

Archived Content

Information identified as archived on the Web is for reference, research or record-keeping purposes. It has not been altered or updated after the date of archiving. Web pages that are archived on the Web are not subject to the Government of Canada Web Standards.

As per the [Communications Policy of the Government of Canada](#), you can request alternate formats on the "[Contact Us](#)" page.

Information archivée dans le Web

Information archivée dans le Web à des fins de consultation, de recherche ou de tenue de documents. Cette dernière n'a aucunement été modifiée ni mise à jour depuis sa date de mise en archive. Les pages archivées dans le Web ne sont pas assujetties aux normes qui s'appliquent aux sites Web du gouvernement du Canada.

Conformément à la [Politique de communication du gouvernement du Canada](#), vous pouvez demander de recevoir cette information dans tout autre format de rechange à la page « [Contactez-nous](#) ».

CANADIAN FORCES COLLEGE/COLLEGE DES FORCES CANADIENNES

NSSC 6/CSEM 6

STRATEGIC MANAGEMENT – THE KEY TO EFFECTIVE AND AFFORDABLE
MILITARY CAPABILITIES

By /par Col Robert Bertrand

This paper was written by a student attending the Canadian Forces College in fulfillment of one of the requirements of the Course of Studies. The paper is a scholastic document, and thus contains facts and opinions that the author alone considered appropriate and correct for the subject. It does not necessarily reflect the policy or the opinion of any agency, including the Government of Canada and the Canadian Department of National Defence. This paper may not be released, quoted or copied except with the express permission of the Canadian Department of National Defence.

La présente étude a été rédigée par un stagiaire du Collège des Forces canadiennes pour satisfaire à l'une des exigences du cours. L'étude est un document qui se rapporte au cours et contient donc des faits et des opinions que seul l'auteur considère appropriés et convenables au sujet. Elle ne reflète pas nécessairement la politique ou l'opinion d'un organisme quelconque, y compris le gouvernement du Canada et le ministère de la Défense nationale du Canada. Il est défendu de diffuser, de citer ou de reproduire cette étude sans la permission expresse du ministère de la Défense nationale.

ABSTRACT

This paper contends that National Defence, which includes the Canadian Forces (CF) and Department of National Defence (DND), cannot afford current Defence Plan and Strategy 2020 capabilities within available and forecasted funding. This has created a bow-wave of unfunded personnel, equipment and infrastructure requirements. The result has been continuous churn during the budget year as repeated reviews are required to address funding shortfalls that should have been addressed in the annual business planning cycle. The problem's source is a flawed strategic management process that has not provided the direction to address current Defence Plan and Strategy 2020 transformation issues. The problem is chronic and needs to be quickly addressed if National Defence is to maintain a modicum of its credibility. Failure to act will compound the problems that have been created to date.

This paper reviews strategy and strategic management theory, the problem facing National Defence and its impact. A variety of analytical models will also be used to understand the issues and finally some recommendations to improve the strategic management process are made.

INTRODUCTION

National Defence, which includes the Canadian Forces (CF) and Department of National Defence (DND), is experiencing problems resulting from a flawed strategic management process. The organization is struggling to generate current Defence Plan (DP) capabilities while also transforming to address the capabilities required for Strategy 2020, National Defence's long-term vision.

The Federal Government relies upon National Defence to play key roles in: ensuring national security and sovereignty, defence of North America, promotion of Canadian values abroad while ensuring international security and world order through United Nation sanctioned peace-keeping and peace-enforcement missions. The challenge for National Defence is to generate effective combat capable forces within the limits of the current budget while also progressing essential Strategy 2020 transformation programs to ensure future combat capabilities.

The Problem. National Defence's strategic management process has not provided the direction necessary to address current DP and Strategy 2020 transformation issues. The Department's current Defence Planning and Management (DP&M) capability-based framework has unaffordable DP and Strategy 2020 programs. Specific direction is required to implement the changes necessary to ensure the effectiveness and affordability of current DP and future Strategy 2020 capabilities.

There are many reasons for this situation including lack of direction on how to make the DP affordable and a lack of clear priorities for future capabilities. Without clear strategic direction, affordable plans cannot be developed and constant review cycles are undertaken to manage available funding. The end result is constant churn, friction and discord between the military and civilian three-star equivalents, or Level Ones, as they compete for a share of an inadequate budget. Until vision, strategy, plans, funding and outcomes are aligned, the current turmoil will continue.

Paper Outline. The background section will provide an overview of the current security environment and Canadian fiscal situation. The discussion section will review strategic management definitions, theory, principles and best practices as described in academic literature. A variety of analytical models will be provided to help understand the issues causing National Defence's strategic management process problem. This will lead to a discussion of the theoretical models upon which National Defence's strategic management processes are built. The impacts of how the theoretical models are actually being applied will be reviewed along with the organizational impacts.

The paper concludes that effective strategic management is vital for National Defence and that the current strategic management system is conceptually sound but has implementation management flaws. Recommendations are submitted with a view to improving National Defence's strategic management process.

BACKGROUND

New World Order and Domestic Security Environment. An understanding of the forces impacting on National Defence is essential to fully understand the external environment within which it operates. Following the breakup of the Soviet Union in 1991, the United States (US) assumed the mantle of the world's lone super-power. No potential adversary has the US military's global reach and advanced conventional weaponry. Given the US's military supremacy, it is not surprising that its potential enemies prefer not to engage them in conventional warfare.

Canada, like the US, faces no conventional military threat but because the world is becoming increasingly complex and unpredictable, it must guard against a number of direct and indirect threats to its national security. The threats, for which a military response may be required, include organized crime, illegal immigration, international terrorism and the proliferation of missiles carrying weapons of mass destruction.¹ The US and Canada must also defend against terrorist threats from extremist organizations. The potential destruction from these new threats pale in comparison to that of a cold war nuclear exchange or conventional forces engagement

adversaries. While western political strategy has pushed toward high-tech, low casualty combat, opposing forces have resorted to using low-tech small arms and guerilla tactics. A few current examples include the Afghani and Iraqi conflicts. Engaging in these conflicts and waging conventional military campaigns will not solve the complex underlying cultural, religious and historical background problems at their core. Moreover, the exit strategy or point will have to be clearly defined to avoid becoming embroiled in a long-term commitment.³ In Western security policy, there is a dangerous gulf between the dominant thinking about security based on “old wars”, like the Cold War and the current reality. The so-called Revolution in Military Affairs, the development of smart weaponry to fight wars at long distance and the proposals for the National Missile Defense Program were all predicated on assumptions about the nature of war, particularly the idea that it is possible to protect territory from attacks by outsiders.⁴ The military capabilities to counter the new threats“ will likely be mobile, lethal packages of sea, land and air capabilities with special operations forces. The most important requirement will be a clear understanding of the long-term commitment required to ensure development of western friendly and stable institutions within the countries from which the threats are emanating. Martin Van Creveld, a noted military analyst, maintains that the new threats will render many of today’s high tech conventional weapons obsolete and obviate the

³ David L. Grange, “Asymmetric Warfare: Old Method, New Concern”, National Strategy Forum Review, Winter 2000, 3

⁴ David Held, “Violence, Law and Justice in a Global Age”, Social Science Research Council, 5 November, 2001, 8

need for continuous rounds of research to develop more capable and costly conventional weapons.⁵ However, other major powers continue weapons research and there should be no assumption that high tech conventional forces have become redundant.

Alignment of capability-based planning with this assumption could have radical impacts on the capital program. For example, focusing on development of new mobile and lethal capabilities primarily for land engagements would likely result in changes to current capabilities. Will the military, if it is to be more mobile, lethal and primarily tasked with land based operations, require the current suite of capabilities such as naval surface and sub-surface and air defence assets? Could unmanned air and naval platforms, that accomplish the surveillance function more efficiently with a reduced risk of casualties, be part of Strategy 2020's future capabilities? This type of thinking shift and planning requires strategic decisions based on clear political direction to determine whether Canada engages in conflicts to preempt direct threats or participates in peace-keeping or enforcement operations.

