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CANADIAN FORCES COLLEGE / COLLÈGE DES FORCES CANADIENNES
JCSP 34 / PCEMI 34

EXERCISE/EXERCICE NEW-HORIZONS

**THE CANADIAN FORCES OPERATIONAL PLANNING PROCESS:
A FORM OF PORTFOLIO MANAGEMENT**

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Abstract

This paper discusses the inception of the Canadian Forces Operational Planning Procedure (CFOPP) within a general trend that recognizes the increasing importance of sound project management. Civilian project management practices are first discussed before introducing the concept of project management and finally of portfolio management as a more appropriate basis for comparison with the CFOPP. Similarities and differences between the CFOPP and the Project Management Institute (PMI) Portfolio Management Standard are highlighted, along with some observations between the two processes.

Comparison of the CFOPP with civilian standards of project management confirms that the best analogy for a military campaign is the Project Management Institute Portfolio Management Standard which includes programs, projects and other on-going work within a framework intended to meet strategic objectives with assigned resources. The CFOPP can then be considered a form of portfolio management, albeit within an environment that imposes its own unique flavor to the process.

Too often the Canadian Forces responds with a Can Do Attitude and proceeds to participate in operations that are not fully developed through the complete use of the Canadian Forces Operational Planning Process.¹

1.0 INTRODUCTION

Since the late 60's, there has been a progressive refinement of the Canadian joint operational planning process. The realignment of the North Atlantic Treaty Organization (NATO) strategy in 1967 sparked a great deal of changes, but none as fundamental for Canada as the requirement to be ready to plan operations on its own. In fact, the changing world environment saw Canada develop its joint planning capability through successive operations that forced a re-organization of its command and control capability, and ultimately lead to its current operational planning ability.

In that context, the development of the Canadian joint staff headquarters and the creation of a formal Canadian Forces Operational Planning Process (CFOPP) seem logical. But the evolution of our CFOPP as a large-scale planning process at the operational level may not be unique to the military. In fact, this paper will demonstrate that the inception of the CFOPP fits within a general trend that recognizes the increasing importance of sound project management and that the CFOPP can be considered as a form of project and program management, known as portfolio management.

¹ Clark, Robert, "The Canadian Forces Operational Planning Process: A Maturing Process or Continued Improvisation?". (Toronto: Canadian Forces College Advanced Military Studies Program Paper, 2000), p.23

To demonstrate this, the essay will first situate project management practices before considering military operations as projects. This will lead to the concept of portfolio management as a more appropriate basis for comparison with the CFOPP. Similarities and differences will be highlighted and will allow observations between processes to be drawn.

It is important for both military officers and civilian project managers to understand that the management of complex modern military endeavors shares many features with the management of projects and programs. In an ever accelerating and changing world, one has to stay abreast of all opportunities to learn and compare notes with the best in its profession. This is certainly true for planning.

2.0 MILITARY PROJECT MANAGEMENT?

Planning is about the organization of resources to accomplish a given objective; these resources can be time, funds, or personnel. This section first looks at civilian project management, then it considers military operations as projects. Finally, this section will introduce the concept of portfolio management as a better equivalency to military operations.

2.1 Project management

A project is “A temporary endeavor undertaken to create a unique product, service, or result.”² An important part of the problem resolution technique is the implementation of the solution. The term project implies further notions of plans to achieve the objective. This is where project management comes into play.

It is interesting to note that modern project management was developed during the 1950s and 1960s in the context of the military industry, “through the large and costly United States (...) Defense Department contracts such as Polaris missile and submarine programs and the National Aeronautics and Space administration (NASA) Apollo Space Program.”³

As a result of those mega-projects emerged “...a distinct field of practice with its own tools, techniques, and concepts.”⁴ This field of practice, called project management, has seen tremendous growth in the last decades with the advent of project-oriented organizations and rapid development outside the traditional boundaries of social or transformational projects that “...have all changed the scope of what is now termed a

² Project Management Institute. *A Guide to the Project Management Body of Knowledge* Newtown Square, (Pennsylvania, Project Management Institute, Inc. 2000), p.368

³ Ives Mark, “Identifying the contextual elements of project management within organizations and their impact on project success”, *Project Management Journal* (March 2005): p.37 from Hebert B., “Tracking Progress”, *CMA Management*, February 2002, p.24-27

⁴ Crawford Lynn and Pollack Julien, “How generic are project management knowledge and practice?”, *Project Management Journal* (March 2007): 87-96., p.88 from Stretton A., A short history of project management: Part one: The 1950s and 60s. *Australian Project Manager*, 14(1), p. 36-37

‘project’.’⁵ Today, “project management is widely accepted as the best approach for bringing a degree of certainty in a modern, fast-paced business environment.”⁶

As it grew as a recognized field of knowledge, project management acquired foundations with the development of project management standards.

2.1.1 Standards

Standards are required to provide guidelines on processes, products or services for many aspects of modern life, and they reach this status when they are approved by a recognized body.⁷

In the interest of efficiency, standards can provide confidence that project personnel share a commonly accepted terminology, common project management tools and techniques, and have the capability to satisfy project objectives.⁸

The field of project management is no exception.⁹ The Project Management Body of Knowledge (PMBOK), is approved by the American National Standards Institute (ANSI) as an American National Standard since 1999. ANSI is in turn the official US representative to the International Standard Organization (ISO).

