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GETTING WHAT WE NEED: CONFRONTING STRUCTURAL SPEED BUMPS ON THE ROAD TO IMPROVED DEFENCE CAPABILITY

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ABSTRACT

Defence capability can be thought of as the most important output of the process of running a defence organization. In order to optimize that output in the face of constrained resource inputs, the process must be highly effective. The process in turn is largely determined by the underlying structure which it serves. In the Canadian context, there is a need to pursue a change in the specific components of defence capability in order to be able to respond to the expectations of the Government and the people of Canada in the face of the current asymmetric threat and complex crises around the world. This paper will argue that progress towards improving our defence capability is hampered by the current structure of NDHQ and the resultant defence management process, which does not provide adequate strategic direction and which continues to favour equipment-focussed single-service projects. These assertions are explored and broad recommendations for change are proposed.

GETTING WHAT WE NEED: CONFRONTING STRUCTURAL SPEED BUMPS ON THE ROAD TO IMPROVED DEFENCE CAPABILITY

You can't always get what you want – but if you try sometimes, you just might find, that you get what you need[1]

Organizational change is an essential component of how a military force adapts to the pressures imposed by the RMA…It is now time to take some of the hard decisions about the pre-eminence of 'jointness' and the implications of this…[2]

INTRODUCTION

It is a fascinating experience to read documents written ten years ago describing National Defence Headquarters (NDHQ) processes. All of the organization names and many of the reporting relationships are different. A list, in no particular order, of recent changes to NDHQ will include the creation of the Assistant Deputy Minister for Information Management (ADM (IM)), the establishment of Defence Research and Development Canada as a special operating agency, the split of personnel functions into military and civilian components, the movement of Air Command, Maritime Command, and Force Mobile Command to Ottawa and their re-creation as Environmental Chiefs of Staff (ECSs), among many others. Within individual Level One organizations there have been just as many changes.[3] The evidence suggests that our bureaucracy, far from being the immovable object perceived by the popular press, has the capacity to change appreciably. The aim of this paper is to demonstrate that further changes

[1] M. Jagger and K. Richards, Lyrics to *You Can't Always Get What You Want*, Rolling Stones, 1969
[2] VAdm Gary Garnett, "The Evolution of the Canadian Approach to Joint and Combined Operations at the Strategic and Operational Level," *Canadian Military Journal*, Vol 3, No 4, (Winter 2002-2003): 8.
[3] For those unfamiliar with the term 'Level One', it includes all the managers who report directly to either the Chief of the Defence Staff or the Deputy Minister (or, in the case of the Vice Chief of the Defence Staff, to both). Although usually thought of as including all of the three-star Generals at NDHQ and all of the Assistant Deputy Ministers, in fact Level One status is not tied to rank, but to the fact that there are no intermediaries in the business

must be considered. This paper will argue that the current structure of the Department of National Defence (DND) and the Canadian Forces (CF), and its attendant program management process, is not the ideal framework in which to create defence capability. While this imperfection affects all of the players in the system, those responsible for joint capabilities are particularly disadvantaged. This effect is compounded by the nature of project management within the Defence Management System (DMS). Difficulty in implementation of needed projects in turn retards the development of new capabilities[4]. Why the focus on organizational structure? Because structure is a key determinant of process, and process is what turns inputs into outputs. This is merely the organizational analog of a mathematical function, which acts on a variable to produce a result. If you want to achieve a different result from the same input, the function, or process, must somehow be changed. If you want a different process, you must address the structure which the process serves.

Those of a literal mindset may observe that the mathematical function analogy is not valid, since it describes how to affect output while holding input constant. In the February 2003 budget, DND received an $800M increase to its baseline funding for each of the current, and the following two, fiscal years; so the inputs have, indeed, changed to some degree. However, the baseline increase does not make up fully for the ongoing shortfalls in Operations and Maintenance funding,[5] let alone allow for any planned increase in capital expenditures without

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planning or accountability structure between a Level One and the overall Departmental program. For instance, both JAG, a Major-General, and the Chief Military Trial Judge, a Colonel, are Level Ones.

[4] Defence capability is a paraphrased amalgamation of two of the four outputs sketched in the DND/CF process model, namely combat capable multi purpose forces and completed missions; the others being defence advice and effective contribution to government. Department of National Defence, A-AD-125-000/FP-001 *Defence Management System* (*DMS) manual*, block 1.0.2. Online version accessed via http://www.vcds.forces.gc.ca/dgsp/dmsmanual/download/intro_e.asp (23 May 03)

[5] For one view of the continuing challenge, see Col (ret'd) Howie Marsh's analysis of the likely impact of Budget 2003 accessible via http://www.cda-cdai.ca/english-frame.htm (27 May 03)

robbing from other allocations. The overall program deficit is smaller than it was but there is no surplus, and therefore the significant changes in outputs still cannot be achieved without changing the process.