The State of Our Defences. Canada and National Defence have not sat idly by as the world's geostrategic situation has evolved. The CDS's 2002-2003 Annual Report identified a number of transformation initiatives, funded and announced in prior federal budgets and defence planning documents, that recognized the importance of domestic security against terrorist networks and conventional enemies. The report implicitly recognized the importance of defending our

⁵ Martin Van Creveld, *Future of War*, New York, NY: Free Press, 1991, 192

portion of the North American perimeter. First, there is a recognition that the Canadian Forces must develop the ability to operate as part of collaborative human networks that include all war fighters, military and civilian headquarters staff as well as other Government security portfolios and allies.

Second, new capabilities were to be stood-up or augmented under a Strategy 2020 target to develop new task-tailored capabilities to deal with asymmetric threats and weapons of mass destruction.⁶ These actions will likely be insufficient. While the Cold War threat may have been reduced, uncertainty facing current military operations has increased. The requirement, stated in Strategy 2020, for better intelligence and becoming more flexible, adaptive and mobile, will likely call for capital investments that go beyond replacement of existing equipment.⁷ This is likely to further increase National Defence's affordability problem.⁸

Speech From the Throne and the Canadian Fiscal Situation. One of the key constraints for National Defence transformation is funding. A wider understanding of Canadian Government fiscal pressures is essential to develop funding assumptions to support National Defence's strategic plan. Former Defence Minister John McCallum stated that National Defence's 2001 and 2002

⁶ Canada, Department of National Defence, Strategic Assessment 2002 (Ottawa: Public Works and Government Services Canada), August 2001, 5.

⁷ Canada, Department of National Defence, "Shaping the Future of Canada's Defence: A Strategy for 2020" (Ottawa: Public Works and Government Services Canada) June 1999, 1.

⁸ John M. Treddenick, "Financing the RMA" from *Managing the Revolution in Military Affairs*, eds. R Matthews and J Treddenick (New York, NY: Palgrave) 2001, 19

budget increases were insufficient and that a significant increase in its budgetary allocation was required.

The 2004 Speech From the Throne did not provide a commitment for additional National Defence budget baseline increases. In fact, the speech provided evidence there were many equally valid and pressing priorities competing for federal funding such as health care, debt reduction, municipal infrastructure, education, future pension obligations and tax relief for low-income families. The March 2004 budget provided National Defence with a commitment for incremental force employment costs of \$277 million to cover the costs of the Canadian Forces' participation in peacekeeping missions in Afghanistan, ongoing international efforts to prevent terrorism and for Canada's military participation in the UN-sanctioned multinational peacekeeping force in Haiti. It should be noted that Treasury Board normally reimburses National Defence for these incremental operational expenses. While the money was welcomed, it was not unexpected. The real benefit received was a one-time infusion of \$50 million to accelerate procurement of the new fixed wing search and rescue aircraft. This new aircraft will allow the Canadian Forces to retire the Buffalo fleet and approximately ten aging Hercules aircraft currently assigned to the search and rescue role.⁹

The bottom line is that National Defence did not receive a firm commitment for additional budget baseline increases in the future. Given the priority of health care and other funding pressures, one of National Defence's

⁹ Canada, Department of Finance, available from <http://www.fin.gc.ca/news04/04-012e.html>, Internet, accessed 20 March, 2004

strategic management assumptions should be for stable funding with economic increases but no appreciable baseline increases.¹⁰

Department Financial Situation and Economics.

Level One Business Plan Gaps. National defence received an additional \$800M in baseline funding in the 2003 budget. However, in their 2003 - 2004 business plans, Level Ones identified DP task to funding gaps totaling approximately \$2.2 billion dollars of which \$669 million was recurring. Even if one allows for some padding of business plan requests, the funding gap is still very significant in view of National Defence's total allocation. A review of the business plan Level One funding gap revealed the following unfunded pressures:

- < National procurement - approximately \$700 million,
- < Infrastructure - \$220 million,
- < Environment clean-up - \$50 million,
- < A capital backlog of \$800 million with a recurring \$300 million demand, and
- < Operating budget - \$500 million.¹¹

The Level One funding gaps are mitigated primarily through under-investment in capital equipment and infrastructure resulting in deferment of equipment

¹⁰ Canada, Office of the Prime Minister, available from <http://www.pm.gc.ca/eng/sft-ddt.asp?id=2>, Internet accessed 13 March, 2004.

¹¹ Canada, Department of National Defence, Vice Chief of the Defence Staff, Corporate Pressures and Strategic Resource Allocation and Reallocation, Collective Meeting, 24 January 2003.

replacement and infrastructure recapitalization. This mitigation practice, used since the early nineties, has resulted in a long-term National Defence capability (equipment and infrastructure) downward spiral. With higher priority Federal Government items like health care awaiting additional funding and no new funds for National Defence in this year's budget, action to address the affordability of National Defence's programs is required.¹²

Given the lack of firm Federal Government commitment for additional military funding, the following quote from Part II of Strategy 2020 - Canadian Defence into the 21st Century is instructive, "The key to achieving a defence vision is to link policy to activities through strategy". A closer examination of strategic management theory and first principles is required prior to looking at the alignment of National Defence's management models with actual implementation practices, problems and recommendations.

DISCUSSION

Strategic Management Theory and Definitions.

Strategy. Professor Henry Bartlett, a member of the Strategy and Force Planning Course, National Security Decision Making Department of the Naval War College, provides the following much quoted definition of strategy:

"An ancient cliché holds that strategy is an art, not a science. Specifically, strategy is the linking of ends, ways and means-a "game plan" that tells how finite resources will be employed to accomplish declared objectives.

¹² Canada, Department of National Defence, Strategic Assessment 2002 (Ottawa: Public Works and Government Services Canada), August 2001. 5.

*Coherent strategy is the key to institutional success; it is as important for businesses and universities as it is for countries*¹³

The word “strategic” is key to this review of National Defence’s strategic management process because it implies a wider focus than the everyday details of running an organization.¹⁴ Consciously dealing with strategy is a difficult task for any organization. Planning is common but planning does not create strategy. Strategic thinking requires a different mindset and awareness, a focus on cause and effect in a dynamic, competitive and uncertain external environment. Strategy is about positioning an organization for the future and leveraging off existing assets or capabilities to create capabilities that will position the organization for future effectiveness. Strategy always aims at the “big picture.” The focus is on results or outcomes, rather than products or outputs. Strategy is less concerned with how to achieve outcomes than with defining what those outcomes should be and linking ends with means.¹⁵

In other words, strategy should focus on the “what,” not the “how.” Organizations employ strategic management as a way to move toward their desired future states by formulating and implementing plans to reach specific goals and objectives. Strategic management, more than anything else, is what gives direction to an organization. Most strategic management methodologies

¹³ Henry C. Bartlett, "Approaches to Force Planning," Naval War College Force Planning Faculty, eds., *Fundamentals of Force Planning* (Newport, RI: Naval War College Press, 1990), v. 1, 443.

¹⁴ Philip Blackerby, "History of Strategic Planning," *Armed Forces Comptroller* 39:1, Winter 1994, 22.

¹⁵ Australia Online, Public Sector Strategic Management, available at <http://cor-ex.com/Services/svPubSec.htm>, Internet accessed 22 March, 2004.

answer three fundamental questions:

- Situation - Where are we right now and how did we get here?,
- ◁ Target - Where do we want to be?, and
- ◁ Path - How can we get there?¹⁶

Strategic management. Strategic management is the process of specifying an organization's objectives, developing policies and plans to achieve these objectives and then allocating resources to implement the plans.¹⁷ It is the highest level of managerial activity, is usually performed by the organization's senior executives and executive team and provides overall direction to the whole organization.¹⁸ An organization's strategy must be appropriate for its current and future circumstances, objectives and resources. One objective of an overall organizational strategy is to put the organization into a position to smoothly transition from its current to its future missions effectively and efficiently. A good organizational strategy should integrate an organization's goals, policies and action sequences (tactics) into a cohesive whole.¹⁹

The Strategy Hierarchy.

