



The Department of National Defence and Canadian Armed Forces

OPERATIONAL SUSTAINMENT MODERNIZATION STRATEGY



CANADIAN ARMED FORCES

FORCES ARMÉES CANADIENNES



National
Defence

Défense
nationale



Canada



Chief of the Defence Staff Foreword

Effective military forces are dynamic in nature, constantly evolving and adapting to meet the demands posed by adversaries and the operational context. The current and future security environment requires the Department of National Defence/Canadian Armed Forces (DND/CAF) to be a modernized and fit-for-purpose institution to prevail in the pan-domain environment. History is replete with examples of both successes and failures, and the force that ignores the need to modernize does so at its peril.

Sustainment is an operational function that underpins all operations at home and abroad and is enabled by Joint Logistics, Royal Canadian Electrical Mechanical Engineers, Health Services Support, Communication Information Systems, Military Police, and Joint General Support Engineers. The purpose of the Operational Sustainment Modernization (OSM) Strategy is to guide DND/CAF efforts to achieve coherent Force Development alignment and strengthen the linkages across the Sustainment Enterprise. It is also about empowering our greatest resource, our people, to sustain and win the fight. Tranche 1 of the strategy will set the conditions for Joint Logistics to be resilient, agile, data-driven and horizontally integrated.

Recognizing the criticality of Operational Sustainment and its modernization is central to delivering sustainment effects that meet operational demands and enable Operational Support activities. Operational Sustainment Modernization is critical for generating timely decision advantage in the face of pan-domain threats from Canada's adversaries.

A handwritten signature in blue ink, which appears to read "W. Eyre".

General Wayne Eyre
Chief of the Defence Staff

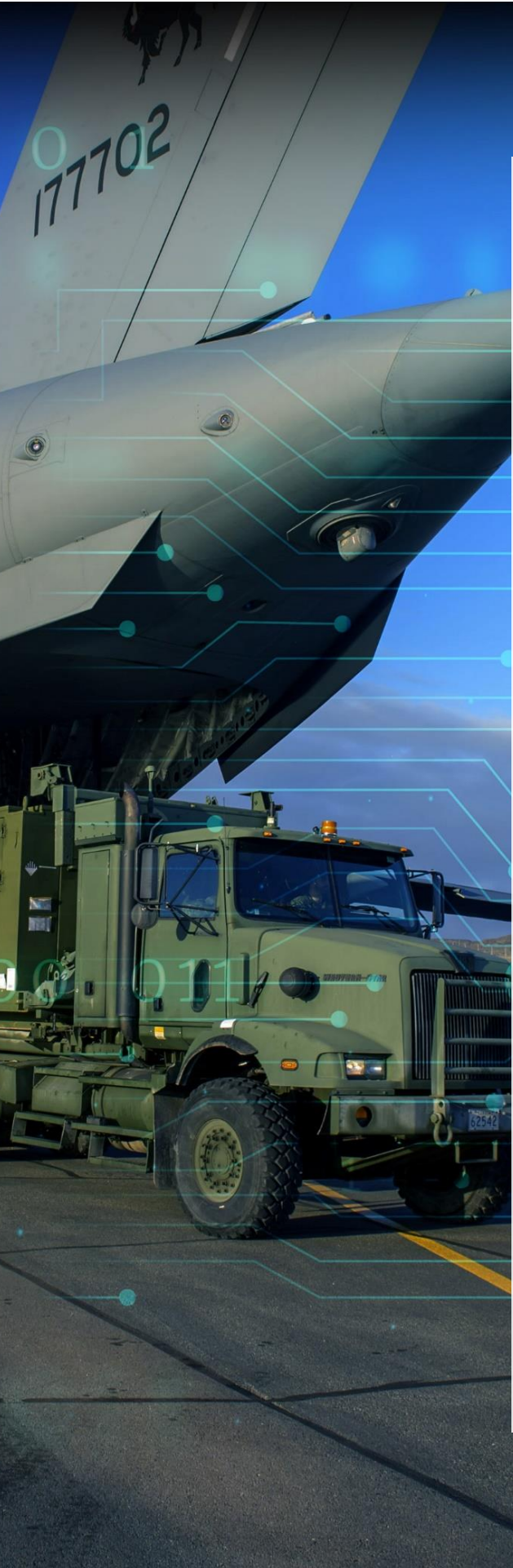


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01 – EXECUTIVE SUMMARY

The OSM Strategy is a joint Force Development (FD) initiative. It outlines the imperatives for a paradigm shift in the CAF's Sustainment Enterprise and to transform, in accordance with Canada's Defence Policy, "Strong, Secure, Engaged". The OSM Strategy is a capstone document considered as part of the CAF's modernization and reconstitution efforts. Future operating environments will require the full integration of sustainment effects to generate persistent readiness advantages and win the fight. Two key drivers for the development of the strategy were the evolving CAF/allied Pan-Domain Command and Control concept, and the digital transformation efforts through the Defence Resource Business Modernization (DRBM) programme.

It was critical to identify the CAF's sustainment starting point to establish the strategy. Key challenges include: a lack of coherence from strategy to projects; limited alignment to CAF capabilities; and weak linkages across the Sustainment Enterprise. Recognizing these challenges and other opportunities, the OSM Strategy proposes a new framework for improved FD and Force Management (FM) in order to modernize and strengthen CAF readiness. The framework builds upon previous work conducted by the Strategic Joint Staff (SJS) and the Canadian Joint Operations Command (CJOC). To address the weak linkages, the framework identifies and defines the three pillars that are components of the Sustainment Enterprise: Institutional Sustainment, Operational Sustainment (OpS) and Operational Support.

Both Institutional Sustainment and Operational Support are well defined in joint doctrine and supported with departmental authorities, responsibilities and accountabilities. OpS links these together and focuses on enabling operational outputs, readiness, and reconstitution. The OSM vision is for the CAF to be sustained by a fully integrated and modernized OpS function that can drive capability development, generate decisive military advantages, and maintain operational readiness across all domains.

The OpS and Operational Support functions hosts joint enabling capabilities¹, which include: Joint Logistics; Health Services Support; Royal Canadian Electrical Mechanical Engineers; Communications Information Systems; Military Police; and Joint General Support Engineers. The OSM Strategy focuses initially on Joint Logistics modernization; however, other joint enabling capabilities will be addressed in future tranches.