Of course, in any human undertaking, the relationship between inputs and outputs is not as neat or linear as described, but the principle is nonetheless valid. Although it is true that some variation in outputs may be obtained in the absence of significant structural changes, this is due to differences in human interpretation, the interplay of personalities, and other largely unquantifiable and unpredictable influences. This is not the ideal basis on which to rest future defence capability. It is a far better plan to analyze and optimize the structure and attendant process. Significant recent improvements to process have been made, notably the adoption of capability-based planning, the development of the Canadian Joint Task List, and the introduction of the Joint Capability Requirements Board, but more remains to be done. This paper will very briefly outline the current DMS, will justify the continued pursuit of improved joint capabilities, and then will explain several ways in which the structure of NDHQ and the DMS work against the development of optimal capabilities in general and joint capabilities in particular. Finally, a few suggestions will be made for adjustments to structure and process.

PROGRAM MANAGEMENT 101

The DMS was introduced in 1999 to replace the Defence Program Management System (DPMS). As explained in the DMS manual, the DMS aligns the department's management practices closely with the Government of Canada's Expenditure Management System (EMS),

providing for the Department's necessary inputs to, and accountability to, that system. The DMS has as its focus the management of the Defence Services Program (DSP), which is "the total of all departmentally approved activities and projects which are deemed to be essential to the delivery of affordable and effective defence services to the Government and Canadians."[6] As such the DMS also encompasses the business planning cycle within the Department, addressing all Corporate and Operating budgets; fosters accountability and reporting through the Planning, Reporting and Accountability Structure (PRAS), and ensures appropriate completion of the necessary reports to government. The PRAS sets out Key Result Expectations for each of the five Capability Programs[7]. Conceptually the DMS should forge the link between the future vision provided by Strategy 2020[8], and the closer-in time horizon covered by the business planning process, which is typically five years. This closer-in period must provide for ongoing activities undertaken by forces in being, and change activities required to move towards the strategic vision. Striking a balance between these competing priorities is a significant challenge for all senior managers in defence. While the DSP, and thus the DMS, are not solely concerned with project management – as has been seen they also authorize and manage all activities related to the production of a defence capability – undertaking projects is an important way to implement aspects of the change agenda. For that reason, challenges related to project management will be discussed quite extensively later in the paper.

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[6] *DMS Manual*, block 1.4.1

[7] PRAS, pp 10-13. The DMS manual only discusses four capability programs, which it calls core processes, leaving out "Sustain Forces". More recent documentation, including the PRAS, the Capability Outlook, and the Report on Plans and Priorities is consistent in naming five capability programs: Command and Control, Conduct Operations, Sustain Forces, Generate Forces, and Corporate Policy and Strategy.

[8] Strategy 2020 is an internal Departmental document and has never received Ministerial scrutiny or endorsement. As such, it cannot be the basis of the Department's reporting to Government under the Expenditure Management System. Nonetheless, as the most 'visionary' document in wide circulation in DND and the CF, it is important that its strategic direction be supported and/or advanced by the DP direction under the DMS.

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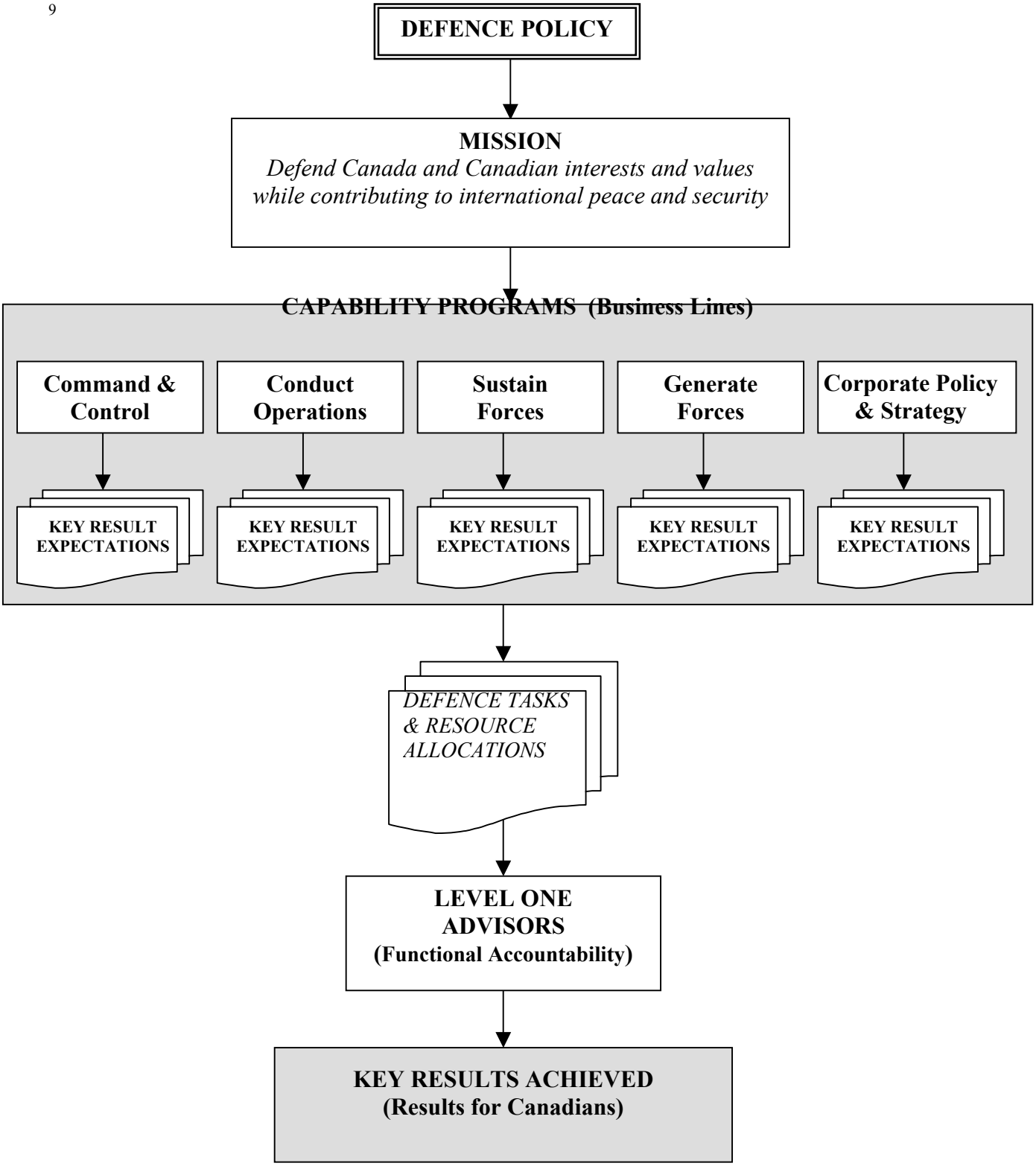