⁵ Crawford Lynn and Pollack Julien, “How generic are ...”, p.279

⁶ Pappas, Lorna, “Frequently asked questions”, Available from <http://www.pmi.org>; Accessed, 17 March 2008, p.68

⁷ “...standards do not need to have official status to have widespread acceptance and effect.”, *Ibid.*, p.88

⁸ *Ibid.*, p.88

⁹ Bouley, Jeffrey, “Breaking the code”, Available from <http://www.pmi.org>; Accessed, 17 March 2008, p.40

PMBOK is not the sole project management standard. The BS 6079 from the British Standards, and the Global Alliance for Project Performance Standards (GAPPS)¹⁰ are worth mentioning. Under the auspice of the GAPPS, an international standard is being drafted by various international project management organizations. It is currently referred to as Global Performance Based Standards for Project Management Personnel. Its aim is to identify performance standards for project managers.¹¹

Closer to us, within the Department of National Defence, the Assistant Deputy Minister (Materiel) possesses its own project management guidelines with the Project Approval Guide and the Materiel Acquisition and Support Desktop. The later refers to the PMBOK, published by the Project Management Institute (PMI).

2.1.2 Project Management Institute Standards

Founded in 1969, the PMI currently has in excess of a quarter of a million members in over 160 countries.¹² It is “the leading membership association for the

¹⁰ The GAPPS includes the Standards and Qualification Organizations, Project Management Professional Associations, Academic/Training Institutions and Industry.

¹¹ Global Performance Based Standards for Project Management Personnel, Working Report No 1: Report from Working Session 24-26 February, 2003, Lille, France. Available from <http://www.globalPMstandards.org>; Internet, accessed, 25 March 2008, p.5

¹² Vella, Linda, “2007: A look back”, *PM Network* (January 2008): 2-3. Available from <http://www.pmnetwork-digital.com/pmnetwork>; Accessed, 17 March 2008, p.2

project management profession.”¹³ The PMI promotes professional development, advocates for the profession, conducts research and sets standards, guidelines and body of knowledge such as the PMBOK, the Standard for Portfolio Management, the Standard for Program Management and many more. PMI standards, guides and bodies of knowledge are written to “...provide information that is relevant to most projects, most of the time.”¹⁴

2.1.3 PMBOK processes

The most commonly quoted and known PMI standard is the PMBOK and it is “...generally accepted and widely recognized as good project management practice.”¹⁵ The document contains explicit knowledge with a strong emphasis on guidelines such as plans and documents. The PMBOK “...mainly consists of declarative and procedural knowledge – that is, what to do and how to do it. In its current form, it does not contain much causal knowledge – that is, why to do a particular process or action.”¹⁶

The PMBOK breaks down project management into nine knowledge areas populated by processes. In turn, these processes are grouped into five main process groups: initiating, planning, executing, monitoring and controlling, and closing. Figure

¹³ Project Management Institute. *About PMI*. Available from <http://www.pmi.org/WhoWeAre/Pages/About-PMI.aspx>; Accessed, 26 February 2008, p.1

¹⁴ Crawford Lynn and Pollack Julien, ..., p.95

¹⁵ Bouley, Jeffrey, ..., p.41

¹⁶ Reich Blaize Horner and Young Wee Siew, “Searching for knowledge in the PMBOK guide”, *Project Management Journal* (June 2006): p.21

2-1 illustrates the interaction of these process groups, with planning and execution constantly interacting under the umbrella of the monitoring and controlling process group until the project is closed.

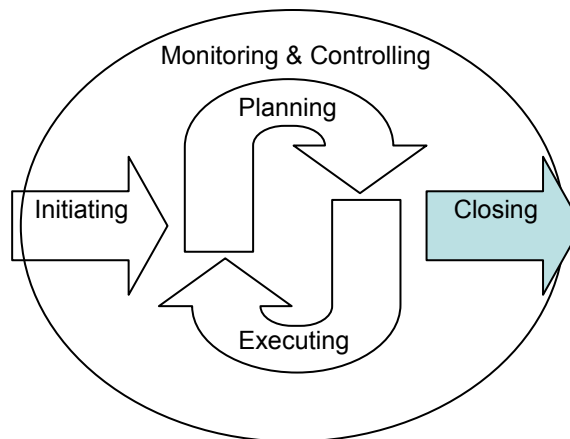


Figure 2-1. PMBOK Process Groups

Source: Project Management Institute. *A Guide to the Project Management Body of Knowledge* Newtown Square, Pennsylvania, Project Management Institute, Inc. 2000.

In the PMBOK, forty-four processes are interrelated within the above groups, and each process inputs and outputs are described. For example, the initiating group contains the following processes: Develop Project Charter and Develop Preliminary Project Scope Statement. Tools or techniques that can be used are described and suggested for given processes. Some of the better known tools are the Work Breakdown Structure which establishes the interrelation of every task to be completed within the project, or the PERT technique, used to determine project duration when there is a high level of uncertainty on the completion time for many of the tasks.

There are also three major documents that provide internal and external governance to the project. First, there is the Project Charter¹⁷ that authorizes the project, and then the Scope Statement that identifies what work will be accomplished and what deliverables are expected. Finally, the Project Management Plan explains how the project will be carried out with respect to the management of resources (time, personnel, funds), quality, risk, scope, communication and procurement.

