Biannual Progress Report to the Standing Committee on Government Operations and Estimates

December 30, 2022

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Introduction

Public Services and Procurement Canada (PSPC) is pleased to provide to the Standing Committee on Government Operations and Estimates the following progress updates regarding current National Shipbuilding Strategy (NSS) and air defence procurement projects, as of mid-December 2022. This report consists of the procurement initiatives led by PSPC included in the NSS and in Chapter 2, entitled “Royal Canadian Air Force”, from Canada’s Defence Policy (*Strong, Secure, Engaged*).

PSPC is a strategic partner to federal departments and agencies in the achievement of their mandated objectives in its role as central purchasing agent. Specifically, with respect to defence and marine procurement, PSPC acquires defence goods and services, such as ships, aircraft and supporting services on behalf of client departments, which include the Department of National Defence and the Canadian Coast Guard. In turn, client departments are responsible for defining their requirements, conducting equipment cost/options analyses, obtaining government policy approval, and managing projects and budgets.

As the Committee has previously determined that the full report would be made public, please note that only information that is publicly available as of the date of submission is included. Project budget figures in this document, particularly for projects in the pre-definition phase, are estimated budgets and the estimated delivery schedules are forecasts as of mid-December 2022.

National Shipbuilding Strategy

Large Vessels – Combat

ARCTIC AND OFFSHORE PATROL SHIPS: ROYAL CANADIAN NAVY

Overview:

The Arctic and Offshore Patrol Ships (AOPS) for the Royal Canadian Navy will:

- conduct armed sea-borne surveillance in Canada's waters, including in the Arctic;
- enforce Canadian sovereignty in cooperation with Canadian Armed Forces partners and other government departments; and
- enhance our ability to assert Canadian sovereignty.

Project at a glance:

Shipyard:	Irving Shipbuilding Inc. (Halifax, Nova Scotia)
Project status:	Construction in progress
Number of vessels to be built:	6
Project budget:	$4.98 billion

Current status:

- The first AOPS, Her Majesty's Canadian Ship (HMCS) Harry DeWolf, was delivered to the Royal Canadian Navy on July 31, 2020. This was the first large vessel delivered to the Royal Canadian Navy under the NSS.
- The second AOPS, the HMCS Margaret Brooke, was delivered to the Royal Canadian Navy on July 15, 2021.
- The third AOPS, the HMCS Max Bernays, was delivered to the Royal Canadian Navy on September 2, 2022.
- Construction of AOPS 6 began on August 15, 2022.

The year ahead: Work continues on AOPS 4, 5 and 6.

CANADIAN SURFACE COMBATANT: ROYAL CANADIAN NAVY

Overview:

The Canadian Surface Combatant (CSC) project will replace both the Iroquois-class destroyers and the Halifax-class multi-role patrol frigates with a single class of ship capable of meeting multiple threats on both the open ocean and in the highly complex coastal environment. The CSC project is the largest and most complex shipbuilding initiative in Canada since World War II.

The CSC will ensure that Canada can continue to monitor and defend its waters and make significant contributions to international naval operations by being able to conduct a broad range of tasks in varied scenarios, including:

- detect, deter, and defend against threats at sea and support land operations;
- counter-piracy, counter terrorism, and interdiction and embargo operations for medium intensity operations; and
- responding to disasters and emergencies, the delivery of humanitarian aid, search and rescue, law and sovereignty enforcement for regional engagements.

Project at a glance:

Shipyard	Irving Shipbuilding Inc. (Halifax, Nova Scotia)
Project status	Design phase
Number of vessels to be built	15
Project budget	$56 to $60 billion
Start of construction activities	2024
First vessel delivery	Early 2030s

Current status:

- The base design and design team for Canada's future surface combatant have been determined and the contracts for this work were awarded.
- The project is currently in the design phase of the Definition Contract. The first design activity, Requirements Reconciliation, has been substantially completed. The second of four design phases, Preliminary Design, commenced in November 2019 and the Preliminary Design Review was conducted in December 2022. The project will enter the third phase, Functional Design, in 2023.

The year ahead: Irving Shipbuilding Inc. and Lockheed Martin Canada will continue the design work for Canada's future surface combatant. Under the 2012 Umbrella Agreement, signed subsequent to a competitive selection process, work on developing and negotiating the Implementation Contract for ship construction continues in collaboration with Irving Shipbuilding Inc.

Large Vessels – Non-combat

OFFSHORE FISHERIES SCIENCE VESSELS: CANADIAN COAST GUARD

Overview:

The Offshore Fisheries Science Vessels (OFSV):

- provide an important platform for scientific research and ecosystem-based management;
- contribute to Canada's stewardship of fishery and ocean resources; and
- replace Canadian Coast Guard Ship (CCGS) Teleost, CCGS Alfred Needler and the decommissioned CCGS W.E. Ricker on Canada's west and east coasts.