Most large organizations have several levels of strategy. Corporate strategy is the highest in the sense that it is the broadest, applying to all parts of

¹⁶ A. Rowe and others, *Strategic Management - A Methodological Approach* (Reading MA: Addison-Wesley), 4.

¹⁷ Ibid, 31.

¹⁸ Ibid, 31.

the organization. It gives direction to organizational values, culture, goals, and missions. Under this broad corporate strategy, management of lower levels of strategy such as concurrent functional (operational and tactical level), intendant and emergent strategies plays an important part in successful strategy implementation.²⁰

Functional strategies (operational) would include new capability development, capability renewal, human resource, financial, legal, public affairs and information technology management strategies. The emphasis of functional strategies is on short and medium term plans and is limited to the domain of each level's responsibility. Each level attempts to do its part in meeting overall organization objectives. Their strategies are derived from broader corporate strategies and also align with them.²¹

The "lowest" level of strategy is tactical strategy. It is very narrow in focus and deals with day to day operational activities such as scheduling criteria. It must operate within a budget and is not at liberty to adjust or create that budget. Tactical level strategy was encouraged by Peter Drucker in his theory of management by objective (MBO). Tactical level strategies are informed by operational level strategies which, in turn, are informed by corporate level strategies.²²

¹⁹ Ibid, 31.

²⁰ Henry Mintzberg, *The Rise and Fall of Strategic Planning* (New York, NY:Free Press), 74-75.

²¹ Ibid, 74.

Intended vs. Emergent Strategies. Plans generally describe an intended strategy. However, the strategy that is actually implemented is almost always different than that which was intended due to unexpected events. This is the result of two factors: unrealized and emergent strategies. Unrealized strategies are those ideas that simply did not work out and were therefore abandoned before full implementation. You cannot predict the future with precision.²³

Less understood and almost never acknowledged, is the influence of emergent strategies. Strategy is more than just a plan or a guide to the future, it is also a roadmap for future consistency. Organizations react to circumstances and develop solutions to problems every day. Some of these solutions are consistent with intended corporate strategies and plans. Other solutions arise due to unforeseen circumstances. This should not be a surprise, since accurately predicting future courses of events is impossible and no amount of hard work will crystallize the future. These reactive solutions to problems usually have a consistency such that, over time, they gradually become incorporated into the organization's core strategy.²⁴ Intended strategies are not necessarily better than emergent strategies, or vice versa. What is important, is to acknowledge the role of emergent strategy and its role in strategy formulation. In reality, as Mintzberg says,

few, if any, strategies can be purely deliberate, and few can be purely emergent. One suggests no learning, the other, no control. All real-world

²² Ibid, 74-75.

²³ Ibid, 24.

²⁴ Ibid, 25.

*strategies need to mix these in some way—to attempt to control without stopping the learning process. Organizations, for example, often pursue what may be called umbrella strategies: the broad outlines are deliberate while the details are allowed to emerge within them. Thus emergent strategies are not necessarily bad and deliberate ones good; effective strategies mix these characteristics in ways that reflect the conditions at hand, notably the ability to predict as well as the need to react to unexpected events”.*²⁵

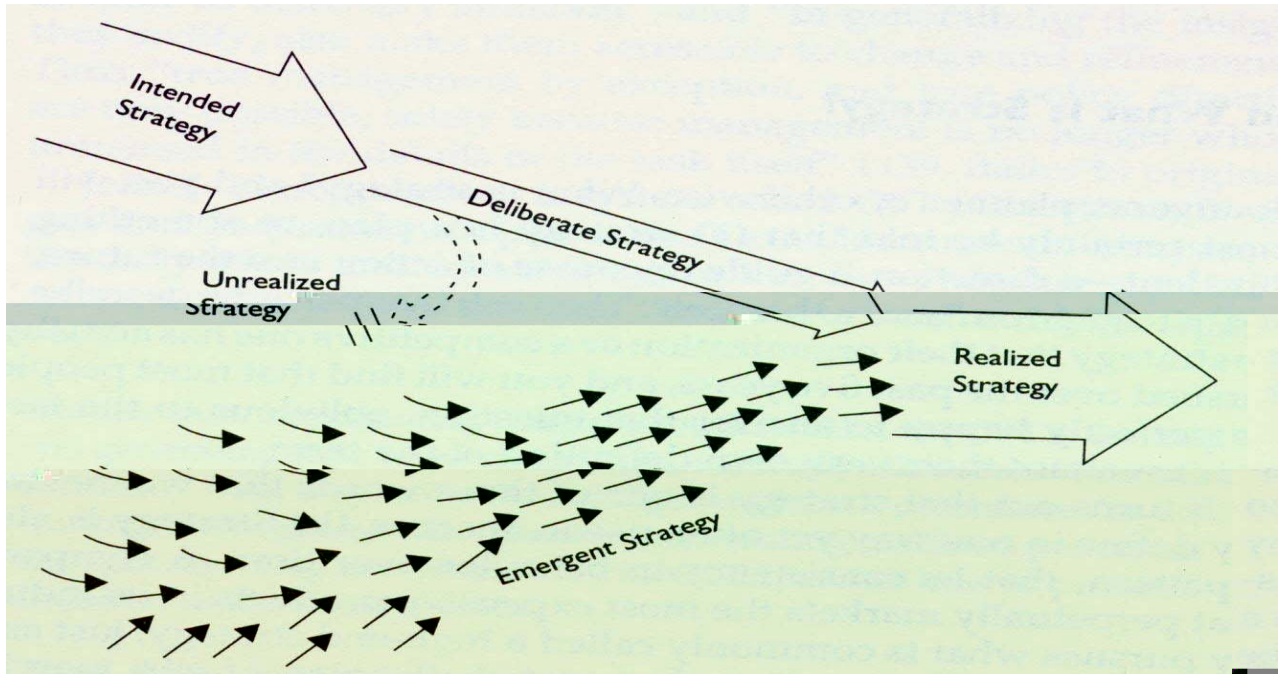


Figure 1 – Forms of Strategy²⁶

The Role of Strategy Formulation and Implementation in Strategic

Management. Strategic management is a combination of strategy formulation and strategy implementation. Strategy formulation involves:

²⁵ Ibid, 25.

²⁶ Ibid, 24.