Another concept often used is that of the triple constraints of scope, time and costs. Balancing these requirements is what will allow for project quality and any increment on a resource would likely affect the other two. Let us now consider how this field of knowledge is relevant to military operations.

2.2 Military operations as projects

Canadian military operations are defined as “...the employment of an element or elements of the CF to perform a specific mission.”¹⁸ This definition is very close to that of a project. The specific nature of missions renders them finite in time, an observation highlighted by Colonel Rouby, French Army: “The military operational command level is

¹⁷ The term Project Charter is also used within the Assistant Deputy Minister (Materiel) Branch Project Approval Guide and the Materiel Acquisition and Support Desktop. There are some differences in the content but the fundamental purpose is the same.

¹⁸ Canada. Department of National Defence, B-GJ-005-500/FP-000 *CF Operational Planning Process*. (Ottawa: DND Canada, 2002), p.1-3

by nature dictated by circumstances and temporary because it is linked to the duration of the mission of a force in a theatre.”¹⁹

Because we are concerned with the operational level of war, it is useful to define a campaign as a “...set or a series of related military operations aimed at accomplishing a strategic or operational objective within a given time and space.”²⁰ Management of the later operations is referred to as *campaign planning* and it is done with the help of military standards. Such campaigns can be of different levels of intensity, from classical war on the plains of Europe to the now common counter-insurgency operations (COIN). In all cases, military operations feature some of the basic criteria of project management: planning and standards.

2.2.1 Operational Planning Standards and Doctrine

Formal operational planning, as we now know it in Canada, did not exist during the Cold War and “...war plans were, in effect, the only *operational plans* of the era.”²¹ Nowadays, operational planning standards are numerous and for NATO partners, they all more or less align with the NATO Guidelines to Operational Planning (GOP). In fact,

¹⁹ Rouby, Gilles, “The joint dimension of operations command”. <http://www.cdef.terre.defense.gouv.fr/publications/doctrine/doctrine05/us/doctrine/art2.pdf>; Accessed 10 February 2008, p.1

²⁰ Canadian Forces College. *Combined and Joint Staff Officer's Handbook*. (Toronto: DND Canada, 2006), p.II-1-2/16

²¹ NATO, “The Defence Planning Process”. <http://www.nato.int/issues/dpp/index.html>; Accessed 10 February 2008, The Defence Planning Process

the realignment of the NATO strategy in the late 60's also signaled the beginning of joint operational planning for many of its members, including Canada.²²

Currently, the *CF Operations* manual is the primary doctrine manual that governs how Canadian Forces plan, conduct and review operations. In turns, it identifies the CFOPP as the planning methodology.

2.2.2 CFOPP processes

Not surprisingly, the CF "...OPP belongs to a family of analytical and procedural methods used by military and business organizations."²³ It is not the only planning methodology in use in the CF but the most used. The Estimate and Battle Procedure is, for example, another planning process followed by the Land Forces. The later is said to overlap the CFOPP and is a process more adapted to simpler or higher tempo operations.

²⁴ The CFOPP is said to be a:

...coordinated process to determine the best method of accomplishing assigned operational tasks and to plan possible future tasks. (...) The planning process is designed to optimize logical, analytical steps of decision making in conditions of uncertainty and ambiguity.²⁵

²² Maloney, Sean, "Purple Haze: Joint Planning in the Canadian Forces from Mobile Command to J-Staff, 1975-1991 (Part 1)", *The Army Doctrine and Training Bulletin*, Vol.5, No.4 (Winter 2002-2003), p.59

²³ The CFOPP is not used outside of the military but, as we are going to see, other planning methodologies exist and fill the same role. Bryant, David J., "Can we streamline operational planning?", *Canadian Military Journal* (Winter 2006-2007): 84-88, from JJ Fallesen, "Decision Matrices and Time in Tactical Course of Action Analysis," in *Military Psychology*, Vol. 7, 1994, pp.39-51

²⁴ *Ibid.* Bryant, David J., "Can we streamline ...", p.1

²⁵ Canada. ...*CF Operational Planning Process*..., p.3-1

The CFOPP breaks down the process of planning into five stages: initiation, orientation, Course of Action (COA) development, plan development and plan review. Figure 2-2 illustrates the five stages and the iterative nature of the CFOPP process. For each stage, the CFOPP identifies and amplifies key procedural steps. For example, in the orientation phase, the key steps are; the conduct and delivery of a mission analysis briefing; initial commander's planning guidance; identification of battle-space effects; and expected outputs such as briefing or documents.