Project at a glance:

Shipyard	Seaspan's Vancouver Shipyards Co. Ltd. (Vancouver, British Columbia)
Project status	In Close-Out
Number of vessels to be built	3
Number of vessels completed	3
Project budget	$788.5 million

Current status:

- The first OFSV, the CCGS Sir John Franklin, was delivered to the Canadian Coast Guard on June 27, 2019. This was the first large vessel delivered under the NSS.
- The second OFSV, the CCGS Capt Jacques Cartier, was delivered to the Canadian Coast Guard on November 29, 2019. This was the second large vessel delivered under the NSS.
- The third and final OFSV, the CCGS John Cabot, was delivered to the Canadian Coast Guard on October 9, 2020.
- With all three OFSV having been delivered, this marks the first large vessel project to be completed under the NSS.

OFFSHORE OCEANOGRAPHIC SCIENCE VESSEL: CANADIAN COAST GUARD

Overview:

The Offshore Oceanographic Science Vessel (OOSV) will:

- be capable of supporting scientific research missions, including oceanographic, geological and hydrographic surveys;
- contribute directly to our understanding of oceans, seabeds and the impacts of climate change; and
- support other Canadian Coast Guard operations, such as search and rescue and environmental response, as needed.

Project at a glance:

Shipyard	Seaspan's Vancouver Shipyards Co. Ltd. (Vancouver, British Columbia)
Project status	Under construction
Number of vessels to be built	1
Project budget	$966.5 million
Estimated delivery	2025

Current status:

- On February 9, 2021, the Government of Canada awarded a $453.8 million (taxes included) contract to Seaspan's Vancouver Shipyards for the construction of one OOSV for the Canadian Coast Guard.
- In early 2019, the Government of Canada made a decision to re-sequence construction of the Joint Support Ships (JSS) and the OOSV at Seaspan's Vancouver Shipyards in order to build on the momentum underway with the construction of the JSS early blocks. Under the revised sequencing, Vancouver Shipyards commenced construction of JSS 1, followed by commencement of construction of the OOSV and subsequently JSS 2.
- While the global COVID-19 pandemic has been a major cause of impacts to schedule and costs of the JSS and OOSV, there have also been general challenges associated with a first of class ship construction. Vancouver Shipyards is working with Canada to mitigate these impacts and the shipyard continues to strive to improve productivity as we move forward.
- A keel-laying ceremony took place on November 25, 2022.

The year ahead: Construction of the OOSV will continue.

JOINT SUPPORT SHIPS: ROYAL CANADIAN NAVY

Overview:

The JSS will provide the Royal Canadian Navy with the ability to:

- increase the range and endurance of naval task group missions, with the capability of delivering fuel and other vital supplies to vessels at sea;
- provide facilities for medical and dental services; and
- provide a home base for helicopter maintenance repair.

Project at a glance:

Shipyard	Seaspan's Vancouver Shipyards Co. Ltd. (Vancouver, British Columbia)
Project status	Both JSS are under construction
Number of vessels to be built	2
Project budget	$4.1 billion
Estimated delivery	JSS 1: 2025 JSS 2: 2027

Current status:

- On June 12, 2020, a performance-based build contract was awarded to Seaspan Shipyards for the full construction of two JSS. This build contract includes the finalization of the scope and terms of the project, the construction and delivery of the ships, spare parts, technical data, training and infrastructure.

- In early 2019, the Government of Canada made a decision to re-sequence construction of the JSS and the OOSV at Vancouver Shipyards, in order to build on the momentum underway with the construction of the JSS early blocks. Under the revised sequencing, Vancouver Shipyards commenced construction of JSS 1, followed by commencement of construction of the OOSV and subsequently JSS 2.
- While the global COVID-19 pandemic has been a major cause of impacts to schedule and costs of the JSS and OOSV, there have also been general challenges associated with a first of class ship construction. Furthermore, a seven-week labour disruption between August 2022 and October 2022 by Seapans' tugboat and barge workers, the picket line for which Vancouver Shipyards workers chose not to cross, will have an impact to the schedule and cost of the JSS project. Vancouver Shipyards is working with Canada to mitigate these impacts and the shipyard continues to strive to improve productivity as we move forward.

The year ahead: Construction of both JSS will continue.

POLAR ICEBREAKERS: CANADIAN COAST GUARD

Overview:

The Polar Icebreakers will:

- replace CCGS Louis S. St-Laurent to become Canada's most powerful conventional icebreakers;
- be among the most powerful conventional icebreakers in the world; and
- enable the Canadian Coast Guard to ensure a year-round presence in Canada's North in support of Indigenous Peoples and other northerners, Arctic sovereignty, high Arctic science, including climate change research, as well as the ability to respond to major maritime emergencies.

Project at a glance:

Shipyards	Seaspan's Vancouver Shipyards Co. Ltd. (Vancouver, British Columbia) and Chantier Davie Canada Inc. (Lévis, Quebec) (pending the successful completion of the ongoing selection process to add a third strategic partner for large ships construction under the NSS)
Project status	Design phase
Number of vessels to be built	2
Project budget	Currently under review

Current status:

- In July 2021, the Government of Canada awarded an initial, or “ancillary” contract to Seaspan’s Vancouver Shipyards to support the assessment and optimization of the design, planning work as well as engineering and construction estimates.

The year ahead:

- Seaspan’s Vancouver Shipyards will continue to advance the design work for one of the two Polar Icebreakers. Construction Engineering and Long Lead Items contracts are expected to be awarded in fiscal year 2022/2023; and
- Canada will initiate design work with Chantier Davie Canada Inc. for the other Polar Icebreaker pending the successful completion of the ongoing selection process to add a third strategic partner for large ships construction under the NSS. We are nearing the completion of the third NSS Shipyard selection process.

