



National
Defence

Défense
nationale



CANADIAN
ARMED FORCES

Federal Marine Procurement Outlook

Department of National Defence

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20 November 2018

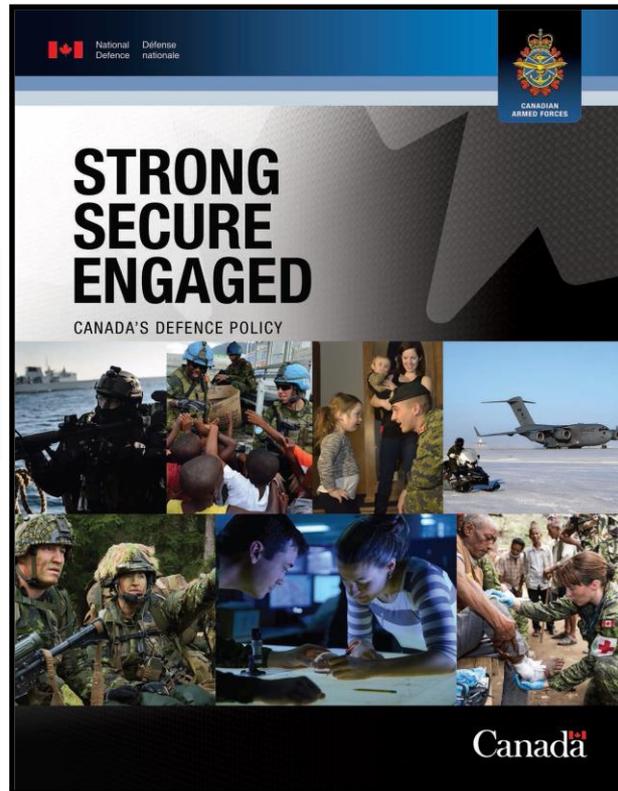
Canada 



Well-supported, diverse, resilient, people and families

Investments to enhance capability and capacity

Stable, predictable, realistic funding



Defence innovation

Canada's new vision for Defence

Modernizing the business of Defence

Investing in the Future Force

Invest additional \$62B for capital expenses to \$104B

Rebuild **core capabilities**: 88 fighter aircraft, 15 surface combatants, 2 joint support ships, 6 Arctic offshore patrol ships

Increase emerging capabilities in **cyber, space, and remotely piloted vehicles** to maintain effectiveness and interoperability with allies

Capability enhancements, including **intelligence, satellite communications, surveillance and logistics vehicles**

Modernizing the Business of Defence

A **transformative innovation agenda** with defence research clusters linked to procurement

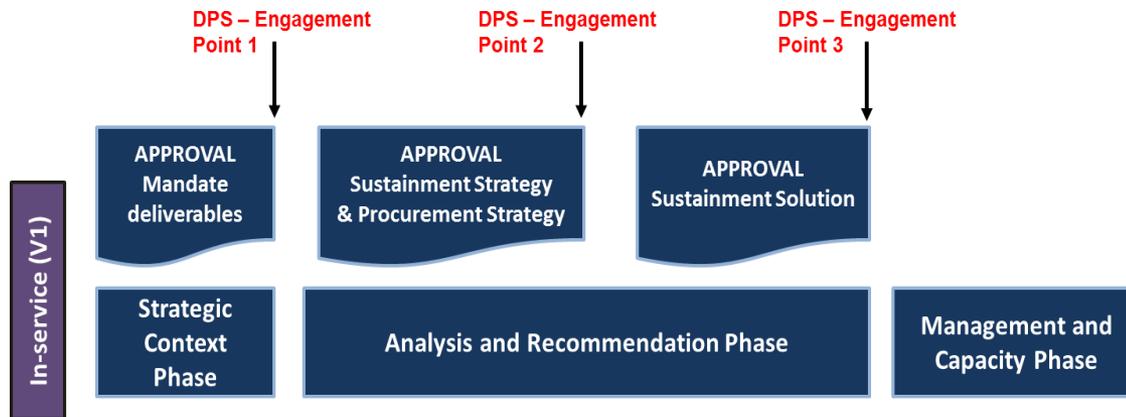
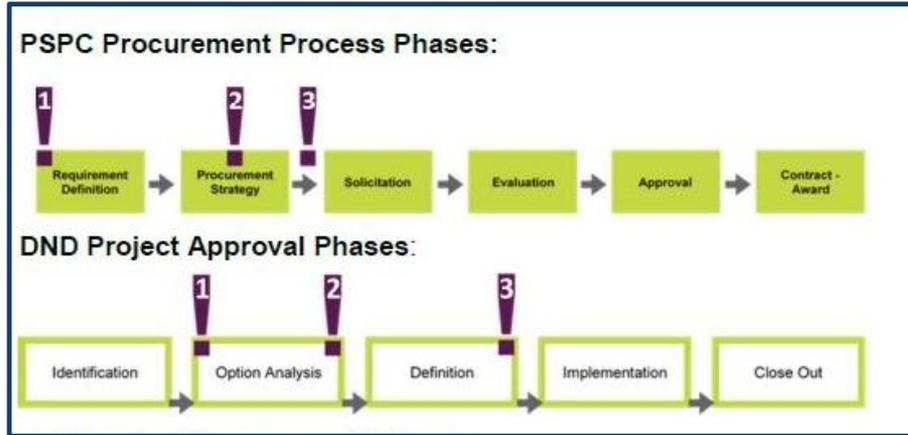
More accountable, transparent, and streamlined **defence procurement** process

