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# Strategic Topic Research List 2014

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## **FOREWORD**

The Canadian Forces College (CFC) is Canada's centre of excellence for joint operational and national strategic levels of professional military education for selected senior leaders of the Canadian Armed Forces, the Department of National Defence and the Government of Canada. It is also a focal point for National Security and Defence Studies within Canada, where those selected senior leaders have the opportunity to further their education at the graduate level.

The Centre for National Security Studies (CNSS), an integral part of CFC, aims to create an environment of learning that accomplish several goals. It provides exceptional education while ensuring that the Department of National Defence and the Canadian Armed Forces (DND/CAF) issues are being identified and looked at. It allows graduating students to better understand and grasp strategic security and defence matters, while fulfilling the institution's requirements of taking a hard look at itself.

The Strategic Topic Research List (STRL) 2014 has been put together, with the students and the institution in mind, in order to achieve those important goals. The students outputs at the end of a program greatly depend on the inputs provided throughout, such as presentations and discussions, but also research. The STRL is another way of ensuring relevant and valuable outcomes that beneficiate both the student and the institution.

BGen Richard Giguère  
Commandant

A handwritten signature in blue ink, appearing to be 'R. Giguère', written over the printed name.



## **PRESENTATION**

This is the Canadian Forces College's (CFC's) annual publication of the Strategic Topic Research List (STRL). The aim of this annual document is to raise students' and researchers' awareness of strategic topics that are of particular interest to the Department of National Defence and the Canadian Forces.

The list is a compilation of input from Federal Government subject matter experts across the field of security and defence studies. The research topics reflect current as well as longer-term strategic issues, and are revised as the research agenda evolves to meet the needs of the future security environment.

Students are strongly advised to read and study this document and contact any of the various DND/CF representatives listed herein for further information regarding possible research projects.

  
Dr. Pierre Pahlavi

Chair, CFC Centre for National Security Studies  
Department of Defence Studies  
Canadian Forces College



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<b>General description of key areas of research:</b>	<ol style="list-style-type: none"><li><b>1. What are the strategic, military, policy, legal and ethical implications of new military technologies, particularly remotely controlled and autonomous weapons technology?</b>  As robotics continues to evolve, Canada and its allies and partners (as well as its adversaries) will likely increase their use of remotely controlled and autonomous weapons systems. Some of the potential benefits of these technologies include lowering Canada's military casualties in combat situations, and allowing the CAF to more effectively fight enemies that use asymmetric warfare. It would be pertinent to examine the operational and doctrinal implications of these technologies; their potential effects on force structures and military culture; the legal and policy frameworks governing their use; and, the ethical considerations surrounding their use.</li><li><b>2. Considering the evolving role and posture of the United States with respect to its global military presence and activities, what – from a defence perspective – are the implications for Canada?</b>  The US remains the world's foremost military power. Facing resource constraints while simultaneously prioritizing engagements in the Asia-Pacific, dealing with a resurgent Russia, considering new demands from NATO Allies, and challenges in the Middle East, the US military may find itself increasingly stretched. It would be useful to consider US priorities, strategies, defence changes and dynamics, as well as their potential impact on Canada – from NATO to NORAD to global engagements.</li><li><b>3. What are the drivers and shapers in Canada's consideration of its national security interests and its growing globalization of trade and investment?</b>  As Canada continues to expand its international trade and investment with a variety of countries and regions, the potential security concerns will also need to be considered. How can Canada expand, deepen and strengthen its trade and investment partnerships with rising global economies, while at the same time appropriately addressing security trends and strategic national security considerations?</li></ol>