PRAS Conceptual Diagram

[9] Department of National Defence, *Planning Reporting and Accountability S*

The departmental business planning cycle can be thought of as beginning in April each year with the promulgation of the new Defence Plan, roughly concurrent and closely aligned with the departmental Report on Plans and Priorities (RPP) which is released to Parliament. Level One managers then conduct their own analyses of the strategic direction and submit their proposed undertakings and the resources required to carry them out in their business plan submissions, which are due to the Vice-Chief of the Defence Staff by 1 December. Key central staff review the assembled submissions through December and January in time for the initial year of the rolling five-year business plan to be approved in February for execution when the new fiscal year begins.

Major adjustments to a Level One's capability can be introduced through this process in either a top down or a bottom up fashion. The Department may assign new tasks and new operating resources, or may take away resources in the DP. Conversely the Level One may propose new capability requirements or activities in their business plan submission, the most exceptional of which make up the Level One Capital Plan (L1CP) which will then be rolled into the overall departmental Long Term Capital Plan (LTCP). These long term plans, implemented through the establishment of projects, are usually thought of in terms of capital equipment (LTCP(E)) or infrastructure (LTCP(C)). However, there is increasing recognition that capital equipment is not the sole determinant of operational capability. This is particularly true for the introduction of completely new capabilities, either from a technological point of view or from the need for new and different functions to be undertaken on operations. For example, the planned introduction of an Unmanned Aerial Vehicle implies far more than a new piece of equipment. Decisions must be made on who will operate the equipment, who will command it,

how it will be maintained, and how the training related to it will be conducted. There could be a need for an entirely new occupation to be created, or a new specialty area within an existing occupation. The personnel structure will change at least a little bit. The DMS recognizes the need to use an equivalent process to traditional project management for these other contributions or adjustments to defence capability, but since this is a relatively new realization there is little formal guidance on how to proceed.

To guide and evaluate both business plan contents and proposed projects, the Vice Chief of the Defence Staff has instituted new conceptual tools. One of the key frameworks is the Capability Goals Matrix, which expands the five capability areas delineated in the PRAS into their Key Results components at the Strategic, Operational and Tactical Levels. Assessments have been made for each locus on the matrix as to how fully and independently that capability needs to be present in the Canadian Forces, indicated by letter codes for High, Medium, and trix as

Level	Command & Control		Operations			Sustain	Generate	Corp Policy & Strategy
	Command	Info & Intel	Conduct	Mobility	Protect			
Military Strategic	H	H	L	H	L	L	M	H
Operational (Domestic)	H	H	M	M	M	M	M	H
Operational (Int'l)	M	M	L	L	L	M	L	M
Tactical	M	M	M	M	M	M	M	M

[10]

Capability Goals Matrix, 2002 Version, not showing colour-coded assessments

WHAT CAPABILITIES ARE REQUIRED?

