# Effects Based Approach to Coalition Operations: A Canadian Perspective*

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## Abstract

This paper explores the evolving Canadian response to the imperative of an integrated approach to security and defence from the perspective of the Canadian Forces. It focuses on an emerging vision of an Effects Based Approach to security and defence supported by Enhanced Interoperability, which, if implemented, will likely enhance any future Canadian contributions to a coalition. In addition to addressing organizational issues associated with this approach such as the nature of Command and Leadership, network-enabling technologies aimed at moving our military into the information age are also addressed.

## Main Text

### Introduction

Canada, like many of its Allies, is grappling with significant changes to the security environment. In addition to traditional interstate war, we also face a new

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generation of threats and a different kind of adversary.[1] Our new adversaries are less concentrations of identifiable mass and more amorphous, ubiquitous and adaptive human networks interlinked through enhanced technical connectivity. They are commonly non-sovereign, trans-national entities that perpetrate violence with little regard for the international conventions for the conduct war. They appear unconstrained by the Geneva Conventions of 1864, 1906 and 1947, the Lieber Code of 1863, or the Hague Conventions of 1899 and 1907, governing the use of force. From clandestine attacks on the World Trade Centre, through the car bombing of a Bali nightclub, to the cold blooded murder of hundreds of innocents aboard Spanish commuter trains, al-Queda and its affiliates are arguably the most notable examples to date.[2]

Why are such threats significant to Canada? First, not to mention our European and other Allies, they have acutely and cruelly demonstrated that North America and its citizens are vulnerable to attack. If it ever was, our continent is a fortress no more. Second, the nature of the violence perpetrated by the new adversary is a direct affront to Canadian values. These include the respect for democracy, the rule of law, and human rights. As our Department of Foreign Affairs has stated, "Canada is not an island able to resist a world community that devalued beliefs central to our identity."[3] Finally, there is a firm resolve among Canadians to prevent violence from threatening the global economic system to which their welfare is firmly linked. Stability and security are prerequisites for continued economic growth and development, not only for Canada, but also for all peoples of the world.

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[1] *Annual Report of the Chief of Defence Staff (CDS) 2002-2003 - A Time for Transformation.*
[2] See Paul Koring, "Multiheaded al-Qaeda has adapted", *The Globe and Mail*, 18 March 2004, p. A11.
[3] Department of Foreign Affairs and International Trade, *Canada in the World*, 1995.

New threats require a reassessment of the relevance of historically validated responses to traditional adversaries and an exploration of new responses where warranted. To do otherwise, risks maintaining a response posture and national security architecture that is no longer viable. Since the attacks of September 11, 2001, like many of our closest Allies such as the United States, United Kingdom and Australia, Canada has begun to reassess and realign the relationships between the constituent elements of its national security and defence framework. Broadly speaking, the discussion is centred on assuming a more holistic view of national security policy where diplomacy, defence, and economic development and trade increasingly are viewed as networked mechanisms to deter, contain or defeat our new adversaries as part of a national or wider coalition effort. As the Canadian Chief of the Defence Staff has stated:

> We are moving from an industrial, hierarchical mode of thinking, to a world powered by collaborative human networks. We must learn to think, behave, and act as a node in a collaborative network that includes our warfighters, all three military environments [services], our civilian colleagues in the [Defence] department, and broader security portfolio, as well as our Allies.[4]

In the Canadian context, the imperative of a networked approach to security and defence is increasingly recognized, most recently by the Auditor-General in a much-anticipated report on the use of the additional $7.7 billion specifically allocated to security and defence agencies soon after the tragic events of September 11, 2001.[5] This imperative has led to the creation of a new Federal Cabinet Committee on Global Affairs chaired by the Prime Minister and focussed on an integrated approach to foreign affairs, defence, international development and trade. More specifically, the Minister of Foreign Affairs

[4] *Annual Report of the Chief of Defence Staff (CDS) 2002-2003 - A Time for Transformation.*
[5] Drew Fagan, "Auditor-General targets security costs", *The Globe and Mail*, 18 March 2004, p. A4.

has been assigned responsibility to lead the development of an integrated and coherent international policy framework in collaboration with the Ministers of International Trade, National Defence (responsible for the Canadian Forces), International Cooperation, and Finance to be reviewed by the appropriate Standing Committee of the House of Commons. In addition, a new Public Safety and Emergency Preparedness Portfolio has been established under the Deputy Prime Minister to better integrate the core activities of the former Office of Critical Infrastructure and Emergency Preparedness, the Royal Canadian Mounted Police and Canadian Security and Intelligence Service as well as other agencies.[6] These initiatives will have direct bearing on future Canadian contributions to multinational coalition efforts for global security interventions and to bi-national efforts for continental security and defence.

**Scope**

This paper explores the evolving Canadian response to the imperative of an integrated approach to security and defence from the perspective of the Canadian Forces. It focuses on an emerging vision of an Effects Based Approach to security and defence, which, if implemented, will likely enhance any future Canadian contributions to a coalition. In addition to addressing organizational issues associated with this approach such as the nature of Command and Leadership, network-enabling technologies aimed at moving our military into the information age are also addressed.

[6] http://pm.gc.ca/eng/chgs_to_gov.asp

**Canadian Forces**

Prior to addressing the emergent CF vision of an Effects Based Approach to security and defence, it is useful to clarify the meaning of the term Canadian Forces. Canadian Forces refers to the three unified Services or "Environments"—army, navy and air force—which collectively have a capped Regular Force strength of approximately 60,000 with 30,000 Reservists. The CF is established by Canada's National Defence Act and is headed by the Chief of the Defence Staff. Working with his civilian counterpart in the Department of National Defence, the Deputy Minister, the Chief of the Defence Staff supports the Minister of National Defence, an elected member of the House of Commons, in managing military affairs in concert with the Prime Minster and Cabinet. Such management is guided by two overarching principles fundamental to the place of the military in a parliamentary democracy: ministerial control over the military and Department of National Defence, and effective parliamentary oversight of the defence programs and activities of government.[7] These programs and activities are undertaken in the support of three fundamental defence roles for Canada's military: the defence of Canada and Canadian interests and values; contributing to Canada-United States defence cooperation; and, contributing to international peace and security.[8]

[7] *National Defence Act*, Sections 3 and 4.
[8] These Defence roles are assigned in the *1994 Defence White Paper*.

**Concepts to Capabilities**

In order to appreciate how the Canadian Forces appears to be adopting a vision of an Effects Based Approach to meet the challenges shaping the future security environment, it is important to briefly address the general process by which concepts, developed within the CF, ideally translate into visions and ultimately, fielded capabilities including equipment and competencies. The first step in the process is the development of concepts and related theories about organizational effectiveness across the full range of military operations from combat to humanitarian assistance. A concept is an idea, theme or design, especially as the basis for development or execution, whereas a theory is a system of concepts explaining a cause and effect relationship from an observable event, especially one based on general principles, independent of the particular things to be explained. Theories applied within a specific context are hypotheses, which, as speculation, may be either supported or refuted through experimentation. Once tested and having generated sufficient support to be accepted, a hypothesis is employed by the CF force development community to formulate, within a projected future context, a vision of how the defence establishment should evolve to remain relevant. The vision may be refined as other hypotheses are accepted and incorporated and/or assumptions are modified. With each iteration, future requirements may be identified and gap analysis undertaken. The gaps identified may be deficiencies in capabilities, resources, or policy. It is incumbent on the CF Leadership to guide the process and in the end endorse and champion a particular vision, thereby allowing management to formulate a path (strategy) by which to achieve it. See FIGURE 1.