The OSM Strategy is the result of extensive collaboration between DND/CAF leadership and stakeholders both inside and outside of the Sustainment Enterprise. It is informed by the initiatives of key allies to modernize their sustainment activities. OSM is supported by Institutional Sustainment modernization activities and is critical to the success of future CAF readiness and operations.

¹ Joint enabling capabilities are defined at Annex A.

02 - STRATEGIC CONTEXT

Global Context

The evolving global context is characterized by Great Power competition, accelerating technological change, social change, climate change and the re-emergence of global pandemics. These constitute the dominant global trends, with challenges being felt across all nations. This is well illustrated by the disruptions caused by COVID-19 and the economic impact to supply chains. This context is impacting allies and adversaries alike.

Canada's economy and industrial base are closely connected to extended networks of global partners and markets. DND/CAF is equally impacted by this reality and our adversaries may actively disrupt critical sustainment nodes.² In an effort to respond to such uncertainty, the Five Eyes (FVEY) community are developing and releasing their future logistics concepts. Working with allies is critical to Canada to support the country's geopolitical and

economic interests. Canada works as a part of a multinational team, therefore disruptions to Canada's allies impact DND/CAF's ability to operate in a coalition. Global disruptions can also have an impact on DND/CAF's domestic operations due to the international-connectedness of Canada's military industries.

To maintain operational advantage within this context, our allies are modernizing their sustainment capabilities to be more interoperable, intelligence driven, resilient and predictive. In order to remain a contributing partner the CAF must follow suit.

CAF Context

Canada's Defence Policy, *Strong, Secure, Engaged (SSE)*, outlines the imperative for change in a complex and unpredictable security environment. It also represents a significant investment to modernize critical capabilities across the CAF.

In order for the CAF to demonstrate increased operational output, more determined efforts must be made in the areas of joint force integration, sustainment modernization, and CAF digitalization.

These efforts, and the changing Future Operating Environment (FOE), necessitated the release of a number of CAF strategic documents, including the CAF Reconstitution Directive and the CAF Digital Campaign Plan. Further strategic documents continue to be developed and it is critical that OpS be integrated throughout their development.

Pan-Domain Command and Control Concept

The objectives of warfare are being pursued energetically by our adversaries on a pan-domain basis (Maritime, Land, Air, Cyber, and Space). The FOE is characterized by high-speed digital communications, coordinated competition across multiple domains and exponential increases in the

data that must be acquired and analyzed to support timely quality decision-making.

Adversaries are conducting operations below conflict thresholds. Consequently, pan-domain threats extend beyond deployed operational

² Contested Logistics Environments is defined at Annex A.

capabilities and include institutional elements such as the Defence Supply Chain (DSC) (e.g. interdependencies from the global supply chain).

DND/CAF is currently developing a Pan Domain Command and Control (PDC2) concept. It will focus on the digital functionality required to expedite the processing of data to achieve timely and informed decisions. This is equally important with sustainment as it is across the other combat functions. The CAF requirement for joint interoperability in the future pan-domain environments has never been higher.

CAF PDC2 concept development is in its early stages and has identified opportunities in the following areas: the system-of-systems view; data standardization; common and standardized institutional processes; and Sustainment Enterprise modernization. OSM is a key supporting activity to future PDC2 concepts and capabilities, with factors such as supply chain resiliency and visibility that need to be strengthened to enable operations. OSM contributes to PDC2 as it identifies key risks and enables timely decision making.

Business Transformation

Successive Auditor-General reports on materiel accountability and supply chain performance reveal that "...half the time the CAF does not receive the right materiel at the right place."³ DND is undergoing a business transformation to improve DND/CAF accountability, visibility, administration, and readiness.

projects that DND/CAF will undertake in the next decade. Many OSM Strategy outcomes will be achieved through Defence^X and related DRBM programme initiatives. These outcomes include process standardization, digitalization and data integration. Defence^X is designed to have a positive effect across the entirety of DND/CAF and establish the conditions for innovation and transformation of other Enterprise Resource Planning (ERP)⁴ projects.

Defence^X is the cornerstone of this business transformation and one of the most significant


















								
L1s	CAF SJS	ADM(FIN)	VCDS	ADM(MAT) CAF	ADM(MAT) CAF	ADM (IE)	ADM (DIA)	HR(Civ) CMP
Domain	Defence	Finance	Project	Supply	Maintenance and Engineering	Infrastructure and Environment	Reporting	HR
								
	ADM(IM)							
Primary SAP Module	DFPS	FI/CO	PS	MM/WM	PM	RE	BI	<PeopleSoft>

Figure 1: Defence^X Lines of Business

³ Ref AN.

⁴ ERP: A packaged business software that lets a company automate and integrate the majority of its business processes, share common data and practices

across the enterprise and produce and access information in a real-time environment. Principles of Supply Chain Management – A Balanced Approach, Ref AL.

03 – OSM STRATEGY FRAMEWORK

OSM VISION

The CAF will be sustained by a fully integrated and modernized Operational Sustainment function that can drive capability development, generate decisive military advantages, and maintain operational readiness across all domains.

Why Develop an OSM Strategy?

The 2021 Chief of the Defence Staff (CDS)/Deputy Minister (DM) Directive for CAF Reconstitution identified the requirement to “Advance the Operational Sustainment Modernization Agenda” in support of SSE, Canada Defence Policy, objectives and increased operational readiness.

Sustainment⁵ is characterized as a joint function providing logistics and personnel support to enable operations. It includes a number of joint enabling capabilities⁶ that must be integrated throughout CAF planning and operations. Sustainment is a common thread woven through CAF reconstitution, readiness and FD.

Notwithstanding its importance, CAF Sustainment FD remains in a nascent stage. The OSM Strategy

will serve to create a framework and align the disparate yet related joint enabling projects and initiatives.

The OSM Strategy is designed to shorten the distance, in effect serving to tighten the network between Institutional Sustainment and Operational Support. This will allow timely and accurate information, supporting both operational effectiveness and departmental compliance.

OpS links together Institutional Sustainment and Operational Support within the Sustainment Enterprise (Figure 2). It guides the joint enabling capabilities and sets the conditions for CAF FD.