Reduced carbon footprint through green infrastructure and focus on energy efficiency

Modernized **infrastructure management** through expanded partnership with the private sector



Defence Procurement Strategy



Industry engagement – a key enabler in strategy development & support solution refinement



Sustainment Initiative

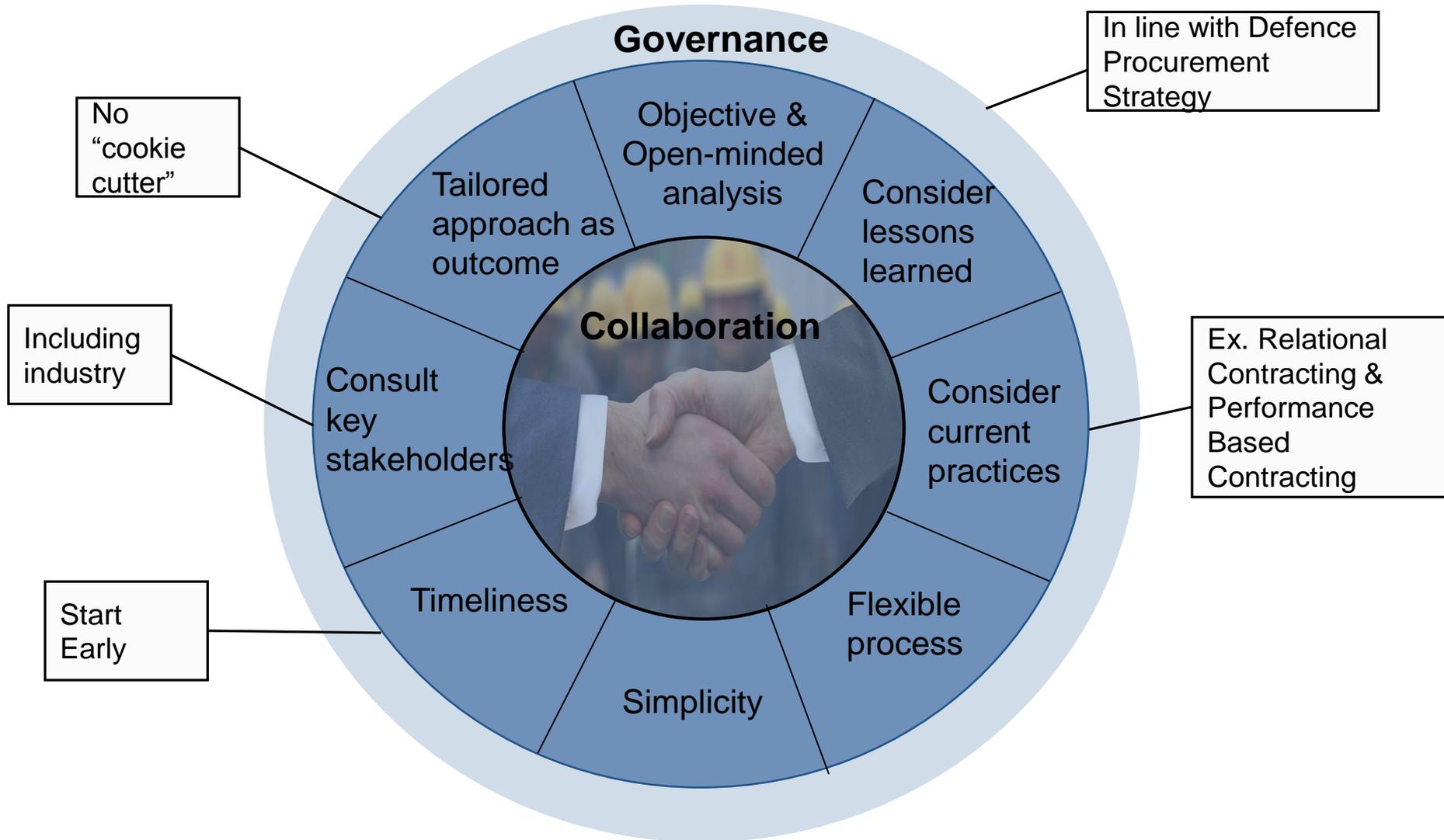
The Sustainment Initiative is a joint undertaking by the Department of National Defence (DND), Public Services and Procurement Canada (PSPC), and Innovation, Science and Economic Development Canada (ISED) aimed at evolving how defence equipment is supported to achieve the best value for Canada while fostering innovation from industry. This is achieved by balancing these **four principles**:

- **Performance** - defence equipment that is operationally ready and mission capable.
- **Value for money** - the required outcomes are procured at a price commensurate with the market rate.
- **Flexibility** - an adaptable and scalable support system that can readily be adjusted to changes in operational requirements and/or operating budgets.
- **Economic benefits** - leveraging industrial benefits from defence procurements to create jobs and economic growth for companies in Canada.