	<p><b>4. From a defence perspective, what are the factors and considerations in positioning Canada to deal with the threats, actions and activities of nations and non-state actors who operate outside of established international rules and norms?</b></p> <p>States and non-state actors that operate outside of established international norms demonstrate the inherent unpredictability of today's international security environment. It will be important to understand how Canada should approach these actors from a defence perspective going forward, together with its allies and partners.</p> <p><b>5. What are the implications for DND/CAF for Canada's renewed emphasis on the Americas and Asia-Pacific?</b></p> <p>The Asia-Pacific and Latin America are regions of high strategic importance for Canada, the US and our other allies and partners, many of whom are focusing significant diplomatic, economic and defence resources on engaging countries in these regions. It will be useful to examine how Canada can engage key players in the Asia-Pacific and the Americas from a defence perspective, in terms of strategic impact aligned with goals of Canadian defence priorities and resource needs.</p> <p><b>6. Russia's activities in Ukraine have reminded Allies of the core mission of NATO. What do NATO – the organization – and Allies need to do in terms of capability, capacity, organizational structure and culture in order to be positioned to meet future challenges to security?</b></p> <p>NATO is being challenged by the fiscal constraints of some of its member states, the shifting geopolitical dynamics in Europe, and the need to reconsider its role on the international stage in the post-Afghanistan context. As NATO defines itself for the Twenty-first century, how can member states – and Canada – best contribute to transatlantic security within the Alliance?</p>
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<b>Organization (name in full):</b>	<b>Canadian Army</b>
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<b>General description of key areas of research:</b>	<p><b>Fight as a coalition, survive alone.</b></p> <p>The CAF should understand what are the limits of the Coalition (NATO or other) strategy and the enduring perception that one could rely on Allies for the provision of combat or enabling capabilities; where, in face of national interests or priorities, one may lose access to guaranteed support.</p> <p><b>Defining core competencies in a context of fighting among the people in the information age.</b></p> <p>The Canadian Army is at the crossroad of defining what capabilities are critical for its ability to sustain combat operations through the lens of the Afghan experience. Are we setting ourselves for fighting the last war again or are we investigating and investing sufficiently in the requirements to better understand the human dimension and fight among the people; overly relying on emerging technology for information operations.</p>



<p><b>Organization (name in full):</b></p>	<p><b>Chief of Defence Intelligence</b></p>
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<p><b>General description of key areas of research:</b></p>	<p><b>Afghanistan</b></p> <p>With the closure of ISAF and the anticipated complete U.S. withdrawal by 2016, what are the prospects for civil war in Afghanistan?</p> <p><b>Strategic Arctic</b></p> <p>The Arctic has recently become a scene of significant rivalry for different countries, including those having no borders with it. Recently, China has joined Russia and the U.S. as countries having significant strategic and economic concerns with Canadian claims to Arctic resources and economic mobility corridors now being revealed by significant climate change.</p> <p>Does DND have to reassess any ‘arctic strategy’ to combat ‘pressures from two fronts’ (ie. Russia &amp; China) or is there potential for an issue-specific alliance with a non-traditional ally (ie Russia against China, or vice versa)?</p> <p>If the latter, are there organisational/ operational/ security implications for the CAF? What are the potential conflicts / remediation’s with current alliances?</p> <p><b>China</b></p> <p>What are China’s global and regional objectives and what strategy will it pursue to shape the political and security environment in order to attain them?</p> <p>What are China’s red lines to use military force in support of its maritime territorial claims?</p> <p><b>Democratic Republic of Congo (DRC)</b></p> <p>The DRC Government and the UN mission are faced with stabilizing the eastern DRC where there are several competing militia groups. Some of the fighting is related to ethnicity but often the underlying issue is tied to the exploitation of natural resources (money). The fighting, in addition to the death and suffering, causes displacement of people and significant</p>





	<p>humanitarian problems that expend millions of dollars each year, in addition to the billion dollar a year UN mission.</p> <p>The DRC military (FARDC), has embraced and integrated many of these militia soldiers into their own military. The government however, cannot afford to pay the slowly increasing numbers of troops and cannot afford provide a social net to soldiers released into civilian world (DDR). This causes a perpetual problem of former soldiers getting in and out and returning to what they do best; looting and displacing the local populous.</p> <p>How can the DRC Government stabilize the militias, balance the number of FARDC soldiers (ie that they can afford) and convince the populous that the FARDC is capable of ensuring their safety, ultimately breaking the cycle?</p> <p><b>Pakistan</b></p> <p>How are civil-military relations evolving in Pakistan? What are the key drivers for this dynamic?</p> <p><b>Iraq</b></p> <p>What is next for Iraq? With ISIL occupying roughly half of the country, what future does the country have? Will ISIL maintain its current territorial advances? Can the ISF retake the lost territory? How will the Iraqi government cope with this issue? Is this the end of Iraq as a single state?</p> <p><b>Computer Network Intelligence</b></p> <p>Country Agnostic: What are the future impacts of Information Technology on the ability of the CF to operate freely in cyber space (i.e. freedom of communications) as part of kinetic operations?</p>
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<b>Organization (name in full):</b>	<b>Chief of Force Development, Director General Capability and Structure Integration, Directorate of Capability Integration</b>
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<b>General description of key areas of research:</b>	<b>Capability Development, Procurement, and Threat</b> <p>DND / CAF have adopted a capability based approach to force development. This approach begins with consideration of likely long-term (15-30 year) security environment issues and is disassociated from specific platforms and systems. Similarly, because of the timeframe considered and the type of scenarios employed to facilitate the capability based planning (CBP) process, no consideration of actual threat (actor + capability + intent) occurs in the early phases of capability development. However, as noted in the current CFD CBP Handbook, foundational CBP theory assumes that, as the time to procurement nears, the capability development process will reconcile capabilities with those of potential threat actors.</p> <p>Currently, there is no standardized process for such consideration to occur. This paper will examine existing CAF capability development processes and structures and investigate what is required to allow for standardized consideration of threat.</p>



