



**CANADIAN GLOBAL AFFAIRS INSTITUTE**  
**INSTITUT CANADIEN DES AFFAIRES MONDIALES**

# **Defence Business Planning in Canada**

by Ross Fetterly  
October 2018

# POLICY PERSPECTIVE

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## DEFENCE BUSINESS PLANNING IN CANADA

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CGAI Fellow  
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*“Running any complex organization during a period of major change, especially large and complex organizations, requires careful attention to the essentials of management.”<sup>1</sup>*

**T**he history of defence reform in Canada has been one of a constant struggle to renew both core military capabilities and personnel strengths, while searching for increased efficiency within a limited budget. Indeed, the Canadian Armed Forces/Department of National Defence (DND/CAF) operates on a magnitude and complexity across a broad range of diverse responsibilities unique in Canada. At a time when global security demands our constant attention, and when the CAF operates outside Canada in a less permissive and uncertain environment, resource management is important. The environment is increasingly one of unilateralism and multi-dimensional conflict, with unconventional means used to disrupt both national institutions and long-standing multi-national arrangements. While state organizations commit many non-military actions such as cyber-security attacks, defence organizations have a significant role to play in this domain. This requires resourcing defence to build capacities that support whole-of-government initiatives which enhance the Canadian government’s resiliency in response to the multi-dimensional actions taken by illiberal or non-democratic states. Defence business planning has a key role in realigning resources and activities in response to shifting geopolitical realities.

Management of defence resources is about transforming them into military capabilities in a relevant manner and in accordance with government policy. Defence establishments are unique within national government institutions, as well as in organizations in general. Nevertheless, they are required to produce certain outputs and are given a range of resources to achieve that. To accomplish assigned tasks, those resources need to be put through a deliberate business-process mechanism. The objective of the defence business planning process is to provide a pragmatic method of documenting organizational priorities and objectives, and communicating them internally while highlighting and addressing any constraints.

Business planning is well established within the Canadian defence establishment. In recent years, the business planning approval process has become a key focal point in the departmental Investment Resource Management Committee (IRMC) leading up to the start of a fiscal year. Yet, the 2017 defence policy, *Strong, Secure, Engaged* (SSE), has dramatically changed the dynamics of resource management at National Defence Headquarters (NDHQ). From a relatively stable status quo, to an environment where programmed personnel, equipment and funding increases are significant, managing change and the new initiatives as articulated in SSE, becomes a central institutional priority. Business planning is the primary process to manage implementation and execution of this relatively ambitious program.

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<sup>1</sup> Michael K. Jeffery, *Inside Canadian Forces Transformation: Institutional Leadership as a Catalyst for Change* (Kingston: Canadian Defence Academy Press, 2009), 107.



The discussion of defence business planning will begin with its challenges, and then provide an overview of factors inherent in resource demands. The third section will examine defence resource management reforms and the impact on implementing SSE, and then address factors affecting change in business planning, as well as consideration of enduring challenges. The final section will highlight that defence business planning is the bridge between near- and long-term planning and then articulate why it will need to act as a primary enabler in implementing SSE-directed activities.

## The Challenges in Defence Business Planning

The defence establishment in Canada is an ambitious and aspirational organization. Hence managing expectations is a constant challenge, as the organization has to simultaneously implement planned initiatives or programs, while engaging in other ongoing activities. The challenges are extensive and wide-ranging. Most importantly, defence “does not produce a single homogenous and generalized product called defence capability. It produces many different products with many different production processes.”<sup>2</sup> This highlights the broad scope and challenges inherent in defence institutions. Internal dynamics and changing global security issues tend to drive evolution in defence business plans. Furthermore, the decision-making process in defence is a “complex process with elements of rationality interspersed with competition for scarce resources and negotiations that result in solutions, that while not always based on logic can be accepted by the major stakeholders”.<sup>3</sup> This forces national defence institutions to constantly choose between near-term and long-term demands on resources. The challenge is that they are “constantly confronted by the paradox of pessimistic realism of phrase coupled with loose optimism in practice”.<sup>4</sup> This can be seen today in countries where military establishments faced with planning for multiple threats are challenged to aptly treat all threats with the commensurate magnitude of resources. This highlights the challenge in allocating resources and the appropriate level of institutional attention in business planning where near-term demands can crowd out investment in longer term threats. The reality is that the funds in the defence budget available for reallocation in a given fiscal year are relatively marginal, with money largely allocated to personnel, operations and maintenance, and capital.