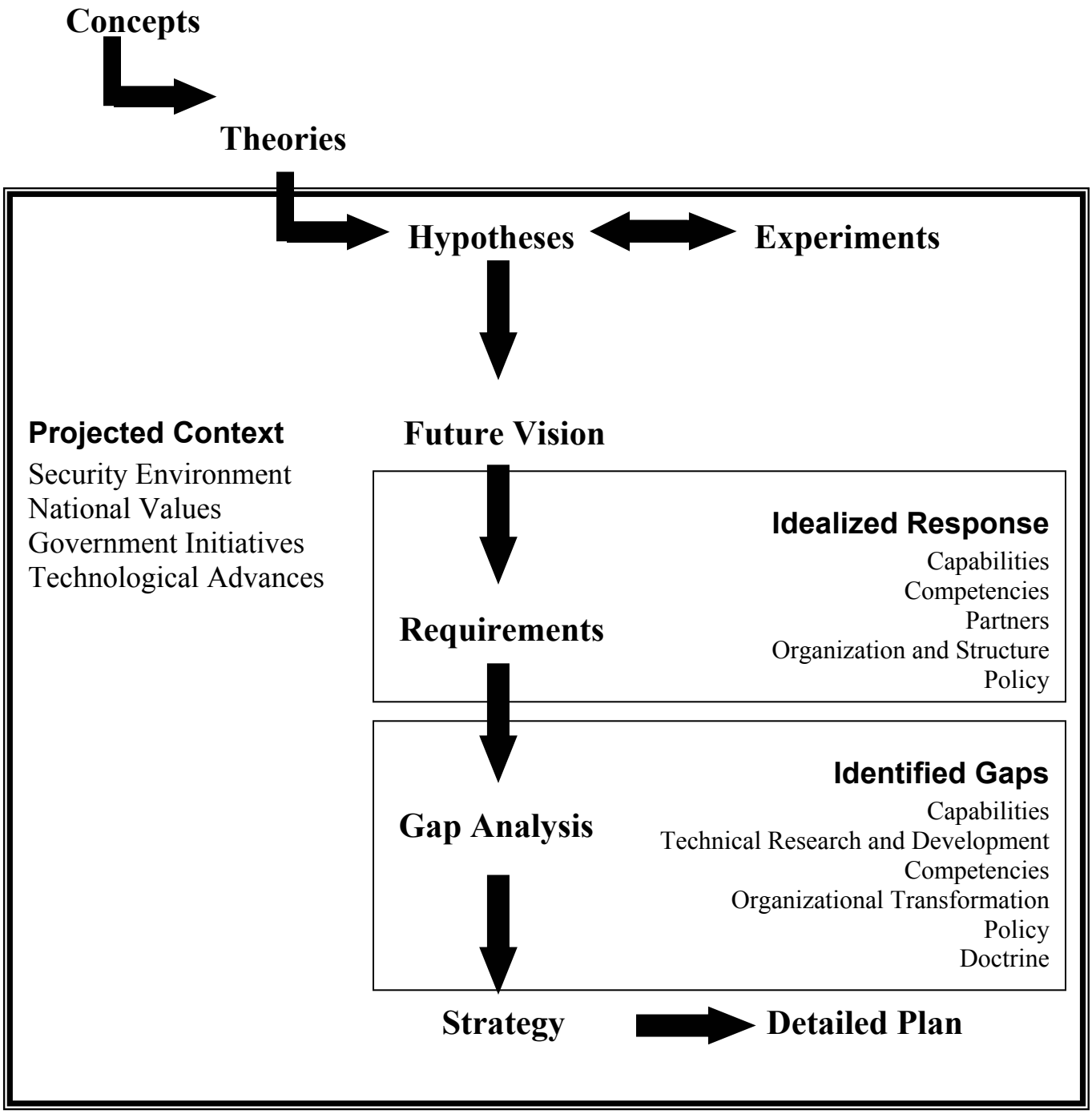

Concepts
Theories
Hypotheses
Experiments
Projected Context
Security Environment
National Values
Government Initiatives
Technological Advances
Future Vision
Idealized Response
Capabilities
Competencies
Partners
Organization and Structure
Policy
Requirements
Identified Gaps
Capabilities
Technical Research and Development
Competencies
Organizational Transformation
Policy
Doctrine
Gap Analysis
Strategy
Detailed Plan

**FIGURE 1**

**Effects Based Approach**

As indicated earlier, while yet to be fully translated into an implementation strategy, an accepted vision of an Effects Based Approach to the full range of military operations is emerging within the Canadian Forces. The working theory is that *integrated* sets of actions undertaken to achieve desired effects will improve our ability to shape the behaviour of both adversaries and neutrals minimizing unintended consequences.

When this theory is applied within the context of a future security environment of highly networked and adaptive adversaries, in addition to our own increasingly networked Departments of Foreign Affairs, Defence, International Development and Trade and Public Safety Portfolio, the hypothesis arrived at is the following: if integrated sets of *diplomatic, information, military, and economic* (DIME) actions are undertaken to achieve desired national and coalition effects, then we will be better able to shape the behaviour of both adversaries and neutrals minimizing unintended consequences. In order to integrate such actions, the Canadian Forces recognises that an Effects Based Approach first and foremost depends on the human dimension—how we share information, and how we perceive and think which directly influences how we will act. It begins by perceiving potential adversaries as agile and highly adaptive, operating within distributed environments composed of complex networks of nodes and multiple linkages. It acknowledges that we must develop and maintain, as accurately as possible, an understanding of how adversaries think, what values, beliefs and objectives drive their actions, and what capabilities are available to them. If we can anticipate with any degree

of certainty how our adversaries will act or react, then we should be better positioned to make decisions that will allow us to out manoeuvre them and drive a change in their behaviour. An efficient and logical means to understand complex qualitative problem sets, weighs the value of relevant factors, evaluates risks against benefits and develops coordinated courses of action. Working with our partners, we must be able to tie individual decisions to national strategy, develop mutually supporting courses of action, and accurately document the rationale for specific military actions. The process will not guarantee the "right" decision for every contingency, but it should enhance the quality of decisions made and the linkages between them.

Through a rigorous process of consultation and collaboration among national security partners as well as multinational experimentation including the Limited Objective Experiment (LOE) and Multinational Experiment (MNE) series[9], the hypothesis described above has garnered sufficient support within the Canadian Forces to be articulated as an emergent vision along the following lines:

> Canadian Forces elements assigned to conduct Operations will be organized and structured to leverage CF interoperability, both internally and with other national and international security partners, to maximize the effectiveness of military contributions in achieving desired effects in the pursuit of larger national and coalition objectives.

**Enhanced Interoperability**

In accordance with the process by which visions are translated into fielded capabilities, the Canadian Forces has begun to explore the organizational and technical

[9] This series of experiments sponsored by US JFCOM has focused on Coalition efforts related to Rapid Decisive Operations, Operational Net Assessment and Effects Based Planning and Execution. See www.jfcom.mil

requirements of operationalizing an Effects Based Approach. The term "Enhanced Interoperability" is increasingly employed to describe how security partners must organize themselves to share information, collaboratively analyse problem situations, and collectively decide on mutually supportive courses of action to achieve desired effects. Enhanced Interoperability describes not only activities in which elements of two or more CF Environments (army, navy, and air force) participate, but also CF interaction with any partner organization involved in security activities that could influence the conduct and outcomes of military operations. These partner organizations with which the CF may be united in action include Other Government Departments, Allies, Non-Government Organizations, and International Organizations and Agencies. It is projected that for the foreseeable future, Military Operations will likely be conducted within this Joint, Inter-Agency, and Multinational (JIM) framework. See FIGURE 2.

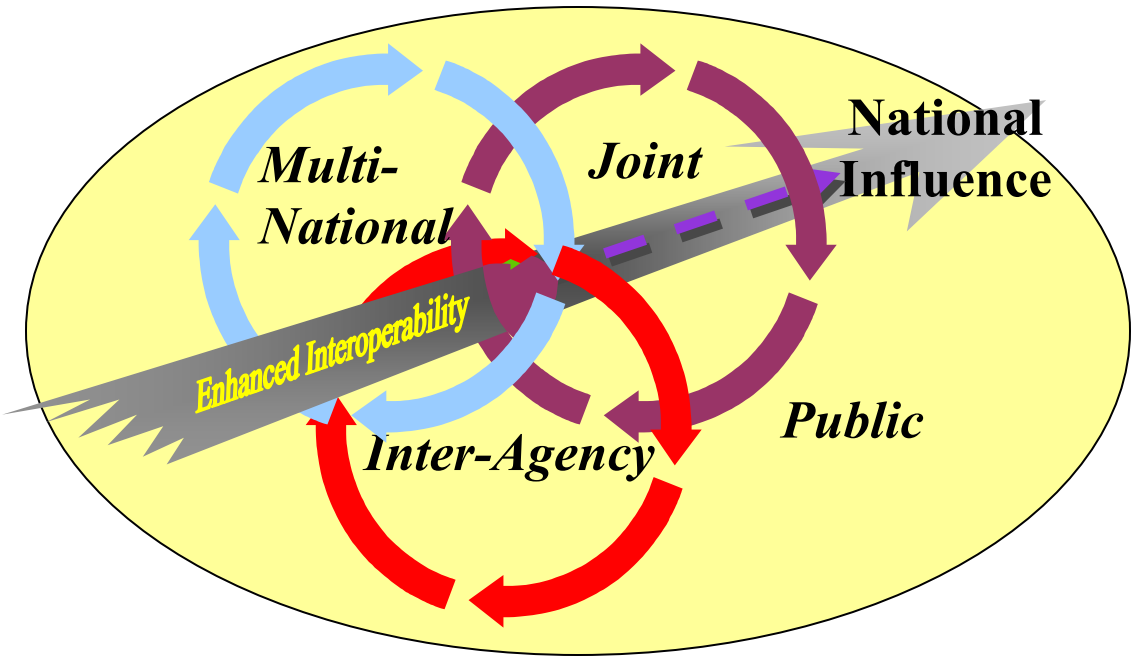



**FIGURE 2**

Within the JIM framework, Enhanced Interoperability may occur in four broad domains: information interoperability (the way we share information including

technological and procedural aspects); cognitive interoperability (the way we perceive and think reflected in doctrine and decision processes); behavioural interoperability (the way we carry out the selected course of action); and physical interoperability (the way equipment and systems are connected or compatible). Clearly, there cannot be a uniform level of interoperability across the entire spectrum of organizational boundaries due to varying legislative limitations, policies, regulations and orders. Different organizations accommodate different levels of interoperability within the three domains ranging from complete independence at the lower end, through de-confliction and coordination, to complete integration among partners at the upper end. That said, the objective is to leverage CF interoperability internally and with our security partners to realize the most effective and efficient employment of military capabilities in meeting national and coalition objectives. Sharing information, collaboratively analysing the problem situation, and collectively deciding on mutually supportive courses of action within the JIM framework should enable us to achieve this aim.