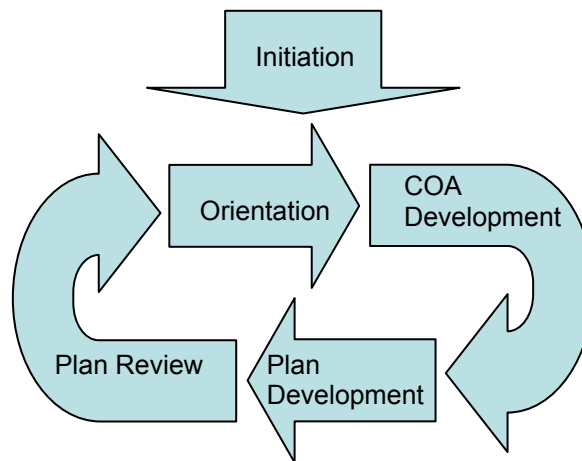


Figure 2-2. Stages of the CFOPP

Many tools and techniques are unique to military operations and have been developed to assist in determining the extent of the problem or of the situation. In campaign planning for example, the Center of Gravity (CofG) analysis, also known as the Strange analysis, helps the planner identify potential decisive points and targeted critical

vulnerabilities. But there are several other unique military techniques such as wargaming that also play a vital role in the process.²⁶

The intent of the CFOPP is very similar to that of the PMBOK in that it offers guidelines on what to do and to some extent on how to do it but without offering much causal knowledge, i.e. why it should be done. Some of the main documents identified are the Initiating Directive, the Concept of Operations (CONOPS) and the plan, which can be a Campaign Plan, an Operational Plan (OPLAN), or a Contingency Plan (CONPLAN).

2.2.3 Military operations and projects

Military campaigns and operations, supported by plans, have specific missions and a finite duration. If we consider Canadian operations in Afghanistan as a Campaign, can we conclude that it is a large-scale military *project*? There is no doubt that there are elements of project management within that campaign. The establishment of Camp Julien as part of Operation ATHENA in 2003, has been considered a "...project in every sense and the PM (Project Management) principles of the PMBOK should be considered for use on any such project in the future."²⁷

²⁶ Wargaming is a simulation technique that sets different course of actions or scenarios against one another to determine the outcome. The process can be supported by role-play or extensive computer simulation. This is a decision making support methodology.

²⁷ Power, P.G., "Applying Project Management Best Business Practices to an Operational Deployment like Camp Julien". (Toronto: Canadian Forces College Command and Staff College Master of Defence Studies Paper, 2004), p.36

Others have reached similar conclusions. The pre-deployment training of the 5th Groupe Brigade Motorisé du Canada (GBMC) was also considered to be composed of multiple related projects.²⁸ But both examples are limited in scope and do not represent the full spectrum of operations that a campaign entails. Furthermore, some have even contended that military operations were projects and made recommendations intended for the project management professionals based on military doctrine.²⁹ There is evidently a need to consider certain aspects of military campaigns that cannot be qualified as projects.

The similitude of processes and the many examples of projects within operations does not make military operations as a whole, a project by itself. In industry, the term *operation* denotes an ongoing process and it is often noted that: “Projects are different because the project concludes when its specific objectives have been attained, while operations adopt a new set of objectives and the work continues.”³⁰ So there undoubtedly are elements of ongoing operations during a military campaign that cannot be assimilated to a single overarching project.

Fundamentally, the CFOPP, when used at the operational level of war to plan a military campaign, seems to be considering the strategic directions much more closely than the PMBOK with its project management process. While the latter ensures that a

²⁸ Pelletier, Roch, “Travail de session (partie 1), DM 559: Exercice Lion Royal”. (Kingston : Royal Military College of Canada, 2004), p.4

²⁹ Beaupré, François, “Military Projects and Military Operations: Apples and Oranges, but Both are Fruits”, (Toronto: Canadian Forces Command and Staff College Paper, 2005), p.iii

³⁰ Project Management Institute. *A Guide to the Project Management Body of Knowledge ...*, p.7

proper mandate is given to the project manager, it does so only with the intent of determining the extent of the project and identifying the resources needed before the project is started. There appears to be very little consideration for the strategic level in the PMBOK project management process. It is a matter of doing the assigned work right. On the other hand, the CFOPP campaign planning process clearly tries to match the selection of the concept of operation within the strategic guidance and constraints.

2.3 Portfolio management

Because it encompasses aspects of project management and strategic direction typical of military campaigns, portfolio management appears to be a closer match to military operations than the strict project management methodology.

PMI defines a portfolio as "...a collection of projects (...) and/or programs (...) and other work that are grouped together to facilitate the effective management of that work to meet strategic business objectives."³¹ Thus, the PMBOK is subordinate to the Portfolio Management Standard and so is the PMI Program Management Standard. Furthermore, PMI also defines portfolio management as "...an approach to achieving strategic goals by selecting, prioritizing, assessing, and managing projects, programs and other related work based upon their alignment and contribution to the organization's strategies and objectives."³² Figure 2-3 illustrates the PMI Portfolio Management

³¹ Project Management Institute, *The Standard for Portfolio Management*. (Newton Square, PMI Publications, 2006), p.4

³² Project Management Institute, *The Standard for Portfolio Management...*, p.5

process, which clearly links projects, programs and other work to the enterprise's strategic plan. This is done through a process of resources and priorities alignment called portfolio balancing