- ◁ doing a situation analysis: both internal and external; both micro and macro-environmental,²⁷
- ◁ concurrent with this analysis, objectives are set. This involves crafting vision statements (long term), mission statements (medium term), overall corporate objectives (both financial and strategic), strategic objectives (both financial and strategic),²⁸ and
- ◁ these objectives should, in the light of the situation analysis, suggest a strategic plan. The strategic plan provides the basis for developing the detailed implementation plans to obtain these objectives.²⁹

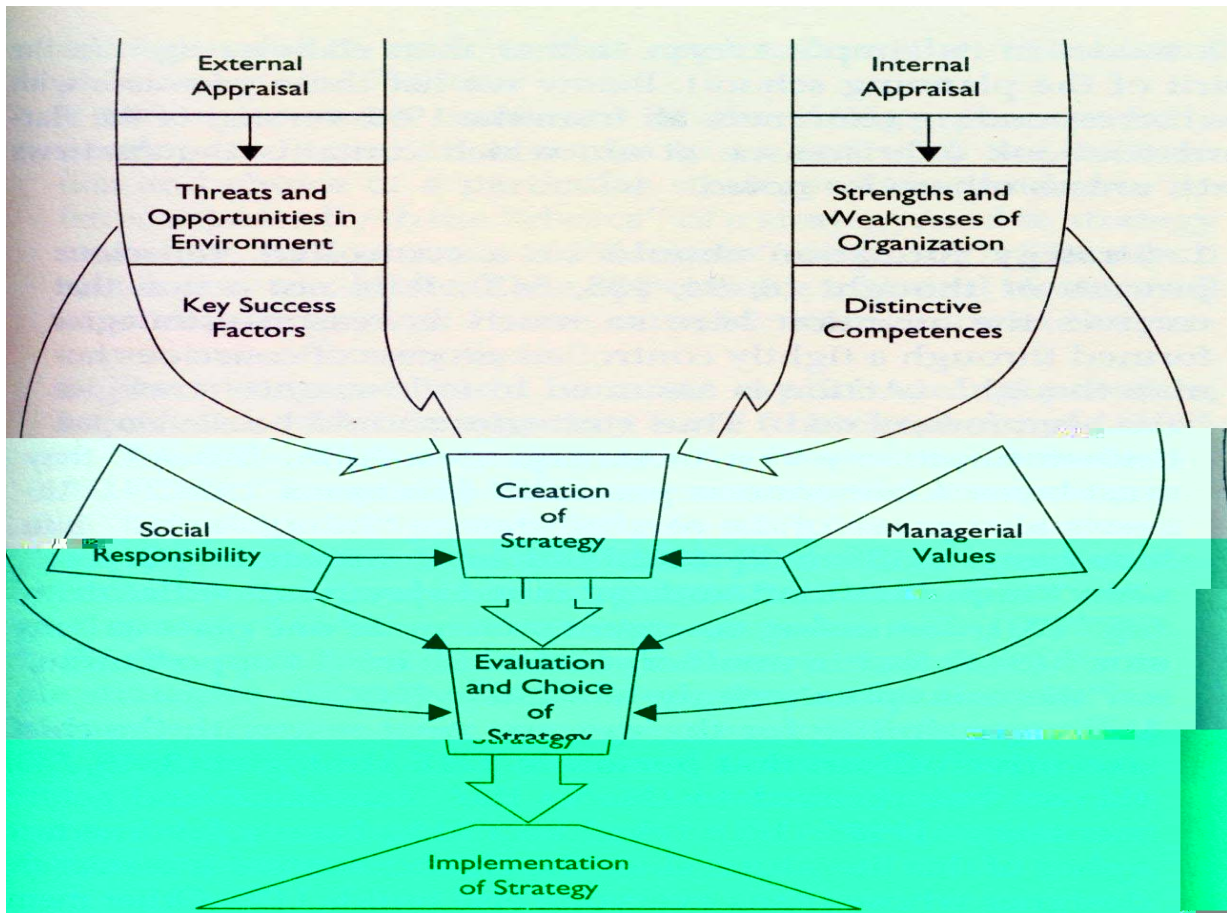


Figure 2 – Strategy Formulation Model³⁰

²⁷ A. Rowe and others, *Strategic Management - A Methodological Approach* (Reading MA: Addison-Wesley), 56-58.

²⁸ Ibid, 79-81.

²⁹ Ibid, 27.

Figure 2 provides a visual interpretation of the strategy formulation and implementation process. This three-step strategy formation process is designed to answer the three fundamental questions that are the essence of strategic management: where you are now, where you want to go, and then how to get there.

Strategy implementation involves:

- < allocation of sufficient resources (financial, personnel, time, computer system support) in a two-part plan: (1) the basic allocation decision; and (2) contingency mechanisms. The basic allocation decision is the choice of which items to fund in the plan (and the level of funding) and which to leave unfunded: the resources are allocated to some items, not to others. There are two contingency mechanisms: (1) a priority ranking of items excluded from the plan, showing which items to fund if more resources should become available; (2) a priority ranking of some items included in the plan, showing which items should be sacrificed if total funding must be reduced,³¹
- < establishing a chain of command and assigning responsibility of specific tasks or processes to specific individuals or groups to establish accountability and manage the strategic implementation process,³²
- < managing the process which includes monitoring results, comparing to benchmarks and best practices, evaluating the efficacy and efficiency of the process, controlling for variances, and making adjustments to the process as necessary,³³ and
- < when implementing specific programs, this involves acquiring the requisite resources, developing the process, training, process testing, documentation, and integration with (and/or conversion from) legacy processes.³⁴

³⁰ Henry Mintzberg, *The Rise and Fall of Strategic Planning* (New York, NY:Free Press), 37.

³¹ A. Rowe and others, *Strategic Management - A Methodological Approach* (Reading:Addison-Wesley), 482.

³² Ibid, 482.

³³ Ibid, 482.

³⁴ Ibid, 482.

Strategy formulation and implementation is an on-going, never-ending, integrated process requiring continuous reassessment and reformation.

Strategic management is dynamic. It involves a complex pattern of actions and reactions and is partially planned and unplanned.³⁵

A good strategy should:

- ◁ be a good fit between the future environment, resources and core competency,
- ◁ be feasible and appropriate,
- ◁ be capable of providing the organization sustainable capabilities,
- ◁ be dynamic, flexible, and able to adapt to changing threat and geo-political situations, and
- ◁ provide focus on desired outcomes.³⁶

We have reviewed what is required for successful strategy formulation and implementation as well as the attributes of a good strategy. Why are some organizations successful and others not in implementing their strategies?

Strategic management is very difficult to perform successfully. Strategic guidance tends to be vague in order to avoid offending stakeholders and alienating government support. This may be a good thing for political ends, but it severely undermines any attempts to develop a coherent defence strategy.

³⁵ Henry Mintzberg, *The Rise and Fall of Strategic Planning* (New York, NY:Free Press), 31.

³⁶ A. Rowe and others, *Strategic Management - A Methodological Approach* (Reading, MA:Addison-Wesley), 482.

Vague guidance has other negative impacts such as weakening the case for military requirements, which is essential for timely approval and procurement. Historical precedent and alliance commitments were frequently used in the past to justify defence requirements but they may have little conceptual validity in the changing geopolitical situation of the post-Cold War world. All this makes the strategizing process difficult, but not impossible. Many comments from the field decry the lack of clear direction on National Defence's current and future military capabilities and overall post Cold War strategy. This is a very easy criticism to voice and the "strategy thing" can be overemphasized, as noted by Mintzberg:

Strategies can be rich visions, intricately woven images that can create deep-rooted perspectives. So long as they are articulated in their own terms, which often means images or metaphors rather than concrete labels, ideally by the people who know them best (notably their creators), they can maintain that richness. But decomposed and expressed formally, in precise words or, worse, numbers, which may be necessary for communication through a dense bureaucratic hierarchy, the rich imagery and intricate interconnections can be lost.³⁷

National Defence's Strategic Management Process. Now that we have reviewed strategy and strategic management theory a review of the theoretical underpinnings of National Defence's strategic management process is in order prior to reviewing issues and developing recommendations.

National Defence uses the Defence Planning and Management (DP&M) framework pictured below to:

- ◁ Plan its long, mid and short term strategic direction,
-

³⁷ Henry Mintzberg, *The Rise and Fall of Strategic Planning* (New York, NY:Free Press), 338.

- ◁ Manage the life-cycle of current and future capabilities,
- ◁ Monitor performance and risk management, and
- ◁ Report to government through the Report on Plans and Priorities (RPP) and the Departmental Performance Report (DPR).³⁸



Figure 3 - National Defence Planning and Management (DP&M) Model³⁹

The DP&M framework is guided by some key aims including the responsibility to care for our people and our duty to serve and be accountable to

³⁸ Canada, Department of National Defence, Vice Chief of Defence Staff – Defence Planning and Management, available at http://www.vcds.forces.gc.ca/dgsp/pubs/dp_m/management_e.asp, Internet accessed 14 April, 2004.

