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Science | Sciences

Update on Canadian Research Vessels Ship Procurement Projects

28th International Research Ship Operators Meeting (IRSO)

La Jolla, California

October 2012

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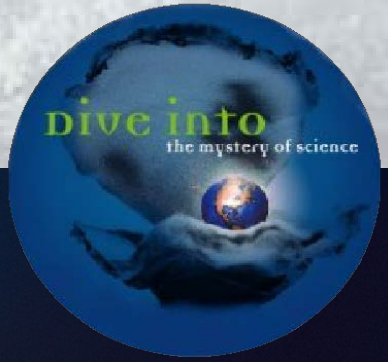


Canada

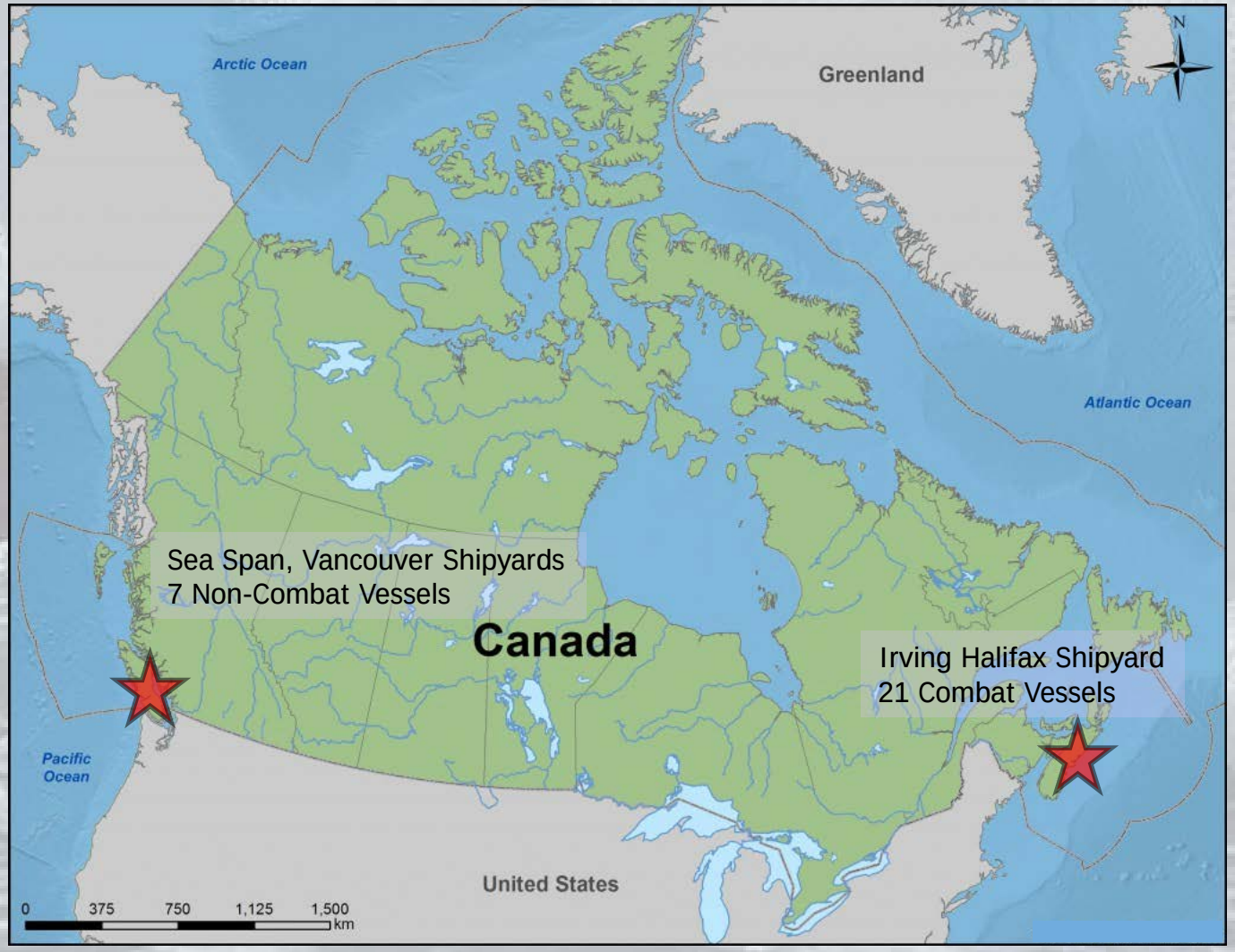
Outline

- National Ship Building Procurement Strategy
- Offshore Fisheries Science Vessels
- Offshore Oceanographic Science Vessel
- Polar Icebreaker
- Near Shore Fisheries Research Vessels
- Channel Sounding and Surveying Vessels