⁵ Sustainment is the ability to maintain effective military power to achieve the desired effects. It includes the planning for all administrative arrangements necessary for the successful implementation of the campaign plan,

including logistic and personnel support. Ensuring a sound sustainment plan is part of the operational planning process. (Ref L - CFJP 4.0)

⁶ Joint enabling capabilities are defined at Annex A.

OSM Strategy Framework

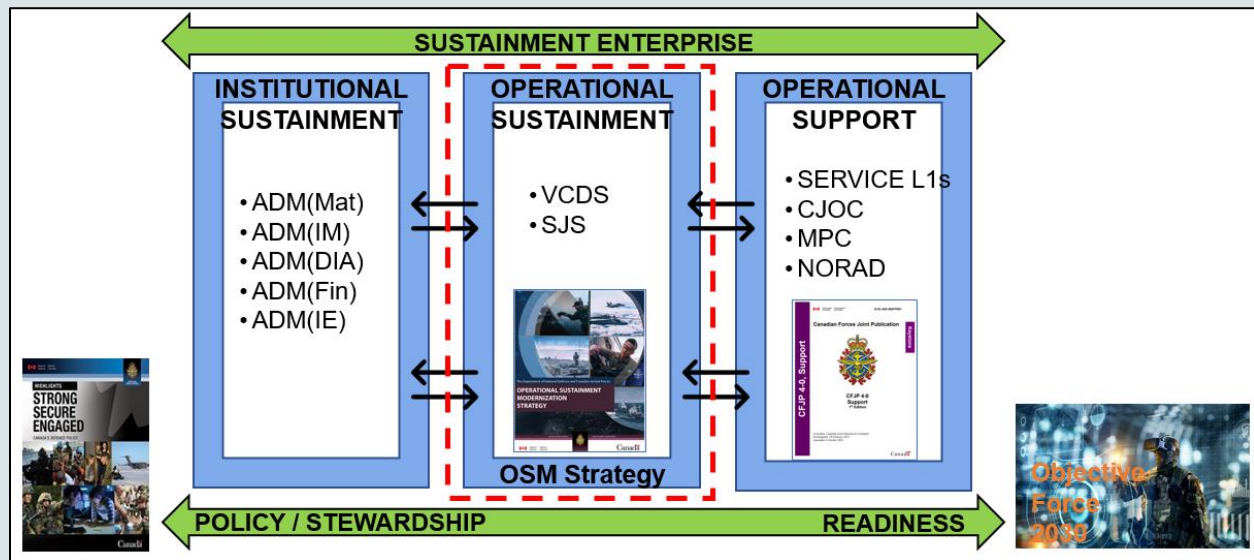


Figure 2: OSM Strategy Framework – Components of the Sustainment Enterprise

OSM MISSION

To strengthen the linkages within the Sustainment Enterprise between Operational Support and Institutional Sustainment by aligning people, processes, technology and governance to enhance readiness and extend operational reach.

OSM Strategy Intent

The OSM Strategy is a joint FD initiative that outlines the imperatives for modernizing all OpS enablers in accordance with current defence policy and the CAF’s overall modernization and reconstitution efforts. It is intended as direction and guidance for the OpS joint enabling capabilities to improve their readiness and strategic coherence (i.e. projects that align with strategic outcomes). It also seeks to support the horizontal integration of all joint enabling capabilities.

The OSM Strategy modernizes the definition of the Sustainment Enterprise. It also seeks to better align the linkages between Institutional Sustainment and Operational Support.

The OSM Strategy is intended as an evergreen document, with updates and amendments as future tranches develop and evolve.

MODERNIZING THE BUSINESS OF DEFENCE: *Whether meeting its environmental responsibilities, leveraging best management practices from the private sector or striving to continually improve efficiency and effectiveness, we will work tirelessly to modernize the business of defence.*

Canada's Defence Policy, SSE

OSM Audience

OSM focuses on the FD of joint enabling capabilities, affecting all Level 1s' readiness and operations. As such, the core audience for the OSM

Strategy is all DND/CAF leaders and all personnel within the Sustainment Enterprise.

OSM Scope

The scope of OSM includes all joint enabling capabilities (Figure 3). OSM is focused on activities that link together Institutional Sustainment and Operation Support. This includes the development of concepts, projects, and capabilities (conception, design and building in the FOE).

The OSM Strategy tranches inform: future follow-on campaign plans; directives; projects; and future concept initiatives.