**Command and Leadership**

In preparing itself to develop the personnel competencies demanded by Enhanced Interoperability, the CF is first and foremost reassessing established institutional assumptions of critical personal competencies associated with Command and Leadership. NATO documentation defines Command as the legal authority vested in a member of an Armed Force by a sovereign nation for the direction, coordination, and control of military

forces.[10] By and large, authority and responsibility over subordinates and resources is a widely accepted definition of Command currently in use in most Western military organizations including the Canadian Forces. However, within the broader JIM operating environment which includes security partners over whom the military has no formal authority, the Canadian Forces increasingly recognizes that Command authority may be considered but one control mechanism within a larger Command and Control ($C^2$) framework. Canadian researchers, Carol McCann and Ross Pigeau, have defined this broader notion of Command as "*the creative expression of human will necessary to accomplish the mission*".[11] If we accept this definition within the context of an Effects Based Approach to security and defence, it follows that the personal attributes of the individual CF member, particularly intellectual and interpersonal competencies, will be critical to engendering trust with security partners in the pursuit of desired effects, especially where no formal Command authority exists. This broader notion of Command has in turn refocused attention on the nature of Leadership and its elements. Leadership in the CF is increasingly defined as "*directly or indirectly influencing others, by means of formal authority or personal attributes, to act in accordance with one's intent or a shared purpose*."[12]

**Emergent Capabilities**

As notions of Command and Leadership are being revisited in order to facilitate information, cognitive and behavioural interoperability both internally to the CF and with

[10] *NATO Glossary of Terms and Definitions* (AAP-6), 2003.
[11] C. McCann and R. Pigeau, *A Conceptual Framework for Discussing Command and Control*, 2001.
[12] Canadian Defence Academy, *Leadership in the CF* - Second Draft, 2003.

its security partners, the Canadian Forces equally recognizes the vital importance of the physical interoperability of equipment and systems. Indeed, the human relationships required for effective collaboration must be supported by enabling technical capabilities that are interoperable across organizational boundaries. Information Age Warfare capitalizes on advances in information management and weapons technologies, allowing militaries to conduct precision engagement, including precision targeting as well as the precision delivery of weapons.

In the particular case of the Canadian Forces, a premium is being placed on a C4ISR "enterprise architecture", which facilitates the flow of information critical to mission success through the Chain of Command as well as to and from our security partners. It will provide warfighters at all levels with an information backbone to help shape common perceptions of the merged battlespace.[13] It will include connectivity to a common information environment, provide core services and a trusted, timely and relevant common operating picture developed through a Joint Information and Intelligence Fusion Capability[14] allowing us to seize and maintain the initiative in the highly complex, dynamic and volatile security environment. In addition, Defence Research and Development Canada is developing a Coalition Operational Planning Suite (COPlanS) of integrated planning, decision-aid and workflow management tools aimed at supporting the Operations Planning Process.[15] Within a collaborative work environment, COPlanS is intended to support both synchronous and asynchronous distributed workflow through the use of a mission analysis tool, a multiple criteria decision support

[13] National Defence, *CF C4ISR Campaign Plan - Interim Report*, 27 June 2003.
[14] National Defence, *CF Command Decision Support Capability - Principles and Goals*, 16 May 2003.
[15] Defence Research and Development Canada, *COP 21 Spec. Tech*. Annex A7, 10 September 2003.

tool, readiness estimate, as well as operational cost and risk management tools. Although it currently supports a single level of workflow as demonstrated during a Joint Warrior Interoperability Demonstration in 2002, more fully developed versions will support multi-level workflows and decision point documentation.

As a critical enabling capability for Enhanced Interoperability, tools such as COPlanS and the components of the C4ISR enterprise architecture including communications systems, computers, networks, sensors, and databases, will be central to the conduct of Information Operations (IO).[16] As much as the skilful application of kinetic force weapons will directly influence the physical domain and the adversary's ability to resist, the skilful application of information as a weapon will directly influence the cognitive domain and thus the adversary's will. At the national Strategic level, IO will encompass both military and civilian elements integrated within a national security architecture. At the Operational level, the focus will be to protect our own Command, Control and Information Systems (C2IS), while integrating available capabilities to disrupt the adversaries' decision cycle and degrade their C2 systems[17]. By isolating our adversaries' Command and Leadership elements from their combat forces, we can expect to slow their tempo of operations, disrupt ongoing operations and degrade their ability to sustain and reinforce.[18]

In an international context, in order to maximize the Canadian Forces' contribution to a multinational coalition, it will be critical for our integrated C4ISR

[16] Information Operations may be defined as actions taken to safeguard the preservation of one's own information and information system while exploiting, disrupting or denying the use of an adversary's information or information system. *CF Operations Manual* (B-GG-005-004/AF-000), Chapter 32.
[17] Ibid
[18] *CF Information Operations* (B-GG-005-004/AF-010), Chapter 1.

architecture and related tools to be interoperable with those of our multinational partners, particularly the US as our closest ally. This will serve to establish a common information environment, facilitate collaboration in shaping common perceptions of the operating environment and permit integrated planning and execution of actions to achieve desired effects. Canadian supported organizations aimed at enhancing such coalition interoperability include the Multinational Interoperability Council (MIC), the Combined Communications and Electronics Board (CCEB) and NATO Allied Command Transformation.

**Vignette**

The following vignette illustrates a practical application of the kind of interoperability with its coalition partners being pursued by Canada. An Allied space based sensor detects the launch of a theatre class ballistic missile with a predicted impact inside an area of active coalition operations. The information is immediately shared across the Coalition Wide Area Network (CWAN) and corroborated through event reporting by coalition land, sea and air-based ELINT and SIGINT collectors including a Canadian warship. Coalition Forces within the predicted impact area are immediately warned of the event and take appropriate action. The Coalition Dynamic Targeting Cell within the Coalition Operations Centre that is familiar with the Canadian integrated Joint Intelligence Surveillance Reconnaissance capability, fixes a Tactical Canadian land unit with an embedded Uninhabited Aerial Vehicle (UAV) and sensor capability close to the launch location. It immediately requests the launch of a UAV with an Infrared and

Electro-optical sensor pack and SATCOM uplink capability to find and fix the adversary's launch capability. Concurrently, a review of all available weapons delivery capabilities within range is conducted including long range artillery, Special Operations Forces and land attack capabilities resident offshore in Canadian warships. It is, however, two Canadian fighters on Strike Combat Air Patrol, armed with Joint Stand-Off Weapons which are selected and committed by the Coalition Air Operations Centre (CAOC). The UAV tasking is quickly approved. Utilizing the spaced based sensor GPS cueing, the UAV quickly finds and fixes the mobile transporter erector launcher and associated support vehicles. The real-time information and imagery is immediately and simultaneously available to the Dynamic Targeting Cell, the CAOC and the committed fighters via linked communication. It is assessed and results in a recommendation for immediate prosecution. While awaiting weapons release authority, the fighters download all applicable information via secure data link and prepare attack profiles. Coalition theatre missile defence assets achieve final confirmation of the threat launch event with the acquisition, tracking and engagement of the inbound missile and confirmation is pushed over the CWAN. Onboard fighter fire control systems are cued using linked offboard sensor data, and once acquired, the target is verified. With Canadian Rules of Engagement met, weapons release authority is granted and the target successfully prosecuted. The action has been rapid and decisive, accurately targeting and precisely applying force, and engaging only that segment of the adversary's society that threatens our national and coalition interests and values.

The foregoing engagement was enabled by increased flow of relevant decision-quality information provided by coalition joint ISR capabilities. This facilitated more

comprehensive real-time battlespace knowledge, resulting in the competitive advantage of decision superiority. The Tactical delivery continued to be performed by highly trained and proficient, Service-generated, combat forces that were tightly focused thereby increasing their potency. In this scenario, a jointly supported Operational decision process identified and targeted an adversary's Strategic asset which was swiftly engaged with Tactical lethality compressing the Strategic, Operational and Tactical arenas into a merged environment.