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<b>General description of key areas of research:</b>	<p><b>Organization and C2 of CAF Information-Related Capabilities</b></p> <p>Currently the command and control of all CAF information related capabilities (encompassing EW, SIGINT, Cyber, Space, C4ISR, Net Ops, and Info Ops / Influence Activities) is not easily understood, is poorly integrated, and lacks coherence. Since the period of "Transformation", there has been no focused effort to investigate whether the information related capabilities should belong to a single central entity. The current trend is to establish disparate "Champions" for these capabilities to help overcome capability development or other short-term issues.</p> <p>The reality is that many individual groups, often under the authority of the individual environments, do the complex work of capability development for these areas, but with little consideration of, and no mandate to integrate these activities to fulfill joint requirements.</p> <p>This paper will investigate what joint-level command and control structure for CAF information-related capabilities is required to ensure the synchronization of information-related capability development and the satisfaction of cross-CAF interoperability requirements.</p>



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<b>General description of key areas of research:</b>	<b>Institutional Integration of CBP, PAA, MYEP</b> <p>Capability Based Planning (CBP) at the strategic level is a primary task of the Chief of Force Development (CFD). CBP is a three year cycle that completed its first complete cycle in 2013 and is now in the middle of the second cycle which will end in 2016. To date, the primary focus of the CBP process has been to identify and assess future capability requirements for the CAF, with data collection and assessment being organized primarily to look at the needs of the operational force. The primary product of CBP is the Force Capability Guidance.</p> <p>As part of its mandate to harmonize, synchronize and integrate the force development activities of the CAF, CFD also plays a key role in the development of CAF/DND institutional capability and CAF/DND force structures. The institutional capability of the CAF is currently reflected in the Program Alignment Architecture (PAA) and the force structure in the Multi Year Establishment Plan (MYEP). These two aspects of the CFD mandate are difficult to assess using the same CBP process that looks at the operational force, but there is a high level of interest in being able to better integrate the outputs of CBP with both the PAA and MYEP.</p> <p>The object of this MDS topic is to develop and assess options that would allow greater alignment of CBP with the production of the PAA and/or MYEP.</p>



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<b>General description of key areas of research:</b>	<p><b>NATO, Smart Defence and the Canadian Armed Forces</b></p> <p>Smart defence is a concept that encourages Allies to cooperate in developing, acquiring and maintaining military capabilities to meet current security problems in accordance with the new NATO strategic concept. This implies the pooling and sharing of capabilities, setting common priorities and coordinating efforts better and involves various activities in the near (0-5 years) and longer (beyond 5 year) terms. One example of a longer term activity is the Framework for Future Alliance Operations project.</p> <p>Some see Smart Defense as a new label for an old approach; however NATO officials like to think of it as a new mindset that encourages members to work with others; to set the right priorities at home and together in Brussels; and to encourage nations, especially the smaller nations, to specialize in what they do best. The concept envisages NATO’s role as evolving into a facilitator: funding mechanisms for multinational projects and enhancing bilateral cooperation and “islands of cooperation.”</p> <p>Such a concept will undoubtedly have an impact on Canada and the Canadian Armed Forces. A potential paper(s) could examine what the impact of participation in Smart Defence may be, both in terms of capability development and CAF force posture.</p> <p><b>Capacity Building</b></p> <p>Canada’s engagement in Afghanistan saw the Canadian Armed Forces participate in capacity building and security force assistance activities in support of the Government of the Islamic Republic of Afghanistan. This included the Strategic Advisory Team from (2005-2008) and Op ATTENTION (2011-2014)</p> <p>Notwithstanding these activities, questions remain regarding the appropriateness of military forces undertaking such tasks. Moreover, in both the Canadian context and that of our closest ally, there is no common structure, process, or system to comprehensively prepare units, and their respective leaders and soldiers, for undertaking these tasks.</p> <p>The objective of this paper is to review the challenges associated with military capacity building efforts, and identify and discuss the force posture and capability implications.</p>	