³⁹ Canada, Department of National Defence, Vice Chief of Defence Staff – Defence Planning and Management, available at http://www.vcds.forces.gc.ca/dgsp/pubs/dp_m/management_e.asp, Internet accessed 14 April, 2004.

the government and people of Canada. The following principles, condensed from the VCDS web site, support the DP&M process:

- ◁ A long-term strategic vision provides National Defence with a direction to move forward into the next years and decades,
- ◁ Defence capability is the central element that drives departmental planning, resource allocation and accountability,
- ◁ The Defence Management Committee (DMC) establishes strategic corporate priorities that govern planning and resource prioritization/allocation,
- ◁ Strategic planning is responsive to key stakeholders,
- ◁ Centralized planning is implemented through decentralized execution,
- ◁ The Report on Plans and Priorities (RPP) will incorporate the output of strategic visioning, capability planning, resource prioritization and corporate business planning,
- ◁ The accountability-oriented business planning process will drive budgeting, costing and reporting; confirm how L1s will achieve objectives and targets; indicate how they will coordinate and work toward shared targets; consolidate and reconcile lateral/functional issues; and finalize commitments. Performance Management Agreements (PMAs) will be linked to L1 business plans. Business plans will be monitored frequently, and adjusted in-year when required,
- ◁ Performance management will provide a balanced view of the institution and will be used to assess progress against corporate priorities; evaluate institutional health and vitality; monitor ability and achievement in meeting stakeholder expectations; and provide a basis for corporate reporting to the government and people of Canada, and
- ◁ Information and financial systems will be integrated and aligned to support the capability-based business model and to serve the information and decision requirements of managers and the needs of Canadian Parliament.⁴⁰

The above model and management principles are conceptually sound and align with strategic management theory and first principles reviewed earlier in this

⁴⁰ Canada, Department of National Defence, Vice Chief of Defence Staff – Defence Planning and Management, available at http://www.vcds.forces.gc.ca/dgsp/pubs/dp_m/management_e.asp, Internet accessed 6 April, 2004.

paper. The process by which strategic resources are allocated to create defence capabilities will now be reviewed prior to reviewing National Defence's strategic management problems.

The Theory Behind Conversion of Strategic Resources Into Defence

Capabilities? Strategic resource management maximizes output from key strategic resources such as personnel, infrastructure, operating and capital budgets. Strategic resource allocation decisions are a key link between the plan and reality and define the boundaries of the possible. The conversion of strategic resources to defence capabilities is a two-phase process. In the first stage, the government decides on the amount of the defence budget. One of the government's key considerations, in deciding how much of the federal budget to allocate to defence, is the attempt to maximize national economic welfare and security.⁴¹ The amount allocated to defence is assumed to be the maximum acceptable in terms of foregone civilian expenditures such as health care or municipal infrastructure funding.⁴²

In the second phase, the defence budget funds the transformation of inputs such as personnel (military and civilian), operating budgets (consumable items such as fuel, utilities, spares and equipment repair and overhaul) and capital (equipment and infrastructure) into outputs.⁴³

⁴¹ John M. Treddenick, "Distributing the Defence Budget: Choosing Between Capital and Manpower," *Issues in Defence Management*, ed. D Bland (Kingston, On: School of Policy Studies, Queen's University), 1998, 3.

⁴² *Ibid*, 3.

Personnel expenditures are a reflection of force size (regular, reserve and civilian employees) rank structure distribution, training and benefit levels and are made to maintain trained forces. A large investment is made to train members. This accumulated human capital is an essential element in the delivery of National Defence tasks and programs.⁴⁴

Operations and maintenance budgets vary directly with personnel numbers, age and size of physical infrastructure and equipment, and force generation and employment tempo. Personnel and operating expenditures are made to keep military forces at a defined level of readiness.⁴⁵

Capital expenditures are an investment in future capabilities as current equipment is replaced or modernized and reflect long-term capability choices. Capital equipment and infrastructure must be continuously upgraded or replaced while concurrently managing disposal of obsolescent or redundant equipment and infrastructure. Capital inventories take a long time (10-15 years) to significantly alter due to long procurement and project life cycles. Strategic resource allocation, especially for capital, requires an understanding of the inter-relationship among the expenditure types and a long term view extending out as much as twenty years.⁴⁶

⁴³ Ibid, 3.

⁴⁴ John M. Treddenick, "Distributing the Defence Budget: Choosing Between Capital and Manpower," *Issues in Defence Management*, ed. D Bland (Kingston, On: School of Policy Studies, Queen's University), 1998, 5-6.

⁴⁵ Ibid, 6.

⁴⁶ Ibid, 6.

The outputs in this case are defence capabilities consisting of combat capable forces, equipment, support infrastructure and support services. The struggle to sustain force generation while recapitalizing infrastructure and equipment has been an enduring problem for all North Atlantic Treaty Organization members since the end of the Cold War.⁴⁷ The challenge for National Defence is to maximize required current and future defence capabilities without appreciable increases to its funding baseline.

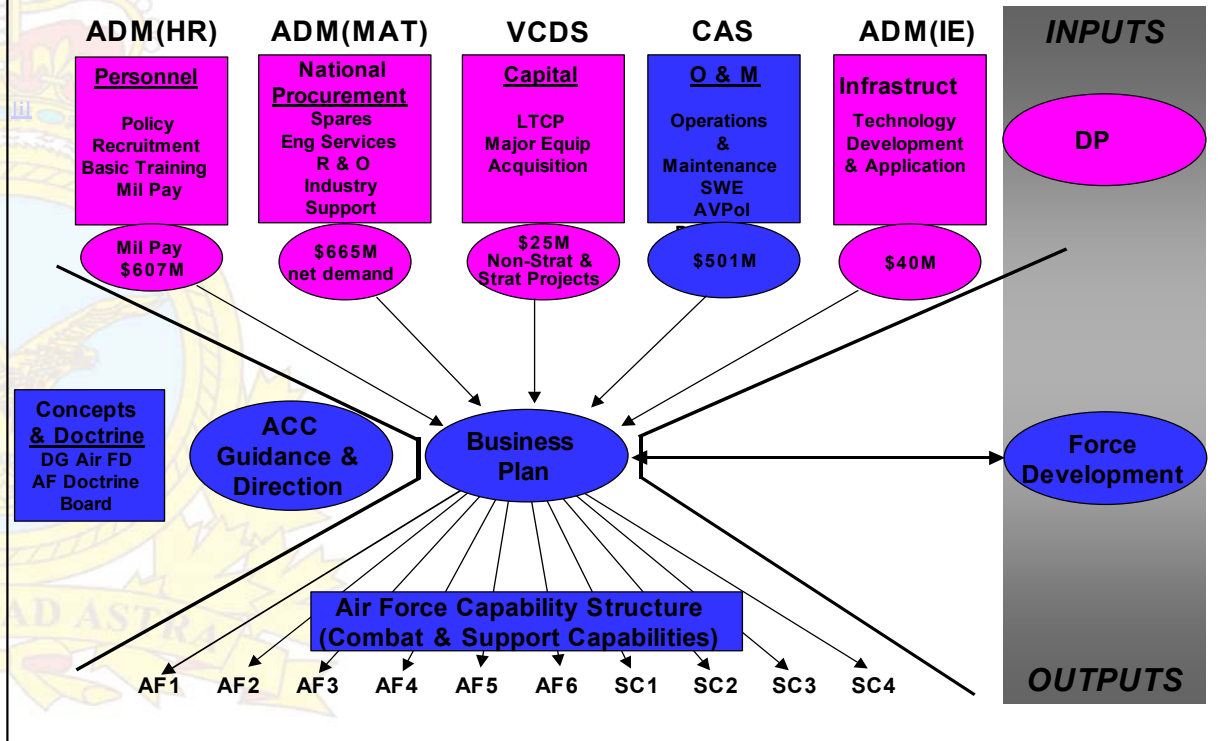
The actual implementation of the strategic task to funding process is complicated by a number of issues which will be discussed below.

