery timeframes. This paper believes that the proper management development framework is in

place, and if the three aforementioned potential issues are examined and eventually addressed, the capital acquisition delivery issues will all but vanish, thus; rendering the words written by Chrystia Freeland found at the beginning of this paper all that more achievable.

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