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<b>General description of key areas of research:</b>	<p>Cyberspace has become a pervasive part of daily lives in the personal, business, and government realms. Whether it is being used to communicate with friends, close financial deals, or transfer intelligence data, it is almost impossible to imagine a world without the benefits that cyberspace brings. Nevertheless, cyberspace capabilities are being harnessed by criminals, terrorists, and state aggressors as well.</p> <ul style="list-style-type: none"> <li>• What would be the air force's (or Army, Navy or CAF) role in cyber protection and cyber operations?</li> <li>• Do cyber operations threaten the current roles and identity of the air force (or Army, Navy, CAF)?</li> <li>• How can the adversaries of today and the future use cyberspace to enhance their own forces and to weaken/attack nations such as Canada and its allies?</li> <li>• What are the advantages of operating in cyberspace?</li> </ul>

<b>Organization (name in full):</b>	<b>Director General Military Personnel</b>
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<b>General description of key areas of research:</b>	<p>Should the CAF introduce multi-source assessment in its senior leader appraisal procedures? Multi-source assessment in the context of personnel appraisal concerns the use of multiple sources (e.g., self, subordinates, peers, superiors, course instructors, and/or clients/stakeholders) to evaluate individuals' current performance and/or their potential to be effective in positions of greater responsibility. Director General Military Personnel (DGMP) has drafted a concept for a personnel appraisal system that will eventually replace the extant CFPAS. Upon reviewing the personnel appraisal literature and "best" practices, DGMP concluded it would be counterproductive to apply multi-source assessment across the CAF as a whole. Instead, it was</p>



	<p>recommended that multi-source feedback continue to be a feature of CAF leader/professional development for officers and NCMs, starting in Developmental Period (DP) 3 and continuing in DPs 4 and 5.</p> <p>Although it has not been recommended for pan CAF personnel appraisal, the application of multi-source assessment for senior leader selection might be practical and beneficial. Together, senior leaders (i.e., CWO/CPO1 and Col/Capt(N) and above) make up less than 1% of the CAF population. However, the actions and decisions by senior leaders have an enormous impact on the organization and its people. Therefore, it is critical that they are identified and selected using the most robust procedures practical.</p> <p>At a minimum, a response to this question should consider:</p> <ul style="list-style-type: none"><li>(a) the various forms of multi-source assessment applied in industry, other militaries and cited in the performance appraisal literature;</li><li>(b) how best to apply multi-source assessment (who, what, when, where, how?);</li><li>(c) issues pertaining to scientific validity, legal defensibility, fairness, standardization, and any other risks and benefits associated with multi-source assessment within the larger personnel appraisal system and associated career management components (professional development and career planning);</li><li>(d) the practicality of incorporating multi-source assessment for selection purposes with the most senior leaders in light of resources, policies, systems, structure, culture/sub-cultures, current HR initiatives, etc.; and</li><li>(e) alternatives - If multi-source assessment is not deemed sufficiently practical or beneficial for selection purposes, could/should the CAF enhance its current application of multi-source feedback for leader/professional development purposes?</li></ul> <p>Having a student focus on this topic would be most beneficial heading into the implementation phase of the new pers appraisal system as we are striving to incorporate some elements of multi-source feedback, either for developmental and/or selection of the most senior leaders.</p>
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<p><b>Organization (name in full):</b></p>	<p><b>Director General Space</b></p>
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<p><b>General description of key areas of research:</b></p>	<p><b>DND/CAF Space within Government of Canada Construct</b></p> <p>Canada continues in its efforts to build and field sophisticated space systems destined to be used by GoC departments, including the DND, in fulfillment of their respective missions including for national security and sovereignty, environmental monitoring, agriculture, fisheries, weather monitoring and research and development to name but a few. In the case of DND (as well as other government departments), the intention/necessity to share data from these systems with partner nations and allies is key to mission success, is often seen as counter to the commercial interests of a nascent Canadian industrial space sector. In addition, there are cases where, DND may wish to limit distribution of space data, even unclassified data, in order to protect sensitive information.</p> <p>This paper seeks to explore how the DND (in particular) can fully exploit new GoC space systems to fulfill its mission while at the same time keeping in-line with the <i>Canada Space Policy Framework</i> and <i>Open Data Policy</i>, and their efforts to actively encourage and support Canada's space industrial base and value-added service providers.</p> <p><b>Space Situational Awareness and the CAF</b></p> <p>The surveillance of man-made objects in space is an integral component of Commander North American Aerospace Defence Command's (NORAD) aerospace warning decision-making process and is a fundamental capability for Canadian national surveillance and control. The Canadian Armed Forces (CAF) is highly dependent on the full spectrum of military capabilities derived from space assets and relies on space-enabled capabilities to conduct successful military operations at home and abroad. Global Positioning System (GPS) position and timing signals are embedded in our vehicles, ships, and aircraft. Satellite communications are often the only effective means to communicate between fighting units and with higher headquarters. Ever more capable and persistent space-based surveillance systems are transforming the way CAF missions are planned and conducted.</p> <p>At the same time, the space domain has become an increasingly "congested, contested and competitive" environment. Recent satellite collisions, anti-satellite weapon tests, and the widespread deployment of jamming capabilities highlight our need to understand this complex</p>





