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2016 NATIONAL SHIPBUILDING STRATEGY

ANNUAL REPORT

Rebuilding the Shipbuilding Industry



Government
of Canada

Gouvernement
du Canada

Canada

Ministerial message



As Minister of Public Services and Procurement Canada and one of the ministers responsible for the delivery of the National Shipbuilding Strategy, I am proud to present this first annual report of the strategy's progress from January 1 to December 31, 2016.

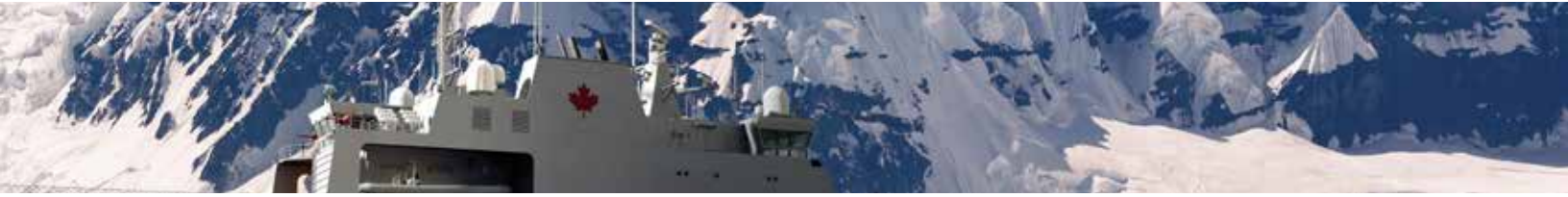
The government committed to providing the brave women and men of the Canadian Coast Guard and the Royal Canadian Navy with the equipment they need to serve and protect Canadians.

To deliver on this promise, our government has enhanced the National Shipbuilding Strategy in several areas, including streamlining processes, increasing transparency, maximizing economic benefits and ensuring best value for Canadian taxpayers. The strategy has always held tremendous promise for Canada. Now, it is positioned to deliver.

In 2016, under the dedicated leadership of Minister Judy M. Foote, substantial progress was made under the National Shipbuilding Strategy. Small vessel construction began on Search and Rescue Lifeboats at two shipyards and a contract was awarded to build two Channel Survey and Sounding Vessels. For large vessels, significant progress was made on the construction of the first Arctic and Offshore Patrol Ship, and steel has been cut for the second. Construction began on the second Offshore Fisheries Science Vessel. Further, preparations, including design work, progressed to support the upcoming construction of the Joint Support Ships, the Offshore Oceanographic Science Vessel, the Polar Icebreaker and the Canadian Surface Combatant.

Our two primary shipyards, Seaspan's Vancouver Shipyards and Irving Shipbuilding's Halifax Shipyard are creating opportunities for Indigenous peoples, women and minority groups to contribute to the renewal of Canada's federal fleets.

The strategy is helping to grow Canada's middle class by creating and maintaining good jobs for Canadians. Companies from coast-to-coast-to-coast are providing support with advanced technologies, specialized parts and equipment, and professional services. Through National



Shipbuilding Strategy contracts, work for small and medium-sized enterprises is being generated all across Canada. Furthermore, active participation by Canadian companies continues to not only support the development and demonstration of required competence and capability for strategy projects, but also puts them in a position to develop international business opportunities as well.

It is estimated that contracts awarded through the National Shipbuilding Strategy to date will contribute close to \$7.7 billion of gross domestic product (GDP).¹ Furthermore, roughly 7,350 jobs per year on average will be created or maintained between 2012 and 2022. This impact will continue to grow over time as new contracts are awarded by the Government of Canada and by our two National Shipbuilding Strategy shipyards.

The strategy is good for Canada, and it is worth getting right. The enhancements we are making will ensure we realize the full benefits of the strategy. We're building ships, creating important jobs for the middle class and strengthening vital industries. As this historic fleet renewal progresses, the Government of Canada is committed to keeping Canadians fully informed.

The Honourable Carla Qualtrough
Minister of Public Services and Procurement

¹ Gross domestic product (GDP) is one of the primary indications used to gauge the health of Canada's economy. It represents the dollar value of all goods and services produced over a specific time period.