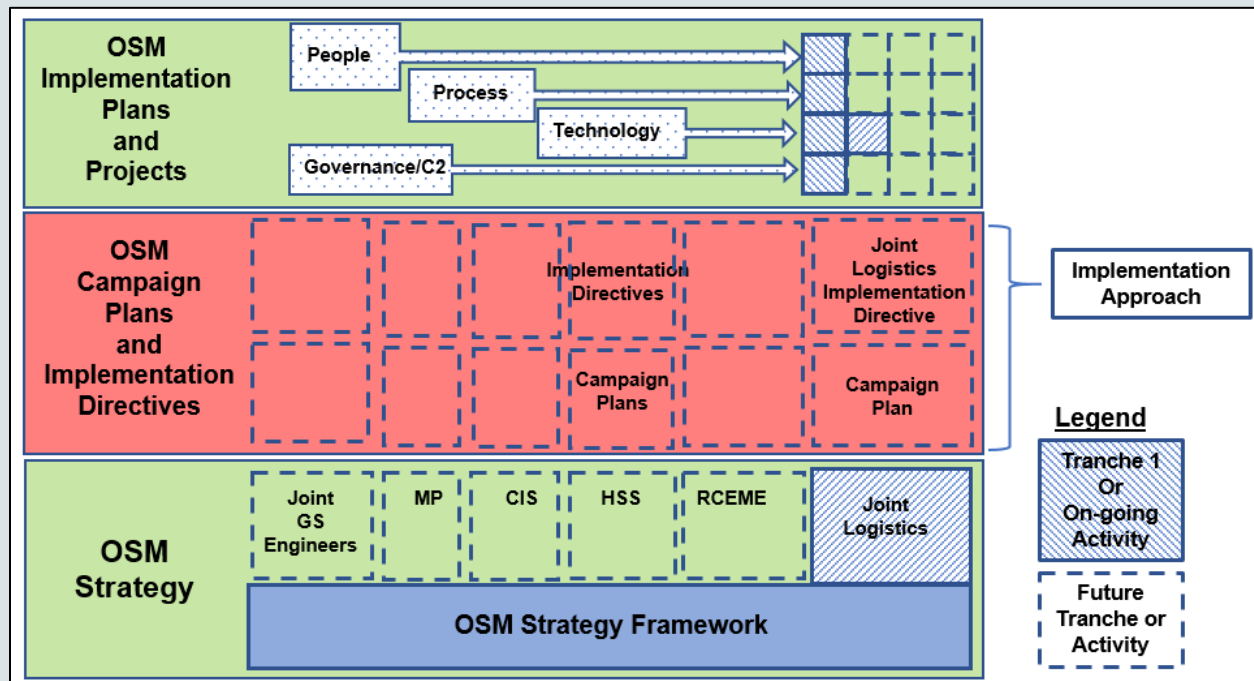


Figure 3: OSM Strategy Scope – Future Tranches and Next Steps for Implementation

04 – TRANCHE 1 – JOINT LOGISTICS MODERNIZATION

JOINT LOGISTICS MODERNIZATION VISION

Joint Logistics will provide trusted, resilient, operationally responsive and visible logistics effects, in order to better generate decisive military advantages and maintain operational readiness across all domains.

Joint Logistics Modernization Vision Details

Trusted Data Insights. DND/CAF leadership obtains trusted data-analytics and insights from across the Sustainment Enterprise.

Digitally Empowered Practitioners. DND/CAF generates and retains digitally empowered logisticians with relevant competencies and tools.

OSM Coherence. Joint Logistics ARAs and activities have coherence and enable successful outcomes for the Sustainment Enterprise, including integration with DND/CAF digital transformation.

Visibility. Enhanced supply chain visibility improves CAF readiness and trust. This will be supported by a number of on-going DSC modernization projects including: Material Identification; Automated Identification Technology; and Defence^x.

Digitally Transformed. DND/CAF has a digitally transformed CAF supply chain that leverages warehouse automation to increase operational efficiency and effectiveness.

Real-Time. The CAF has the ability to plan, position and predict materiel readiness requirements in real-time.

Integration. The CAF has the ability to digitally integrate the sustainment of joint forces on operations.

Interoperable. The CAF has the ability to participate in the sustainment of a multi-national coalition and digitally exchange joint logistics data.

Why Start with Joint Logistics?

As a critical capability within the OpS function, Joint Logistics was selected to be the first tranche mainly because it was the capability that was experiencing the most challenges and had the most potential for positive change.

In addition, the Strategic J4 organization, within SJS, had been seized with the difficulty surrounding this joint enabling capability, attempting to address the problem, with limited

success. The development of the OSM Strategy was the ideal opportunity for awareness, emphasis and collaboration to reinforce the Strategic J4 team and propel the Joint Logistics' efforts forward.

Joint Logistics is in effect the cornerstone of the Sustainment Enterprise. Investments and progress realized across logistics modernization will have a direct and positive effect across the entirety of the OpS function.

We have in front of us a rare opportunity to capitalize upon this strategic energy and to put into motion a Logistics specific campaign plan that will mobilize us onto a 21st century Logistics Capability that will be a source of pride and renewed enthusiasm for the DND/CAF members working inside of it.

Major-General C.J. Zimmer, CAF Joint Logistics Senior Advisor

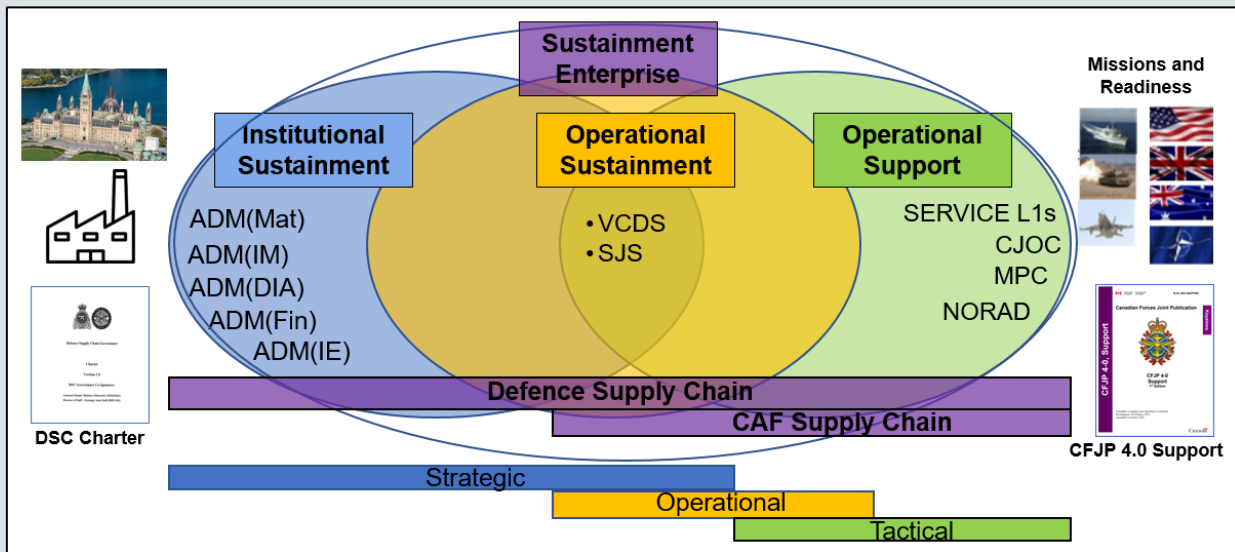


Figure 4: OSM Strategy Framework – Joint Logistics: DSC and CAF Supply Chain⁵ Relationship

Joint Logistics Modernization Outcomes

People Outcome: Modernized training and education sustaining a culture of continuous modernization

People: Culture, Education and Training		
The way we have been operating to date...		...where Joint Logistics Modernization will take us.
CAF members are less digital at the workplace than their personal lives...	becomes →	...CAF members work in a connected digital environment that mirrors Canadian society and industry.
Insufficient education and training for sustainment practitioners...	becomes →	...Sustainment practitioners empowered with relevant competencies.