Is the Canadian Forces concerned about changing outputs, that is, generating different operational capability from a given level of resources? Many defence critics have suggested we must be, with varying opinions as to what kinds of outputs should be sought.[11] While the Canadian Forces require many improved capabilities, some of these changes need to be in the direction of creating or improving joint capabilities. Why worry about joint capabilities? Indeed, those of a slightly arcane and very literal bent will point out that the concept of jointness should be meaningless in a unified force such as Canada's. However, as MGen Dempster

[10] Department of National Defence, Capability Outlook 2002-2012, p.4. Online edition accessed via http://www.vcds.forces.gc.ca/

[11] There was a flurry of these opinion papers in the months leading up to the tabling of the February 2003 budget, from sources as diverse as SCONDVA, the Auditor General, the Conference of Defence Associations, etc. See, for example, http://www.cda-cdai.ca/pdf/nationatrisk.pdf (24 May 03) or http://www.ccs21.org/peoples-def/people-def-rev.htm (24 May 03)

observed: "The notion of a single integrated Canadian Forces was seen by many senior military professionals as an administrative or legal construct driven from the political level rather than as a joint operational one supporting effective military performance."[12] While this is less so now than it was perhaps fifteen or twenty years ago, vestiges of this syndrome remain. "The underlying concept for NDHQ assumed that each environmental staff would design a force structure, develop long term plans, identify requirements and initiate projects…".[13] That statement was written in 1988. Since then much has changed structurally in NDHQ, but what it has achieved in essence is to have the ECSs continue to carry out those functions, while adding a fourth organization within the Deputy Chief of the Defence Staff (DCDS) group that does these functions for most, but not all, joint capabilities.

Perhaps the level to which jointness extends needs to be specified before any convincing argument about its importance can take place. No one would propose that young lieutenants learning to fly the CF-18, or taking command of their first platoons, need to think or act in a joint way; at least not beyond understanding the control measures that apply, for reasons of joint coordination, to their respective environments. Nor would most people seriously argue that the CF should return to the pre-Hellyer days of three independent services, notwithstanding that unification might not have had full support at the time. More seriously, there is now consideration as to what degree th5348 350.21973 Tmp504 Tw 12 0 0 12 130.6anizaart 1988. Since the5.884j12

not merely joint coordination but also tight cooperation across many other government departments.[14]

Jointness at the strategic level, therefore, appears to be well accepted, albeit not yet ideally implemented; and at the lowest tactical level appears to be of little relevance. That leaves the higher tactical to operational levels relatively less well defined. Debate continues about whether the focus at this level should be on developing 'jointness' or on enhancing interoperability to maximize success in combined single-service tasks. Perhaps the answer is "it depends", specifically it depends on the nature of the mission. Forcing a joint approach on a single-service activity would seem to be introducing unnecessary complexity. Or perhaps it depends how far into the future your strategic vision extends. However, there are some capabilities that clearly lend themselves to a joint approach, such as intelligence; surveillance; nuclear, biological and chemical defence; and some aspects of sustainment. Equally, there are others, such as naval task group operations, or mechanized infantry tactics, techniques and procedures, where more focus should remain on enhancing interoperability with key allies.

Canada has become adept, within limits of available resources, at planning, mounting, and executing missions as a contributor to a multinational force, consisting of a deployed Joint Task Force under the command of a Joint Task Force Headquarters, supported by a National Support Element. This ability was born somewhat painfully from our participation in the Persian

[14] The DCDS has sponsored an initiative to place staff officers within several key government departments, in addition to our past focus on the Privy Council Office and the Department of Foreign Affairs and International Trade.

Gulf Conflict of 1990-1991[15] and has been significantly refined and streamlined since then. But that is really the limit to which our current deployable joint capability extends. That limit has been tested empirically, through our effort at leadership of the proposed multinational force to Zaire in 1996, Operation ASSURANCE. Despite the widely held view among senior leaders that the single most important lesson learned from Operation ASSURANCE was that Canada should not attempt to lead a multinational force again[16], recent evidence would suggest that this view might not be shared at the political level. Our current Minister proudly announced our upcoming contribution to the International Security Assistance Force in Afghanistan, including some leadership elements: "…Canada is willing to serve with a battle group and a brigade headquarters for a period of one year, starting late this summer. We are currently in discussion with a number of potential partners."[17] This is far from true lead nation status, yet is nonetheless significant, particularly as the specific tasks Canada will undertake have evolved to include numerous positions at ISAF HQ.

Of at least equal concern to the strategic thinker, Mr Paul Martin has made several recent statements giving clear advance warning of his approach to foreign policy and defence issues. On 30 April of this year, he stated: "Leadership is required to collectively resolve the world's problems. The need is undeniable. And the opportunity is there. Canada can show the way."

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[15] NDHQ Program Evaluation E3/92, *Command and Control Case Study, The Gulf Crisis – Operation Friction*. 1258-99 (DGPE) 13 October 1993.

[16] While the interdepartmental lessons learned document prepared by James Appathurai and Ralph Lysyshyn actually observed that "Canada was well-placed to lead the formation of this MNF", it went on to enumerate several serious difficulties. This lead the media to report its key findings differently: "Don't try to lead multinational forces: Report" was the headline in the Saint John telegraph Journal on 11 Aug 1997. As recently as this past winter, Vadm Garnett wrote "almost certainly, there will be no more 'Great Lakes expeditions'. (Garnett, *The Evolution of the Canadian Approach*…. p 8.)