How Does National Defence Convert Strategic Resources to Capabilities?

To aid the reader in understanding the process, a model developed by the Chief of the Air Staff (CAS) will be used. The model at Figure 4 below was used in the CAS 2001 Business Plan Guidance to outline National Defence's strategic resource management framework. The framework would apply equally to the Navy and Army.

⁴⁷ John M. Treddenick, "Financing the RMA" from *Managing the Revolution in Military Affairs*, eds. R Matthews and J Treddenick (New York, NY: Palgrave) 2001, 6.

Air Force Generation Resource Requirements



- ◁ An accountability-oriented business planning process attempts to coordinate the use of the resource inputs, most of which are managed by other Level Ones, to deliver combat capability and current year change initiatives,
- ◁ The Level One's outputs, shown at the bottom of Figure 4, as capability structure outputs, align with Defence Plan (DP) assigned tasks consisting of a variety of environmental combat capabilities and support to corporate priorities such as modern management, employment equity and bilingualism, and
- ◁ Program Management Board (PMB) provides recommendations to the DM and CDS to mitigate in-year resource pressures and surpluses.

For multi-year force generation as well as changes to current capabilities, a strategic plan is supposed to be used to prioritize and implement initiatives such as force development, phase-in of new capabilities, phase-out of obsolete capabilities, doctrine and force development changes.

Examination of the model raises a number of questions:

- ◁ The Level Ones do not control all of the resources required to deliver assigned DP tasks. The operation and maintenance budget, managed by the Level One assigned the specific DP tasks, constitutes approximately 25% of the required resources, the remainder such as national procurement (NP) funding, major infrastructure recapitalization and personnel funding are allocated to other Level Ones to manage. Are the Level Ones, controlling the other required allocations, identifying the funding pressures for the corporate funding they manage to the center as well as the affected Level Ones? How can a Level One manage force generation for assigned DP tasks if they do not control all of the required funding?
- ◁ How are the resources aligned i.e. is sufficient national procurement, O&M, personnel and infrastructure allocated to deliver assigned tasks? The Level One requires alignment of the right type of resources (O&M, capital and personnel) to deliver assigned DP tasks. Providing a Level One with adequate O&M and inadequate NP funding will constrain the force generation effort to the level of the smallest resource envelope, NP in the Air Force's case,
- ◁ If the defence plan is under funded, what actions are taken to ensure affordability and at what impact to assigned tasks?
- ◁ How are surpluses handled? and

- ◁ Are vision, strategy, plans, funding and outcomes aligned to maximize the effort and outcomes of each Level?

The reality is a dysfunctional system with affordability issues. These issues persist largely due to a lack of direction on how to make National Defence's programs affordable.

Program Affordability Issues

Business Plan Under Funding. In-year strategic resource management starts off with an under-funded business plan that is then devolved to Level Ones. The under-funding is partly mitigated by over-programming at the corporate level. Over-programming, not to be confused with over-commitment and over-spending, is authorized by the DM. Over-programming recognizes that certain organizations will not consume all of their budgets and that surpluses will be declared too late to use the money effectively. It also assumes there will be some mitigation of unexpected in-year funding pressures by central agencies. Over-programming allows planned expenditures for goods with a longer procurement lead-time, like capital equipment and infrastructure. However even over-programming funding, which is largely allocated proportionately to each Level One, does not mitigate the funding gaps.

Capital Investment. Capital budgets add nothing to current military capabilities and require significant periods before assets (buildings 1-5 years, equipment 2-

15 year) are placed in service.⁴⁸ Due to a lack of resources, National Defence has had to defer capital expenditures to mitigate current-year operating, personnel or operational tempo budget pressures. Personnel and operating budget pressures have often been looked at as fixed costs by defence planners who have tended to treat capital as a budget residual after the in-year budget pressures were mitigated. The lack of direction to reduce in-year activity to available funding has resulted in personnel, equipment and infrastructure activity being maintained above an affordable level. Was this based on senior management's expectation of future budget increases? If so, the assumption was false and as a result the backlog of capital projects was exacerbated. This invariably led to a downward spiral. As the costs of maintaining aging and excess equipment increased, the budget available for recapitalization was further reduced. The spiral increased as operating and maintenance costs rose and the organization found itself divesting or maintaining equipment without plans for replacement. The spiral was often reinforced by the capping of the capital budget further delaying equipment and infrastructure replacement as projects competed for restricted capital budgets were deferred, thereby delaying re-capitalization and further increasing the cost of maintaining old equipment.⁴⁹

Capital Program Cost Pressures. The rising cost of new equipment and maintenance has reduced the amount of funding available for recapitalization.

⁴⁸ John M. Treddenick, "Financing the RMA" from *Managing the Revolution in Military Affairs*, eds. R Matthews and J Treddenick (New York, NY: Palgrave) 2001, 6.

⁴⁹ D. Kirkpatrick, "The Rising Unit Cost of Defence Equipment – the Reasons and the Results" *Defence and Peace Economics* 6, 1995, 279-280.

One of the main causes of these cost increases, from one generation of weapon platform or support system equipment to the next, is the requirement to constantly upgrade combat capabilities and technology. This is done for a variety of reasons including providing combat forces with higher capability equipment against the threats they will face and inter-operability with our primary ally, the US (who are constantly upgrading their capabilities and technology).

Another major contributor to cost increases is the eventual closure of production lines on older platforms. This forces National Defence to go to new and costlier

weapon platforms unless lower technology equipment from other nations is used. (TJ)ETEMC 1 g8

Augustine that “in the year 2054 the entire US defence budget will purchase just one tactical aircraft” .⁵⁰

Out-Sourcing. One of the solutions National Defence looked to for reducing its budget gap was outsourcing of non-core activities. Alternate service delivery, contracting-out, partnering with industry initiatives were examined and in some cases implemented within National Defence with mixed results. Analysis of these contracts reveals an initial penetration pricing approach by the contractor to win the original contract. Subsequent renewals invariably come with significant cost increases as contractors take advantage of entry cost barriers, for other contractors, to increase their contract prices. The favouring of Canadian businesses further exacerbates the problem. This inevitably increases costs since National Defence pays the Canadian company’s market entry cost. One only has to look at the outsourcing of Cormorant maintenance. The cost of the maintenance contract was approximately fourteen million dollars higher than the Labrador maintenance budget that was removed from the Air Force’s budget baseline. The problem was compounded when the increased cost was assigned to the Air Force’s national procurement allocation further compounding that funding gap.

So What?

So where does all of this leave us? Is strategic management impossible given the complexities of National Defence and is strategic visioning a waste of

⁵⁰ Frank Augustine, “Augustine’s Laws”, American Institute of Aeronautics and Astronautics, 55.

time? A review of National Defence's strategic management model reveals that it aligns with all of the key theoretical aspects of strategic management.

However in reviewing first principles, we see that National Defence's strategy management process does not answer all three of the following fundamental questions:

- < Situation - Where are we right now and how did we get here?,
- < Target – What capabilities do we need over the next 20 years?, and
- < Path – Over the next three horizons what is plan to acquire new capabilities and divest itself of non-core capabilities?

From National Defence's perspective, the situation has been well analyzed and documented in professional military and academic publications and research. Where the strategic management process becomes untracked is the lack of a well-defined target and path. The first DP&M principle stresses the importance of a strategic vision:

“a long-term strategic vision provides National Defence with a direction to move forward into the next years and decades. A strategic vision provides a context for change initiatives across the organization. It is a check for developing short-term objectives. If goals and objectives in the Department do not accord with the strategic vision, they must be realigned.”