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The 2016 National Shipbuilding Strategy Annual Report

The National Shipbuilding Strategy (NSS) is Canada's 30-year plan to renew the fleets of the Royal Canadian Navy and the Canadian Coast Guard. The strategy's primary objectives are to equip the Royal Canadian Navy and the Canadian Coast Guard, create jobs and generate economic benefits through the rebuilding of Canada's shipbuilding industry.

This report is an update on the National Shipbuilding Strategy from January 1 to December 31, 2016. It provides details on the progress of NSS projects and information regarding new contracts and contract amendments signed in 2016. The report also captures expenditures during the year for NSS-related activities contracted prior to 2016.



The year in Review

Key achievements

During the reporting period, progress on the National Shipbuilding Strategy was made in the following areas:

- \$472.3 million in new National Shipbuilding Strategy contracts were awarded throughout the country. Since the introduction of the strategy in 2012, NSS-awarded contracts are estimated to create or maintain close to 7,350 jobs on an annual average from 2012 to 2022
- \$243.8 million in contracts were awarded by National Shipbuilding Strategy shipyards to Canadian suppliers, of which \$185.5 million were awarded to small and medium-sized enterprises (SME's)². During the reporting period an additional 129 new Canadian firms, three-quarters (99) of which are SME's, were engaged by the shipyards for work on NSS-related projects
- five key enhancements were announced and implemented to help strengthen the approach and delivery of the National Shipbuilding Strategy
- a streamlined procurement strategy was announced and a request for proposal released for the Canadian Surface Combatant, calling for a single open and competitive process to select an existing warship design and design team to work with Irving Shipbuilding's Halifax Shipyard and Canada
- a performance measurement framework is being developed and is expected to be implemented in 2017 to determine if the objectives of the strategy are being achieved

² Companies with fewer than 250 full-time employees

Large ship construction

- \$270.8 million in new large ship construction was contracted in 2016 to both Irving Shipbuilding's Halifax Shipyard and Seaspan's Vancouver Shipyards.
- Construction began on a second batch of Offshore Fisheries Science Vessels. These will be the first large vessels to be delivered by Seaspan's Vancouver Shipyards under the strategy.
- Construction continued on the first two Arctic and Offshore Patrol Ships at Irving Shipbuilding's Halifax Shipyard.

Small ship construction

- In 2016, \$12.9 million in new small ship construction activity was awarded to Canadian shipyards.
- A \$5 million contract was awarded to Kanter Marine of St. Thomas, Ontario, to build two Channel Survey and Sounding Vessels for the Canadian Coast Guard.
- Construction is underway to build and deliver six Search and Rescue (SAR) Lifeboats for the Canadian Coast Guard, valued at total of \$89 million (contract awarded in 2015).

Repair, refit and maintenance

- Ship repair, refit and maintenance accounted for \$188.6 million in new contracts awarded or amended for the Canadian Coast Guard and the Royal Canadian Navy, including:
 - Babcock Canada Inc of Victoria, British Columbia, which was awarded \$17 million in contracts for submarine maintenance
 - Verreault Navigation Inc of Les Méchins, Quebec, which was awarded a \$8.9 million contract for vessel life extension work for the CCGS Pierre Radisson
 - Heddle Marine Services of Hamilton, Ontario, which was awarded contracts valued at \$4.1 million for repairs, refits and conversions, including dry docking of the CCGS Hudson
 - Canadian Maritime Engineering of Dartmouth, Nova Scotia, which was awarded a \$400,000 contract for repair, refit and maintenance activities on the CCGS Needler





ENHANCEMENTS TO THE STRATEGY

The National Shipbuilding Strategy introduced a more effective, well-planned and structured approach to shipbuilding, but transitioning to this model has been complex and difficult. There were a number of challenges and growing pains related to the implementation of the strategy, including:

- ineffective decision making and lack of expert advice needed to guide decision-makers
- government shipbuilding teams that were too small and lacked sufficient expertise to deliver the NSS
- budgets were set in the previous decade using non-standardized approaches and never updated to reflect inflation, significant changes in exchange rates or material costs
- lack of formalized comprehensive mechanisms in place to measure progress and results
- insufficient communications with Canadians on the cost, timelines and progress of various builds

However, a 2016 government review of the strategy identified a number of these problems and in May 2016, the Minister of Public Services and Procurement announced a series of significant enhancements to ensure the strategy effectively meets its objectives and addresses these challenges.