[17] The Hon John McCallum made the remark in the House of Commons during question period on 12 Feb 03. http://www.parl.gc.ca/37/2/parlbus/chambus/house/debates/058_2003-02-12/han058_1445-E.htm#Int-414761 (24 May 03)

and, "Let's be clear, our foreign policy should be based on our deepest values".[18] These two statements together imply a continuing period of high operational tempo, and the second in particular implies that if he becomes the Prime Minister he may be willing for Canada to be involved where other nations, choosing an interest-based approach, are not. About two weeks later, he emphasized "I think there are areas that Canada can take the lead, and we should," citing specifically that the military must have the capacity to lead missions such as the one called for by the UN to address the current crisis in the northeastern Congo. [19]

How does a leadership role in multinational operations correlate with joint capabilities? Quite simply, it was the lack of operational level joint capabilities that made the military aspects of the endeavor in the Great Lakes region of Africa so fraught with difficulty. Deficiencies in several joint capabilities ranging from intelligence production to movement control to medical support to psychological operations and civil-military cooperation capacity were made glaringly obvious.[20] While it has been argued that the CF is now in a better position to lead than it was in 1996,[21] and it is true the Canadian Forces has improved its deployable command, control and communications capacity significantly, there are still key joint enablers whose capacity needs to be improved before Canada can fulfill the leadership role being foreshadowed by some of our influential public figures.

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[18] Paul Martin, from a speech given to the Canadian Press. Transcript available via http://www.paulmartintimes.ca/where-paul-stands/stories_e.asp?id=526 (23 May 03)
[19] Paul Martin. These remarks were made at the Halifax Town Hall meeting on 12 May 03. http://www.paulmartintimes.ca/where-paul-stands/stories_e.asp?id=553 (23 May 03)
[20] See *Op ASSURANCE – LESSONS LEARNED STAFF ACTION DIRECTIVE*, Annex A to 3452-12-8 (J3 Lessons Learned) 25 February 1998
[21] Col TJ Grant, "Canada: To Lead or Not To Lead", (Toronto: Canadian Forces College National Security Studies Course Paper, 2003), 23

Even without an acknowledged need to be able to lead in multinational operations, operational level joint capabilities are still required. The renewed focus on the Defence of Canada and the Defence of North America in the face of the current asymmetric threat calls for a new approach to continental operations. This is most obvious in the need for much closer surveillance of Canada's vast territory, coastline, airspace and ocean approaches, but it is also apparent in the need to provide for a relevant mitigation capability for a variety of asymmetric attacks that could now conceivably take place in Canada. Capabilities built by the CF in this regard certainly will need to be well coordinated and practiced with other key government departments.

SPECIFIC STRUCTURAL AND PROCESS IMPEDIMENTS

Despite the welcome introduction of the Joint Capability Requirements Board, and despite its own assertion to the contrary, the DMS remains essentially a bottom-up system. Strategic direction is indeed provided; for the longer term via documents such as Strategy 2020, and for the shorter term through the annual DP. As has already been seen, Level One managers then conduct their business planning, and adjust their own forecast personnel, operations and maintenance (P, O&M) activities, their own miscellaneous requirements (MR) spending, and their future projects, if necessary, in order to address their interpretation of the priorities laid out in the DP. This means that the JCRB considers and may endorse those projects that are submitted to it – it does not, with rare exception, direct or request that projects be undertaken. If projects are not brought forward, the capability may not be considered. Or, as one anonymous wit, a veteran of several projects, has observed, JCRB in its current form does not truly provide a

joint capabilities review, but rather, a multiservice review of someone else's project. He also observed that the most visible effect of the CF's focus on jointness has been to teach the environments that finding a way to make their projects look more joint is a key factor in getting them approved. While this is not necessarily a bad thing, it may in fact drive the cost of any given project higher, and in any case it hardly substitutes for thorough analysis of what capabilities, joint or otherwise, are most urgently needed.

The missing strategic direction appears to be some elements of "what" capabilities must be developed and most of the "how much" of any given capability should be developed. This ambiguity is marked in the Capability Program areas of Conduct Operations, where Key Results are expressed in words such as "Provide the capability to render humanitarian assistance and conduct disaster relief activities, within Canada and internationally" or "provide the capability to participate in UN Peace Support Operations". Almost any capability from any environment could be justified as supporting these Key results. Similarly, under Sustain Forces, a sample Key Result reads "Provide the capability to repair and maintain equipment and Defence materiel."[22] All of these Key Results beg important questions like 'what kind of capability? How much of it? Where does it have to go and for how long?' and, 'How much equipment of what kind must we repair, where must it be repaired, and in what period of time?'. There is some general guidance in the 1994 White Paper as to how much is needed, and the eleven Force Planning Scenarios can also be useful, but in the wake of the recent resource-constrained years there has been a tacit backing away from the full 'Main Contingency Force' deployment, or Scenario Eleven if you

[22] PRAS, pp 10-11.

prefer.[23] Ideally the strategic direction gap should be filled by policy originating with the Government, and perhaps the upcoming foreign policy review and defence update may help achieve this, but Canada does not have a history of crystal-clear national security or defence policy pronouncements. The highest level of the Department must be prepared to address the ambiguity.