PROGRAM ICEBREAKERS: CANADIAN COAST GUARD

Overview:

The Program Icebreakers will:

- combine the existing Heavy and Medium Icebreaker classes into one class;
- provide south of 60° icebreaking in the winter and north of 60° icebreaking in the summer in support of commercial shipping;
- be used as part of Canada’s increasingly rigorous security requirements in Arctic waters which are becoming more accessible due to global warming;
- have the capability to operate in severe ice conditions to enable all Canadian Coast Guard missions during ice season; and
- conduct searches on the water, respond to marine distress calls, provide assistance to disabled vessels and maintain critical services to the north.

Project at a glance:

Shipyard	Chantier Davie Canada Inc.(Lévis, Quebec) (pending the successful completion of the ongoing selection process to add a third strategic partner for large ships construction under the NSS)
Project status	Definition
Number of vessels to be built	6
Project budget	Under review

Current status:

- Not started.

The year ahead:

- Canada will initiate design work with Chantier Davie Canada Inc. pending the successful completion of the ongoing selection process to add a third strategic partner for large ships construction under the NSS.

ARCTIC AND OFFSHORE PATROL SHIPS: CANADIAN COAST GUARD

Overview:

These vessels will:

- be dedicated to a range of critical missions, including North Atlantic Fisheries Organization patrols;
- operate as the primary conservation and protection enforcement vessels on Canada's east coast, replacing existing Canadian Coast Guard offshore patrol vessels; and
- have ice capable functionality that will allow the Canadian Coast Guard to expand its patrol capability into the low Arctic.

Project at a glance:

Shipyard	Irving Shipbuilding Inc. (Halifax, Nova Scotia)
Number of vessels to be built	2
Project budget	$1.6 billion (excluding taxes)
First vessel to be delivered	2026

Current status:

- On November 1, 2019, the design contract for the project was awarded to Irving Shipbuilding Inc.
- In May 2019, the Government of Canada announced that, as part of an investment to renew the Canadian Coast Guard fleet, Irving Shipbuilding Inc. will build two additional AOPS that will be adapted for the Canadian Coast Guard.
- The ongoing COVID-19 pandemic will have an impact on project timelines, the extent of which has not yet been fully determined.

The year ahead: Work underway to complete the design to meet Canadian Coast Guard requirements. The Preliminary Design Review was completed in June 2020 and the final design review was completed in fall 2022.

MULTI-PURPOSE VESSELS: CANADIAN COAST GUARD

Overview:

The Multi-Purpose Vessels (MPV) will enable the Canadian Coast Guard to carry out multiple missions, including:

- icebreaking in moderate ice conditions and assisting in shipping and spring time flood control in the St. Lawrence waterway and Great Lakes region;
- search and rescue, emergency response, and security and protection missions; and
- maintaining Canada's marine navigation system composed of approximately 17,000 aids to navigation.

Project at a glance:

Shipyard	Seaspan's Vancouver Shipyards Co. Ltd. (Vancouver, British Columbia)
Project status	Design phase
Number of vessels to be built	Up to 16
Project budget	$14.2 billion (estimate)
First vessel to be delivered	2029

Current status:

- In August 2020, the Government of Canada awarded an initial, or "ancillary" contract to Seaspan's Vancouver Shipyards to support early concept design work for the multi-purpose vessels. Under this contract, the shipyard is exploring options and analysis for advancing the design of the vessels.

The year ahead: Vancouver Shipyards will continue the design work for the MPV.

Small Vessel Shipbuilding Projects

SEARCH AND RESCUE LIFEBOATS: CANADIAN COAST GUARD

Overview:

These shore-stationed self-righting lifeboats:

- provide key search and rescue services, including:
    - conducting searches on water
    - responding to marine distress calls
    - providing assistance to disabled vessels
- operate up to 100 nautical miles from shore
- replace the Canadian Coast Guard's existing search and rescue vessels

Project at a glance:

Shipyards	Chantier Naval Forillon (Gaspé, Quebec) and Hike Metal Products (Wheatley, Ontario)
Number of vessels to be built	20 in total (10 per shipyard)
Project budget	$176.4 million (including taxes)
First vessel delivered	Late 2017
Project completion	2024

Current status:

Delivery and acceptance of vessels 1 through 14:

- CCGS Gabarus Bay and CCGS Chedabucto Bay delivered on December 8 and 12, 2022
- CCGS Shediac Bay and CCGS Chignecto Bay delivered in May 2022
- CCGS Hare Bay and CCGS La Poile Bay delivered in 2021
- CCGS Cadboro Bay and CCGS Florencia Bay delivered in 2020
- CCGS Sacred Bay and CCGS Conception Bay delivered in 2019
- CCGS McIntyre Bay and CCGS Pachena Bay delivered in 2018
  CCGS Pennant Bay and CCGS Baie de Plaisance delivered in 2017

The year ahead: Construction of vessels 15 and 16 to continue in 2023.