Although the preceding vignette describes individual Canadian Tactical contributions to a wider coalition effort in major combat operations, current thinking within the CF appears increasingly to be moving towards national Joint Task Force contributions. In addition, Canadian leadership of a multinational Joint Task Force in peace support or limited combat operations contexts is also being contemplated. If implemented, such initiatives would serve to increase Canadian military support to wider coalition efforts and at the same time reinforce Canada's commitment to joint force transformation in alignment with our closest Allies.

**CF Initiative**

Aside from the purely military dimension, the Canadian Forces is well positioned to assume a Leadership function (as defined earlier) in promoting the integration of the non-military instruments of national influence and their inclusion in a larger coalition effort. By spearheading Canadian involvement in multinational Concept Development and Experimentation like the LOE and MNE series which investigate elements of an

Effects Based Approach to operations, the CF has begun to elicit pan-governmental interest, particularly from the Department of Foreign Affairs, in the benefits of collaboration across the JIM framework. In addition, CF-led experiments such as the Advanced Littoral Intelligence, Surveillance and Reconnaissance Experiment (which intends to conclusively illustrate the inherent advantages of an nationally integrated ISR architecture in support of increased information sharing) have attracted the attention and support of key security partners including Public Safety and Emergency Preparedness, the Department of Justice, Transport Canada, and the Canadian Coast Guard. While such initiatives do not in any way discount traditional military kinetic strikes as a potentially significant contribution to a coalition effort, they reinforce the possible synergies to result from their use in conjunction with other mutually supporting means of influence. Simply put, they focus on harnessing the broad social capital that Canada may bring to bear in a particular contingency. By pursuing collaborative planning that takes into account non-kinetic instruments of national power rather than solely military-centric kinetic ones, coalition partners like Canada may be better positioned to influence the achievement of desired outcomes to a greater degree than has been the case in the past. In this way, an Effects Based Approach may contribute to more equitable burden sharing in the pursuit of coalition objectives.

**Challenges**

While an Effects Based Approach holds tremendous promise for coalition operations, it is not without its challenges. When speaking of an Effects Based

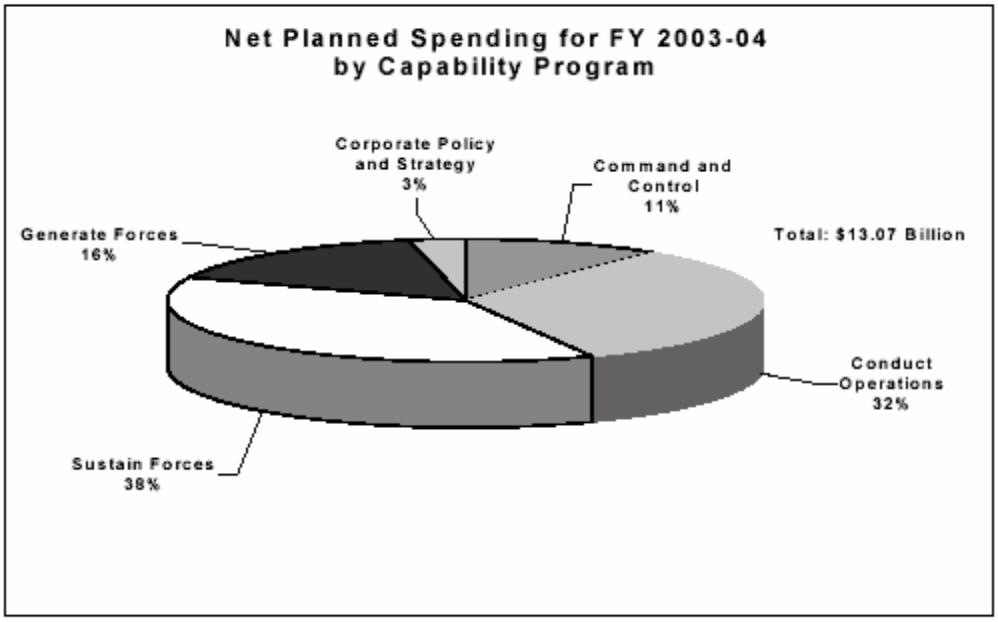
Approach to operations, we must be careful not to confuse the imperative of greater *integration* among diplomatic, information, military and economic instruments of national influence in the pursuit of desired effects, with the military's real or apparent *assimilation* or *direction of* non-military elements as part of a more holistic planning process. Rather, the military and other instruments of government should be seen as mutually supportive in the pursuit of higher coalition objectives. To do otherwise would unnecessarily risk the appearance of the Task Force Commander attempting to control other supporting agency domains, thereby potentially alienating and aggravating security partners. By the same token, the perspectives and motivations of security partners might be misrepresented and misinterpreted by the military. During MNE III, the approach of some coalition members appeared to reflect the *de facto* paramountcy of the military effort. For example, the System of Systems Analysts supporting the Operational Net Assessment development were assimilated into most elements of the Effects Based Planning process alongside the Military Coalition Task Force planners. As a result, the System of System Analysts assumed more of a direct reporting function to the Task Force Commander focused on the military imperatives, rather than a reach-back function providing the military with a broader, more objective perspective of developments across the Political, Military, Economic, Social, Infrastructure and Information (PMESII) spectrum, and wider inter-agency community.

Beyond organizational issues, the enabling technologies that facilitate the kind of physical support needed to support an Effects Based Approach to security and defence, are often costly with a short half-life. For a smaller coalition contributing nation like Canada, limited resources (See FIGURE 3) necessitate a discriminating approach to the

pursuit of new technologies. That said, focused standardization efforts pursued through multinational fora such as the MIC, should assist in realizing efficiencies in the development of supporting systems that are "born interoperable."

***Canadian Defence Spending***

*Resource Overview*




Source: Department of National Defence, *Report on Plans and Priorities 2003-2004.*

**FIGURE 3**

## Conclusion

Descriptions of the future security environment consistently use terms such as volatile, uncertain, complex and adaptive[19]. Within these projections, information flows will have increased by several orders of magnitude and

[19] See for example: National Defence, *The Future Security Environment 2025*, 2003.

latency will have been significantly reduced. Commanders on both sides will likely watch conflict unfold in near-real-time, as will a large portion of the world's population over commercial media. We will likely continue to face new forms of adversaries, emanating from highly networked and globally distributed, trans-national organizations which may not conform to accepted rules of conduct. The projected root causes of future conflicts include inter-related combinations of political, military, social, economic, and environmental elements. The solution sets to these complex problem sets will likely require integrated efforts in corresponding domains. In the case of the Canadian Forces, an Effects Based Approach is increasingly recognized as the most viable means by which to achieve such integration across the Joint, Interagency, and Multinational framework. By pursuing Enhanced Interoperability, innovative definitions of Command and Leadership particularly in dealing with non-military security partners, as well as advances in information management and weapon systems technologies, the CF should be well positioned to make significant contributions to coalition Effects Based Operations in the 21st Century.