Before any program adjustment can be made or project initiated, the operational need to do so must be recognized. Some of this can be derived from the strategic guidance currently passed via the DP. As has been shown, clarity is lacking. This is understandable, but it creates an area in which diversion of intent can take place. The specifics at present are left to others, and this is a key role for the future concepts and requirements staffs of the environments; that is, deciding what their future operational requirements should be. Because of its status as the force employer, and because of its responsibility for the national lessons learned process, joint force development (including experimentation), and operational research, the DCDS group is well positioned and equipped to carry out this function for most joint capabilities. However, a couple of caveats need to be made. First, the DCDS is not the only Level One who owns or is concerned with joint assets. ADM (Mat), ADM (IM), and ADM (HR-Mil) also control pieces of joint operational capability, at least as of this writing. Second, it is a very long road between the recognition of a needed or desired capability, and its fielding. The DMS and the project management manual describe four distinct phases for any project: initiation, option analysis, definition, and implementation, with closeout a fifth phase whose importance is just coming to be recognized.

[23] Perhaps the most explicit embodiment of this was the decision made by the National Military Support Capability project, for reasons of affordability, not to build the Joint Support Group that would be required to support a full

As a result of the Treasury Board definition of a project, which excludes initiation and option analysis,[24] the resources required to conduct these initial phases cannot be attributed to the project and must be sourced from within the sponsoring Level One's business plan. While the DCDS Group is not a small organization, it has, and must continue to have, the conduct of operations as its primary focus. Other aspects tend to be economically staffed, leaving little scope for diversion of human resources towards project work. A related concern has been expressed by a former VCDS: "The DCDS is now responsible for such a large number of tasks that there is concern that the group's ability to focus on its vitally important force employment

initiation and options analysis phases of a project are typically small, sometimes a single staff member who concurrently has other duties. Second, modern project management is a complex field, requiring an appreciation for specialized disciplines ranging from costing, through risk management, integrated logistics implications, environmental considerations, industrial benefits, training impact, negotiation, preparation of project documentation, etc.[26] It is unreasonable to expect that the technical expertise needed in all these areas will exist in a small project team. Contractors can fill in some of the gap, and increasingly are engaged to do so, but of course this costs money, which will not exist for the project outside the sponsoring Level One business plan until it reaches the definition phase. Ironically, by that time much of the hard thinking and negotiating has been done.[27] So for most projects the NDHQ matrix is the only practical source for this type of functional expert support. This is probably the most cost-efficient method of obtaining support,[28] but such support is highly variable in its timeliness. This is not to say that functional agents in the matrix deliberately ignore or undermine projects. Despite the observations of cynics, most functional staff at NDHQ, whether military or civilian, is both diligent and competent. The problem is simply that everyone involved is juggling many priorities and not everyone shares the same understanding of what has first call on their time and expertise.

Because of the existence of the environmentally affiliated equipment program management (EPM) divisions within ADM (Mat), (Director General Air Equipment Program

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[25] Garnett, op.cit., p 7
[26] DMS manual p 9-30
[27] See the list of Key Activities for the project identification and the option analysis phases as laid out in the DMS manual pp7-5 through 7-9
[28] Department of National Defence. A-LP-005-000/AG-003, *Project Management Volume 3, Project Organization* (Ottawa: DND Canada, 1988) 9-14

management, DGAEPM; Director General Maritime Equipment Program Management, DGMEPM; and Director General Land Equipment Program Management, DGLEPM)[29] to which staff officers may have been posted as part of their career development, ECSs and ADM (Mat) are the Level One organizations most likely to have personnel with project management experience and a high degree of familiarity with the NDHQ matrix. All other things being equal, these individuals are more likely to gain effective matrix support than those new to the process. They understand who does what, they know which steps must come before which other ones, and they know how to present their needs so they can be handled in the most efficient manner. Certainly the DCDS group, which typically contains few officers of the occupations most associated with project management, is at a relative disadvantage here.

Another key factor in obtaining matrix support is direct, personal involvement of the sponsoring Level One. While the actual matrix work is done by staff officers at the Captain to Lieutenant-Colonel rank, and their civilian equivalents, their priorities are established by Directors and Directors-General, who in turn react to the priorities of their own Level Ones. A Major who is the newly-appointed project manager for a certain initiative will probably not have a great response to his request to a contact in a functional agency for support, unless the sponsoring Level One has been able to engage the Level One who owns the functional experts and gain agreement that this is a priority. This is simple in principle, and understandable in a matrix, but extremely time consuming and dependent not on the objective merits of the project, but on the energy of the sponsoring Level One and the interplay of personalities throughout. Unfortunately, the DCDS and ADM (HR-Mil) are both organizations with split responsibilities

[29] For an overview of the responsibilities of the EPMs, see the Logistics Branch Handbook, Chapter 5 – Environmental Logistics and Central Systems, art 504 para 13

for on the one hand, force employment and force generation; and on the other, sustainment and force generation, making them relatively less able to focus on project issues. Once again, the Level Ones who own joint capabilities are at a relative disadvantage here, and as a result their project staffs may face a more difficult time obtaining needed matrix support.