The enhancements to the strategy are in five key areas:



GREATER EXPERTISE AND STRONGER OVERSIGHT

To complement existing external expertise and oversight measures, such as independent reviews of costing and the productivity and performance of the shipyards, the government secured an expert advisor who provides advice on multiple facets of the strategy, including risk and program management, construction benchmarking and competitiveness, as well as performance and operational improvements.

Several mechanisms were already in place to ensure the effective management of the strategy, including integrated program schedules and independent reviews of requirements, costing and the productivity and performance of the shipyards. However, given the importance of the strategy, oversight and governance were enhanced through the creation of the Cabinet Committee on Defence Procurement and the reinvigoration of the Deputy Ministers' Governance Committee (DMGC).

INCREASED INTERNAL CAPACITY

After years of relative inactivity in shipbuilding procurement, the government's internal capacity to manage shipbuilding projects is not as robust as it needs to be. Shipbuilding is a complex, long-term endeavour, it requires the involvement of dedicated and highly skilled individuals. As such, the government plans to address this challenge by doubling the size of the workforce by recruiting additional employees with the skills required to manage all aspects of the strategy, including negotiations, contracting and project management, procurement experts and engineers within strategy procurement project offices by 2019. The recruitment of additional staff, increased training and external support has already begun and future efforts will ensure that required skills are in place to support the successful delivery of the strategy.



MORE ACCURATE PLANNING

In order to manage a project on the scale of the National Shipbuilding Strategy, new approaches to costing and more accurate planning are being developed to ensure efficiencies and on-time delivery of the vessels.

Revised costing estimates for the National Shipbuilding Strategy are in development and, once implemented, will improve the quality of information available to better present the impact of uncertainties and risks on cost estimates. More accurate cost estimates with built-in contingencies will support better informed investment decisions. Moreover, the regular reporting of this information will help ministers to stay abreast of the cost estimates as programs and projects evolve.

In support of the strategy, a number of third party experts have been engaged by the government to help assess cost proposals related to implementation of the strategy its projects and provide, as required, advice, assistance and leadership on the negotiation and execution of complex contracts and agreements.

Through the use of extensive industry engagement and collaboration, innovative measures are being put into place. Consultations with industry on contracting the in-service support for the Arctic and Offshore Patrol Ships and the Joint Support Ships resulted in the integration of the in-service support for the AOPS and the JSS into one, thereby reducing overall costs and benefitting the marine industry through increased workforce stability.

As well, the Canadian Surface Combatant (CSC) project, the largest within the NSS, in 2016 announced a single open and competitive procurement process to select an existing warship design and design team in order to reduce integration and schedule risks and bring greater cost certainty to the project.

All of these measures will result in a faster, streamlined approach to procure the next-generation fleet of warships.

DETAILED MONITORING

To ensure the strategy remains on track to meet its objectives, the government is working closely with third party experts and the shipyards on measures to assess performance. Assessments will be made on numerous factors, including the timeliness of projects and measures designed to support assessment of shipyard production performance. Furthermore, monitoring of projects and their economic benefits will permit the government to track the progress of the strategy, identify gaps, and address them promptly.

As part of a broader approach to looking at defence procurement performance overall, a performance measurement framework is being developed and is expected to be implemented in 2017 to enable the collection and integration of information and analysis required to answer fundamental questions about the performance of the strategy in achieving its key objectives. This performance measurement framework is built around the objectives of the strategy and performance will be measured against schedule, budget and scope; production performance and the status of the marine sector overall; and the direct and indirect economic benefits resulting from shipbuilding and related activities. Full implementation is expected by the fall of 2017.