# An Effects Based Approach to Coalition Operations

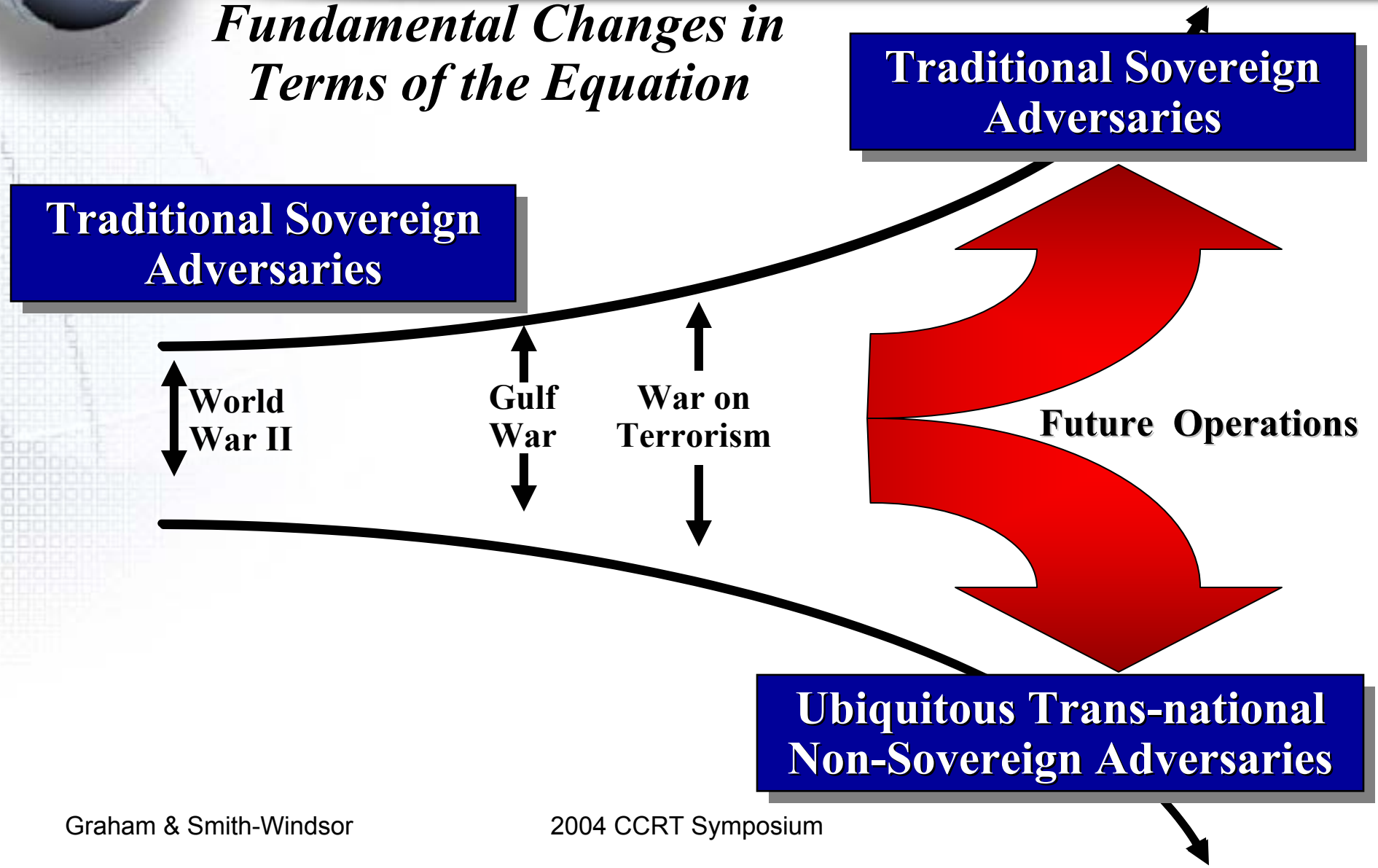
## A Canadian Perspective

# Introduction

- We face a new generation of threats and a different kind of adversary within the evolving security environment
- Implications for Canada
  - We must acknowledge North American vulnerability
  - The methods used are a direct affront to deep rooted Canadian values
  - They threaten the stability of the international system upon which Canadians' livelihood depends
- Demands a reassessment of historically validated responses to traditional adversaries

# Changing Nature of Conflict

*Fundamental Changes in Terms of the Equation*



# Canada's National Security Policy

- **Released 27 April 2004**
  - The Government is building a **fully integrated security system** that ensures that we can more effectively respond to existing threats and quickly adapt to new ones. The evolving nature of threats to Canadians requires a **fully integrated government approach** that ensures that issues and information do not fall between the different parts of our security system.
  - Essential to bring together information on threats to Canada from all available sources and properly assess them in order to **provide as accurate and complete a picture as possible**.
  - Analytical capacity has been enhanced by doubling the size of the Intelligence Assessment Secretariat within the Privy Council Office.

# NSP and Allied Linkages

- The US, UK and Australia also recognize that the current scope of threat assessment requirements exceeds the capacity of any one organization and that an integrated approach is essential.
  - UK Joint Threat Assessment Centre
  - US Terrorist Threat Integration Center
  - Australia National Threat Assessment Centre

# Other Canadian Government Initiatives

- Appointment of a National Security Advisor to the Prime Minister
- Creation of a National Security Advisory Council made up of security experts from outside of Government
- Creation of two new Cabinet Committees
  - Global Affairs
  - Canada – US Relations
- Development of a new Foreign Policy framework integrating Diplomacy, Defence and Development
- Amalgamation of domestic security activities into Public Safety and Emergency Preparedness – Canada portfolio

# Canadian Forces Direction

We are moving from an industrial, hierarchical mode of thinking, to a world powered by collaborative human networks. We must learn to think, behave, and act as a node in a collaborative network that includes our warfighters, all three military environments, our civilian colleagues in the department, and broader security portfolio, as well as our allies.