Asymmetry of information at various levels within DND/CAF challenges business planning, making it a central integrating element of the resource management process. At the military base or station level, leaders understand their capacity to expend resources, but have limited flexibility to reallocate them. At the more senior levels (operational and strategic), leaders can reallocate resources and know priorities at the base level, having gained their initial experience at that level. Institutional-level business planning provides a common document that makes priorities and

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<sup>2</sup> John M. Treddenick, “Distributing the Defence Budget: Choosing Between Capital and Manpower” in *Issues in Defence Management*, Douglas Bland (editor), School of Policy Studies, Queen’s University, 1998, 57-82, 63-64.

<sup>3</sup> Joe Sharpe and Allan D. English, *Principles for Change in the Post-Cold War Command and Control of the Canadian Forces* (Kingston: Canadian Forces Leadership Institute, 2002), xiii.

<sup>4</sup> Roberta Wohlstetter, *Pearl Harbour: Warning and Decision* (Stanford, CA: Stanford University Press, 1962), 69.



directed activity levels across the institution, such as the navy or army, clear to all members. Through an expanded use of defence analytics, the Canadian defence establishment has begun to address long-standing governance and incentive challenges from the strategic to tactical level of resource management. A key near-term issue is to improve the quality of information for use in business planning.

The business environment in the defence establishment is dominated by the rules, policies and procedures established by Parliament and central agencies for all federal government departments.<sup>5</sup> DND is part of the Treasury Board Secretariat-directed performance measurement regime. This accountability framework can change dramatically. In 1996 the federal government implemented the Planning, Reporting and Accountability Structure (PRAS) Policy. Then, in 2008 government departments were directed to implement a Management, Resources and Results Structures (MRRS) Policy. Following the 2016 election, the new government directed a shift to a policy on results – known informally as deliverology. The Liberal government instructed departments to develop results frameworks, establish program inventories and create performance information profiles. Changes to government rules, policies and procedures present challenges internally for the defence establishment. For consistency in managing and reporting on resource management and as a large, diverse organization, establishing new processes to match changed central agency information requirements can be a challenge. Shifts in the international security environment can be dramatic and consequential, driving rapid change in operational capabilities, training and equipment, thus bringing changes to defence that other government departments don't face.

Yet, in a global security environment the velocity of technological change, the shifting threat landscape, disconcerting economic disequilibrium within and among nations, disruptive impacts of globalization and the relentless effect of innovation on economies are combining to drive a rethinking of defence business planning processes. The technological revolution is transforming management processes, highlighting the need for adopting a data-driven analytics regime. Indeed, where data are becoming increasingly viewed as “the new oil”,<sup>6</sup> and where innovation is disrupting sector after sector, Western defence departments need to invest heavily to remain at the leading edge in innovation adaptation. To a certain extent therefore, the defence establishment's adaptiveness to optimize processes and procedures drives its effectiveness. That shift is managed through business planning and execution. However, large, long-standing organizations have a tendency to maintain historical processes and procedures until their ineffectiveness becomes apparent – highlighting the importance of business planning to ensure effective execution of the defence program.

Defence business planning – which provides a detailed funding request for the next fiscal year and forecasts for the following three years – has been the subject of considerable effort and process reform in DND/CAF in recent years. However, with Russia and China dramatically

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<sup>5</sup> Charles Davies, *Vimy Paper 18: Defence Transformation and Renewal: Teeth, Tails and Other Myths* (Ottawa: Canadian Defence Association Institute, 2014), 3. Available at <https://cdainstitute.ca/wp-content/uploads/2012/06/DaviesMay2014.pdf>

<sup>6</sup> Rohinton P. Medhora, *Data Governance in the Digital Age* (Waterloo: Centre for International Governance Innovation, 2018), 2.



increasing their military strength and capacity, both strategic and business planning processes in Canada need to continue adjusting to remain aligned with the fluidity of the near-term global strategic environment. Faced with diminishing technology barriers and a greater range of emerging threats that need addressing, it is the intellectual curiosity, expertise in new domains such as cyber, and creative imagination that will differentiate Canada's ability to keep pace with an uncertain and dynamic international security environment. The agility to respond rapidly to emerging international crisis situations is increasingly important. One could consider the responsiveness provided by agility as institutionally important as the investment in emerging technologies. Western governments can be expected to be regularly taken by surprise regarding the challenges they face, as well as the capabilities and resources that responses demand.