Guidance available to those working on joint projects is less directly applicable to the challenges they face. Despite the fact that projects do not necessarily involve equipment acquisition, that is the basis on which all the current guidance for project teams, including the seven volumes of the project management manual, is written. Projects that affect Force Structure, or postulate the creation of entirely new capabilities, are more complex. Not only must they compete for funding, they must reach agreement on movement of personnel resources and O&M funding across Level Ones. The onus on achieving consensus lies with the project team. The DMS manual is not all that helpful. Specific guidance for personnel projects runs to two very generally worded pages in a 10-chapter manual[30]. Guidance in dealing with the P, O&M issues in a primarily capital project is more direct, but no more encouraging: "The fundamental principle relating to all projects is that the sponsoring ECS/Group Principals, or affected Groups, in the case of projects with cross-Group implications, should normally absorb their P, O&M requirements…P, O&M commitment is a critical issue that *a project leader must resolve* [italics mine] prior to submitting the project for consideration or departmental approval…by PMB."[31]

[30] DMS manual p8-2 and 8-3
[31] DMS manual p7-43

Within a fixed personnel structure, at least one Level One manager is going to perceive a net loss in this negotiation. From the outset, the process is conflict laden, frequently protracted, and prone to deadlock. Where consensus cannot be willingly gained, direction is required in order to break the logjam. Frequently, instead of having the impasse resolved by clear direction, the project team is sent back to make renewed efforts to overcome the impasse, which introduces significant delay.

For equipment-focused projects, the DMS manual stipulates that project leadership will shift during the definition phase from the sponsoring Level One to the implementing Level One. The sponsoring Level One could be any of them, but for deployable operational capabilities will likely be one of the ECSs, the DCDS, or ADM (HR-Mil). For most equipment acquisitions, the implementing Level One will be ADM (Mat) and the project management offices will become elements of one of his primary divisions. For information management projects, the DSP manual stipulates that ADM (IM) take over project leadership in the implementation phase. But there is no division in any Group responsible for joint equipment program management, so there is no natural home to transfer to. Furthermore, as we have already seen, joint projects are not necessarily primarily equipment-focused. There is no division with the responsibility to implement projects involving force structure or knowledge management. Therefore the project offices for joint projects tend to remain under the Group where they were born. This further stretches the span of control of the responsible Level One, and does not foster best practices by allowing the project staff to benefit from daily contact with people doing similar things.

None of this should imply that joint projects cannot be made to work. Events since 11 September 2001 have demonstrated that much can be accomplished relatively quickly with appropriate top-down direction and a shared sense of urgency and priority. The aforementioned expansion of JTF 2 and the creation of the NBCD Company are joint projects that quickly gained approval and were moved to implementation within two years, despite the difficult issue of negotiating personnel changes. It is probably not coincidence that these were, in essence, top-down initiatives developed by a special working group chaired by the Director-General Strategic Planning (DGSP) to come up with options for improving domestic response capability in the face of the asymmetric threat. The working group was tied in tightly to JCRB, and was carefully coordinated with the resource managers!

SUGGESTIONS

Pointing out problems is relatively straightforward, and of limited value. Making constructive suggestions is more difficult, but probably more valuable. What follows in this section is not intended to be definitive or exhaustive, but to stimulate others to develop ideas for change.

VAdm Garnett, in remarking on the evolution of the DCDS group, observed: “With four requirements czars at work in the same headquarters, overlap and redundancy are inevitable. An organizational review should look at whether it might make sense to adopt a requirements model such as that now in use in the UK, wherein all service requirements staffs are centralized in a

single joint requirements staff."[32] Added to these concerns about overlap, is the possibility that the four staffs may actually be working on the basis of mutually incompatible visions of the future, much in the same way the three single services in the 1960s were observed by Mr Hellyer to be preparing to fight different wars.[33] It may not be that a single integrated requirements cell is required, although that would seem to provide the most clarity, but certainly as a minimum there needs to be a mechanism to more clearly subordinate individual environments' priorities to the overall intent. At present there is simply too much room for interpretation in the Capability Programs and their Key Results. Further, and in consideration of the pressures and challenges facing the DCDS and the need to coordinate requirements work with resource management, this single integrated requirements staff should probably be part of the VCDS group. The results of their analysis would be submitted to JCRB and after due consideration would then constitute direction to the Level Ones. This implies a significant change in the role of the ECSs, although they should retain a strategic concepts type of role in ensuring future interoperability. ECSs would also be key functional advisors to the CDS and would of course be participants in JCRB. The goal of this change is not to artificially promote joint initiatives over single service ones. The point is to decide in a unified way what the priority initiatives of the Canadian Forces are, and to foster their implementation.