Sustainment Business Case Analysis Process





Arctic and Offshore Patrol Vessel (AOPV)



Fall
2018

-AOPS 1:
Launch & Naming
Ceremony
-AOPS 2:
Megablocks 1-3 at
land level
-AOPS 3:
Keel laying

Winter
2018

-AOPS 4:
Steelcutting

Spring
2019

-AOPS 1:
Sea Trials

Summer
2019

-AOPS 1:
Delivery

Fall
2019

-AOPS 2:
Launch & Naming
Ceremony
-AOPS 4:
Keel laying



Joint Support Ship (JSS)

Scope:

(2) Two Joint Support Ships providing a cost effective 30+ year life span and robust deployability including:

- Combat Management System with associated sensors, and link capabilities;
- Complete military communication systems
- Helicopter mission planning and organic aircraft weapons handling
- Damage stability and recoverability capability
- CBRN citadel
- Degaussing
- Dual redundant propulsion

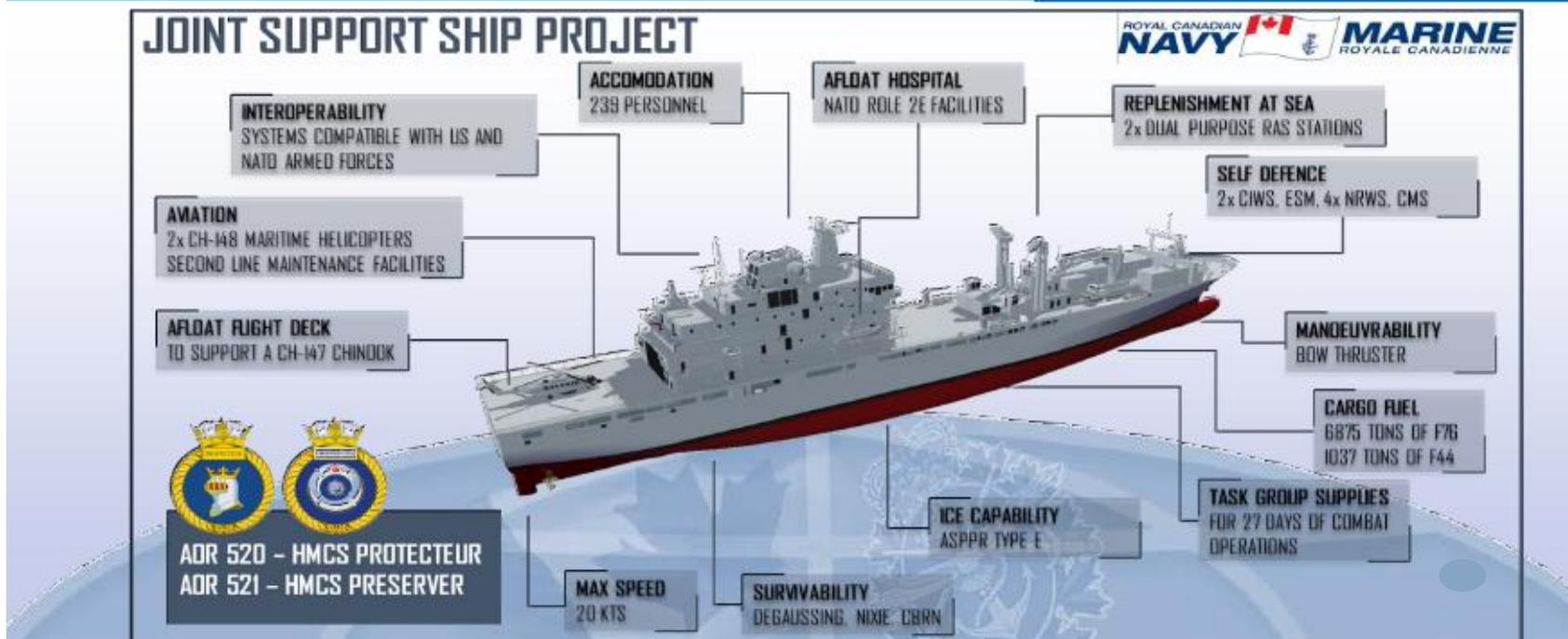
Schedule:

2018 Start of Production

FY 22/23 JSS1 delivery

FY 23/24 JSS2 delivery

* Schedule is dependent on progress of the CCG projects in the NSS Non-Combat Package





Canadian Surface Combatant (CSC)

SSE Announcement

- Estimated cost
\$56-60 Billion

Construction Start

- Early 2020s

First Ship Delivery

- Mid 2020s

Scope

Confirmed in Strong, Secure, Engaged

Build **15 ships** to recapitalize the Canadian Armed Forces surface combatant fleet

Replaces the warfare capabilities residing with the HALIFAX (HAL) Class ships and recently retired IROQUOIS (IRO) Class ships

Includes the necessary Integrated Logistics Support, trainers, training and infrastructure

Naval Large Tug Project (NLT)



DELIVERABLE:

- 4 new large tugs to replace 5 *Glen*-class tugs and 2 fire boats.
- The new tugs will provide sufficient large tug capability to the Queen's Harbour Masters in Halifax and Esquimalt to support naval operations over the next 25 years.
- Requirements;
 - Perform a combination of in-harbour and coast/offshore work
 - Able to perform a *Protecteur*-class Cold Move
 - Migrate afloat harbour fire protection into large tugs.