Defence business planning in Canada – the near-term resource management focus (one to four years) is necessarily closely linked to the long-term capability-based planning process (15 to 30 years). Faced with all these challenges, DND/CAF needs to continue regularly adapting to improvement in private sector models of business planning geared to function effectively in today's environment. Just as emerging technologies are bringing private sector corporations together from across a range of different industries to collaborate, defence establishments need to also draw from successful industrial models to improve defence business planning processes.

## Factors Inherent in Defence Resource Demands

Resource demands in defence are distinct and present challenging factors that need to be managed through business planning. Western military forces need a toolbox of applications for use in a broad range of potential situations, some of which are non-kinetic activities, such as dealing with refugees and local populations. In today's ambiguous international security environment, money is like ammunition – it must be targeted to be used effectively. Factors inherent in resource demands can be summarized as:

- **Sensitivity to economic conditions** – a decline in economic activity and government revenue could put pressure on the federal government to reduce defence expenditure;
- **Operational tempo** – planned military activity levels can change unexpectedly due to rapid shifts in the international strategic environment;
- **Expenditure is non-linear** – military training cycles, unforecasted activities in support of Canadians such as aiding provinces in fighting forest fires and payments for capital equipment programs that could be delayed present challenges to defence leadership during a fiscal year;
- **There are multiple stakeholders** – with different resource demands and perspectives – some with divergent goals or objectives. This can include army,



navy or air force leadership, departmental officials, central agencies, Public Service Procurement Canada, Global Affairs Canada and Canadian industry;

- **Multi-layered systems** (financial, supply system, operational) – that function in a security environment which can demonstrate unpredictable behaviours. The most prominent of these is the capital equipment procurement system;
- **Structural complexity** – this is driven by strategic, operational and tactical activities and the considerable variety of tasks DND/CAF undertakes;
- **Expenditures occur in a pluralist environment** – circumstances where there are often no quick fixes, and where one solution does not generally fully resolve the problem;
- **Multiple institutional perspectives** – stakeholder management by central staffs in DND/CAF is an ongoing and challenging activity;
- **A high turbulence threat environment** – where speed to deploy is critical; and
- **Competition for new military personnel** – is increasing within the private and public sectors for shrinking numbers of Canadians entering the workforce.

## Defence Management Reforms and their Impact on Implementation of SSE

What has been referred to as Canada's decade of darkness in defence began in 1994, as the Chrétien Liberal government struggled to reduce what had become a large structural budgetary deficit. The CAF shrank in size, a number of bases were closed, some equipment became redundant and Canada was reduced to one military university in Kingston. Government-directed support to peacekeeping, begun at the closure of the previous decade, increased. While Canada was formally committed to the bi-national North American Aerospace Defence Command (NORAD) in partnership with the United States, and as a member of the North Atlantic Treaty Organization (NATO), managing and preparing for peacekeeping missions became a significant institutional operational focus. The paradox is that in the post-Cold War era from the end of the 1990s to 2005, the Canadian military was very active in undertaking international operations, a dramatic difference from the Cold War period. To a considerable extent, the operational experience military personnel gained established the conditions for the transformation that began with the work of the Canadian Forces Transformation Team (CFTT) in 2005. This shifted “the focus of the institution away from its post-Cold War mind set, placing a much higher priority on domestic and continental security, but also playing a greater role on the world stage”.<sup>7</sup>

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<sup>7</sup> Jeffery, 46.



The result of the decade of darkness was the CAF's recognition that it needed to develop a more strategic-focused culture. This required changing the ways of the recent past; officer training was improved and military senior leadership positions were sought in NATO and the UN, along with initiatives to have a more educated officer cadre. The decade of darkness was a wake-up call to the Canadian military leadership.

While the CAF gained exceptional operational experience, first with United Nations peacekeeping missions globally over a long time, followed by a decade in Afghanistan, recognition grew that governance and resource management needed to improve at NDHQ in Ottawa. In addition, the CAF's leadership saw the need to work better with officials in other government departments in Ottawa so as to move defence program initiatives forward more effectively. In the current international security environment, Canadians can no longer be viewed as living in a fireproof house, despite being surrounded by three oceans and the United States to the south, and in spite of the distance from global conflict zones. The Canadian government is responsible for providing a broad range of services to its citizens, in a large and sparsely populated country with a modest tax base. With our closest ally now taking an increasingly "America first" approach to international relations, this likely means that defence resource managers should expect that they will continue to operate in a resource-constrained environment.