Education and Training. The Joint Logistics community of practice is one of the largest in the CAF and requires logisticians with advanced professional competencies. These competencies may be a combination of academic education, professional designations and/or learning from industry.

Education and training modernization will require holistic reviews of training programs, shifts in instructional delivery, and investments in




current technology. In sum, we cannot continue to enable and prepare our military logistics professionals by doing more of the same, we must be more flexible, agile and contemporary with our approaches to both education and training.

Culture and Modernization. People and culture are at the core of Joint Logistics modernization. Therefore, all efforts must be made to view modernization through the eyes of logisticians and improve *customer* experience.

Our workforce must be empowered with intuitive interfaces and, where possible, align with contemporary levels of digital literacy. Creating a culture in Joint Logistics that embraces modernization is the key to ensuring that the CAF aligns with our allies, and as close as possible, to the pace of industry.

Digital Literacy. Digital competencies are critical to the DND/CAF workforce⁷ and contribute to the overall CAF digital transformation effort. It is imperative that the CAF leverages the existing digital skills of our members and builds upon them in a deliberate and asymmetrical manner. Digital literacy is our vital ground. Enabling the digital immersion of the Joint Logistics workforce is the key to unlock the full potential of digital transformation and OSM.

Process Outcome: Increased operational readiness through end to end process standardization and digitization

Process: Unity of Effort and Efficiency		
The way we have been operating to date...		...where Joint Logistics Modernization will take us.
Process customization...		... Processes are standardized and aligned with ERP modernization/best practices.
Manual processes, hard copies, clip boards...		...Digital culture. Process benchmarking, mapping, optimization and automation.
Reactive to demands...		...Predictive real-time analytics for increased demand sensing and agile fulfillment.

Standardization. Joint Logistics is predominantly dependent upon analog systems and bespoke processes. From a digital maturity model perspective, it would be considered *Digitally Aware*.⁸ As modern ERPs are adopted, business best practices and standardization must be incorporated by the CAF. Through such modernization, the CAF will transform business processes to enable automation and improve data accuracy.

Process standardization must align with NATO standards and aims to align with industry best practices. Sustainment Enterprise process standardization will create improved interoperability both at home and abroad.

Automation. Increased automation is necessary to leverage the power of our ERP systems (e.g. Defence^x). Where it is possible and practical,

automation will be enabled to increase speed and accuracy. This automation should see an immediate and positive impact on our personnel requirements within Joint Logistics. Automation will reduce the burden on our people and must be aggressively sought and enabled where possible.




Business Intelligence and Assessments. Business intelligence tools and assessments are increasingly part of day-to-day DND/CAF sustainment operations. An OSM performance assessment framework will be created to provide CAF leadership with trusted data analysis in order to monitor performance and support data-driven decisions. These assessment frameworks must include the use of digital benchmarking⁹ so that current state analysis can be used to measure performance improvements.

⁷ Ref R.

⁸ Ibid.

⁹ Note: Business Intelligence process software is available to enable process benchmarking.

Technology Outcome: Trusted data and system confidence, enabling evidence-based decision making and risk management

Technology: Interoperable and Credible		
The way we have been operating to date...		...where Joint Logistics modernization will take us.
Ad hoc system interoperability...		...Excellence in pan-domain operations, multinational/departmental interoperability by design and systems.
Unreliable data, obscure information for decision support ...		...Trusted data and system confidence, transparent information to enable evidence-based decision-making.
ERP customization...		... Simplified user experience at the transactional layer, back-end system customization is minimized.



Joint Requirements. Acquiring new technology is not a challenge unique to logistics modernization but is found throughout DND and beyond. The goal is to fully understand our own requirements and to align them with pre-existing technologies or projects (e.g. Defence^X). The identification, rationalization, alignment and then communication of Joint requirements is a critical part of this logistics effort.

Technology Feasibility Assessment. Many established logistics technologies are already in use by industry and allies. Joint Logistics requires identification of key areas of study and investment in testing and evaluation. These include but are not limited to such advancements as the use of robotics and autonomous resupply. Where possible, we must work alongside our science and technology partners within DRDC in order to be aware of advancing technologies and their potential for improving logistics operations.

Modernized ERP Systems. DND/CAF ERP systems underpin Joint Logistics and are key to enabling the performance and the readiness of the greater Sustainment Enterprise. The power of modern ERP systems is their ability to integrate data and enable decision making. The next generation ERP systems need to integrate with other DND/CAF ERPs as a system-of-systems while also remaining interoperable with the ERPs of our key allies. In addition, all efforts must be made to avoid system customizations in order to support system security and the currency of application features.

Trusted Joint Logistics Readiness Information. The integrity of data is the vital ground of a modern ERP. Data is the CAF's most valuable digital asset as it is the foundation for decision-making. At present, the confidence of sustainment data remains low. Our data integrity is at risk, due to multiple systems managing the same lines of business and non-intuitive and complex interfaces. DND/CAF must expand upon current efforts to improve data quality, employing reliable, trusted and industry proven technologies, which will improve business intelligence and data trust.

Governance/Integrated C2 Outcome: ARAs aligned and integrated, achieving unity of modernization effort

Governance/Integrated C2: Structure and Partner Integration		
The way we've been operating to datewhere Joint Logistics Modernization will take us.
Fragmanted ARAs ...		... ARAs aligned to achieve unity of purpose, automation, and modernization.
Working in silos and in uncoordinated service-specific initiatives...		...OpS established as a joint capability and horizontally integrated with a joint investment plan.

Leading Joint Logistics Modernization. There are clear and present challenges in leading this modernization effort. Currently, cooperation and governance compensate for fragmented ARAs in Joint Logistics. Notwithstanding these challenges, the Strategic J4 is leading Joint Logistics campaign plans. In addition, it should be noted that a Major-General/ Rear-Admiral has been designated as the Joint Logistics Senior Advisor by the CDS, in an effort to support and strengthen strategic alignment.

Trusted Industry Partner Integration. Cooperation between DND/CAF and trusted industry partners is an essential element of the Sustainment Enterprise. Industry provides capabilities and technical expertise that cannot be easily or quickly replicated within DND/CAF. Additionally, DND/CAF relies on in-service support for many critical operational platforms, infrastructure, and systems.