CHANNEL SURVEY AND SOUNDING VESSEL: CANADIAN COAST GUARD

Overview:

These vessels:

- replaced the two vessels in the St. Lawrence Seaway in the Central and Arctic regions
    - these vessels have been in operation for an average of 37.5 years and were nearing the end of their lifespan
- provide private and commercial boaters with information about channel bottom conditions and water depth predictions; and
- provide the Canadian Coast Guard and other federal institutions the capability to monitor and observe marine and environmental conditions.

Project at a glance:

Shipyard	Kanter Marine (St. Thomas, Ontario)
Project status	Completed
Number of vessels built	2
Project budget	$5 million
Vessel delivered	End of 2018

Current status: Both vessels were delivered in 2018.

HYDROGRAPHIC SURVEY VESSELS: CANADIAN COAST GUARD

Overview:

These vessels:

- support the Department of Fisheries and Oceans' hydrographic survey operations in Canada's 3-ocean coastal and internal waters; and
- are based in:
    - Burlington, Ontario;
    - Mont-Joli, Quebec;
    - Dartmouth, Nova Scotia; and
    - St. John's, Newfoundland and Labrador.

Project at a glance:

Shipyard	Kanter Marine (St. Thomas, Ontario)
Project status	Completed
Number of vessels built	7 vessels including trailers
Project budget	$5.5 million
Vessel delivered	July 2017

Current status: Project is completed.

COASTAL RESEARCH VESSEL: CANADIAN COAST GUARD

Overview:

These vessels:

- support the Department of Fisheries and Oceans' Great Lakes Science program through the Great Lakes Laboratory for Fisheries and Aquatic Science, primarily based in Burlington, Ontario;
- operate throughout the entirety of the Great Lakes in both the offshore and near shore environments, while conducting both daylight and night-time operations between April and December each year; and
- tow arrays, trawls and conduct stationary point sampling of aquatic organisms.

Project at a glance:

Shipyard	Kanter Marine (St. Thomas, Ontario)
Project status	Completed
Number of vessels built	1
Project budget	$1.2 million
Vessel delivered	November 2016

Current status: Project is completed.

NAVAL LARGE TUGS: ROYAL CANADIAN NAVY

Overview:

The naval large tug project is intended to replace the Royal Canadian Navy's five civilian-crewed Glen-class large tugs and the two Fire-class rescue boats (one of which was retired from service in 2014). These vessels currently operate in Her Majesty's Canadian (HMC) Dockyard Halifax in Nova Scotia and HMC Dockyard Esquimalt in British Columbia.

Project at a glance:

Shipyard	Ocean Industries Inc. (Isle-aux-Coudres, Quebec)
Number of vessels built	4
Contract Value	$102 million (including taxes)
First vessel to be delivered	2023

Current status:

- Contract was awarded in April 2019
- Construction of the first vessel began in September 2020
- Construction underway on three of four naval large tugs for the Royal Canadian Navy

The year ahead:

- Construction will continue on the first three naval large tugs, and is expected to begin on the fourth and final vessel.
- Delivery of the first two tugs has been delayed to April 2023 due to supply chain issues. The last two tugs are planned for delivery later in 2023 and 2024.

Defence procurement

Air procurement initiatives

MULTI-FLEET AIR TRAFFIC MANAGEMENT AVIONICS PROJECT

Project Summary:

The Government is upgrading a number of Royal Canadian Air Force (RCAF) air navigation, management, and control system capabilities. To support these upgrades, the Multi-Fleet Air Traffic Management (MFATMA) project will ensure that aircraft avionics systems remain compliant with changing air traffic regulations, both civilian and military, around the world, and that RCAF fleets can continue to operate safely, and in close coordination with allies.

The MFATMA project will implement the avionics capability requirements in two groups. Group 1 consists of avionics capability requirements that are ready for implementation. This includes five fleets:

- CC-177 Globemaster
- CP-140 Aurora
- CC-144 Challenger (model 604 only)
- CC-150 Polaris
- CT-142 Dash 8

Group 2 consists of avionics capability requirements that need definition work prior to implementation. This includes nine fleets:

- CF-188 Hornet
- CC-177 Globemaster
- CC-130J Hercules
- CP-140 Aurora
- CH-148 Cyclone
- CH-147F Chinook
- CC-144 Challenger (model 604 only)
- CC-150 Polaris
- CC-138 Twin Otter

This project will also upgrade training devices and simulators for the CC-130J Hercules, CP-140 Aurora, CH-148 Cyclone, and CH-147F Chinook fleets to maintain RCAF training proficiency.

Project Costs: $608 million including taxes

Project Phases:

Currently in Phase:	Implementation Phase for Group 1; Definition Phase for Group 2
Initial operational capability:	2024
Full operational capability:	2027

FUTURE AIRCREW TRAINING PROGRAM (FACT)

Overview:

The program will renew aircrew training services to help maintain a multi-purpose and combat capable air force. The program will include delivery of pilot training, as well as aircrew training for air combat systems officers and airborne electronic sensor operators. The contract period is expected to be at least 20 years.

Procuring:
Comprehensive aircrew training program that provides aircraft, simulators, civilian instructors and classroom training systems, as well as other essential services, such as aircraft and airfield maintenance, accommodation, and food services.