While defence reforms began with the training and education of military personnel, from a resource management perspective it really began with the deliberate implementation of activity-based costing, which helped develop better decisions. The lesson learned from this initiative is that when you establish a cost culture in defence, operational military personnel will see the value of cost estimation and then want more financial information to support decision-making. The Directorate of Costing Services in the Assistant Deputy Minister (Finance), was on the leading edge of adopting computer technology and software for costing and was staffed by rising military finance officers and public servants. Yet, progress came as a step function. Progress would be made and then plateau. Innovators and leaders would subsequently develop new initiatives to continue improving defence resource management. Most recently, an extended period of governance reform has taken place at NDHQ. Decision-making committees and processes were changed, due to the recognition that government confidence in the decision-making process was the centre of gravity in Ottawa for the defence establishment.

SSE demonstrated the result of enhanced governance and decision-making at NDHQ. The capability-based planning process, involving military officers and public service personnel, had been well developed and implemented during the previous government and was available to support SSE's development. The DND faces the same fundamental challenges as any other defence department. These include uncertainty, inter-temporal challenges – the distinctively different near- and long-term difficulties – as well as the broad portfolio of responsibilities and a range of social issues such as the further integration of women into the CAF and the use of illicit drugs prevalent in Western societies.

A successful defence business plan deliberately strives to articulate government policy, as well as the institutional leadership's corporate philosophy and orientation, so as to provide a framework



that underpins their decisions and actions over the document's timeframe. Although the federal government has allocated funds for the capital equipment programs SSE identified over a 20-year period, in part, it will be playing catch-up resulting from a historical lack of a sufficient and consistent recapitalization funding allocation. Yet, money alone will not solve all of the challenges the department and the military face.

In the current strategic environment, business planning is the fundamental tool necessary for implementing SSE. While defence departments do not have control over the challenges they will face, they do know the rate at which weapons systems will wear out, and the maintenance regime needed to keep the equipment operating at specific activity rates, as well as current and forecasted personnel attrition rates. Similarly, most capital equipment program timelines can be reasonably forecasted and implemented effectively, although for some high value and politically sensitive programs this can be a challenge. Capital equipment programs are managed through business planning, as the project moves from concept development through to project close-out. Business planning for personnel costs is driven by current and forecasted attrition rates of military personnel, their activity rates and training costs.

Integrating business planning into the core of defence culture supports the resource management function. This cultural operating system already functions systematically and effectively in planning for operations. Indeed, military organizations are inherently planning machines. However, to be a system that is embedded deeply in Canadian military culture, defence business planning also needs to be viewed as a central institutional activity by all DND/CAF personnel – not simply by those responsible for producing the annual business planning documents. Indeed, business planning brings people together with different backgrounds, perspectives and environments – such as army, navy, air force and Special Forces support and operational personnel – as well as departmental civilians in a manner that fosters greater unity of purpose and action towards institutional objectives. Done right, the departmental business plan can engender an aligned, integrated and effective intellectual effort across the defence establishment. Fundamentally, the departmental business plan is about ideas and how to operationalize defence policy. This fosters a needed ongoing institutional debate about ends, ways and means. Answering these questions will provide a roadmap to achieve institutional objectives. Finally, the departmental level business plan needs to sell this story effectively to both internal and external audiences. This story needs to make the integrative nature of business planning clear by highlighting the linkage it builds and executes within institutional defence resource management.

## **Factors Affecting Change in Defence Business Planning**

There is a surprising underlying paradox in defence, where notwithstanding the fact that Western military establishments are substantially much more capable and lethal than in earlier generations, they can be less resilient due to the complexities brought on by rapid advances in technology. Similarly, risks have become more trans-national, systemic, interrelated and erratic than in recent decades. Indeed, Canada is entering into an uncertain international strategic



environment, where demands on operational requirements and resources can be expected to continually surprise and challenge the federal government. While Western defence institutions are focused on technology, until the 19th century “the vast majority of military revolutions were the product of organizational rather than technological changes”.<sup>8</sup> However, with countries such as Russia and China increasing their military strength and capabilities, organization reform – enabled by the business planning process – needs to gain greater prominence in Western national defence headquarters.

The CAF is exceptional in operations, domestic or deployed, and can be both flexible and adaptive. For example, the CAF demonstrated considerable learning in Afghanistan by changing operational processes to correspond with the security environment. However, DND/CAF is much less adaptive institutionally and is bureaucratic. Why the difference? It could be because the defence establishment has a broad and diverse range of responsibilities; consequently, effecting institutional-level change is more difficult. Effecting changes calls for a focused institutional effort, direction and resources. A more salient question is whether the defence institution will be able to leap from the current process to a more agile one in responding to shifts in the international strategic environment. Indeed, prioritization is about outcomes, not effort. In a national defence establishment characterized by multiple issues vying for institutional attention and unexpected events regularly hijacking the attention of DND/CAF leadership, the defence business plan supports consistent execution of the departmental plan, while remaining flexible so as to adapt to changing circumstances. Overlaying all these factors is that the constant fiscal realities affect defence.