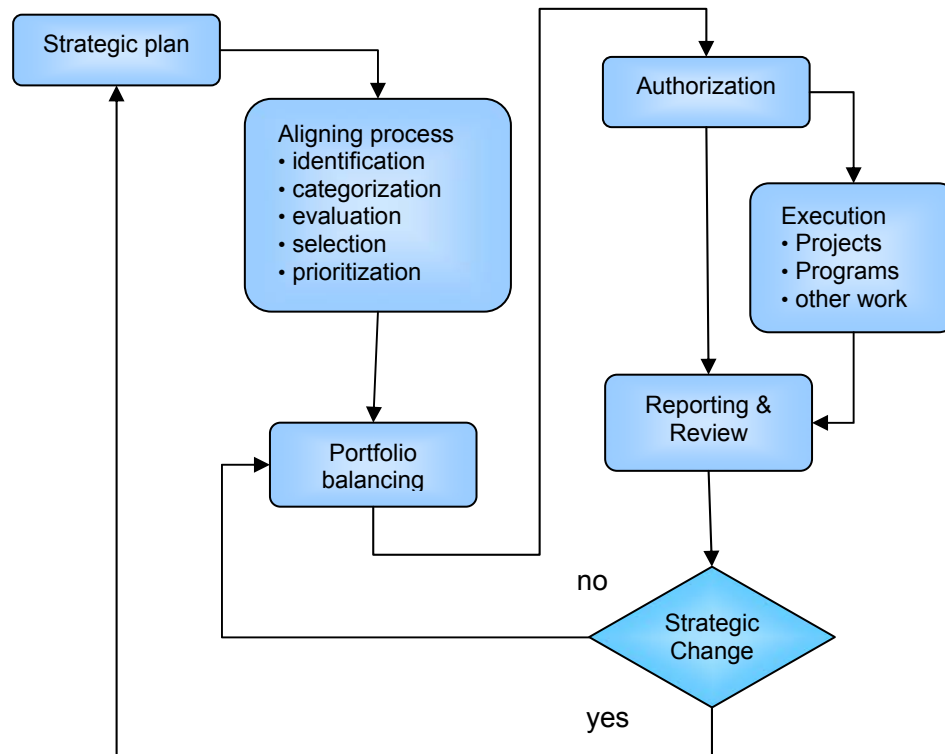


Figure 2-3. PMI Portfolio Management Process

Project Management Institute, *The Standard for Portfolio Management*. Newton Square, PMI Publications, 2006.

Indeed, the combination of projects, programs and other work under a portfolio is more likely to be equivalent to a military campaign. In fact, campaign planning and its process of focusing on the objective, is not unlike portfolio management, which is concerned with “doing the right work” and meeting strategic guidelines that drive the portfolio.³³

³³ Project Management Institute, *The Standard for Portfolio Management...*, p.3

3.0 CFOPP VS PMI PORTFOLIO MANAGEMENT

Now that we have found some similarities between the use of the CFOPP as a planning tool at the operational level and the PMI portfolio management approach, we need to measure the degree of resemblance between these two approaches.

3.1 What is similar?

The CFOPP and Portfolio Management standards are methodologies used to achieve results through an analytical planning process. Although the documentation for both processes is non-prescriptive guideline to assist practitioners in their application of the proposed methodologies, it represents best practices in each field. Furthermore, the steps in each process are not very different. Annex A contains a comparison of the steps for both processes.

Both processes begin with strategic guidance or directive that triggers the identification of various alternatives to fill the strategic objectives, or to meet the desired end state. Those alternatives or CoA are then categorized, evaluated and selected for implementation. Before implementation, a balancing of the various objectives might be required to match current resources. It is at this point, once the operational level planning has been completed and that a campaign plan is generated through the CFOPP, or that a portfolio is assembled with various projects, programs and other work, that the similitude becomes more evident.

Both processes include work that can be identified formally as project, and both have an element of ongoing work or program. Perhaps the most important aspect of the resemblance is the dependence of each on the resources assigned, which can fluctuate due to strategic changes to the environment. There are also similarities with the tools used.

3.1.1 Techniques and tools

Much of the documentation used to initiate or authorize projects within a portfolio or to launch an operation within a campaign has a direct equivalent or a dual use. Where the PMI standard tools are not already employed by military operational planning processes, consideration is given to them. As an example, the Colored Petri Nets PMBOK technique is proposed to facilitate concurrent military planning process and to accelerate the execution of plans.³⁴ Another such technique called resource leveling is used to resolve the gaps between resources required by the plan and resources available.³⁵ In Canada, the COPlanS uses Project Management techniques in their suite of software tools to assist with the assignment of resources to tasks over time.³⁶

³⁴ The authors applied the CPN technique to a Joint Military Appreciation Process (JMAP) in an effort to rationalize the use of resources. The intention is clearly to target time and shorten the execution of plans by maximizing concurrent execution of tasks, a typical project management technique. Australian Department of Defence, Defence Science and Technology, DSTO-TR-1762 *Formal Specification and State Space Analysis of an Operational Planning Process*, (Edinburgh: Command and Control Division, DSTO Defence Science and technology Organisation, 2005), p.1-5

³⁵ Thuve, Håkon, "TOPFAS: Tool for Operational Planning, Force Activation and Simulation". http://www.dodccrp.org/events/6th_ICCRTS/Tracks/Papers/Track4/127_tr4.pdf; Accessed, 10 February 2008, p.11

³⁶ COPlanS stands for Cooperative Operations Planning System developed by Defence and Research Development Canada in Valcartier, Québec. It is a software for distributed collaborative environment facilitating critical thinking, analyses and syntheses, but also facilitating collaborative planning by offering

Perhaps the best example of commonality between the two processes is that of risk management. In project and program management, risk management is used to reduce the impact on project quality. After all, “Risk management is one of the greatest benefits of a strong project management-centered culture.”³⁷ Similarly, the CFOPP recommends risk management as a procedure to reduce negative impacts on operations and on the achieving the mission.