	<p>environment and to protect our access to, from and through it. As space-enabled capabilities become an increasingly critical element of CAF operations, we must also be proactive to ensure those capabilities are available when and where needed.</p> <p>These activities, specific to Canada's strategic requirements, provide CAF leadership with a clear understanding of the space order of battle known as Space Situational Awareness (SSA). This paper seeks to identify the strategic components and activities of SSA that are critical to CAF objectives. Furthermore, capability-based linkages will be made to high-level DND and GoC policy and guidelines, both released and pending, which highlight the CAF's need to continue developing capability in this critical mission domain.</p>
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<p><b>Organization (name in full):</b></p>	<p><b>Director Land Command Integration</b></p>
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<p><b>General description of key areas of research:</b></p>	<p><b>Decentralized Approach to Command and Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) Capability Development</b></p> <p>The CD process has not been adapted to reflect the rapid evolution of technology and the unique integration issues associated with C4ISR capabilities. There have been some successes in the CAP and allied armies by introducing equipment through Urgent / Unforeseen Operational Requirements (UORs), Technology Demonstrator Programmes (TDPs) or as "buy and try" activities. In the Canadian Army (CA), many of the latter have been locally generated initiatives, which then led to wider take up of a capability across CA. Without a formally established trials organization, it is felt that there may be some merit in allowing Divisions I manoeuvre Brigades within the CA, and the equivalents within other Canadian Armed Forces (CAF) environments, to conduct experimentation with C4ISR capabilities on a distributed basis as a major part of the CD process. Similarly, the CA has developed a highly successful approach to iterative software development in generating a range of tools linked to the HRMS application. Again, these tend to be generated from local initiatives and then made available to a wider set of users.</p> <p>This approach reflects the Gartner BI-Modal concept of information technology and could be applied more widely. Consideration could be given to using Vote 1 funds to address the rapid technology refresh rate which our Vote 5 Capital Project process cannot match. The proposed research question is, "Would a distributed experimentation approach add</p>



	<p>value to the Canadian Armed Forces (CAF) CD process for C4ISR capabilities."</p> <p><b>Joint Requirements Organization</b></p> <p>Chief Force Development (CFD) has recently been given the authority to draw together CAF C4ISR CD activities with a view to ensuring that they meet the joint needs of the CAF, to reduce redundancy and to better integrate activities. However, this approach requires CFD to knit together the respective requirement sets gathered by separate Environments. It also involves CFD running separate "joint" projects, even 'though there is no "joint" force generation organization. It may be more appropriate to gather all the Environments together into a single Capability I Requirements Management organization under a single chain of command (CoC). In areas such as C4ISR and Logistics, the sub-directorates would be highly joint and naturally drive those engaged in the capability and requirements management arena to generate joint requirements from the outset and to consider the appropriate balance of investment against a single pot of money. It is likely that savings would be accrued through the rationalization of separate CoCs.</p> <p>The proposed research question is, "What are the advantages and disadvantages of unifying the separate Environmental Requirements Management organizations into a single joint organization, and how could this be achieved?"</p>
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<p><b>Organization (name in full):</b></p>	<p><b>Director of Land Force Development</b></p>
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<p><b>General description of key areas of research:</b></p>	<p><b>Fight as a Coalition, Survive Alone</b></p> <p>The CAF should understand what the limits of the Coalition (NATO or other) strategy and the enduring perception that one could rely on Allies for the provision of combat or enabling capabilities as in face of national interests or priorities, one may lose access to guaranteed support.</p>



<b>Organization (name in full):</b>	<b>Director of Land Requirements</b>
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<b>General description of key areas of research:</b>	<p><b>Support to the Arctic</b></p> <p>"As the Arctic becomes less and less frozen for longer and longer periods each year, what tasks and/or missions will the Army be expected to do in a temperate Arctic? What will be the concept of operations for those tasks? What internal and external interdependencies with other agencies will exist?"</p> <p><b>Definition of Core Competencies in a Context of Fighting among the People in the Information Age</b></p> <p>The Canadian Army is at the crossroad of defining what capabilities are critical for its ability to sustain combat operations through the lenses of the Afghan experience. Are we setting ourselves for fighting the last war again or are we investigating and investing sufficiently in the requirements to better understand the human dimension and fight among the people to be ready to fight the next war (e.g. are we overly relying on emerging technology for information operations?).</p>