### **Business Planning as the Bridge between Near- and Long-Term Planning**

Defence business planning links near-term resource allocations to medium- and longer term planning. The challenge is that it is filled with internal contradictions. This includes the necessity to balance priorities based on people, operations and maintenance, and investing in capital equipment. Business plans are designed to reconcile these diverse resource demands in accordance with defence priorities and objectives. Indeed, business planning decisions today are important, as management decisions made in 2018 will affect defence in Canada for the next 20 to 30 years. While SSE is “an ambitious defence policy predicated on a significant increase in defence spending”,<sup>9</sup> this incremental funding needs to be programmed and managed through the defence business planning processes.

The development of a defence business plan is complex and time-consuming. The results are shaped by various organizations, officials and the external environment, and are reflected in the DND Defence Plan 2018-2023.<sup>10</sup> Influenced by the defence sector’s distinctive characteristics, the

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<sup>8</sup> Yuval Noah Harari, *Sapiens: A Brief History of Mankind* (Toronto: McClelland & Stewart, 2016), 262.

<sup>9</sup> David Perry, *Policy Update – Strong, Secure, Engaged So Far* (Ottawa: Canadian Global Affairs Institute, 2018), 1.

<sup>10</sup> Department of National Defence, *Defence Plan 2018-2023* (Ottawa: Department of National Defence, 2018). Available at <https://www.canada.ca/content/dam/dnd-mdn/documents/reports/2018/defence-plan-2018-2023.pdf>



relationship in the military production function between factor inputs and outputs is very specific. Inputs deliver capability – which includes labour, capital and technology – and thus provide an output of national defence forces with trained personnel, infrastructure and complex technology-intensive equipment fleets. Outputs deliver certain levels of security, yet they are increasingly dependent on technology. Business planning can maximize the effectiveness of these inputs and direct resources to corporate priorities. The difficulty lies in achieving the most effective allocation, or the right balance, of resources to specified objectives in an uncertain environment.

## **Enduring Challenges in Defence**

Defence must strike a balance between effective capability and value-for-money, operational tempo and quality of life, army, navy, air force, Special Forces and joint capability, strategic, operational and tactical capability. It must also conduct operations and prepare for the future (sustainment vs. transformation). In addition, there are many bottom-up pressures, which can include maintaining aging equipment, increasing costs in utilities and fuels, and the impacts of defence-specific inflation. Managing technology is becoming an important consideration. While defence organizations have always leveraged technology, now they also must integrate and network technology much more than in the past. Indeed, restructuring the defence enterprise for agility in responding to a rapidly developing and constantly changing environment is becoming at least as important as investing in new technology. In the current international strategic environment, it is apparent that risks are more systematic and global, as well as increasingly interconnected and unpredictable than in the past. The defence business planning processes provide an annual period for reflection, deliberation and choices.

## **Employing Business Planning to Execute SSE**

Business planning is like painting a warship: the work involved is never done. A principal challenge facing business planners in the Canadian defence establishment in 2018 is not speed, but the compression of time. In the present international security environment, decision cycles have decreased and the reaction time necessary to respond to changes has diminished. The stated objective of the DND Defence Plan 2018-2023 is “to operationalize the Government of Canada’s Defence Policy”.<sup>11</sup> Thus, business planners can increase their value by developing better approaches to operate in the current ambiguous and uncertain environment. During times of institutional change within defence – such as after the release of a new defence policy – the focus tends to be overwhelmingly on equipment, at the expense of institutional reform. While the substantive list of capabilities and capital procurement projects planned over SSE’s 20-year timeframe will certainly be a focus, several recent years of governance reform at NDHQ and the business planning process will drive a more balanced evolution of the defence establishment.

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<sup>11</sup> Ibid., 1.