Program Status: Request for Proposal (RFP) has been provided to qualified suppliers. RFP closing date is January 5, 2023.

Next Steps: Contract award anticipated in 2024.

FUTURE FIGHTER CAPABILITY PROJECT (FFCP)

Overview:

The objective of the FFCP is to acquire and transition into service 88 advanced fighter aircraft and associated equipment, weapons, infrastructure, information technology, and sustainment, including training and software support. This project will leverage Canadian capabilities and support the growth of Canada's aerospace and defence industries.

Acquisition Budget:
$19 billion as established in *Strong, Secure, Engaged*.

Status:
The project entered the finalization phase of the procurement process in March 2022 with the top-ranked bidder: the United States government and Lockheed Martin with Pratt and Whitney, for the F-35 fighter jet.

Next Steps:
During the finalization phase, the United States government and Lockheed Martin with Pratt and Whitney must successfully demonstrate that a resulting contract would meet all of Canada's requirements and outcomes, including value for money, flexibility, protection against risks, and performance and delivery assurances, as well as high value economic benefits for Canada's aerospace and defence industry. Once this has been demonstrated, Canada would proceed into the implementation phase of the project and acquire the F-35 including all associated goods, services and infrastructure.

HORNET EXTENSION PROJECT (HEP) (LIFE-EXTEND EXISTING CAPABILITIES)

Objective:
To ensure that Canada's Hornet fighter fleet can continue to protect North American airspace and continue to fulfil NORAD and NATO commitments until 2032, when the replacement fleet is expected to be fully operational.

Requirements:
The Department of National Defence is implementing the project in two concurrent phases.

Phase 1 is focused on addressing evolving civilian air traffic management regulations and meeting allied military interoperability requirements. New equipment and enhancements will be delivered on up to 94 aircraft that includes air traffic control and navigation equipment, secure voice radios and satellite communications, helmet night vision equipment, and upgrades to targeting pods and aircraft simulators.

Phase 2 is focused on additional combat capability upgrades for 36 aircraft. New equipment and enhancements include radars, weapons, survivability equipment and security systems.

Project Costs: $1.3 billion including taxes

Timeline:

May 15, 2020	Project Approval
Dec 09, 2021	Amended Project Approval
December 2023	Initial Operational Capability (IOC)
June 2025	Full Operational Capability (FOC)

INTERIM FIGHTER CAPABILITY PROJECT

Objective:
The Interim Fighter Capability Project will pursue the acquisition of Australian F/A-18 aircraft, associated spares and equipment to help supplement the CF-18 fleet to address an urgent capability gap until the replacement fleet is fully operational

Requirements:
Acquire 18 flyable Australian F/A-18 aircraft and modify them from their existing configuration to ensure that they are functionally identical to Canada's CF-18 fleet ('Canadianized').

Project Budget: $339.3 million

Timeline (Fiscal Year):

Completed	Start Options Analysis
Completed	Start Definition
Completed	Start Implementation
Completed	Initial Delivery to RCAF
Completed	Receipt of all 18 Australian F/A-18 aircraft.
2022/2023	Final Delivery

STRATEGIC TANKER TRANSPORT CAPABILITY PROJECT

Project summary:

The government is acquiring a new fleet of aircraft to replace the CC-150 Polaris. This new fleet will conduct multiple tasks, such as in-flight refuelling of other aircraft, military personnel and cargo airlift, medical evacuations, and strategic transport of Government of Canada officials.

This new aircraft will improve the flexibility, responsiveness, interoperability with allied nations, communications security, and self-protection of the Royal Canadian Air Force's current fleet. The project will acquire an in-service support solution for the new aircraft, as well as infrastructure to house and maintain the fleet at the main operating base, 8 Wing Trenton, Ontario. Additionally, the project will provide a training and simulation capability to prepare and maintain crew readiness.

Objective: The Strategic Tanker Transport Capability project will provide a capability to the Canadian Armed Forces to conduct Strategic Airlift and Air-to-Air Refuelling in replacement for the CC-150 Polaris.

Funding Range: $1 billion to $4.99 billion

Anticipated Timeline (Fiscal Year):

2022/2023	Implementation Phase
2028/2029	Initial Operational Capability
2030/2031	Final Operational Capability

Project updates:
April 1, 2021 - Following evaluation of the responses received to the Invitation to Qualify (ITQ), the Government of Canada published the name of the qualified supplier that demonstrated its ability to meet the requirements listed in the ITQ. The company is Airbus Defence and Space SA.

July 14, 2022 – The acquisition of 2 used aircraft was announced through a DND News release. These 2 aircraft will be operated in a strategic airlift role until their induction into the Airbus line for modification into a Strategic Tanker Transport Capability aircraft.

ACQUIRE SPACE CAPABILITIES INCLUDING REPLACEMENT OF THE CURRENT RADARSAT SYSTEM, SENSORS FOR TRACKING SPACE DEBRIS

Defence Enhanced Surveillance from Space - Project (DESSP)

Objective:

DESSP will replace and improve upon the defence capabilities delivered by the GC RADARSAT Constellation Mission (RCM) and Polar Epsilon (PE) 1 and 2 projects.