Strategy 2020 provides the vision document. It can be argued that it lacks detail but as we have seen, the vision should not tell you how to get to where you want to go. The roadmap, in National Defence's strategic management process, the DP&M, is the capability-planning document. The capability-planning document has a corporate scope that crosses all functional

and environmental organizations. In a Department as large as National Defence, the task could be perceived as unmanageable given separate civilian and military cultures, priorities and the duality of the CDS and DM management framework. Fortunately, the fact National Defence must proceed from vision to implementation to solve its chronic problems provides the impetus for change. As previously documented, formal strategic planning must operationalize the vision while presenting a clear and affordable statement of current and future capabilities including supporting infrastructure and personnel.

How can we use the Department's theoretical strategic management model, the DP&M, to resolve the current dysfunctional situation? The Minister's Advisory Committee on Administrative Efficiency, made several observations with respect to National Defence's strategic management process:

- ◁ Management focus is more transactional than strategic,
- ◁ Accountabilities are too diffuse, and
- ◁ Core competencies are not clearly defined.⁵¹

The VCDS and DGSP have stated that development of the required capability plans is a priority, which will provide a necessary first step to begin solving the short-term affordability problems. Highlighting this gap will hopefully provide the impetus to address both the short-term affordability and longer term

51 Canada, Department of National Defence, "Minister's Advisory Committee on Administrative Efficiency", (Ottawa: Public Works and Government Services Canada) 2003, 3.

transformation problems. The decisions required to provide the stability associated with a clear and funded long-term plan are difficult. The CDS's 2003 Annual Report titled, "At a Crossroads" had the following words on the difficult choices facing the CF:

"The Canadian Forces have not, in recent memory, been as well-positioned as they are today to address the challenges we face and to establish a new course for the future. For the first time in several years, our budget has stabilized and is sufficient to meet the essential demands of today's defence program. It is important to emphasize that transformation will take time. We will not complete this process during my tenure as Chief of the Defence Staff. Nonetheless, we must accelerate our efforts. This will require difficult choices. We will have to reallocate from lower to higher priorities. Our choices will need to be selective, strategic and asymmetric. We will have to choose which new capabilities to invest in, and what existing capabilities to maintain, reduce or eliminate. We cannot and will not pursue a transformation agenda by "tinkering" at the margins in new capabilities without reducing or eliminating those that are no longer relevant in the current and future strategic environment."⁵²

RECOMMENDATIONS

Numerous recommendations could be made to improve National Defence's strategic management process. However most of them would simply restate strategic management best practices. The following three recommendations are provided to address the core problem, lack of clear strategic direction. The recommendations are kept short with some minor guidance as befits a strategic level paper.

⁵² Canada, Department of National Defence. Chief of the Defence Staff, 2003 Annual Report, (Ottawa: Public Works and Government Services Canada), 1998, 3.

Provide Direction. Each Level One is promoting their vision of the future for National Defence through separate vision documents or policy and functional direction due to a lack of clear direction on what National Defence's current and future capabilities will be. If the current capabilities are clearly unaffordable and the future is unclear and likely unaffordable as well, what can be done? The first step must be to get to the front of the line and provide direction. What kind of direction? The direction must answer what capabilities will exist over the next twenty years along with supporting personnel structures, infrastructure and funding. The direction must answer how the current capability to operating budget gap will be closed and where the resources for transformation will come from. This will not be an easy exercise. Closing the operating budget gap while setting aside funding for capital procurement will necessitate directed capability, activity and budget reductions and reallocations. Until this step is taken the current in-year churn will continue perpetuating National Defence's problems.

Capabilities and infrastructure identified for disposal should have minimum funding assigned, while those designated for phase-out in the longer term should have only essential maintenance funding allocated. More efficient use of scarce baseline funding should allow budget diversions to future capability funding.

This paper will not discuss the politics surrounding change initiatives. However National Defence has closed and moved units in the past and there will be opportunity to do it again in the future if the case for action and requirement are clear and the timing is carefully selected to allow politicians to manage the

issues. A key task for National Defence's senior executive will be to select and maintain their course over the short and long term allowing emergent strategies to evolve and replace planned strategies, which have failed. Message consistency will be key supported by a repetitive communication plan that is supported by all Level One managers. These actions will be key to shaping the external environment so it is receptive and supportive of National Defence's transformation requirements.

Change Management. There is a pressing need to reduce and manage the large number of change initiatives within National Defence. Managing change is complex and reducing Departmental activity in this area will increase the probability of success of the remaining initiatives. Each Level One has at least a dozen initiatives, each of which has the potential to impact force generation at the operational and tactical levels. Changes should be rigorously cross-impacted, prioritized and sequenced by VCDS staff to align with the capability direction recommended above and forecasted funding. If change initiatives do not align with the directed capability program and are not mandated they should be deferred or cancelled. One of the keys to reducing the churn within National Defence will be to rigidly gate all project initiation. The reduced, affordable integrated change plan should then be presented to DMC for endorsement. A list of unfunded and prioritized initiatives that align with the capability direction must also be prepared to ensure efficient use of National Defence's resources.

Lateral Coordination. The vertical coordination and integration of different Level One strategic plans with the five capability plans is fairly good. Unfortunately the coordination between Level One strategic plans (Army/Navy/Air Force/ADM (Mat) etc.) is terrible. The Level One plans appear to be developed in isolation from each other, despite the fact that virtually every operational capability requires a combination of contributors. Service Level Agreements (SLAs) are intended to be the vehicle of lateral coordination, but they have not yet been negotiated for the most part. There are many reasons for this including lack of staff and an unwillingness to define obligations with precision in an era of intense competition for resources. However, the DP&M described accountability-oriented business planning process would be the preferred mechanism for several reasons: it would ensure accountability and provide additional impetus to the annual business planning efforts. If National Defence can align its force generation and future capability requirements with available funding, the mechanism would work. Failing that, analysis could be conducted to determine the effectiveness and efficiency resulting from reallocating corporate account funding directly to Level Ones force generators with controls on its use.

CONCLUSION

Effective strategic management is essential because it focuses attention on capability choices and the management necessary to implement National Defence's vision successfully. Until vision, strategy, plans, funding and outcomes are aligned; National Defence's strategic management problems will

persist. As this paper has documented, failure to plan for the future leads to a situation where senior management's focus is very short term and where the main effort is on preservation of a limited capital inventory and not on its growth. Timely capability, force structure size and composition, and strategic resource allocation choices are required. Setting clear priorities for future capabilities as well as those that will be retained, replaced and disposed of will allow alignment of operating budgets and long term capital, personnel and infrastructure plans. Although the strategic plan is not used on an everyday basis for control, it does constitute the future baseline. It is also a "work in progress" as it continues to evolve allowing emergent strategies to grow within the overall strategic plan. To continue to stumble along in the current mode, postponing the hard choices, will condemn the Department to more decades of incrementalism.

The above recommendations will hopefully provide some impetus to correct the flaw in National Defence's strategic management process and provide the direction, change management and co-ordination necessary to address current Defence Plan and Strategy 2020 transformation issues. Above all, it must be remembered that the strategic management process is not holy; it is a means to an end—not an end in itself, as pointed out by J.B. Quinn:

"A good deal of the corporate planning I have observed is like a ritual rain dance; it has no effect on the weather that follows, but those who engage in it think it does. Moreover, it seems to me that much of the advice and instruction related to corporate planning is directed at improving the dancing, not the weather."⁵³

⁵³ J.B. Quinn, Quinn, J.B.. *Strategies for Change: Logical Incrementalism*. Homewood, IL: Irwin, 1980, 122.