REQUIREMENT CONSIDERATIONS:

- Commercial design and construction
- Highly manoeuvrable
- At least 2 propulsion systems and enough Bollard Pull to enable 2 tugs to cold move a Joint Support Ship in 25 kts wind and 2 kts current
- Clutter free upper decks
- Commercial bridge configuration with standard bridge control console
- Fire-Fighting Capability 1 (FiFi1)
- Accommodation for 6 crew
- Designed for at least 25 years of operations

SSE - PROJECT STATUS:

In Definition: RFP Complete.

Next Milestone: Implementation

Funding: \$100-\$249M



CONTACT INFORMATION:

- NLT Project Director
- LCdr Byrne Schneider
- DNR 3-3
- Byrne.Schneider@forces.gc.ca
- 819-939-3962



Multi-Role Boat (MRB)



DELIVERABLE:

- Replace the *Halifax*-class frigates' Rigid-hull Inflatable Boat (RHIB) and davit system with a new RHIB and multi-function launch and recovery system (LARS). The LARS' enhanced capability will support launch/recovery of fully manned MRB as well the existing Sea Rescue RHIB, cargo and miscellaneous stores handling and future demands including possible USV/UUV.
- Each frigate system will include:
 - Port and Starboard articulating crane system
 - Two 9.3m twin-engine, ISR equipped, 12-person shock mitigating seating RHIB.

REQUIREMENT CONSIDERATIONS:

- RHIB operating independently in all conditions of visibility/weather both inside and outside of frigate's visual and radar horizons.
- Integrated sensors and communications to pass information (e.g. position/radar & EO/IR video) to other platforms
- LARS shall be able to launch and recover fully crewed and loaded RHIB (Minimum Safe Working Load of 7,030 kg)
- Multi-functional; conduct current boat/materiel tasks of the existing davit and torpedo handling crane, and support anticipated future requirements (UUV/USV, launch and recovery of other Federal Government boats / RIBs)

SSE - PROJECT STATUS:

In Definition.

Next Milestone: RFP Release

Funding: \$50-\$99M



CONTACT INFORMATION:

- MRB Project Director
- Mr. Mark De Smedt
- DNR 3-7
- Mark.DeSmedt@forces.gc.ca
- 819-939-3966



Remote Minehunting and Disposal System (RMDS)



DELIVERABLE:

- A modular, stand-off Naval Mine Countermeasures (NMCM) capability, designed to provide the full spectrum of Naval Mine Hunting operations and contribute to underwater domain awareness;
- The RMDS project intends to leverage proven Commercial off of the Shelf (COTS) unmanned systems and Autonomous Underwater Vehicle (AUV) technology;
- RMDS payloads will contain modular sub-systems that are portable and deployable;

REQUIREMENT CONSIDERATIONS:

- Two Complete RMDS Payloads, including:
- AUV Sub-system,
 - 2 (min) small, “man portable” AUVs (<70kg), and
 - 2 (min) light weight, AUVs (<450 kg);
 - Mine Disposal Sub-system.
 - 20 Explosive Mine Disposal Vehicles (EMDV);
 - 2 (min) training and/or inspection variants;
 - mine disposal control console; and
 - portable storage magazine for up to five EMDVs;
 - Transportable Command Centre (TCC). 20’ ISO shelter container for the conduct of deployed RMDS operations

PROJECT STATUS:

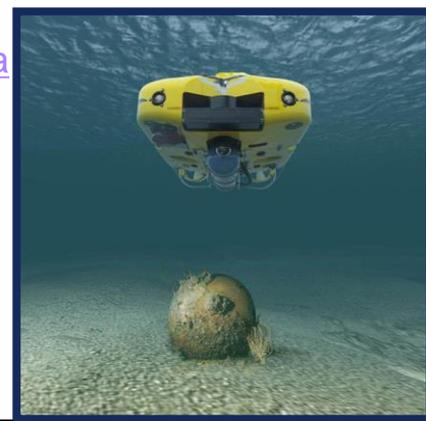
In Definition

Next Milestone: RFP

Funding: \$20-\$49M

CONTACT INFORMATION:

- RMDS Project Director
- LCdr Mark Dittrich
- DNR 3-2
- Mark.Dittrich@forces.gc.ca
- 819-939-3960



Naval Inshore Support Vessel (NISV)



DELIVERABLE:

- The aim of this project is to provide 6 to 8 common Naval Inshore Support Vessel (NISV) to the RCN:
 - platform to ensure Fleet Diving Units conduct diving operations and maintain readiness of capabilities;
 - vessel suitable for training Naval reservists in small vessel operations; and
 - may provide range support.

REQUIREMENT CONSIDERATIONS:

- Equipped to receive containerized capabilities. Aim 4 ISO 20's or equivalent ISO breakdown on the same continuous work deck. Space to operate the systems on deck. Containerized capabilities are not part of the project;
- Centerline through deck opening on the work deck for dive stage;
- The vessels will accommodate at least 24 personnel for minimum 5 days;
- NMT 30 meters at the water line; and
- NMT 350 Tonnes.

PROJECT STATUS:

In Identification.

Next Milestone: Options Analysis

Funding: \$100-\$249M



CONTACT INFORMATION:

- NISV Project Director
- LCdr J.R. Gallant
- DNR 3-5
- James.gallant2@forces.gc.ca
- 819-939-3965

Naval Security Team Force Protection Boat (NST – FPB)



DELIVERABLE:

- To develop a Force Protection boat (FPB) capable of rapid deployment by land, sea or air to support waterside security and Force Protection capability. This FPB will support the Naval Security Team (NST) for on-water security.