<b>Organization (name in full):</b>	<b>Royal Canadian Air Force - CFLO Pentagon</b>
<b>Contact Person(s) (e-mail &amp; phone #):</b>	<b>Brigadier-General P. Ormsby, CDS Liaison to US Joint Chiefs of Staff</b>
<b>General description of key areas of research:</b>	<p><b>Internship with OGD</b></p> <p>The need for senior RCAF officer internships with key Departments in the Canadian Government to gain vital experience necessary to successfully fill and execute institutional positions in the CAF.</p> <p><b>China and the RCAF</b></p> <p>What role would the RCAF play in future coalitions to counter Chinese expansionism?</p>



<b>Organization (name in full):</b>	<b>Royal Canadian Air Force - JTFN</b>
<b>Contact Person(s) (e-mail &amp; phone #):</b>	<b>Brigadier-General G.D. Loos, Comd JTFN</b>
<b>General description of key areas of research:</b>	<p><b>Current environment and its demands for strategic leadership in a military air force</b></p> <p>The intent is to explore the core competencies required at senior levels on an air force's 'strategic bench', and the corresponding structure and org for that bench - especially as it applies to force development and generation.</p>

<b>Organization (name in full):</b>	<b>Royal Canadian Air Force - RCAF HQ / DAR</b>
<b>Contact Person(s) (e-mail &amp; phone #):</b>	<b>Colonel P.F. Garbutt, DAR</b>
<b>General description of key areas of research:</b>	<p><b>Defence Procurement Strategy - How does the CAF procure leading edge technologies not available in Canada</b></p> <p>To study the new DPS [released June 14] implications on the acquisition of high technology capabilities that are not available in Canada. Propose a methodology for the CAF to speed acquisition of high technology capabilities from foreign sources while providing opportunities for Canadian industry.</p>

<b>Organization (name in full):</b>	<b>Royal Canadian Air Force - CFAWC</b>
<b>Contact Person(s) (e-mail &amp; phone #):</b>	<b>Lieutenant-Colonel B.M.J. Paulhus, CFAWC APKD</b>
<b>General description of key areas of research:</b>	<p><b>Common Operating Picture (C4ISR)</b></p> <p>To study how we can ensure proper coordination amongst all departments involved in the defence and security of our borders and their approaches. Optimizing a common approach to Whole of Government COP.</p>



<b>Organization (name in full):</b>	<b>Strategic Joint Staff</b>
<b>Contact Person(s) (e-mail &amp; phone #):</b>	<b>Colonel M.C. Atkins, Director Strategic Engagement</b> <a href="mailto:Michael.Atkins@forces.gc.ca">Michael.Atkins@forces.gc.ca</a> <b>613-996-9735</b>
<b>General description of key areas of research:</b>	<p><b>Strategic Communication and the Canadian Armed Forces</b></p> <p><b>Background:</b> NATO and several of our allies are moving forward with the implementation of a StratCom <i>function</i> while the concept itself is underdeveloped in Canada. Lacking a strategic framework, associated doctrine or leadership familiarity, recent experience in Afghanistan has led to a bottom-up, tactical concept of StratCom that is not focused on the military power requirement to align actions, images and words to achieve strategic objectives as an element of national power.</p> <p><b>Question:</b> Given the emerging importance of Strategic Communication to the Canadian Armed Forces, are there gaps in policy, operational enablers and doctrine that inhibit the ability of the CAF to inculcate the concept throughout all levels of command, with specific focus at the strategic level?</p>

<b>Organization (name in full):</b>	<b>Strategic Joint Staff</b>
<b>Contact Person(s) (e-mail &amp; phone #):</b>	<b>Colonel M.C. Atkins, Director Strategic Engagement</b> <a href="mailto:Michael.Atkins@forces.gc.ca">Michael.Atkins@forces.gc.ca</a> <b>613-996-9735</b>
<b>General description of key areas of research:</b>	<p><b>Joint Capability Operationalization in the Canadian Armed Forces</b></p> <p><b>Background:</b> Traditionally, new capabilities have been developed and operationalized solely within one of the environments, relying on the extant knowledge and skill sets inherent in that field of expertise. More recently, new capabilities are emerging out of largely research (space) or civilian (cyber) fields. With no clear environment in the lead, what is the best framework for the Canadian Armed Forces to shepherd the manning, development and operationalization of emerging joint capabilities.</p> <p><b>Question:</b> Emerging Joint Capabilities do not naturally fit under the umbrella of any of the Environmental Commanders. Does the organization of the CAF support the development, manning and exploitation of joint capabilities? Are there better approaches?</p>