The breadth and complexity of tasks and responsibilities in defence places a premium on organizational and implementation skills. Consequently, implementation and delivery of SSE through business planning is a primary task. Defence's current state of transformation needs to be addressed as a specific element of future business plans. One enduring feature of the Canadian defence establishment is that it has always been in the event-planning business. The defence business plan is at the centre of this function and acts in supporting resource allocation to achieve government objectives and in the role of institutional change agent. A key element of the defence business plan needs to contain forecasted steps to transition within an evolving international security environment at the respective levels within DND/CAF. While ships and aircraft get much of the attention in defence procurement, hundreds of other procurement initiatives support military capability. This is also an apt metaphor for business planning in defence, and highlights the importance of transferring inputs of financial, people, materiel and equipment resources into the desired next fiscal year and three future years' capability outputs.

## Conclusion

A paradox of the current environment is that information “by itself, does not represent knowledge, and therefore merely having more information is not in itself an advantage”.<sup>12</sup> Consequently, having the appropriate kind of knowledge needed in defence is only the start. The important factor is having leaders who can both make that knowledge relevant and an integral element of the military's business planning objectives. The business plan is a transparent document that is a primary mechanism to drive change. Business planning shifts the conceptual framework under which defence operates. Indeed, the function of planning staffs is not to issue orders, but to bring minds together. While the managing expertise of the business planning is currently constrained by capacity issues and the long federal contracting time, which compresses the time in a fiscal year to contract, improved departmental financial management and governance demonstrates the ability of NDHQ staff to effect positive institutional change. While technology advantages can be short-lived, longer term military advantage can better be maintained by developments in both training and doctrine. Business planning supports innovation in management processes and focuses attention on advancing institutional priorities.

Senior leadership needs to evolve direction and guidance to further improve business planning outcomes, with time as the overriding variable: it takes years to turn policy objectives into military reality. Expeditionary-focused militaries, such as Canada's, are generally more capital-intensive than territorially oriented military forces. Consequently for Canada, capital-intensive military forces continually face rapid technological advances in weapons systems across the land, sea, air, Special Forces and space environments, necessitating ongoing new investments and regular updating of thinking regarding operating concepts and tactics.

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<sup>12</sup> Gordon R. Sullivan and Michael V. Harper, *Hope Is Not a Method: What Business Leaders Can Learn from America's Army* (New York: Times Books, 1996), 45.



Defence management in Canada has many long-standing challenges, which require a process to enable recurrent rethinking of long-held assumptions, as defence institutions tend to gravitate to the status quo. Yet the reality is that many of the places in which the CAF operates today are ungoverned spaces. To respond to non-linear shifts in the international strategic environment, the Canadian defence establishment needs to adopt, as do our allies, a more responsive culture in resource management; one that focuses on rapidly working through a series of different ideas, while leveraging best options and creating agility. In defence, as in many other sectors, the competitive landscape is continually changing. What worked effectively a decade ago may no longer be effective. This environment places a significant burden on the leadership. Defence organizations that are unable to transform the environment in which they operate internationally must focus on internal transformation. Defence business planning is a primary process to bridge near- and long-term institutional change. How much it achieves this objective will be a primary determinant of the extent that SSE is implemented over its timeframe.

## ► About the Author

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**Ross Fetterly** retired in 2017 from the Canadian Forces after a 34-year career as the Royal Canadian Air Force's director of air comptrollership and business management. He previously served as the military personnel command comptroller, and in other senior positions with the Department of National Defence Assistant Deputy Minister (Finance). He is currently a Fellow with the Canadian Global Affairs Institute.

Retired Col. Fetterly completed a tour in February 2009 as the chief CJ8 at the NATO base headquarters at Kandahar airfield, Afghanistan, where he was responsible for finance, contracting and procurement. While deployed he wrote a paper entitled *Methodology for Estimating the Fiscal Impact of the Costs Incurred by the Government of Canada in Support of the Mission in Afghanistan* with staff from the Parliamentary Budget Office. Col. Fetterly was employed as the deputy commanding officer of the Canadian contingent in the United Nations Disengagement Observer Force in the Golan Heights during the second intifada in 2000-2001. He has served as an air force squadron logistics officer and as a finance officer at military bases across Canada.

An adjunct professor at the Royal Military College of Canada (RMC) department of management and economics, and a Senior Fellow with the Centre for Security Governance, Dr. Fetterly has a B.Comm (McGill), M.Admin (University of Regina) and an MA and PhD in war studies from RMC. His PhD fields of study included defence economics, defence policy and defence cost analysis. His primary research focus is defence resource management. Dr. Fetterly also teaches courses in financial decision-making, defence resource management and government procurement at RMC. Through his company, Ross Fetterly Consulting Inc., he teaches a defence resource management course and a business planning course internationally for the Department of National Defence to senior military officers and defence executives in developing countries.

## ► **Canadian Global Affairs Institute**

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