Project Summary:

DESSP is the DND/CAF planned replacement and upgrade of the DND capabilities provided by the RCM and PE2 ground stations to meet future operational and strategic requirements. The project will provide support to global intelligence collection requirements while concentrating on monitoring the maritime approaches to Canada.

Requirements:

DESSP will fulfill the Space-based Surveillance Requirements Document (SBS-RD) requirements to the maximum extent possible. It will include a space-based synthetic aperture radar (SAR) and an Automatic Identification System (AIS). Other payloads and capabilities may include detection of Common Maritime Transmissions, and other space-based surveillance payload capabilities. Key requirements include weather and light conditions independency, interoperability with allies, focus on low-latency, global access and defined areas of interest, arctic surveillance, and tactical ordering and reception.

Budget:

Current budget estimate is $2.475B, which is based on SSE and the Capability Investment Fund (CIF) refresh. Additional funds requested in the Continental Defence MC.

Anticipated Timelines (Fiscal Year):

2023/24	Start Definition (timelines under review)
2028/29	Start Implementation
2032/33	Initial Delivery
2033/34	Final Delivery

ENHANCED SATELLITE COMMUNICATIONS PROJECT – POLAR (ESCP-P)

Overview:
ESCP-P will provide a Government of Canada (GC), secure, and reliable Narrowband (NB) and Wideband (WB) communications capability in the Arctic to the Canadian Armed Forces (CAF). ESCP-P will support the rebroadcast of the United Stated Integrated Warning System (IBS) and host an adjunct payload.

Requirements:

- Communicate voice and data information (including Classified) in the Arctic theatre of operations jointly amongst CAF force elements and with Allies including NATO and NORAD partners;
- Provide the minimum throughput and channel accesses to support communications for the GC and its International Partners in the Arctic region (including IBS);
- Have control over planning, monitoring and operating the payloads through DND Operational Centre(s);
- Support and leverage the full system capability as an integrated component of the overall CAF infrastructure; and
- Host adjunct payload.

Procuring:
A space segment, consisting of a purpose-built satellite constellation providing coverage between 65^{o} North (N) and 90^{o} N latitudes.

Ground segment infrastructure that provides the terrestrial infrastructure including Operations Centres, interface and control capabilities for the system.

A user segment that includes new and adapted or modified user terminals.

Full life In-Service Support (ISS) for the delivered system throughout its life cycle of 15 years.

Status: The project is at the Options Analysis phase where a preliminary statement of operational requirement and a business case analysis are being developed.

Next steps: Anticipate entering Definition phase in December 2023. Revised timeline and budget will be promulgated when the project enters its Definition Phase.

TACTICAL INTEGRATED COMMAND, CONTROL AND COMMUNICATION AIR PROJECT

Objective: Project will harmonize two Comd RCAF capital activities: Joint Tactical Data Link Project and CAS Initiative Ground/Air/Ground Radio Replacement as well as address streaming video data exchange.

Funding Range: $100 million to $249 million

Anticipated Timeline (Fiscal Year):

2019/2020	Definition started
2022/2023	Start Implementation
2023/2024	Initial Delivery (under review)
2027/2028	Final Delivery (under review)

UTILITY TRANSPORT AIRCRAFT

Objective: To acquire a replacement for the CC-138 Twin Otter.

Requirements:
This project will provide a fleet of aircraft to conduct utility airlift operations, maintenance and training in Canada's far north. It will ensure sufficient range to transit on an IFR flight with a standard Ranger load from Yellowknife to Iqaluit (and return) within a crew duty day. Cargo space and loading will be such that safe loading and unloading can be performed by the crewmembers themselves without additional personnel or equipment. The aircraft must permit take-off and landing on semi-prepared or gravel-surfaced runway in an austere environment while carrying two standard Ranger loads. The aircraft must also demonstrate the capability for autonomous operations while deployed throughout the Arctic region, including a self-start capability after lengthy exposure to extreme Arctic temperatures.

Funding Range: $250 million to $499 million

Anticipated Timeline (Fiscal Year):

2021/2022	Start Definition (delayed - under review)
2024/2025	Start Implementation (under review)
2027/2028	Initial Delivery (under review)
2029/2030	Final Delivery (under review)

FUTURE FIGHTER LEAD-IN TRAINING

Overview: Acquiring a new future fighter lead-in training (FFLIT) solution for the RCAF.

Procuring: Canada requires a FFLIT to deliver effective fighter education, skills and experience in the control and operation of military high performance jet aircraft.

Status: Engaging with industry to discuss Canada's requirements and request feedback. The first request for information (RFI) closed on October 27, 2021.

Next steps: Further engagements opportunities will be organized based on requirements and feedback received from the industry.

The current North Atlantic Treaty Organization (NATO) Flying Training in Canada Program will cease fighter lead-in training (FLIT) operations in 2024, and the RCAF is currently in the final stages of adopting a temporary bridge training capability to sustain FLIT capacity until such time that FFLIT commences operation.

CORMORANT MID-LIFE UPGRADE (SUSTAIN DOMESTIC SEARCH AND RESCUE CAPABILITY)

Project summary:
This project will extend the estimated life expectancy of the CH-149 Cormorant to at least 2042, address obsolescence issues, ensure compliance with emerging regulations, and address a search and rescue capability deficiency at the Trenton Main Operating Base. To achieve these objectives, we will explore updates and upgrades to the existing CH-149 Cormorant fleet, augmentation of the fleet, and improvements to maintenance regimes and training. The project is currently in the Definition Phase.