National Shipbuilding Procurement Strategy

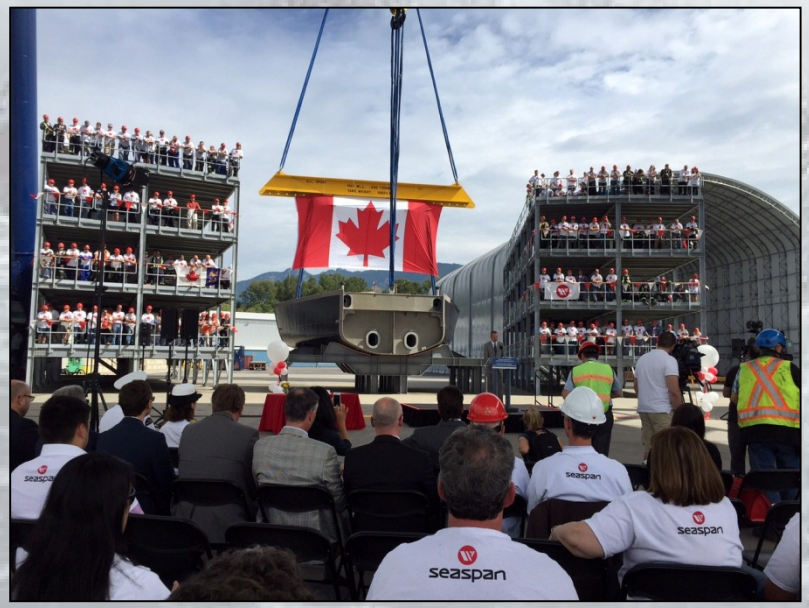
- On June 3, 2010, the Government of Canada announced Canada's National Shipbuilding Procurement Strategy (NSPS).
- NSPS is an unprecedented long-term, multi-billion dollar commitment to renewing Canada's federal fleet.
- Bring predictability to federal ship procurement (eliminate boom and bust cycles)
- Two shipyards selected for large ship constructions
- Small ship construction set aside for other yards
- Repair, refit and maintenance still sourced through competitive tendering

National Shipbuilding Procurement Strategy



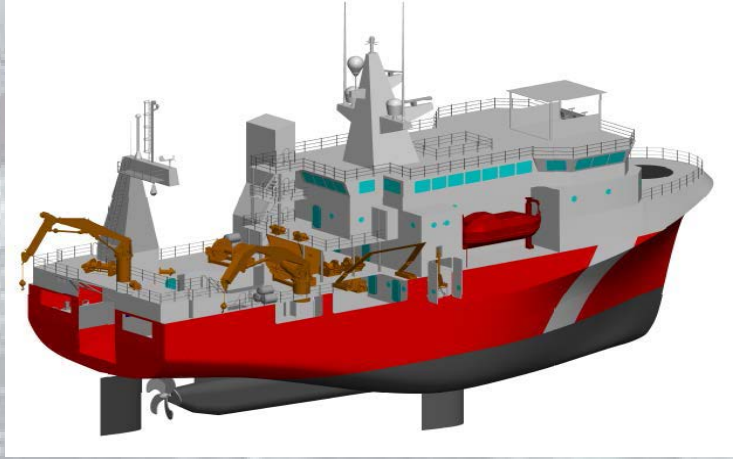
Offshore Fisheries Science Vessels

- The lead project under NSPS non-combat yard (Sea Span, Vancouver Shipyards)
- June 24, 2015 marks the official start of construction for the *CCGS Sir John Franklin*



3 Offshore Fisheries Science Vessels (OFSV)

- Conduct fishing and acoustic surveys in the Northern Atlantic and Pacific Oceans
- Collect physical, chemical, and biological oceanographic data to monitor changes in marine ecosystems
- Replacing CCGS *W.E. Ricker* (Pacific), CCGS *Needler* (Maritimes) and CCGS *Teleost* (N&L)
- Commence construction 2015



OFSVs Vessel Particulars

Dimensions

- 63m length
- 16m beam
- 6.1m draft
- 35 total berths (crew 21, Science 13)
- Range: 8500 nm

Science Outfit

- Drop keel for sensor suite
- Stern trawl capability
- Oceanographic launch and recovery system (LARS)
- Side scientific LARS
- Wet lab, biology lab, oceanographic lab and marine mammal observation post