REQUIREMENT CONSIDERATIONS:

- Transportable by truck, trailer, container or aircraft
- Support sustained operations in all weather conditions
- Integrated navigation, communications, and radar
- Crew of 2-4 personnel

PROJECT STATUS:

In Identification.

Next Milestone: Options Analysis

Funding: \$5M-\$20M

CONTACT INFORMATION:

- NST FPB Project Director
- Lt(N) George Szabo
- DNR 3-2
- George.Szabo@forces.gc.ca
- 819-939-3960

Outboard Engine Dive Boat (OEDB)



DELIVERABLE:

- RHIBs which are more suitable for CAF diving operations.
- The aim of this project is replace the current PC RHIB in use.
- Ability to support common diver tasks
- Facilitate the nature of the operations

REQUIREMENT CONSIDERATIONS:

- 8 greater than 9 M RHIB with cuddy wheelhouse
- Diver doors
- 2 x 275 hp counter rotating outboard engines (provided)
- Spare parts
- Manuals
- Tie down rail systems
- Space to work Aft
- Winch/liftmore
- Potentially able to operate some tow systems
- At least 2 trailers

PROJECT STATUS:

In Definition.

Next milestone: RFP

Funding - Minor Project under \$5M

CONTACT INFORMATION:

- OEDB Project Director
- LCdr J.R. Gallant
- DNR 3-5
- James.gallant2@forces.gc.ca
- 819-939-3965



DELIVERABLE:

- Deliver four (4) robust, low maintenance, low draft, steel barges to Canadian Forces Base (CFB) Esquimalt, Port Operations and Emergency Services Branch (POESB).

REQUIREMENT CONSIDERATIONS:

- Primary roles of 400 Series Barge:
 - Anchor Removal and Ranging
 - Installation of towed arrays
 - Cargo and equipment transport while under tow by a tug
 - Ship-side work, tests, trials and general maintenance
 - Meet all relevant labour and safety codes

PROJECT STATUS:

In Definition.