Secure, mutually beneficial, long-term relationships with trusted industry partners are an accelerator to OSM. All industry partner integrations need to be managed in the FOE and in accordance with operational requirements.



Lines of Effort

The Joint Logistics modernization Lines of Effort (LOE) are based on the initial SJS mission analysis. The LOEs identified were: People; Process; Technology; and Governance/C2. This was an adaptation of a model commonly used in

industry referred to as *PPT* (i.e. people, process and technology). The OSM Strategy was built upon this work and the draft “Sustainment Enterprise,” developed by SJS and CJOC.

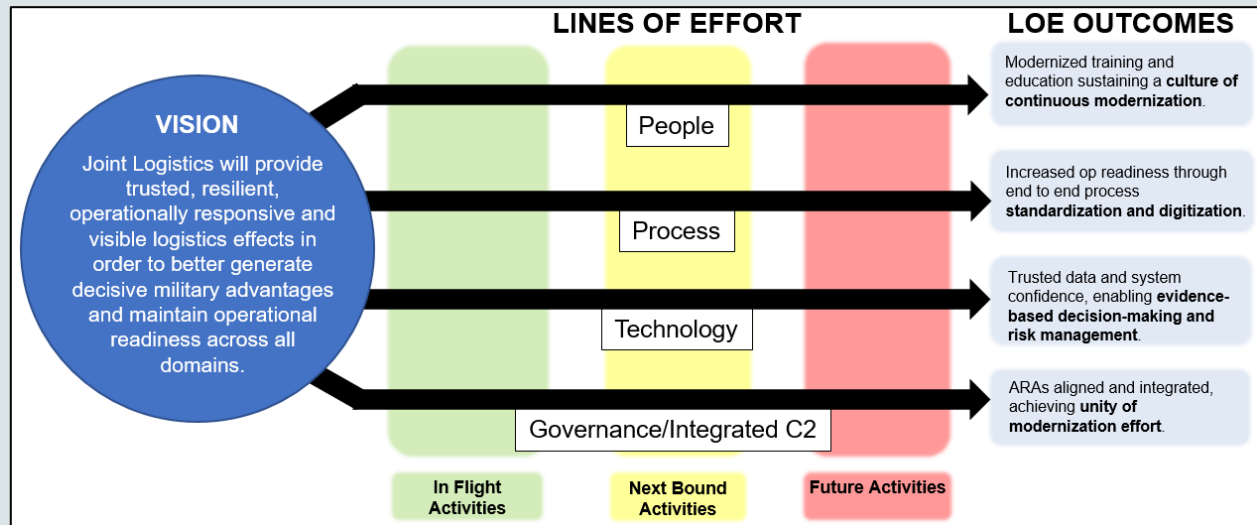
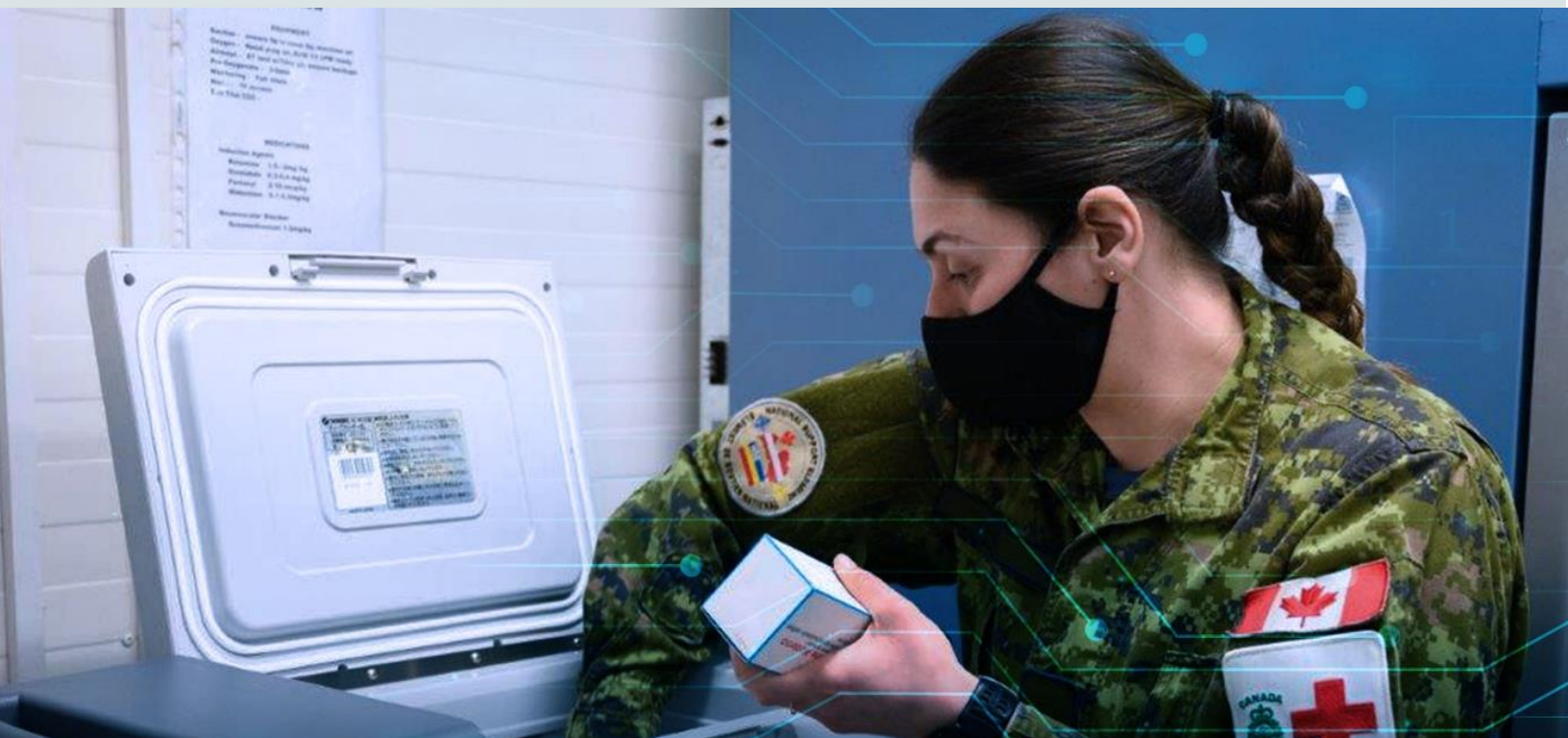


Figure 5: Joint Logistics Modernization Lines of Efforts



05 – CONCLUSION

The modernization of OpS is critical to the success of current and future CAF operations. The OSM Strategy strengthens the linkages between Institutional Sustainment and Operational Support. This strategy is a capstone document that provides a foundational framework for all OpS joint enabling capabilities. It is also evergreen in that it will be updated as OpS joint enabling capabilities tranches are released.