General RR Henault – Chief of Defence Staff

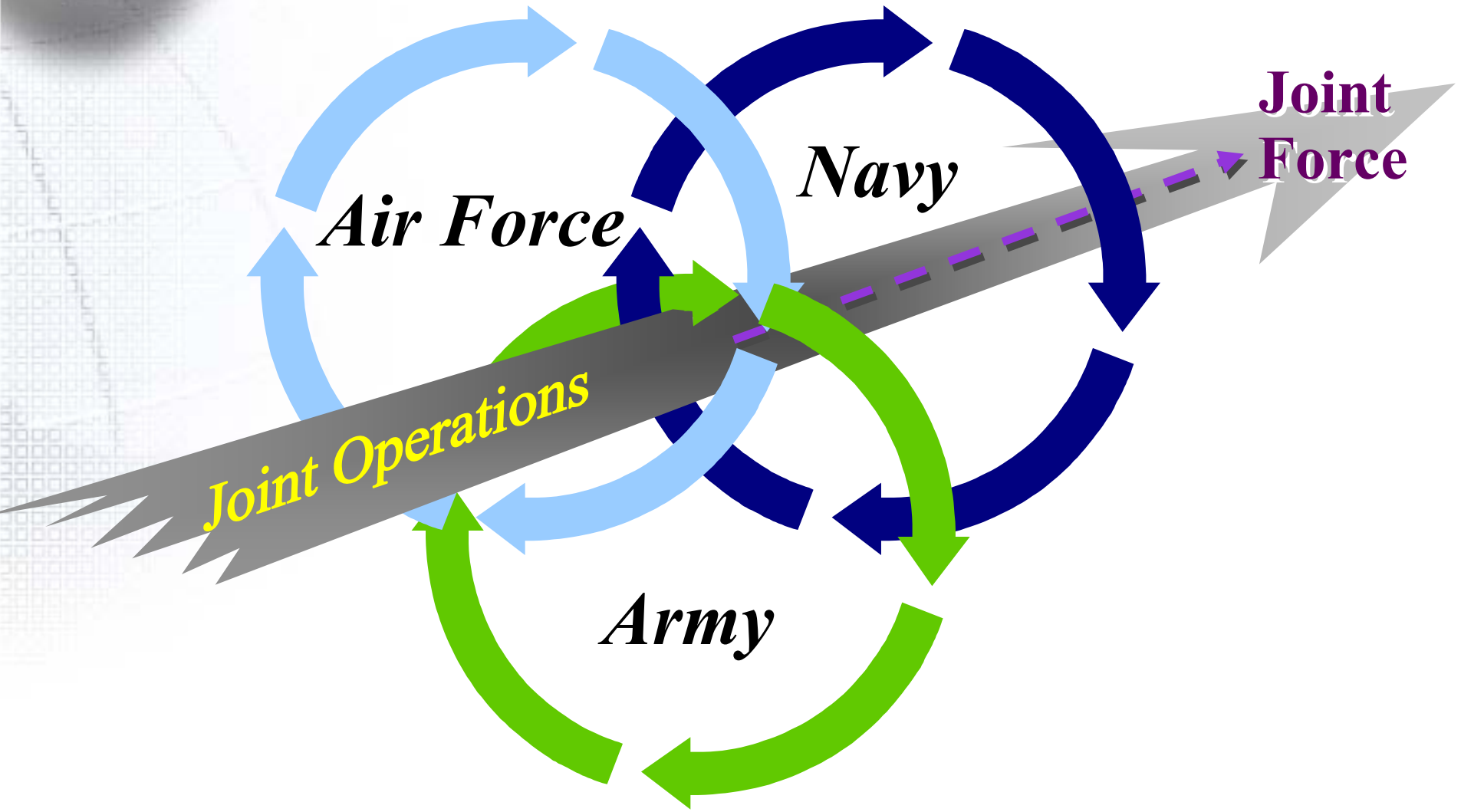
Annual Report of the CDS 2002- 2003

# Transform From… Transform to…

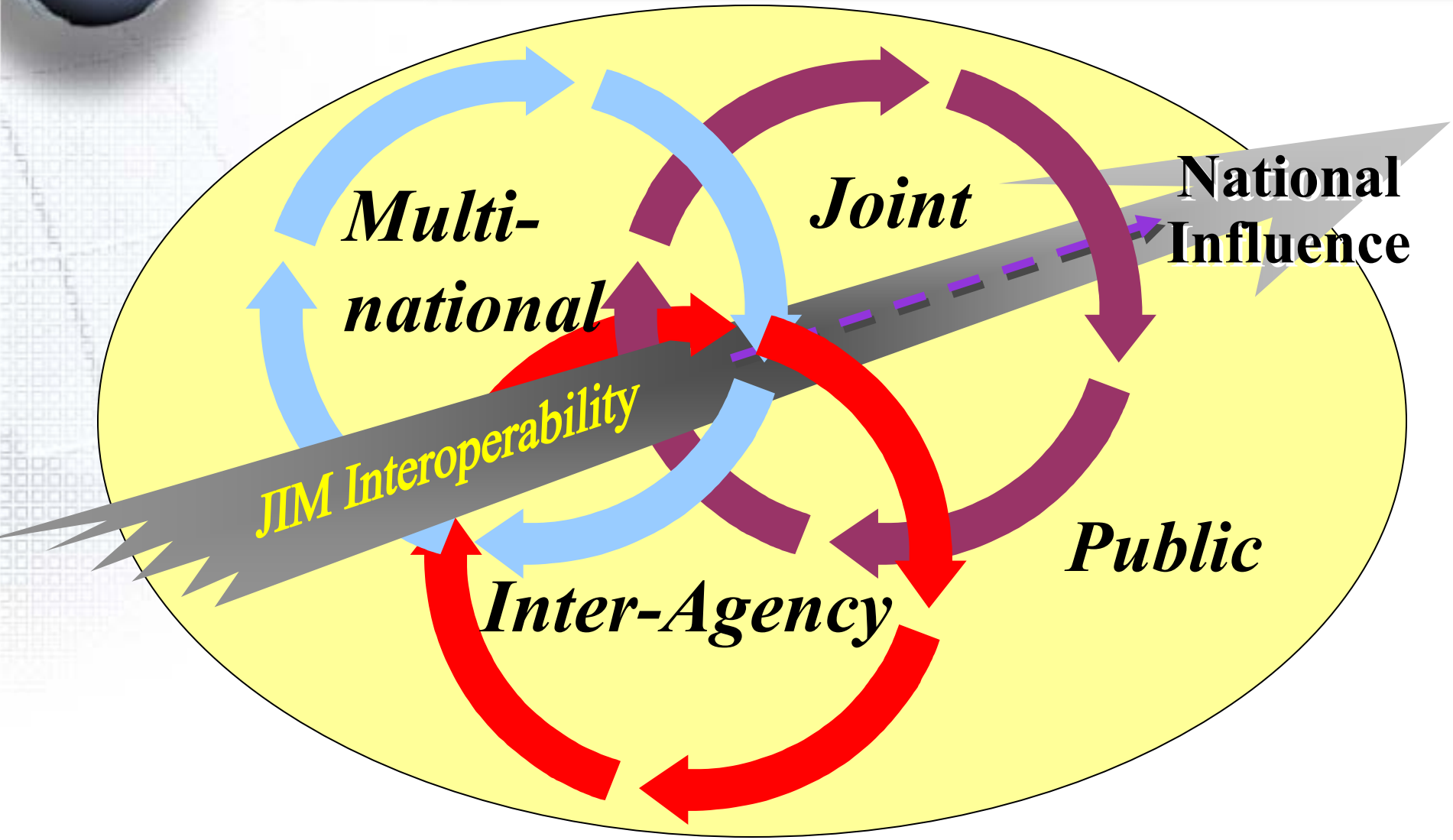
- **Threat based and platform centric**
- **"Industrial Age" application of weapons of mass force**
- **Force protection based on accepted rules of conduct for warfare**
- **Large Military Formations with tight unit cohesion**
- **Forward deployed, limited mobility forces**
- **A conservative, risk averse culture**
- **Inward focused**
- **Inability to react quickly**

- **Capability based focused on capabilities adaptive to volatile, uncertain, complex and adaptive environments**
- **"Information Age" precision engagement**
- **Force protection based on asymmetric threats with reduced restraint**
- **Task tailored forces for foreign and domestic employment**
- **Nationally based, globally mobile forces**
- **An innovative, risk managing culture**
- **Joint, Interagency, Multinational and Public**
- **Agile and adaptive**

# Military Transformation



# Security Transformation



# Emerging Joint Vision

Canadian Forces elements assigned to conduct Operations will be organized and structured to leverage CF interoperability, both internally and with other national and international security partners, to maximize the effectiveness of military contributions in achieving desired effects in the pursuit of larger national and coalition objectives.

# Enhanced Interoperability

- **Information interoperability -** the ability to share information including technological and procedural aspects.
- **Cognitive interoperability -** the ability to perceive and think in a similar manner reflected in doctrine and decision processes.
- **Behavioral interoperability -** the ability to carry out the selected course of action in an integrated and ideally synergistic manner.
- **Physical interoperability -** the ability of equipment and systems to connect and be compatible.

# Command and Leadership

- Within the Joint, Interagency and Multinational environment which includes security partners over whom the military has no formal authority, Command authority may be considered but one control mechanism within a larger Command and Control ($C^2$) framework.

- The mix of Military and Non-military partners demands:
  - An expanded notion of **Command** defined as: "**the creative expression of human will necessary to accomplish the mission**".
  - An increased emphasis on **Leadership** defined as: "**to directly or indirectly influence others by means of formal authority or personal attributes to act in accordance with the leader's intent for a shared purpose**".

# Multinational and National CD&E

- The CF is an active partner in multinational Concept Development and Experimentation relating to EBA and Coalition Interoperability
  - US JFCOM led LOE 1 (2002) and 2 (2003)
  - US JFCOM led MNE 3 (2004) and MNE 4 (2006)
  - US led JWID series transitioning to CWID
- Nationally the CF is planning the Advanced Littoral ISR Experiment (ALIX) involving key domestic security partners such as PSEP – C and the Canadian Coast Guard

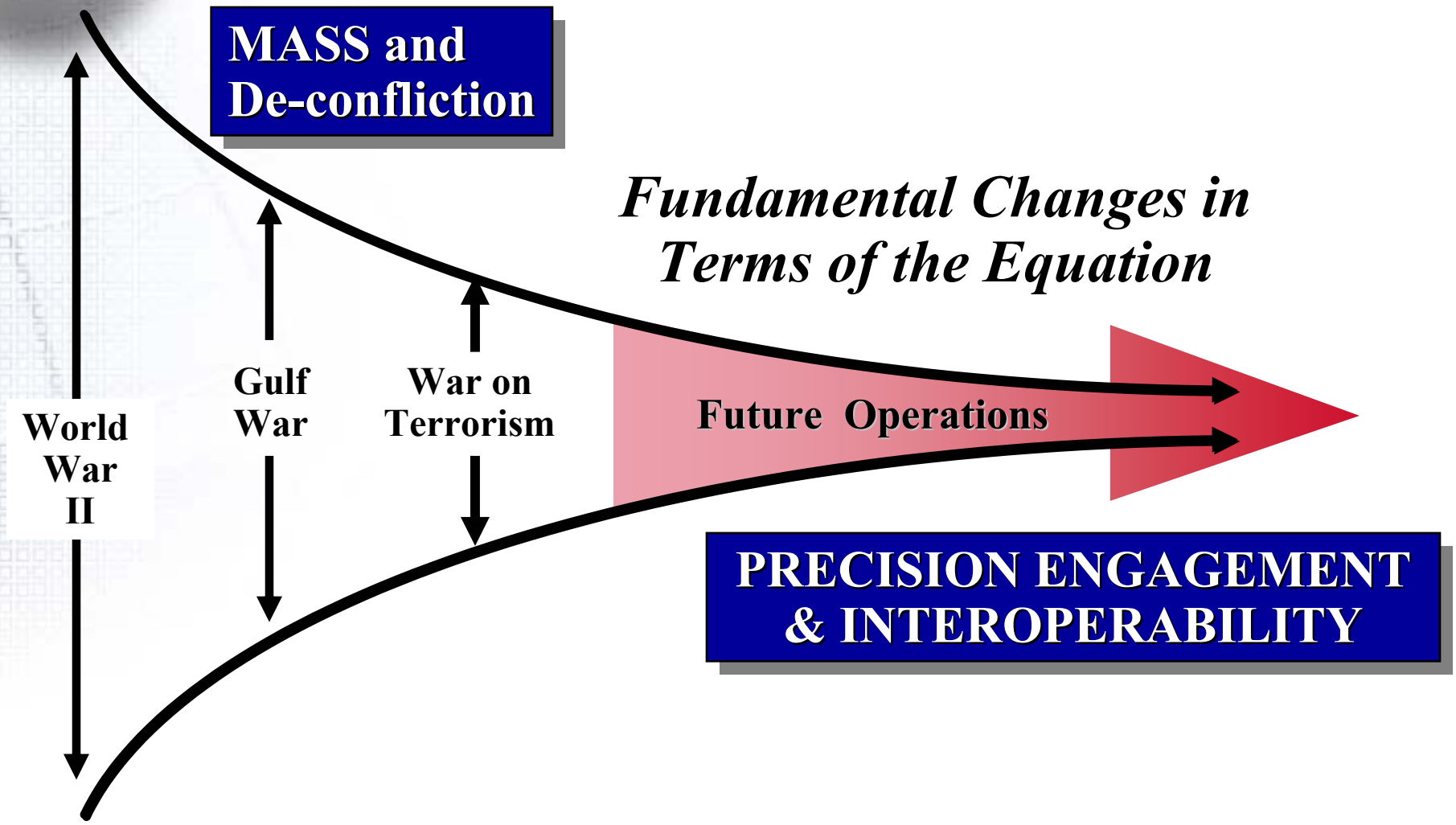
# CF Capabilities Enabling Enhanced Interoperability