Anticipated Timelines:

Project approval:	February 2019
Contract award:	December 2022
First delivery:	2026
Initial operational capability:	to be confirmed
Final delivery:	to be confirmed
Full operational capability:	2029

FIXED-WING SEARCH AND RESCUE AIRCRAFT REPLACEMENT (FWSAR)

Overview:

Acquiring the next generation of search and rescue planes and opening a new training facility in Comox, British Columbia.

The aircraft will be based in:

- Comox, British Columbia
- Winnipeg, Manitoba
- Trenton, Ontario
- Greenwood, Nova Scotia

These aircraft are replacing the current fleet of CC-115 Buffalo and CC-130H Hercules, which have served Canada well over the last 20 to 40 years.

Contract value: $2.54 billion

Procuring:

- 16 CC-295 aircraft equipped with advanced technology systems
- Infrastructure and set-up activities
- Construction of a new simulator-equipped training centre in Comox, British Columbia
- Maintenance and support services
- Tools and test equipment, spare parts, and access to technical data

Status: Canada has accepted 14 aircraft as of November 25, 2022.

Next steps:

- Initial operational capability 2025/26

MANNED AIRBORNE INTELLIGENCE, SURVEILLANCE AND RECONNAISSANCE (CLIENT DEPARTMENT: DND)

Overview:

Acquiring a new manned airborne intelligence surveillance and reconnaissance (MAISR) capability for the Canadian Armed Forces.

Procuring:

- 3 Beechcraft King Air 350ER aircraft and associated mission systems
- In-service support for a potential 22.5-year period

Status:

- Procurement 1: In December 2020, through the Foreign Military Sales program, Beechcraft Textron, Wichita (Kansas), delivered three King Air 350ER aircraft to the United States Government which have since been accepted and provided to L3Harris in Greenville (Texas) to commence with aircraft integration of the mission systems
- Procurement 2: Public Services and Procurement Canada, on behalf of the Department of National Defence, awarded an in-service support to Team CERTAS, a joint venture between General Dynamics Mission Systems–Canada, from Ottawa, Ontario, and Voyageur Aviation Corporation, from North Bay, Ontario

Next steps: continue working towards the first delivery of fully integrated aircraft.

REMOTELY PILOTED AIRCRAFT SYSTEM (RPAS) PROJECT

Overview:
The RPAS project will deliver a new capability to support Canadian Armed Forces (CAF) intelligence, surveillance and reconnaissance during domestic and international operations. The aircraft will be piloted by certified RCAF pilots from a Ground Control Centre in the National Capital Region and will be capable of carrying and employing precision-guided munitions.

Procuring:
Medium-altitude, long-endurance, remotely-piloted aircraft systems to support three lines of tasking, with associated sustainment, training and infrastructure.

Funding Range: $1 billion to $4.99 billion

Status: Definition phase. The Request for Proposal (RFP) was released to qualified suppliers in February 2022 and closed in August 2022.

Next steps: Contract award anticipated by 2024.

NAVIGATION AND AVIONICS EQUIPMENT

Objective:
A four-phase project that is to ensure the RCAF will be able to rely on GPS for precise navigation and timing for other aircraft systems

Requirements:
Phase I: GPS Navigation Capability for multiple aircraft fleets (Implementation)
Phase II: GPS Anti-Jamming Antenna Capability for larger aircraft fleets (Implementation)
Phase III: GPS Anti-Jamming Antenna Capability for CH-146 Griffon (Definition)
Phase IV: GPS M-Code Signal Capability (Definition)

Funding Range: $100 million to $249 million

Anticipated Timeline (Fiscal Year):

Start Options Analysis	Completed
Start Definition	Completed
Start Implementation	Completed
Initial Delivery	Completed
Final Delivery	2023/2024 (under review)

CANADIAN MULTI-MISSION AIRCRAFT (CMMA)

Overview:
The objective is to equip the Canadian Armed Forces with a long-range manned Command, Control, Communications and Computers (C4) and Intelligence, Surveillance and Reconnaissance (ISR) and Anti-Submarine Warfare (ASW) aircraft with extended capabilities to replace the CP-140 Aurora.

Requirements:
To meet the continuing and evolving mandate for advanced ISR capabilities, the Canadian Armed Forces needs a manned, long-range platform, capable of providing C4 ISR and ASW with the ability to engage/control and to fully integrate with other ISR and ASW assets. The Canadian Multi-Mission aircraft (CMA) project will provide the capability required to effectively support Canada's strategic requirements for C4ISR and ASW at home as well as to support Canada's interests abroad. Canada's large size necessitates an aircraft with long range and loiter times to ensure the platform can transit to operating areas and remain on station for sufficient time.

The project is currently in Options Analysis.

Funding range: Greater than $5 billion

Anticipated Timeline (Fiscal Year):

Start Options Analysis	2021/2022 - underway
Start Definition	2023/2024
Start Implementation	2027/2028
Initial Delivery	2032/2033
Final Delivery	2037/2038

GRIFFON LIMITED LIFE EXTENSION PROJECT

Overview:
The Griffon Limited Life Extension (GLLE) project will extend the life of the Royal Canadian Air Force's fleet of 85 CH-146 Griffon helicopters to at least 2031.