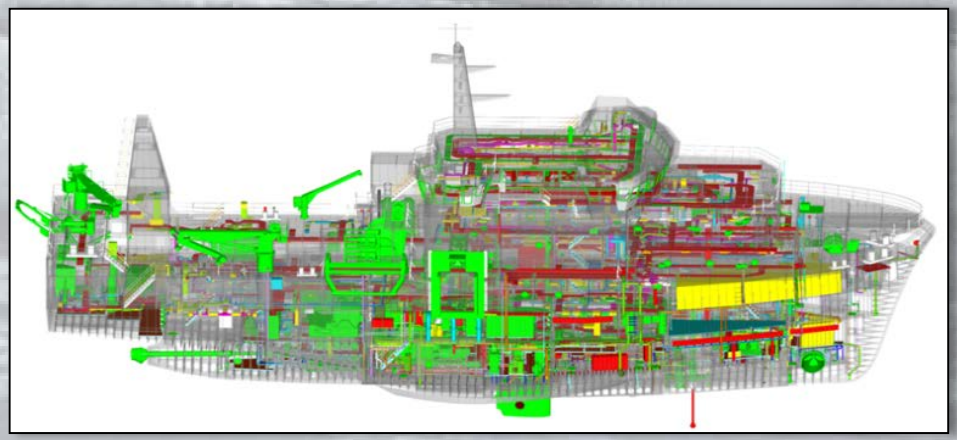
Offshore Fisheries Science Vessels

Procurement of Long-Lead Items and Materiel

- The OFSV long-lead items (LLI) contract procured for OFSV #1.
- Exercising options for LLI for OFSV's 2 and 3 (propulsion system components), delivery expected in 2017.

Initial Block Production

- Work continues towards completion by the contract end date of September 30, 2015 (initially due March 27).
- Over 320 lessons learned have been documented by VSY (as of July 31) during the initial block work (related to information flow, material flow, engineering processes, and production processes) and over 50 improvements have been implemented.



Offshore Fisheries Science Vessels: Milestones

Milestone	Date
Completion of Initial Block	September 30, 2015
Delivery of Vessel #1	April 2017
Delivery of Vessel #2	September 2017
Delivery of Vessel #3	December 2017

Offshore Oceanographic Science Vessel

- The second build project under NSPS
- Conduct physical, chemical, and biological oceanographic expeditions; Marine geological/geophysical surveys; Hydrographical surveys; and Electronic habitat surveys of fish and invertebrates.
- Replacing CCGS *Hudson* (Maritimes)
- OOSV design modified to accommodate regulatory emission requirements without reduce the vessel's range by decreasing the fuel it can carry.
- Commence construction 2016, delivery 2018

OOSV Vessel Particulars

- Dimensions
  - 86m length
  - 16m beam
  - 5.8m draft
  - 56 total berths (33 crew, 23 Science)
  - Range 12,000nm
- Science Outfit
  - Drop keel for sensor suite
  - A-Frame, primary and secondary winches
  - Oceanographic launch and recovery system (LARS)
  - 30 m core LARS
  - General purpose lab, biology lab, chemical lab, computer lab, ocean sampling room, acoustics lab and marine mammal observation post

Polar Icebreaker Conceptual Design

Polar Icebreaker Vessel Particulars

- Dimensions
  - 150m length
  - 28m beam
  - 10.5m draft
  - 100 total berths (60 crew, 40 supernumeries)
  - Range 26,200nm
- Outfit
  - Modular Mission “plug and play”
  - Drop keel for sensor suite
  - Two medium-lift helicopters
- Delivery 2021

Near Shore Fisheries Research Vessels

One 25-meter

- *CCGS VLADYKOV* – Delivered 2012

Two 22-meter

- *CCGS LEIM* – Delivered 2012
- *CCGS M. PERLEY* – Delivered 2012

Near Shore Fisheries Research Vessels

Principal Particulars

- Dimensions
  - 25 m or 22m length
  - 9.2 m beam
  - 3.6 m draft
  - 296.0 tonnes displacement
  - 11 and 10 total berths
- Propulsion
  - Twin geared diesel 718 kW
- Range: 1800 nm
- Cruising Speed: 9 knots
- Science Outfit
  - 5 t stern A-frame
  - ½ t side A-frame
  - 18 t-m knuckle crane
  - Fishing sounder (38, 120 & 200 kHz)
  - Fishing sonar
  - Multi-beam sounder
  - Acoustic Doppler Current Profiler
  - Underwater acoustic positionning
  - Acoustic trawl monitoring
  - Quiet design

Channel Sounding & Survey Vessels

- Small twin-hull sounding vessels designed to conduct depth survey operations of the main shipping channel in the St. Lawrence River, during the period or spring break-up until end of November
- Replacing *CCGS Smith* and *CCGS GC-03*
- Commence construction 2016, delivery 2018

CSSV Vessel Particulars

- Dimensions (TBD)
  - 11.5m to 11.95m length
  - TBD beam
  - No more than 1.2m draft
  - total berths (2 crew, 2 Science)
  - Range 500nm @12knts
- Science Outfit
  - Multibeam sonar mounted on an hydraulic arm
  - 400 kg SWL crane
  - Science multi-purpose portable winch
  - RapidCastSV system; mission critical equipment used to measure the speed of sound in water
  - Sediment grab system

Thank you!