Next milestone: RFP

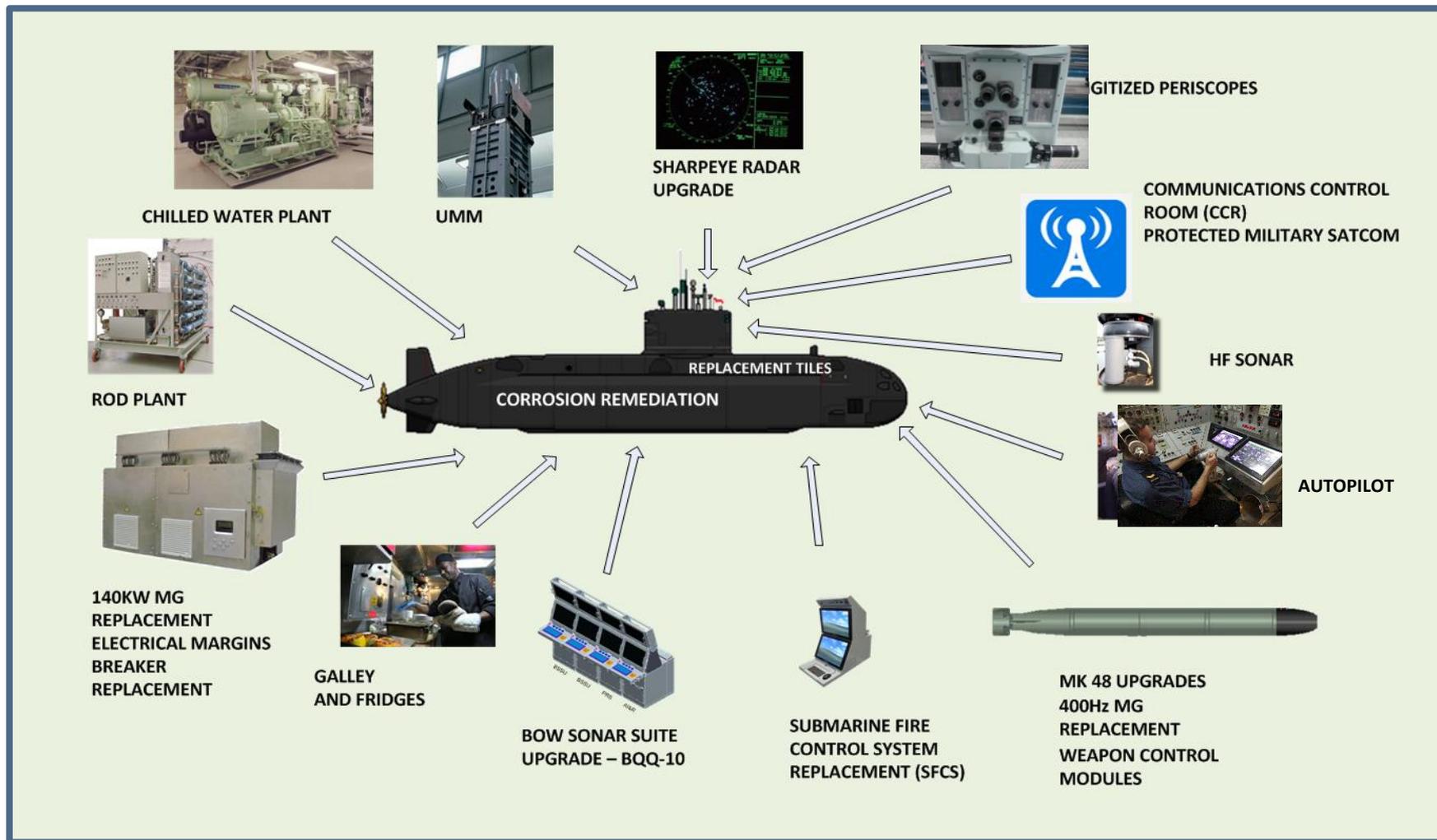
Funding - Minor Project under \$5M

CONTACT INFORMATION:

- Project Director
- Lt(N) George Szabo
- DNR 3-3
- George.Szabo@forces.gc.ca
- 819-939-3968



Victoria Class Current Sustainment and Upgrade Program





Victoria Class Modernization Program

- Program currently in **Options Analysis phase**, RCN lead
- Implementation will be managed within submarine sustainment program
 - To be **integrated into Class Plan** – no extra time out of service;
 - Will be procured as **discrete elements** (may be grouped) – DND to manage integration;
 - To be completed in concert with ongoing sustainment program.



Victoria Class Submarine 9+3 Op Cycle



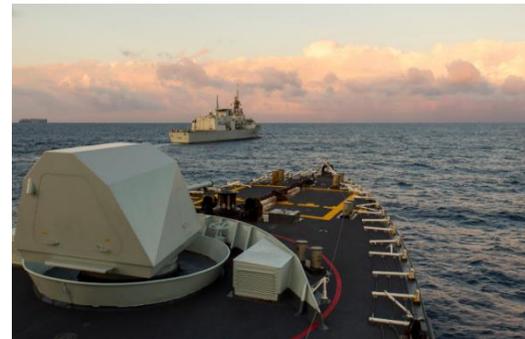
Main Capability Insertion Periods

Requirement to Balance Capability Insertion and Operational Tempo



Halifax Class Frigates

- **Halifax-class Modernization (HCM) Program**
 - Largely focused on sensor and command management system updates
 - Full Operational Capability Achieved January 2018
 - Finalizing remaining activities in order to effect a project close out
- **Status of the Class** - Average platform age of 24yrs
Current Focus:
 - Establishing long term, performance based support contracts to end of life
 - Addressing obsolescent equipment not replaced during HCM
 - Managing age related Hull, piping and Superstructure Corrective Maintenance
- **Equipment replacement projects:**
 - Diesel Generators and Chillers
 - Naval Remote Weapon Station
 - Underwater Warfare Suite Upgrades
 - SG-180 Antennas
 - Electronic Support Measures and Electronic Countermeasure equipment
 - Multi-Role Boat and Crane
 - UAS fitted for but not with Block II ESSM



- **In-Service Support Contracts:**
 - *Halifax-class* Combat System Support
 - *Halifax-class* Design Agent
 - Navigation Systems
 - LM 2500 ISS, CAT Diesel ISS
 - RAMSES, CIWS
 - Work Period Contracts
 - 2nd east coast Industry Capability



Halifax Class Frigates

Challenges

- High Operational Tempo - RCN's Major Surface Combatant until CSC
- 3rd Level Hull, Piping and Superstructure Maintenance Growth
- Establishment of needed ISS arrangements for newly introduced equipment
- System Security Engineering - Cyber
- Keeping pace with technological change
 - COTS based systems
 - Rapid capability introduction

Innovation

- Improved coatings and surface treatments to reduce corrosion
- Longer life – lower energy consumption internal lighting (Energy Efficiency)
- Bio-Fuel compatibility (Fuel Economy)
- Non-invasive hull, deck and superstructure survey techniques
- Employment of Naval Material Regulation and Class Society Organizations
- Application of Performance Based Support approaches for Naval Warships
- Increased Environmental Compliance
- Automated Bosn Mate
- RFID for sailors