<b>Organization (name in full):</b>	<b>Strategic Joint Staff</b>
<b>Contact Person(s) (e-mail &amp; phone #):</b>	<b>Ms. Heather Hrychuk, Director of Strategic Operations Analysis</b> <a href="mailto:Heather.Hrychuk@forces.gc.ca">Heather.Hrychuk@forces.gc.ca</a> <b>613-995-9120</b>
<b>General description of key areas of research:</b>	<p>Canada's engagement in Afghanistan saw the Canadian Armed Forces engage across the spectrum of operations. This included undertaking security force assistance and capacity building missions, under Op ATTENTION and the Strategic Advisory Team respectively.</p> <p>However, there are questions regarding the appropriateness of military forces undertaking such tasks. Moreover, in both the Canadian context and that of our closest ally, there is no common structure, process, or system to comprehensively prepare units, and their respective leaders and soldiers, for undertaking these tasks.</p> <p>A paper could review the challenges associated with military capacity building efforts and examine the structures required to enable such efforts in the future.</p>



<p><b>Organization (name in full):</b></p>	<p><b>Strategic Joint Staff</b></p>
<p><b>Contact Person(s) (e-mail &amp; phone #):</b></p>	<p><b>Lieutenant-Colonel L.C. Carvalho, SJS J34 Engineer</b>  <a href="mailto:Luis.Carvalho@forces.gc.ca">Luis.Carvalho@forces.gc.ca</a>  <b>613-996-4089</b></p>
<p><b>General description of key areas of research:</b></p>	<p><b>Improving the Productivity of CAF Maintenance Execution</b></p> <p><b>Background:</b> The maintenance of CAF vehicles, ships, air craft, communications equipment and weapons systems is a critical enabler to operational readiness, but it is also very resource intensive. Unprecedented pressures on the existing maintenance execution capacity of the CAF caused by the introduction of multiple new weapon system platforms and technology, the continuing need to maintain ageing fleets/equipment and the recurring loss of critical technician experience means that current practices and paradigms are unsustainable. The CAF needs to improve its maintenance execution efficiency.</p> <p>Third party analysis of CAF maintenance execution practices indicates that technician “wrench time,” that is the proportion of a technician’s day spent on the performance of maintenance activities, is one of the greatest value drivers to be examined for improving maintenance execution efficiency. Current wrench time for military technicians across the elements is estimated to vary between 15 to 30%. Based on comparison with other military organizations, it has been proposed that increases in wrench time in the range of 10% to 20% are achievable.</p> <p><b>Objective:</b> Propose revolutionary solutions to improve effectiveness and efficiency of CAF maintenance execution in order to support mission readiness. The solutions may be applicable CAF wide or may be focused on a specific Environment or equipment platform.</p>



<p><b>Organization (name in full):</b></p>	<p><b>Strategic Joint Staff</b></p>
<p><b>Contact Person(s) (e-mail &amp; phone #):</b></p>	<p><b>Lieutenant-Colonel Martin Gros-Jean, FP&amp;R Production</b>  <a href="mailto:Martin.Gros-jean@forces.gc.ca">Martin.Gros-jean@forces.gc.ca</a>  <b>613-992-8701</b></p>
<p><b>General description of key areas of research:</b></p>	<p>DND does not have a comprehensive document to guide its work from the strategic / corporate level. Instead, DND relies on different, often uncoordinated and disparate, sometimes Treasury Board mandated corporate products that serve as guide to plan activities across myriad domains. The Defence Priority Document, the Report on Plans and Priorities, the Multi-Year Establishment Plan, the Investment Plan, the Force Posture and Readiness Directive besides the various Business Plans and Operational Plans are all documents providing Defence guidance. Obviously, redundancies abound in such an array of documents. Even for a seasoned practitioner of the business planning process, there is a real challenge in understanding all the linkages and utility of all those documents.</p> <ul style="list-style-type: none"> <li>• How would a consolidation of all strategic guidance into a Defence Plan be of use?</li> <li>• Would it lead to better integration among NDHQ's functions, from programmatic to force generation output?</li> <li>• What could be the ideal publication rate?</li> <li>• How would a Defence Plan be beneficial for internal and external communication?</li> <li>• Who should be the lead for the Defence Plan?</li> </ul>