OSM will improve joint capability development outcomes by identifying, aligning and communicating joint sustainment requirements. It will enable joint FD investments across the joint enabling capabilities. Most importantly, OSM improves CAF strategic-level alignment and enhances Operational Support.

The OSM Strategy was synchronized with DND/CAF strategic objectives for PDC2, business transformation and the CAF Digital Campaign Plan. Over the last year, FVEY allies have also released their future logistics concepts and the OSM Strategy was informed by this work.

The OSM Strategy's LOEs of People, Process, Technology and Governance/C2 represent a framework for follow-on campaign plans and implementation directives. The next step for Tranche 1 – Joint Logistics modernization is to develop a Joint Logistics modernization campaign plan and implementation directive(s).

In a service-centric military, developing joint concepts, functions and capabilities is challenging because it does not neatly fit within a single service nor does it have a single business owner. Notwithstanding the plethora of long-standing obstacles and cultural impediments to change, the requirements for sustainment modernization have never been more clear. The global context, the recent pandemic, the increasing reliance upon interoperability with our closest allies and CAF digital transformation have all combined to elevate the importance of OpS. *The best time to focus on joint capabilities was twenty years ago. The next best time is now.*



ANNEX A – DEFINITIONS

1. The definition of the Sustainment Enterprise and of its sub-components have not been fully defined within CAF joint doctrine. Only some functions of the Sustainment Enterprise (i.e. Operational Support¹⁰) are officially defined. It is important to note that the definition of Operational Sustainment and Operational Sustainment Modernization are being defined in this document. Currently established definitions are as follows:

Capability: the ability to contribute to the achievement of a desired effect in a given environment within a specified time and sustainment of that effect for a designated period. It comprised of functional components, as listed under PRICIE + G¹¹ (*CBP Handbook, 2019*)

Capability Domains: Under the capability-based planning process; uses a conceptual capability framework that categorizes specific capabilities within six capability domains (Command, Sense, Act, Shield, Sustain, and Generate). (*Ref J - CFJP 1.0*) **refer to**

Operational Functions

Defence Supply Chain: The end-to-end system of interdependent activities that function horizontally across, and housed within, National Defence organizations, other government departments and industry, to deliver the materiel requirements of the CAF both domestically and overseas. (*Ref D - DSC Governance Charter*)

Operational Functions: Five functions (Command, Sense, Act, Shield, and Sustain) are integrated at all the operational and tactical levels of war. (*Ref M - CFJP 5.0*)

Operational Support (OS): Operational support is the action of a force, or portion thereof, which directly aids, protects, complements, or sustains the operations of another force. Operational support is provided by a supporting command either within a theatre of operations or along strategic lines of communication. (*Ref J - CFJP 1.0*)

The specialized and common support activities provided to aid or sustain the operations of a force within a theatre of operations and along the Strategic lines of communication. (*Ref L - CFJP 4.0*)

Sustainment: Sustainment is the ability to maintain effective military power to achieve the desired effects. It includes the planning for all administrative arrangements necessary for the successful implementation of the campaign plan, including logistic and personnel support. Ensuring a sound sustainment plan is part of the operational planning process. (*Ref L - CFJP 4.0*)

¹⁰ The definition of Operational Support is under review as part of an update to Ref L - CFJP 4.0 Support.

¹¹ PRICIE + G stands for: Personnel and Leadership; Research & Development, and Operational Research

and Analysis (plus Experimentation); Infrastructure, Environment and Organization; Concepts and Doctrine; Information Management and Technology; Equipment and Support; and, Generate.

2. The newly established definitions are as follows:

Contested Logistics. An environment in which the armed forces engage in conflict with an adversary that presents challenges in all domains and directly targets logistics operations, facilities, and activities in Canada, abroad, or in transit from one location to the other.

Defence^X: Formerly known as Defence Resource Management Information System Modernization, the project was rebranded as Defence^X as it was more than a technology upgrade for the DND/CAF but rather an organizational change management and business transformation initiative.

Institutional Sustainment: A component of the Sustainment Enterprise and the doctrinal Function of *Sustain*. The integrated strategic sustainment activities that function horizontally across and housed within DND Level 1 organizations (largely excluding CAF), other government departments and industry, to deliver the readiness requirements of the CAF. Strategic activities generally include, but are not limited to, the exercise of Departmental functional authority for policy and process that enable the execution of Operational Sustainment and Operational Support.

Joint Enabling Capability: A CAF organizational and pan-domain grouping, defined by distinct personnel, training, process, role and governance that delivers military sustainment effects as a component of the Sustainment Enterprise. The joint enabling capabilities are: Joint Logistics; Health Services Support; Royal Canadian Electrical Mechanical Engineers; Communications Information Systems; Military Police; and Joint General Support Engineers.

Operational Sustainment: A component of the Sustainment Enterprise and the doctrinal Function of *Sustain*. It exists as a communicating and alignment function between Operational Support and Institutional Sustainment, encompassing all joint enabling capabilities. **refer to Joint Enabling Capability and Sustainment Enterprise**

Operational Sustainment Modernization: The alignment of people, processes, technology, and governance/C2 to create a cohesive sustainment effect, across all joint enabling capabilities within the Sustainment Enterprise. **refer to Joint Enabling Capability and Sustainment Enterprise**

Sustainment Enterprise: All the DND/CAF organizations, people, equipment, and data engaged in the provision of sustainment effects to enable defence readiness and the conduct of operations; broadly grouped under Institutional Sustainment, Operational Sustainment and Operational Support.