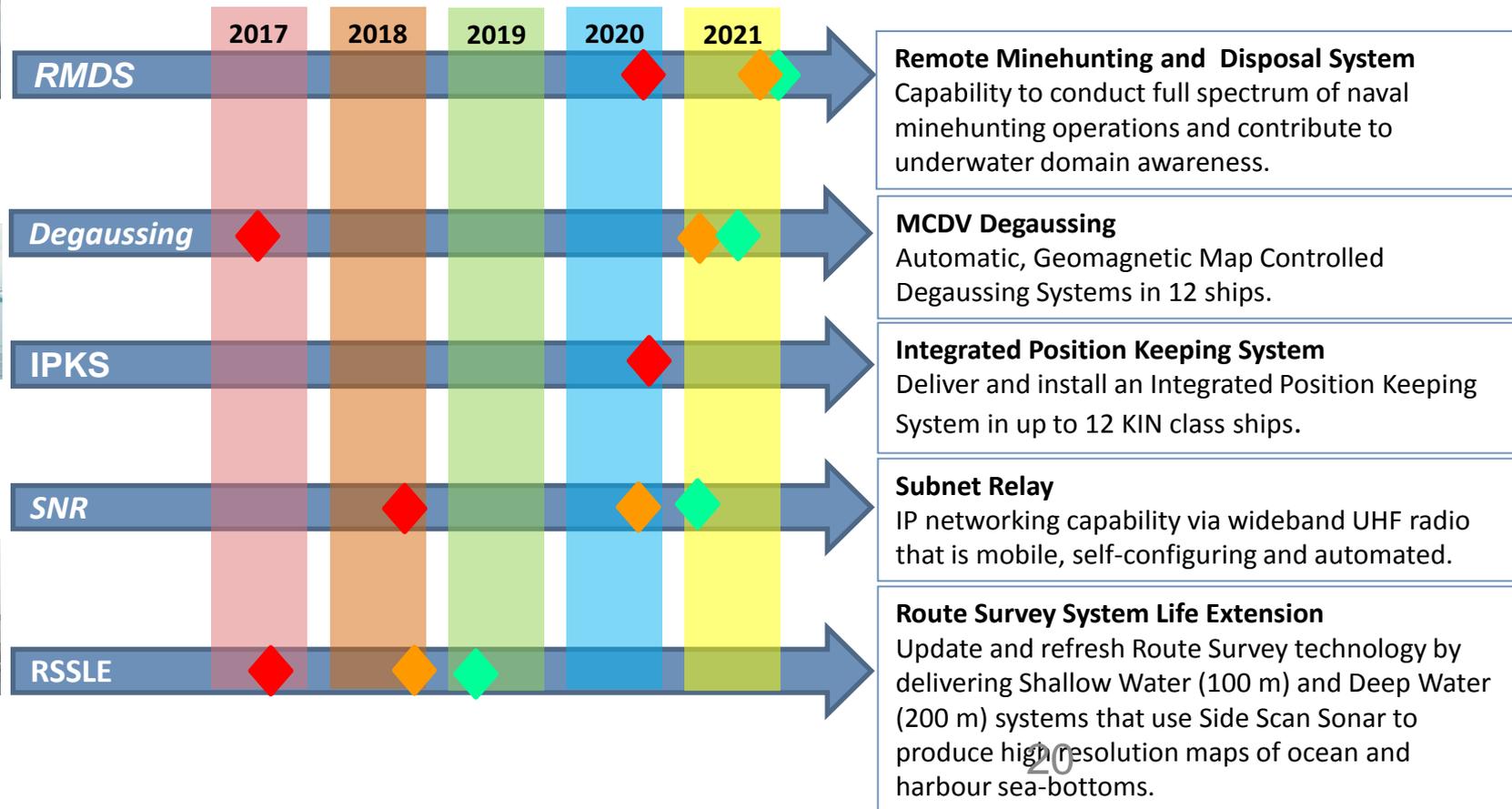


Kingston Class

- Maintaining Class readiness at full capability
- Development of reasonable life sustainment strategy, and renewal of ISSC is a priority

Target Milestone Dates

- ◆ IOC
- ◆ FOC
- ◆ Project Closeout





Non Combatant Program Update – Dockings

MCDVs

- Moncton Scheduled to commence April 2019, ECD 10 September 2019
- Summerside Scheduled to commence April 2019, ECD 15 October 2019
- **Saskatoon Scheduled to commence May 2019, ECD 31 August 2019**

ORCAs

- **Moose Scheduled to commence November 2019, ECD 8 Feb 2019**
- (No ORCA Dockings in 2019, as per 5 year cycle)

AUXILIARY

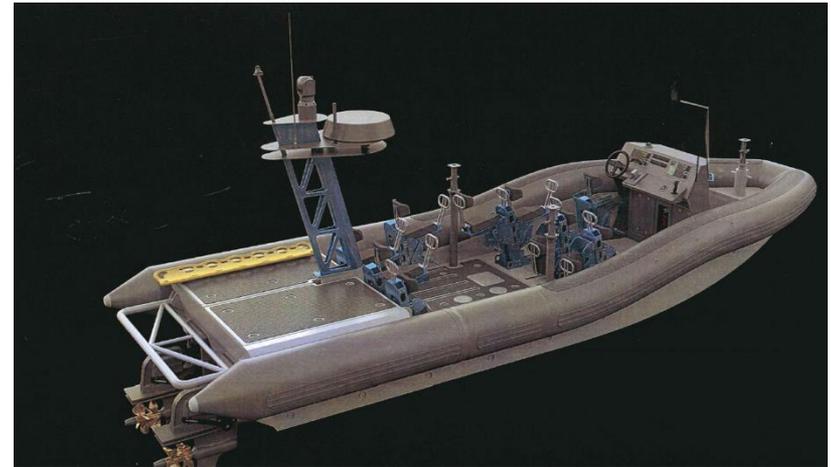
- **Albatross In Progress, ECD 6 March 2019**
- **Abalone In Progress, ECD 31 December 2018**
- **Tillicum In Progress, ECD 16 November 2018**
- **Stikine In Progress, ECD 6 March 2019**
- Parksville Scheduled to commence January, ECD 12 March 2019
- 494 Barge Scheduled to commence in March 2019
- Glendale Scheduled to commence in April 2019
- Merrickville Scheduled to commence in April 2019