<p><b>Organization (name in full):</b></p>	<p><b>Strategic Joint Staff</b></p>
<p><b>Contact Person(s) (e-mail &amp; phone #):</b></p>	<p><b>Mr. Michel Pilon, Global Engagement 2</b>  <a href="mailto:Michel.Pilon@forces.gc.ca">Michel.Pilon@forces.gc.ca</a>  <b>613-995-6384</b></p>
<p><b>General description of key areas of research:</b></p>	<p>To quote the new 2014 GES:</p> <p>“Defence diplomacy refers to the focused and tailored engagement undertaken by the Defence Team with partner countries and organizations around the world to build and maintain cooperative relationships to advance Canadian defence interests and priorities. Defence diplomacy draws on a range of activities and resources and employs the entire Defence Team - military and civilian – as well as defence equipment and assets. Over time, the dividends of defence diplomacy directly enable the execution of the defence mandate and support broader Government of Canada national security and foreign and trade policy priorities.”</p> <p>Currently, DND/CAF Global Engagement (GE) is managed through an annual recurring cycle aimed at coordinating/synchronizing L1 engagement activities using BP for resourcing. Over the last three years the management process has failed to achieve success as a result of a number of factors to include: multiple changes of direction, multiple re-organisations, GES lack of clarity/objectives, delays in staffing, lack of centralized funding and others.</p> <p>The research should focus on proposing either a new process or identifying ways to improve the current management architecture. The proposal should cover: resourcing method, info sharing/info management, planning requirements, performance and effect assessment, and overall effectiveness of GE in meeting GC foreign policy objectives.</p>



<b>Organization (name in full):</b>	<b>Strategic Joint Staff</b>
<b>Contact Person(s) (e-mail &amp; phone #):</b>	<b>Colonel P.J. Williams, Director Arms Control Verification Peter.Williams4@forces.gc.ca 613-992-2348</b>
<b>General description of key areas of research:</b>	<p>Somewhat akin to the situation after the two World Wars of the 20th Century, in which nations sought alternatives to direct participation in military conflict, the forthcoming end of the current NATO ISAF mission in Afghanistan, many nations are becoming "war-weary". In addition, nations such as the United States are experiencing fiscal crises, and have plans to implement a budgetary reduction process known as sequestration which could have dire impacts on US military force posture and readiness worldwide. For our own part, Canada has commenced the Defence Renewal process.</p> <p>DND's current Global Engagement Strategy lists defence cooperation with the United States as one of its highest priorities. This has long been the case, is perhaps most visibly manifested in our efforts in support of the North American Aerospace Defence (NORAD) command, and CANUS military co-operation generally is likely to continue in future, despite our respective national interests which sometimes differ.</p> <p>Therefore, to what extent will the potential outcomes of US sequestration impact Canada/US defence co-operation and Canada's approach to challenges in the future security environment?</p>



<p><b>Organization (name in full):</b></p>	<p><b>Strategic Joint Staff</b></p>
<p><b>Contact Person(s) (e-mail &amp; phone #):</b></p>	<p><b>Dr. Rachel Lea Heide, Directorate Strategic Operations Analysis</b>  <a href="mailto:Rachel.Heide@forces.gc.ca">Rachel.Heide@forces.gc.ca</a>  <b>613-996-8359</b></p>
<p><b>General description of key areas of research:</b></p>	<p><b>HADR – Improving and Increasing Training Opportunities</b></p> <p>The Strategic Joint Staff has been looking into the current force posture and readiness allocations for humanitarian assistance and disaster relief (HADR) operations to determine if the Canadian Armed Forces (CAF) needs to improve its ability to anticipate or respond to these situations. A possible means of improving HADR response capabilities could include increasing training opportunities with allies, NGOs and other government departments (OGDs).</p> <p>This research topic suggests identifying the recent and current training regimes for expeditionary and domestic HADR operations since 2000. What HADR training does the CAF conduct for CAF personnel (army, navy, air force, Disaster Assistance Response Team)? How often does this training occur? Do personnel ever deploy without having received any HADR training sometime in his/her career? How are lessons-learned fed back into the training revisions? How are the different organizations within the CAF involved in HADR made aware of other CAF organizations' lessons learned and training revisions? Is there a central repository for HADR lessons learned? If not, how best should it be organized?</p> <p>Does the CAF conduct HADR training with OGDs, NGOs, and allied militaries? If so, what is the nature of this training, and how often does it occur? What are the pros and cons of training with allies and civilian organizations? How could training with OGDs (for both expeditionary and domestic HADR operations) and allies and NGOs (for expeditionary operations) be increased, and how might this improve the CAF's responsiveness?</p>