- **Joint C4ISR enterprise architecture** including:
  - CF Command System (CFCS)
  - Command Decision Support Capability
  - **Joint Intelligence and Information Fusion Capability (JIIFC)**
  - **CF Common Operating Picture**
  - **Distributed Collaborative Planning Tools i.e. COPlanS**
- **Joint Headquarters and subordinate Units, Joint Operations Group and Joint Support Group**
- These are expected to provide CF input to the Federal Government Operations Centre and the Integrated Threat Assessment Centre

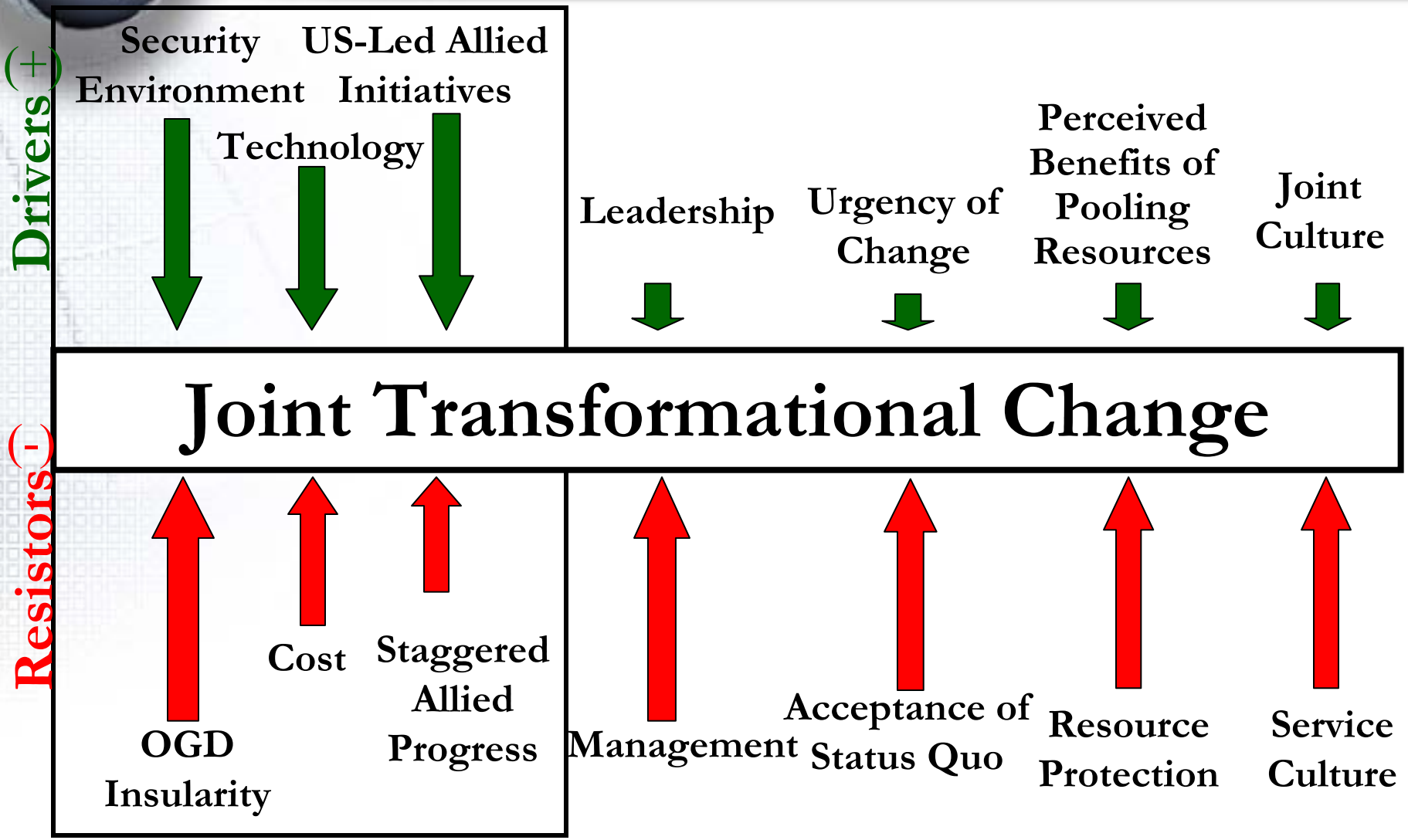
# Integrated Threat Assessment Centre

- Effective threat assessment allows the Federal Government to objectively and continuously assess the risks to Canadians based on all available information. This **assessment is grounded in intelligence and trend analysis, and evaluates both the probability and potential consequences** of threats.
- Integration of PCO, FAC, CF/DND, CSE, PSEP-C, CSIS, RCMP, CBSA and TC.
- **Paraphrases Effects Based Approach**: Analysis, Plan, Execute/Conduct Operations, Assessment of Effects.
- Supported and staffed by cross-functional and interdepartmental teams.