ANNEX B – REFERENCES

- A. Strong Secure and Engaged
- B. Joint Capabilities in the CAF, Study Team Report, Jul 2019 (VAdm (Retired) Maddison and Ms Purdy)
- C. The CAF Sustainment Enterprise, Draft, Jun 2021
- D. Defence Supply Chain Governance - Charter - Version 1.0, ADM(Mat) and DOS SJS
- E. Sustainment of Land Operations
- F. The Defence Supply Chain: One broken link of the broken Defence Sustainment Enterprise (Placemat)
- G. Draft CDS Guidance on Strategic Military Planning for CAF (version 10)
- H. SSE Combat Systems Study - Joint Capabilities Analysis Report, 2 Nov 2020 (CCSI - VCDS)
- I. Pan-Domain Force Employment Concept – Prevailing in an Uncertain World
- J. CFJP 1.0 - Canadian Military Doctrine
- K. CFJP 3.0 - Operations
- L. CFJP 4-0 - Support
- M. CFJP 5-0 - The CF Operational Planning Process
- N. RCN - Logistics Deployed Support - Naval Logistics Publication - 4.0
- O. CFCD 129 - RCN - Readiness and Sustainment Policy
- P. RCAF - Force Sustainment
- Q. Joint Supply Chain Forum (JSCF) Digitization Community of Practice Terms of Reference
- R. Canadian Armed Forces Digital Campaign Plan
- S. Defence Supply Chain Business Requirements Integration Committee (BRIC) Terms of Reference
- T. Digital Discussion Paper, Anderson
- U. National Cyber Threat Assessment 2018, Canadian Centre for Cyber Security
- V. A-LM-007-100/AG-00, Supply Administration Manual, 1.4 Performance Measurement Framework
- W. Australian Defence Force, Future Concept of Logistics, Version 1.0
- X. Defence Supply Chain - Current State Review Presentation, 14 Jan 2022
- Y. Future Security Environment - 2013-2040, 2014 CFD
- Z. Department of National Defence and Canadian Armed Forces, 2021-22, Departmental Plan
- AA. CDS Planning Directive for CAF Reconstitution, July 2021
- AB. The Joint Log Strategy 2032 - Enhancing and Extending Operational Reach for the RCLS, Draft, Feb 2022
- AC. Good to Great - *Why Some Companies Make the Leap...and Others Don't*, Jim Collins
- AD. The Culture Code - *The Secrets of Highly Successful Groups*, Daniel Coyle
- AE. DND/CAF Data Strategy
- AF. Domains and Technology Food for Thought Series - 3D Printing/Additive Manufacturing
- AG. Digital Supply Networks - *Transform Your Supply Chain and Gain Competitive Advantage with Disruptive Technology and Reimagined Processes*, Amit Sinha, Bernardes, Calderon and Wuest.
- AH. United Kingdom, Ministry of Defence, Digital Strategy for Defence - *Delivering the Digital Backbone and unleashing the power of Defence's data*, April 2021
- AI. Technology Scanning for Combat Service Support (CSS) Modernization: An Investigation Study for the Canadian Army, Jordan Miller Calian, November 2018
- AJ. Business Case Analysis, Defence Resource Management Information System (DRMIS) Modernization C.001788, Version 0.5
- AK. Defence Supply Chain (DSC) Annual Report to Programme Management Board, Sep 2019 - Dec 2020
- AL. Principles of Supply Chain Management - A Balanced Approach, Fifth Edition, Wisener, Tan and Leon, 2019
- AM. Supply Chain Management - Strategy, Planning and Operation, Seventh Edition, S. Chopra, 2019
- AN. Spring 2020 Report 3 - Supplying the Canadian Armed Forces - National Defence, Reports of the Auditor General of Canada to the Parliament of Canada
- AO. CBP Handbook, 2019

ANNEX C - ACRONYMS AND ABBREVIATIONS

3D - Three Dimensional	DOPs - Directorate of Operational Sustainment
5F - Force Development, Force Management, Force Generation, Force Employment, and Force Support	DRBM - Defence Resource Business Modernization
ADM(DIA) - Assistant Deputy Minister (Data, Innovation and Analytics)	DRMIS - Defence Resource Management Information System
ADM(Fin) - Assistant Deputy Minister (Finance)	DSC - Defence Supply Chain
ADM(IE) - Assistant Deputy Minister (Infrastructure and Environment)	EMI - Enterprise Modernization Initiative
ADM(IM) - Assistant Deputy Minister (Information Management)	ERP - Enterprise Resource Planning
ADM(Mat) - Assistant Deputy Minister (Materiel)	FOE - Future Operating Environment
AIT - Automated Identification Technology	FD - Force Development
AM - Additive Manufacturing	FM - Force Management
ARA - Authorities, Responsibilities and Accountabilities	FI/CO - Finance/Comptrollership
BI - Business Intelligence	FVEY - Five Eyes
BRIC - Business Requirements Integration Committee	GoC - Government of Canada
C2 - Command and Control	HLMR - High Level Mandatory Requirements
CAF - Canadian Armed Forces	IM - Information Management
CCSI - Chief of Combat Systems Integration	IT - Information Technology
CDS - Chief of Defence Staff	MISL - Modernization of Sustainment and Logistics
CFD - Chief of Force Development	MI - Materiel Identification
CFJP - Canadian Force Joint Publication	MM - Materiel Manager
CJOC - Canadian Joint Operations Command	L1 - Level 1
Comd - Commander	LOE - Line of Effort
DFPS - Defence Forces Public Safety	NATO - North Atlantic Treaty Organization
DGMSSC - Director General Materiel System and Supply Chain	NORAD - North American Aerospace Defense
DGJIOS - Director General Joint Integration and Operational Support	OGDA - Other Government Department and Agency
DG Sp - Director General Support	OpS - Operational Sustainment
DM - Deputy Minister	OSM - Operational Sustainment Modernization
DMINO - Distribution and Materiel Inventory Network Optimization	OSMM - Operational Sustainment Modernization Meeting
DND - Department of National Defence	PDC2 - Pan-Domain Command and Control
DOS - Director of Staff	RCLS - Royal Canadian Logistics Service
	PS - Project Systems
	RE - Real-estate
	SJS - Strategic Joint Staff
	Strat J4 - Strategic Joint 4
	WM - Warehouse Manager
	VCDS - Vice Chief of Defence Staff