3.1.2 Reasons for failure or troubles

Another interesting similarity between portfolio management and campaign planning is the often-quoted ill-defined scope of work or mission as a reason for failing to achieve the objective. There are many examples of projects or missions that have seen drastic changes to their stated objective during the plan execution.³⁸ Ill-defined scope or scope creep is often stated as a cause for not achieving project success, i.e. delivering on time and within resources.³⁹ For military plans, scope creep is often referred to as gold plating.

decision aids and business process (Workflow) management. Accessed by internet 21 april 2008.
http://www.valcartier.drdc-rddc.gc.ca/poolpdf/e/166_e.pdf

³⁷ Greenguard, Samuel, “The seven deadly myths of project management”, Available from <http://www.pmi.org>; Accessed, 17 March 2008, p.24

³⁸ Clark, Robert, “The Canadian Forces Operational Planning Process...”, p.14

³⁹ Maj Power concluded that the Theater Activation Team Commander would be “well advised to get sign off on the camp they are to provide.” to limit scope creep, which he considers inevitable for military operations. Power, P.G., “Applying Project Management ...”, p.16

Because of their origin, portfolio management and campaign planning have much in common and it may prove just as interesting to look at their differences.

3.2 What is different?

Intuitively, all military officers know that campaign plans and portfolios are different. This section will try to identify those differences and determine to what extent they hold true. After all, it is only normal that the CFOPP and PMI Portfolio Management be dissimilar. “Each industry is different and even within an industry, each business must build a project management system that is right for that organization’s culture and mission.”⁴⁰ Terminology is certainly very different but many analogies can be identified.

3.2.1 Volatile environment

When comparing a portfolio and a military campaign, the environment immediately comes to mind as a major difference. How can we compare the benign corporate environment to that of a military battlefield? The answer is easy, we cannot. The intent here is to compare the planning processes and not necessarily the constraints acting on the delivery of the solution being envisioned. Yet some argue that even the military operations and plans are more volatiles, thereby forcing a more creative process, a form of art:

⁴⁰ Bouley, Jeffrey, ..., p.40

Campaign design employs a number of tools and concepts to help produce a coherent plan. In the end, though, the variables are too numerous and too shifting, the possibilities too many and the importance of professional judgment too important to make it a scientific process. It is therefore destined to remain in the realm of the Operational Art.⁴¹

Once again, this speaks to the uncertainty of war and to the precarious nature of plans once delivered, but not of the planning process itself. We will look into the nature of the *art* of planning in the next section.

If we focus on the planning process itself, there are certain fields of application of projects outside of the military that also experience high levels of uncertainty. “The business environment is constantly changing – market fluctuate, technology evolves and the world adapts.”⁴² The high tech industry is well-known for its high rate of change but a project such as finding the cure for cancer has inherent uncertainty attached to it due to lack of knowledge about what needs to be done but also about what competitors are doing.⁴³ The corporate planning environment and attitude with respect to uncertainty resembles what we have seen above:

It is often futile to develop elaborate plans and employ sophisticated control techniques on projects with high levels of uncertainty. (...) Given great uncertainty, it is guaranteed that the plan – however elaborate it is – will undergo continual modification, so that detailed planning and stringent controls may not work.⁴⁴

⁴¹ Canada, Department of National Defence. CFC CJSOH/MEMII *Canadian Forces College Combined and Joint Staff Officers Handbook*. (Toronto: Canadian Forces College, 2003), p.41

⁴² Fairweather, Virginia, “Success and the Sponsor”, *PMI Executive Guide*. Available from <http://www.pmi.org>; Accessed, 17 March 2008, p.35

⁴³ Frame, J. Davidson, *Managing project in Organizations: how to make the best use of time, techniques and people*, Revised ed. (San Fransisco: Jossey-Bass Inc., 1995), p.164

⁴⁴ Frame, J. Davidson, *Managing project...*, p.170

In the high tech industry and in response to uncertainty, Hildebrand comments on a different approach to managing projects called agile programming, for which "...there is a great deal of back and forth as the team reacts to changing customer requirements and estimates. And the project manager should be in the throes of it all."⁴⁵ It appears then that planning uncertainty can be handled and that it may not be a reason to limit the comparison between military and civilian planning processes.

Another major factor that impacts military operational planning is the often-limited time available to planners. It can be interpreted as a factor of uncertainty and examples of civilian time-constrained projects are numerous. So again, there might be more similarities than we first might perceive. In the end, both processes are iterative in nature and can accommodate successive iterative refinements of an initially coarse output. So in both cases time-constrained projects or missions can be coarsely planned initially and refined when time permits.

3.2.2 A more creative process

In the previous section, we briefly presented the notion of operational art when discussing the military planning process at the operational level. This implies a certain creativeness in the process, which would mean that the CFOPP acts as a canvass for the operational art. Indeed, "...the operational planning process in itself is a highly creative

⁴⁵ Hildebrand, Carol, "Full speed ahead", *PM Network* (October 2007): 56-60. Available from <http://www.pmnetwork-digital.com/pmnetwork>; Accessed, 17 March 2008, p.58

process, including brainstorming techniques and the application of concepts that are not easily translated into bits and bytes.”⁴⁶ Is this different from the portfolio management process?