Another possibility, either alone or conjunction with changes to the requirements staffs, is to tighten the link between the strategic analysis driving the twenty-year vision and the DP direction driving the five year business planning and project horizon. There are two reasons for this. First, projects do not have a five-year time horizon. Even the relatively straightforward

[32] Garnett, *The Evolution of the Canadian Approach...*, p 8.

Weapons Effect Simulation project, essentially on off-the-shelf equipment purchase, has taken since 1983 until now to award a contract, and full implementation will stretch until 2007. There is realistically only one project cycle within the time to implement the vision. This places enormous pressure on those involved in developing the twenty-year vision. Second, incremental upgrades to existing capabilities may crowd out funding for transformational initiatives. Again, these tend to be environment-driven and individually justifiable in the face of rust-out, but once on the LTCP(E) they serve to delay truly transformational initiatives, since it is extremely difficult to stop an initiative once underway. One way to tighten this linkage is to use a tool similar to the US Joint Chiefs of Staff J4's Focused Logistics Wargame (FLOW).[34] This wargame, conducted every two years, models every aspect of sustainment against a series of scenarios. This is done in sufficient detail, using real capacities rather than doctrinal ideals, so that those functions that limit freedom of action are made obvious. The most important "limiters" become high priority for problem solving, including procurement and force structure considerations. Canada could attempt something similar, perhaps less frequently, but not limited to sustainment activities. The Scenario Operational Capability Risk Assessment Model (SOCRAM) tool may be helpful in conducting this type of simulation. The results could provide a level of analytical rigour to the selection of priority initiatives that is hard to achieve on the basis of pure thought. If all Level Ones participate in the game and debate its findings, there should be a stronger commitment to acting on the results.

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[33] Paul Hellyer, *Damn the Torpedoes: My Fight to Unify Canada's Armed Forces*, (Toronto, McClelland & Stewart, 1990), 33.
[34] See JCS J4 website at http://www.dtic.mil/jcs/j4/projects/flow/flow.htm (25 May 03)

The traditional view of projects is that they are exceptional activities, short-term in nature, and therefore staffed temporarily.[35] This may be true for individual projects, but it is not true for the aggregate of project management activity within the Department. By reviewing the data of the last decade or so, it should be possible to determine a baseline level of project management work. Consideration should be given to establishing a project management organization, under which PMOs can be housed and from whom project staff can be assigned. Contrary to past practice, most of these project management staff members should be civilians. Naturally, the operational requirements of each project must be kept uppermost, and therefore each team will still need active, committed military participation, probably at the Project Director level, but I believe much is to be gained from developing a highly experienced cadre of project managers. The civilian project management literature would agree: "Inexperienced personnel can be accommodated in the project organization, but should be carefully placed where they can gain experience within their capacity."[36] This approach would also promote continuity among project staff, a significant determination of success: "The project manager's involvement with his project begins – or should begin – when the project starts. It continues – or should continue- until the project ends."[37] Consideration should be given to merging the three current EPM divisions into an overarching joint EPM, probably subdivided around related technologies or application rather than environment. For example, all sensor projects would be grouped together, or all rocket-based weapons and munitions. This would decrease the disadvantage faced by joint projects, which do not currently have an affiliated EPM. Finally, a

[35] The DMS Manual, block 9.3.1, states "A project organization is temporary and exists only for the life of a project".
[36] Dingle, *Project Management…*, p89
[37] Ibid., p 61

way should be found to create an organization that takes over implementation of non-equipment projects, and a body of guidance for these complex undertakings should be developed.

CONCLUSION

As the Rolling Stones understood, the Canadian Forces has not historically got what it wanted, nor is it likely to get what it wants in the future, unless it undertakes structure and process changes related to strategic planning and the management of the DSP. The operational tempo faced by the Canadian Forces is likely to remain high, and the missions may well increase in challenge and complexity. Only the most carefully applied strategic direction can ensure that the nation gets what it needs in terms of defence capability to perform these roles. The current process, grounded in single service stovepipes but with a fourth stovepipe titled 'joint' nurtured by the DCDS, allows too much room for interpretation of existing strategic direction and relies on a bottom-up process for the introduction of new capabilities. While all of the proposals generated in this manner may be worthy, the realities of project management will tend to favour equipment-based single service projects over more complex initiatives.

To combat this, the requirements functions currently resident in the ECSs and DCDS should be amalgamated as part of the VCDS group working closely with the resource managers. The role of JCRB must evolve to include the clear direction of which capabilities will be developed for the Canadian Forces of the future. The tendency for incremental upgrade projects to crowd out available capital funding must be guarded against. The serious challenges facing joint projects and non-equipment focussed projects must be acknowledged and changes

implemented to encourage more effective project management for all project sponsors and leaders. These changes could include the reorganization of the major ADM (Mat) EPM divisions to either a common-technology basis or a common function basis. The department should foster a cadre of professional project managers who are assigned to projects on the basis of the projects priority as determined by JCRB. Contrary to the prevailing wisdom, structural change is possible within NDHQ – significant change has taken place already over the past few years. The proposed changes are well within our bureaucracy's capacity to adapt.

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