BIBLIOGRAPHY OF DOCUMENTS REVIEWED AND CITED

- Aucoin, Peter. The New Public Management: Canada in Comparative Perspective. Ottawa: IRPP, 1995.
- Australia Online, Public Sector Strategic Management, available at <http://cor-ex.com/Services/svPubSec.htm>, Internet accessed 22 March, 2004.
- Australia, Department of the Premier and Cabinet Government of Western Australia, "Public Sector Management, Publications and Policies", Available from <http://www.dpc.wa.gov.au/psmd/pubs/pubs.html>., Internet accessed 6 Mar 2004.
- Bartlett, Henry C. "Approaches to Force Planning," Naval War College Force Planning Faculty, eds., Fundamentals of Force Planning (Newport, RI: Naval War College Press, 1990) Volume 1.
- Barzelay M., Campbell C., Preparing for the Future - Strategic Planning for the US Air Force, (Brookings Institution Press, Washington, D.C.), 2003.
- Blackerby, Philip. "History of Strategic Planning." Armed Forces Comptroller Volume 39, No. 1. Winter 1994.
- Banks, William C. "Defense Contingency Budgeting in the Post-Cold War World." Public Administration Review Volume 59, No. 2. Mar/Apr 1999.
- Camm, Frank. Adapting Best Commercial Practices to Defence, From New Challenges, New Tools for Defence Decision Making, ed. Stuart E. Johnson and others, Santa Monica,CA: RAND, 2003.
- Canada, Department of National Defence, Strategic Assessment 2002 (Ottawa: Public Works and Government Services Canada), August 2001.
- Canada, Department of National Defence, "Shaping the Future of Canada's Defence: A Strategy for 2020" (Ottawa: Public Works and Government Services Canada) June 1999.
- Canada, Department of National Defence, Vice Chief of Defence Staff – Defence Planning and Management, available at http://www.vcds.forces.gc.ca/dgsp/pubs/dp_m/management_e.asp, Internet accessed 14 April, 2004.
- Canada, Department of National Defence. Defence Management System Manual. (Ottawa: Public Works and Government Services Canada),1998.

- Canada, Department of National Defence, Vice Chief of the Defence Staff, Corporate Pressures and Strategic Resource Allocation and Reallocation, Collective Meeting, 24 January 2003.
- Canada, Department of National Defence, A Time for Transformation (Ottawa: Public Works and Government Services Canada) 2003.
- Canada, Department of National Defence, "Minister's Advisory Committee on Administrative Efficiency", (Ottawa: Public Works and Government Services Canada) 2003.
- Canada, Department of National Defence, Chief of the Air Staff - CAS Planning Guidance FY 01/02. (Ottawa: Public Works and Government Services Canada), 2000.
- Canada, Treasury Board of Canada, "Expenditure Management System of Government of Canada", (Ottawa: Public Works and Government Services Canada) August, 1996.
- Canada, Treasury Board of Canada, "Review of Memorandum to Cabinet – Expenditure Management System (EMS) – SFO sign-off – Information Notice", (Ottawa: Public Works and Government Services Canada) 19 July, 2001.
- Canada, Treasury Board of Canada, "A Review of Business Planning Number 2", (Ottawa: Public Works and Government Services Canada) July, 2001.
- Canada, Treasury Board of Canada, "Experience With Performance or Accountability Frameworks", (Ottawa: Public Works and Government Services Canada) November, 2003.
- Canada, Treasury Board of Canada, "An Evaluation of the Business Planning Process in Cycle Two", (Ottawa: Public Works and Government Services Canada) December, 2002.
- Charles, Bob. "A Simple Business Planning Framework." Australian Accountant Volume 65, Issue 9. October, 1995.
- Charles, Bob. "Avoiding the Pitfalls of Business Planning." Australian Accountant Volume 65, Issue 10. November 1995.
- Dewey, John. The Quest for Certainty: A Study of the Relation of Knowledge and Action. New York NY: Putnam, 1929.
- Downs, George. W, and Patrick D. Larkey. The Search for Government Efficiency: From Hubris to Helplessness. Philadelphia PA: Temple

- University Press, 1986.
- Drucker, Peter F. *Management: Tasks, Responsibilities and Practices*, New York NY:Harper & Rowe, 1973.
- Grange, David L. "Asymmetric Warfare: Old Method, New Concern", *National Strategy Forum Review*, Winter 2000.
- Heckert, J. Brooks, and James D. Willson. *Business Budgeting and Control*. New York NY: The Ronald Press Company, 1967.
- Held, David, "Violence, Law and Justice in a Global Age", *Social Science Research Council*, 5 November, 2001.
- Hope, Jeremy and Robin Fraser. "Beyond Budgeting: Building a New Management Model for the Information Age." *Management Accounting* Volume 77, Issue 1. January 1999.
- Hope, Jeremy, and Robin Fraser. "Budgets: The Hidden Barrier to Success in the Information Age." *Accounting & Business* Volume 2, No. 3. March 1999.
- Johnson, H. Thomas, and Robert S. Kaplan. *Relevance Lost: The Rise and Fall of Management Accounting*. Boston: Harvard Business School Press, 1987.
- Kaplan, Robert, and David Norton. *The Balanced Scorecard: Translating Strategy into Action*. Boston MA: Harvard Business School Press, 1996.
- Kennedy, J. Alison. "Getting the Most from Budgeting." *Management Accounting* Volume 77, Issue 2. February 1999.
- D. Kirkpatrick, "The Rising Unit Cost of Defence Equipment – the Reasons and the Results" *Defence and Peace Economics* 6, 1995.
- Lewis, Ira. "Public Service 2000 and cultural change in DND." *Canadian Public Administration* Volume 37, No. 2. Summer 1994.
- Lindblom, Charles. *The Policy-Making Process*. Englewood Cliffs CA: Prentice-Hall, 1980.
- Mintzberg, Henry. *The Rise and Fall of Strategic Planning*. New York NY: Free Press, 1994.
- Mintzberg, Henry. *Mintzberg on Management: Inside Our Strange World of Organizations*. New York NY: Free Press, 1989.

- National Defence Panel, "Transforming Defence: National Security in the 21st Century" Joint Force Quarterly, Summer 1997.
- Peters, Tom. *The Pursuit of Wow*. New York NY: Vintage, 1994.
- Plumptre, Timothy W. *Beyond the Bottom Line: Management in Government*. Halifax: Institute for Research on Public Policy, 1988.
- Quinn, J.B. *Strategies for Change: Logical Incrementalism*. Homewood, IL: Irwin, 1980.
- Rowe A. and others, *Strategic Management a Methodological Approach*, Reading MA: Addison Wesley, 1994.
- Saul, John Ralston. *Voltaire's Bastards: The Dictatorship of Reason in the West*. Toronto ON: Penguin, 1992.
- Staten, Clark L. "Asymmetric Warfare, the Evolution and Devolution of Terrorism; The Coming Challenge for Emergency and National Security Forces." 27 April, 1998, 1.
- Straussman, Jeffrey D. *Public Administration*, 2nd ed. White Plains, N.Y.: Longman, 1990.
- Taylor, Bernard. "Strategies for Planning." *Long Range Planning* Volume 8, No. 4. 1975.
- Treddenick, John M. "Distributing the Defence Budget: Choosing Between Capital and Manpower," *Issues in Defence Management*, ed. D Bland (Kingston, On: School of Policy Studies, Queen's University), 1998.
- Treddenick, John M. "Financing the RMA" from *Managing the Revolution in Military Affairs*, eds. R Matthews and J Treddenick (New York, NY: Palgrave) 2001.
- Van Creveld, Martin, *Future of War*, New York, NY: Free Press, 1991.
- Wildavsky, Aaron. "If Planning is Everything, Maybe It's Nothing." *Policy Sciences* Volume 4. 1973.
- Wikipedia The Free Encyclopedia, available at <http://en.wikipedia.org/wiki>, Internet accessed 21 February 2004.
- Willsmore, A.W. *Business Budgets in Practice*. London: Pitman, 1973.