Colour
East
West



Small Boats Interim In-Service Support Contract

- Various hulls to be included
 - ~150 RHIBs
 - ~600 Inflatable Boats (IRBs)
 - Multi Role Boat (MRB)
 - Defender Class
- Excluded hulls
 - MRRB (AOPS)
 - Likely to be integrated to AJISS scope
- Expected RFP Release: 2019
- Estimated Contract Award: 2020





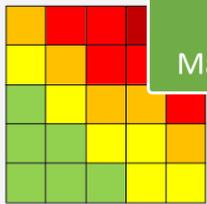
Naval Materiel Assurance

NMA Change Program



Assured Materiel State

Confidence in known materiel state, verified against NMA standards



Managed Materiel Risks

Single, common process to identify, assess, and manage materiel risks



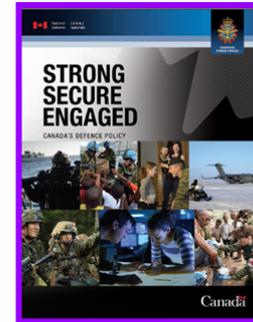
Demonstrable Due Diligence

Rigorous system to demonstrate self-regulation

Defending Canada and protecting Canadians

Improved Materiel Readiness

Safe, Environmentally Compliant, Fit for Purpose



The Government has no higher obligation than the safety and security of the Canadian people



Preparing combat-ready naval forces that support Canadian interests at home and abroad

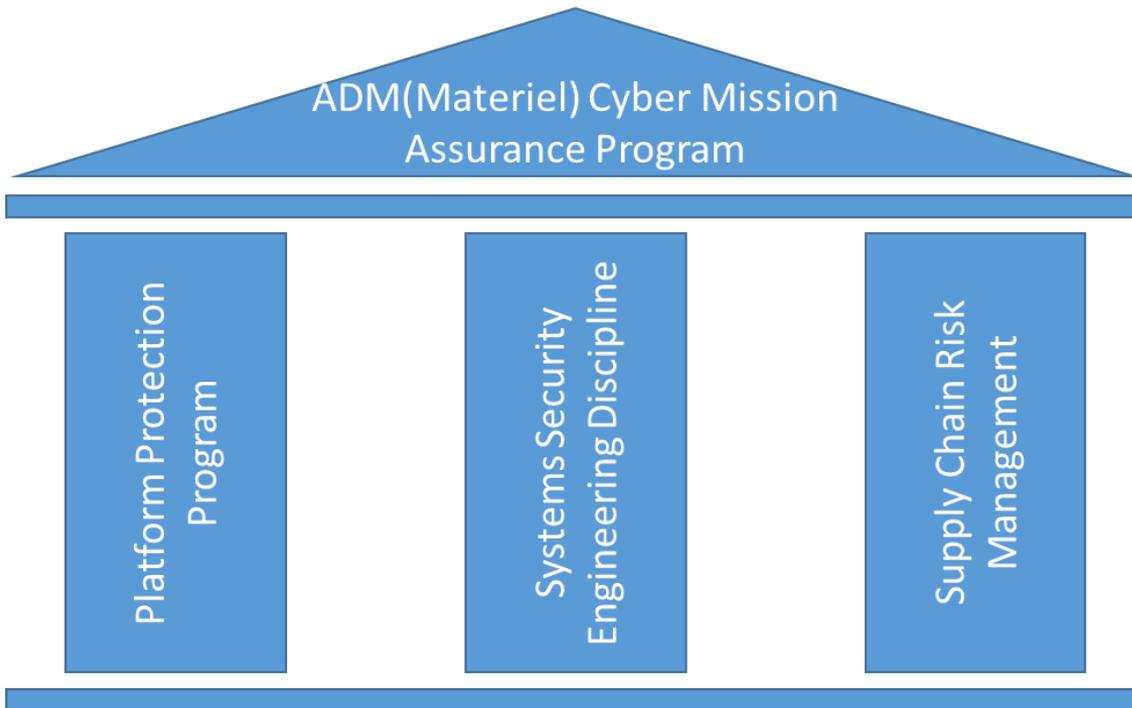


Fit for service, safe, and comply with applicable legislation, regulations and standards



Cyber in RCN Platforms

SSE Initiative 87: Establish a new program to protect critical military networks and equipment from cyber-attack.



How can industry help the Cyber Mission Assurance Program?

- Innovation
- Understanding and securing the supply chain
- Relational Contracting
- Own Security Engineering Teams



Cyber Resilient Products



- Perfect enabler for the RCN
- Immediate ramp
- Leading edge technology in development and/or unproven
- Onus is on the company
- Designed to be quick
- Flexible throughout

CONTACT INFORMATION:

- BCIP Point of Contact
- Lt(N) Josh Fudge
- Josh.fudge2@forces.gc.ca
- 613-971-6716

GENERAL INFORMATION:

<https://www.tpsgc-pwgsc.gc.ca/app-acq/picc-bcip/index-eng.html>



More on Innovation

- Unmanned Vehicles/Systems
- Equipment Health Monitoring <-> Enterprise System
- Green Technologies (waste disposal)
- Energy Efficiency
- Wi-Fi at Sea
- Monitoring of onboard environmental conditions
- Structural Condition Monitoring System
- Corrosion Management
- Artificial Intelligence
- ...more.



Federal Marine Procurement Outlook

Thank You