It is true that at the project level, the PMBOK appears to place more emphasis on an analytical approach to problem solving, and less on creativity. But project managers are not hard over either; “We want people to be speaking a common language, but that doesn’t overrule the need to use creativity, common sense and ingenuity.”⁴⁷ So the approaches do appear to be the same. The tools and the tools and techniques for the aligning process group of portfolio management do allow for much creativity in the identification, categorization, evaluation, and selection of the tasks that will be included in the portfolio. Once again, the differences are not absolute and could be limited to some of the techniques and tools used.

3.2.3 Techniques and tools

For each different category of projects, “...a whole different set of problems and potential project management techniques may apply.”⁴⁸ It is not surprising then that campaign planning employs a great number of unique tools. For example, the Strange analysis is unique to military campaign. Starting with the end state in mind, the planners

⁴⁶ Thuve, Håkon, “TOPFAS...”, p.4

⁴⁷ Bouley, Jeffrey, ..., p.43

⁴⁸ Crawford Lynn and Pollack Julien, ..., p.89 from Evaristo R. & van Fenema P.C., “A typology of project management : Emergence and evolution of new forms. International Journal of Project Management, 17 1999, p.280

are taken through a process that identifies the main elements of the plan, which are of prime importance to achieve the strategic and operational end states. Those elements, are numerous (CofG, decisive points, lines of operations,...) and allow the depiction of the overall plan and of potential critical path. While any changes to a task on the critical path of a PMBOK project is likely to impact on the project quality, i.e. on the cost, the delivery time or the scope of the project deliverable, such considerations do not have direct application on a campaign plan. In the later, the identification of the critical path highlights key decisive points essential to achieve the end state, without any emphasis on the element of time or cost.⁴⁹

Another aspect touched on previously is the extent of the scheduling done at the operational level when using the CFOPP process. Comparing the production of a campaign plan with that of a full-blown PERT diagram would highlight many differences in the planning details. Is it a matter of experience with the relatively new CFOPP? Maybe, but with respect to the level of planning details, campaign planning is not project management nor is it portfolio management. Military planning appears to put little emphasis on the element of time or resources employment over time. The opposite is normally the norm for project management where “Thorough scheduling and resources leveling can help identify a Critical Path and allow for proper re-alignment of the plan if those differ or if slack is entirely eaten up.”⁵⁰

⁴⁹ Although the principle of Economy of Effort, which is one of the ten Canadian Principles of War would drive decisions related to military resources. Canada. ...*CF Operational Planning Process...*, p.1-6

⁵⁰ Pelletier, Roch, “Course Project Part 2, DM 559: Exercise Lion Royal”. (Kingston : Royal Military College of Canada, 2004), p.11

We would expect to see the military pay as much attention at the operational level to optimum use of resources as it does at the tactical level when preparing target order for example. It remains that "...a military commander is seldom given an unmovable end-date nor is the cost normally one of the driving factors when it comes to meeting the expectations of his superiors."⁵¹ And this observation has been made by various observers; "...individuals and groups of military personnel are unlikely to minimize cost unless there are strong pressures for them to do so."⁵² This certainly underlines a major difference in how the planners interpret and act on the constraints imposed on them by their environment. This may be a cultural difference or a reflection of the higher level of considerations reflected in the military planning process.

3.2.4 What about the execution of the plan?

A final observation that has to be pointed out is that the CFOPP does not propose an overall process that encompasses a cradle to grave approach to the planning process.⁵³ This is not to say that the lessons learnt are not recorded for military operations, but that the CFOPP does not include such step as a guideline in its planning process. The same goes for plan execution.⁵⁴ In that sense, *PMI Portfolio Management* coupled with *PMI*

⁵¹ Beaupré, François, "Military Projects...", p.67

⁵² Sandler, T. and Harley, K., *The Economics of Defense*, Cambridge, (Cambridge University Press, 1995), p.175

⁵³ Although stage five of the CFOPP is about plan review, there is no formal close-out stage similar to that proposed by the PMBOK.

⁵⁴ Bryant, David J., "Can we streamline...", p.4

Program Management and the PMBOK are much more inclusive as planning guidelines. The PMI standards do include guidelines for all steps of the planning process from the strategic level down to the operational and tactical levels. And these steps include best practices for capturing and preserving lessons learnt and knowledge management from previous experiences.

3.3 So what?

In the end, there is no right or wrong when comparing two different planning approaches. But there may be lessons to learn from both sides. Mike Brochta, senior project manager at the United State Central Intelligence Agency (CIA) wrote, "For CEOs, project management is a proven way to accomplish their strategies and is a low-risk means to an end."⁵⁵ Similarly, LCol Semler, a United State Army reservist who served in Iraq wrote:

Project management proved a necessity in coordinating and synchronizing the development of security forces to allow for elections and independent operations. (...) Finished buildings without soldiers on site were quickly looted...⁵⁶

In Canada, many officers have looked into the PMI Standards and concluded on their pertinence to some aspects of military operations. Some have concluded that the

⁵⁵ Colford, John, "Project what?", Available from <http://www.pmi.org>; Accessed, 17 March 2008, p.10

⁵⁶ Semler, Christopher, "From the Top: Command Center", *PM Network* (July 2007), Available from <http://www.pmi.org>; Accessed, 17 March 2008, p.21

use of PMBOK tools and techniques would “improve the success of completing a project such as Camp Julien”.⁵⁷ And there are many other such examples.⁵⁸

There are two important aspects to remember. Knowledge is another arrow in our quiver and intuition has to be fed to be effective.