Requirements:
The GLLE project will replace a number of the aircraft's avionics systems, including communications radios and cryptographic equipment, cockpit voice and flight recorders, navigation systems, automatic flight control systems, and control display units, upgrade the cockpit displays, upgrade engines, and integrate sensor systems.

The project will also upgrade flight simulation and training devices to ensure alignment with the fleet modifications, and the provision of equipment and spare parts.
The CH-146 is a proven, durable utility tactical transport helicopter that fills a number of functions. It has participated in tactical troop transport, reconnaissance, escort and surveillance, casualty evacuation, disaster relief, special operations aviation support, and search and rescue.

The project is in the Implementation Phase.

The cost of the project is:

- Up to $90 million for the definition phase
- Up to $800 million for the span of the Griffon Limited Life Extension project

Anticipated Timeline:

Start Options Analysis	Completed
Start Definition	Completed
Start Implementation	Underway (contract awarded in May 2022)
Initial operational capability	2024
Full operational capability	2027

Marine procurement initiatives

INTERIM AUXILIARY OILER REPLENISHMENT VESSEL

Overview:

The Royal Canadian Navy had to retire the former HMCS Protecteur and HMCS Preserver earlier than anticipated. This left the Navy with an urgent requirement to fill a critical gap in replenishment at-sea capability until the JSS are delivered.

The key role of the interim provision of service contract is to provide an at-sea supply and replenishment service to the Royal Canadian Navy during non-combat domestic and international operations. It could also offer significant additional capabilities, such as aviation support, space for medical support, and humanitarian assistance or disaster relief.

Project at a glance:

Contract awarded:	November 30, 2015
Awarded to:	Federal Fleet Services Inc. (formerly Project Resolve Inc.)
Contract length:	5 years, with an additional 5, 1-year option periods at the discretion of the Government of Canada
Vessel conversion done by:	Chantier Davie Canada Inc. (Lévis, Quebec)
Converted for:	Royal Canadian Navy
Contract value:	$691.6 million
Vessel entered into service:	January 29, 2018, for a period of 5 years, a recent amendment has been entered into to extend service by 2 additional years to January 2025

EMERGENCY OFFSHORE TOWING VESSELS: CANADIAN COAST GUARD

Overview:

Emergency Offshore Towing Vessels:

- are capable of towing large commercial ships in distress, such as tankers and container ships, before they get too close to shore; and
- form part of a broader strategy under the Oceans Protection Plan to bolster Canada's marine safety system, that also includes:
  - an in-depth towing needing analysis;
  - equipping the Canadian Coast Guard's large ship fleet with emergency towing capacity; and
  - an expanded approach to regional response planning.

Project at a glance:

Contract awarded:	August 2018
Awarded to:	Atlantic Towing Limited (Saint John, New Brunswick)
Number of vessels to be leased:	2, operating in the waters off the coast of British Columbia
Additional elements of the contract:	Training in offshore emergency towing to Coast Guard personnel and partners, including Indigenous communities, involved in marine safety
Vessels for:	Canadian Coast Guard
Project budget:	$67 million (including taxes)
Duration of contract:	3 years, with 7 additional option years
Current status:	Both vessels arrived on-site in late 2018

Project description:

This contract fulfills an immediate operational need to have vessels available as soon as possible, while the Government of Canada works in partnership with Indigenous communities and local stakeholders to develop a long-term strategy for emergency towing on the West Coast and across Canada.

The two leased vessels will be operated by Atlantic Towing Limited personnel, along with members of the Canadian Coast Guard, off the coast of British Columbia. One will patrol a northern area in Canadian waters between Alaska and the northern tip of Vancouver Island, and the other a southern area, including the west side of Vancouver Island and the Strait of Juan de Fuca.

The contract allows for four one-year option periods under the same contract terms and conditions, to be exercised at Canada's discretion. In November 2022, Canada exercised its second of these option years for two fully crewed Emergency Towing Vessels stationed off the coast of British Columbia. The services from these vessels will provide an interim heavy-towing capacity while a long term strategy is developed.

IN-SERVICE SUPPORT: HALIFAX-CLASS COMBAT SYSTEM

Overview:

Through the NSS, the Government of Canada successfully modernized the Royal Canadian Navy's fleet of 12 Halifax-class frigates to ensure they continue to meet evolving operational needs. As part of this modernization project, various combat systems onboard the frigates were retrofitted through the Halifax-class modernization/frigate life extension combat system integration design and build contract. These include, but are not limited to, detection and search radars, navigation radars, fire control systems (targeting radars), and target identification systems.

The in-service support contract is for 12 Halifax-class combat systems (HCCS). The HCCS are an integral component of the entire fleet of Halifax-class ships and will require in-service support until the arrival of the CSC.

Project at a glance:

Contract awarded	October 30, 2020
Number of vessels	12
Contract awarded to	General Dynamics Mission Systems-Canada (Ottawa, Ontario)
Vessels for	Royal Canadian Navy
Contract Value	Initial contract is valued at approximately $182 million (including taxes)