# Changing Nature of Operations



# Current Challenges

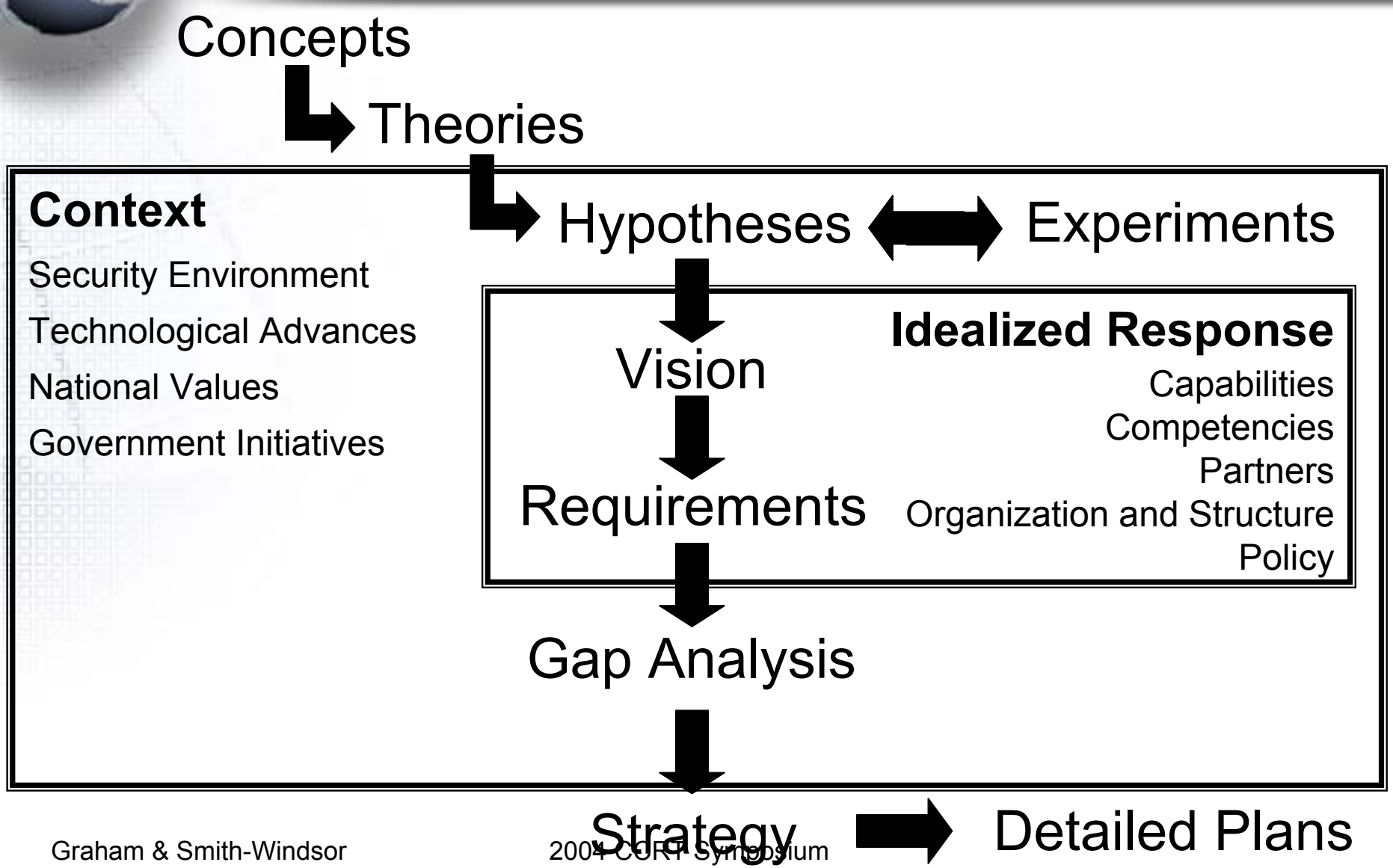


# Conclusion

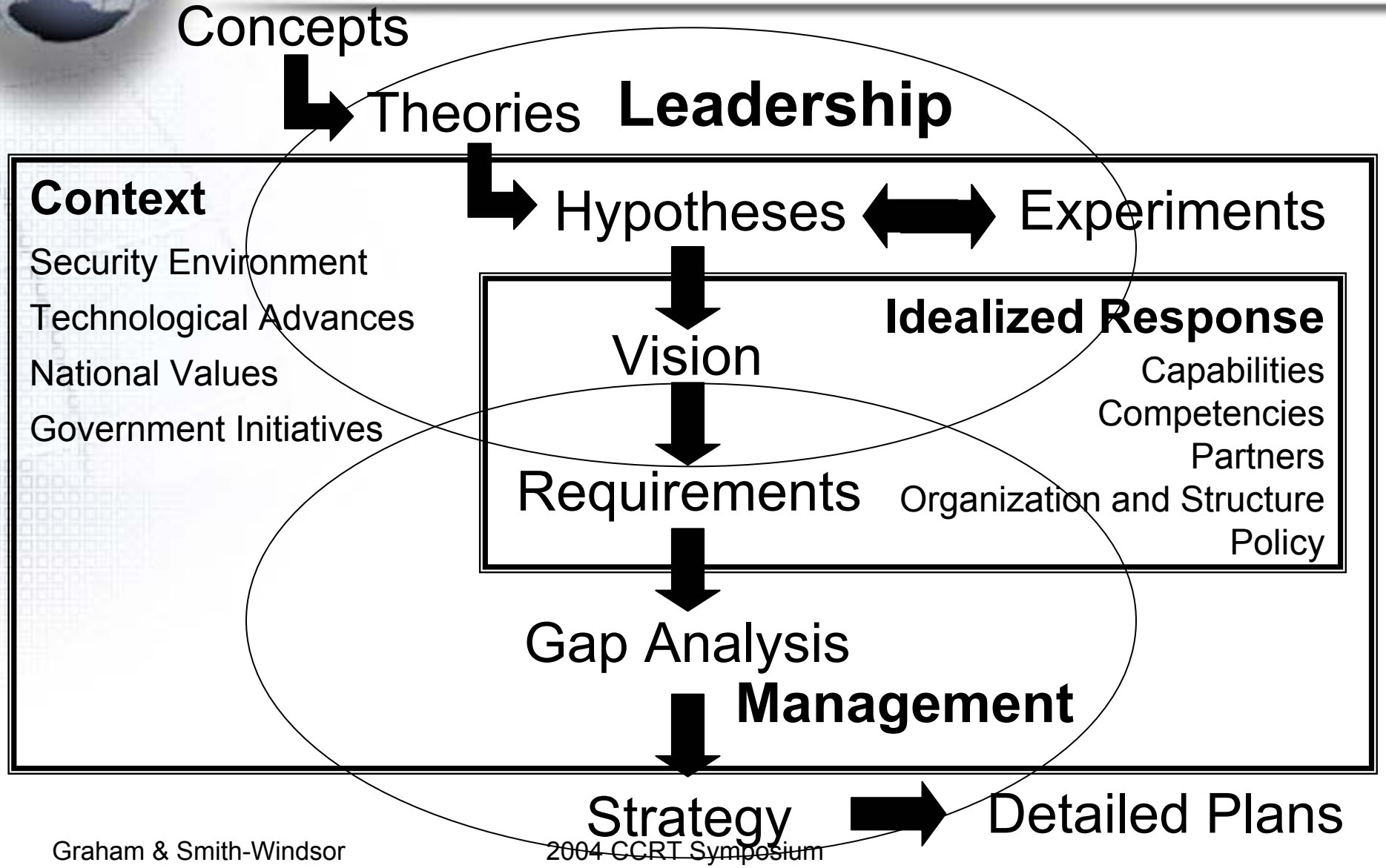
- An Effects Based Approach within a Joint, Interagency and Multinational framework conceptually expands the definition of manoeuvre and strike to include diplomatic, information and economic realms which, although not directly controlled, must be considered by the Operational Commander.
- It does not discount the traditional military kinetic strikes but reinforces the potential synergies if they are used in conjunction with other mutually supporting instruments of influence integrated by collaboration.
- Provides opportunities for coalition contributing nations, such as Canada, to influence the desired outcome beyond that which would normally be attributed to simply their military contribution.

# Questions or Comments

# Concepts to Capabilities

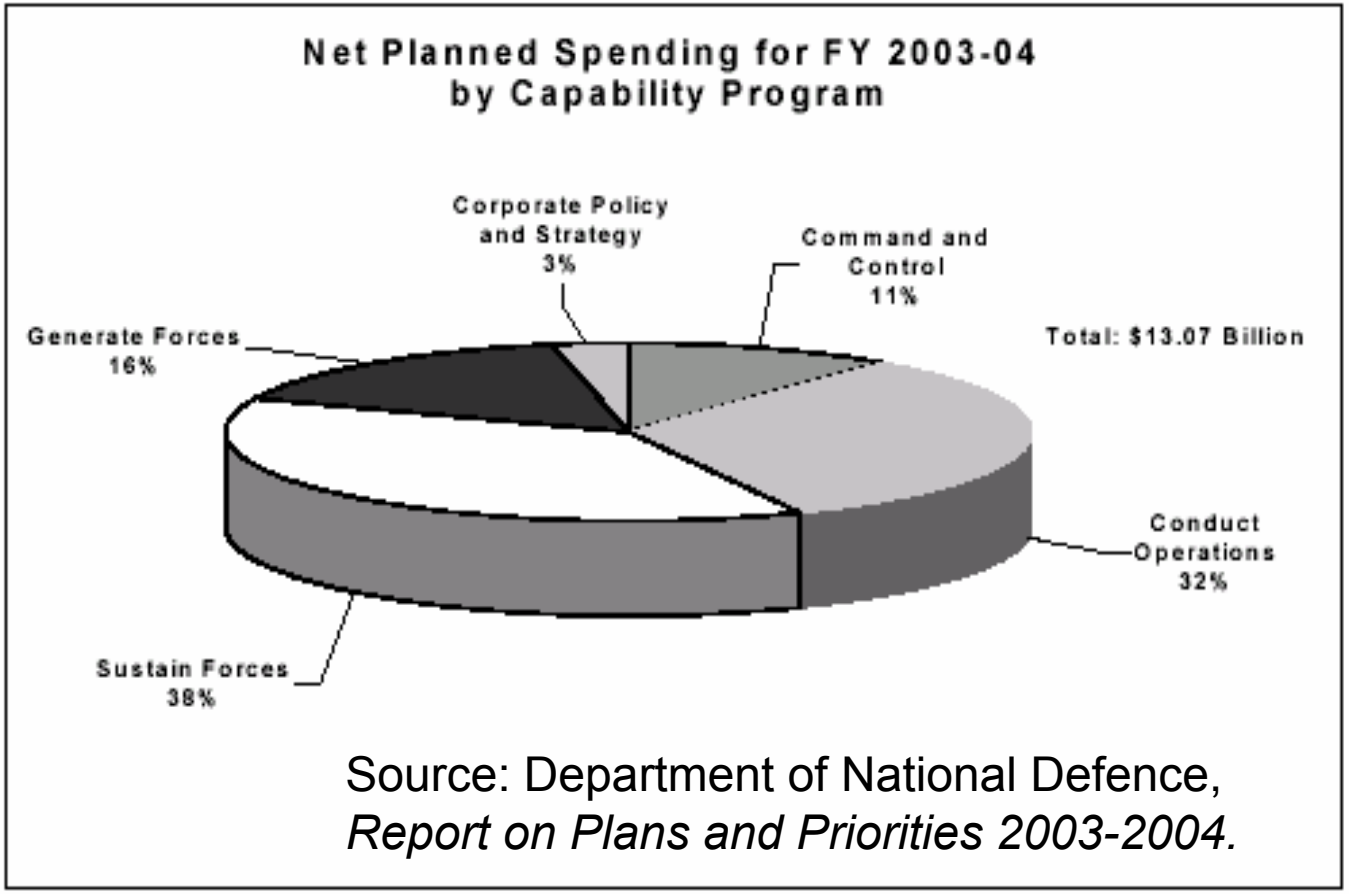


# Concepts to Capabilities



# Resource Overview

*Resource Overview*




Source: Department of National Defence, *Report on Plans and Priorities 2003-2004.*