3.3.1 Another arrow in our quiver

Standards contain best practices in a field of work. The sheer size of the project management membership throughout the world indicates the vitality of this field of knowledge. Familiarity with industry should be viewed as another source of best practices with respect to planning. ISO standardization of some of the project management guidelines is a sure sign of their quality and soundness.

PMI risk management methodology, defined in its PMBOK, has much to offer with respect to best practices in that field. But the most valuable contribution of the PMBOK is perhaps to offer knowledge, terminology and practices in the field of project management.⁵⁹ Being aware of the non-military lexicon of project management can certainly allow military planners to draw experience and knowledge from yet another source. In this day and age of diminishing numbers of military personnel and increasing

⁵⁷ Power, P.G., “Applying Project Management...”, p.4

⁵⁸ Using many of the standard project planning tools, a Tool for Operational Planning, Force Activation and Simulation (TOPFAS) is under development. It intends to capture planning data and “serve as a common

cooperation with civilian organizations, it is certainly an advantage to be familiar with PMI project management terminology. This goes both ways.

There are other occasions where we might learn from the industry. Christopher Semler noted; “Because combat soldiers are not usually equipped with project management knowledge, the normal tools, such as Gantt charts, were initially dismissed.”⁶⁰ There is no reason to deprive oneself of the best tools for the task at hand.

3.3.2 Helping intuition do its work

Planning and practice help build an experience database which assists intuition when short-notice planning prevents thorough planning of an operation. Past successes such as the deployment of the DART team as part of Operation TORRENT in 1999 “...demonstrate the high value of conducting as much deliberate planning as possible beforehand and adapting that planning base to the situation encountered on short notice.”⁶¹ Experience is essential to help build our intuitive abilities which are then available when time is limited.

⁶⁰ Semler, Christopher, “From the Top...”, p.21

⁶¹ Clark, Robert, “The Canadian Forces Operational Planning Process...”, p.17

4.0 CONCLUSION

In this paper, we have compared the CFOPP with civilian standards of project management. This has allowed us to observe that the CFOPP came in during a period of increasing activity in the new field of project management. There was universal recognition of the importance of sound project management. We also highlighted that the best analogy for a military campaign was the portfolio management process which includes programs, projects and other on-going work within a framework intended to meet strategic objectives with assigned resources. The CFOPP can be considered a form of portfolio management, albeit within an environment that imposes its own unique flavor.

It is important for both military officers and civilian project managers to understand that the management of complex modern military operations shares many similarities with the management of complex portfolio composed of many projects and programs. In an ever-accelerating world of changes, we have to stay abreast of all opportunities to learn and compare notes with the best in our field of expertise. This goes for planning. At the same time, we should always remember that the success of a military campaign or of a portfolio does not depend on dogmatic planning procedures but rather on a just equilibrium of the creative and analytical approaches to problem solving.

The rationale for inflexibility is that order comes from structure: we convince ourselves that the more formal the structure we impose on projects, the less chaos we face. Thus, we may require all project changes to be approved by three levels of management, and we may require staff to fill out six-page progress reports every week. We may also put together very detailed plans for our project, so that

nothing is left to chance. We may hold daily staff meetings to make sure that workers know what they are supposed to do. And so on. In our attempt to realize order, we may instead achieve stifling bureaucracy.⁶²

Even if we refine and streamline our approaches, even if we reach the highest level of sophistication in civilian and military planning techniques, we should always keep in mind that intuition, imagination coupled with judgment, understanding the purpose and objectives of plans is the secret ingredient to the success of any major endeavor.

⁶² Frame, J. Davidson, *Managing project...*, p.231

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Annex A

Table 1: Comparison of the CFOPP and Portfolio Management Processes.

	Canadian Forces Operational Planning Process (CFOPP)	Project Management Institute (PMI) Portfolio Management
Strategic	Initiation	Strategic Plan <ul style="list-style-type: none"> ▪ Goals definition and categories ▪ Key performance criteria ▪ Capacity definition
Operational	Orientation <ul style="list-style-type: none"> ▪ Mission Analysis ▪ Commander's Planning Guidance 	Aligning Process <ul style="list-style-type: none"> ▪ Identification ▪ Categorization ▪ Evaluation ▪ Selection ▪ Prioritization
	COA Development <ul style="list-style-type: none"> ▪ Factors analysis ▪ Develop COA ▪ Commander's Decision 	
	Campaign Plan Development <ul style="list-style-type: none"> ▪ CONOPS approval ▪ Synchronize activities 	<ul style="list-style-type: none"> ▪ Portfolio balancing ▪ Authorization
	Campaign Plan Review <ul style="list-style-type: none"> ▪ React to strategic changes 	Portfolio reporting and review <ul style="list-style-type: none"> ▪ React to strategic changes • Component execution and reporting
Tactical	<i>Execution (not a formal phase of the CFOPP)</i> Other CF Doctrines and processes I.e. Estimate and Battle Procedure or the CFOPP at a different level.	<ul style="list-style-type: none"> ▪ Programs (PMI Program Management) ▪ Projects (PMI PMBOK) Other sustaining work