INCREASED TRANSPARENCY AND ACCOUNTABILITY

The government is committed to open and transparent communications with Canadians on the strategy. This includes new public reporting on progress the primary contractors are making in meeting their economic obligations to Canada. To ensure Canadians and stakeholders are kept informed of plans and progress, annual reports and regular updates will be provided, tracking the successes, milestones and challenges of the strategy.



EQUIPPING THE ROYAL CANADIAN NAVY AND THE CANADIAN COAST GUARD

LARGE VESSEL SHIPBUILDING PROJECTS

In 2016, \$270.8 million of new large-ship construction was awarded to both the Irving Shipbuilding's Halifax Shipyard and Seaspan's Vancouver Shipyards.

The total on-going contracted activity³ for large ship construction in 2016 resulted in over 7,400 jobs being created or maintained during the reporting period.

The shipyards are in full production, constructing technologically advanced ships for the Royal Canadian Navy and Canadian Coast Guard.

TABLE 1.
VESSELS AT IRVING SHIPBUILDING'S HALIFAX SHIPYARD

VESSEL	SCOPE	STATUS	CLIENT
Arctic and Offshore Patrol Ships	Five or Six vessels	Construction of two vessels in progress	Department of National Defence
Canadian Surface Combatant	15 vessels	Definition (design) phase	Department of National Defence

³ On-going contracted activity refers to the amount spent on NSS-related contracts during 2016.



**TABLE 2.
VESSELS AT SEASPAN'S VANCOUVER SHIPYARDS**

VESSEL	SCOPE	STATUS	CLIENT
Offshore Fisheries Science Vessels	Three vessels	Construction of two vessels in progress	Department of Fisheries and Oceans
Offshore Oceanographic Science Vessel	One vessel	Basic and Design Development underway	Department of Fisheries and Oceans
Joint Support Ships	Two vessels*	Definition (design) phase	Department of National Defence
Polar Icebreaker	One vessel	Definition (design) phase	Department of Fisheries and Oceans

* For Joint Support Ships - option to build a third

Consult Annex A - Status of large vessel projects at the end of the report for more detailed information.





IRVING SHIPBUILDING'S HALIFAX SHIPYARD

Irving Shipbuilding's Halifax Shipyard began production of the Arctic and Offshore Patrol Ships on schedule in September 2015, and by December 2016, significant progress had been made on the construction of the future HMCS *Harry DeWolf*, the first vessel in the class. Irving also commenced production of the second vessel, the future HMCS *Margaret Brooke*, in August 2016.

SEASPAN'S VANCOUVER SHIPYARDS

The Offshore Fisheries Science Vessels being built by Seaspan's Vancouver Shipyards will be the first large vessels delivered under the strategy. Construction of the first two ships is well under way, having commenced in June 2015 and March 2016, respectively. The third and final vessel is on track to commence construction in early 2017. On September 30, 2016, a significant milestone in the construction of the first Offshore Fisheries Science Vessel was reached when Seaspan's Vancouver Shipyards mated a grand block, weighing over 170 tonnes and containing the vessel's wet lab—one of the key spaces supporting the ship's missions—to the ship, fully enclosing the ship's propulsion motor room. This addition also brought the first group of mission equipment to the ship.

The Government of Canada awarded the initial construction engineering contract to Seaspan's Vancouver Shipyards to commence the work required to prepare for the construction of the Offshore Oceanographic Science Vessel. In February 2016, Canada awarded the long lead items and material contract to Seaspan's Vancou-



Mating of the Offshore Fisheries Science Vessel stern Grand Block to ship

ver Shipyards. This contract enables the shipyard to initiate early discussions with potential suppliers and to purchase required material and equipment. A long lead items and material contract was also awarded to Seaspan's Vancouver Shipyards for the Joint Support Ship.

A key element within the strategy selection process was the requirement for each bidder to provide its recapitalization plans to achieve a pre-defined "target state", by which the shipyards would:

- have the capability to build the required vessels efficiently
- implement upgrades in facilities and processes that would, through continuous improvement, equip an enhanced workforce to meet defined international best practices and productivity levels, placing them on par with the top quartile of comparable international shipyards

The shipyard modernizations at Irving Shipbuilding's Halifax Shipyard and Seaspan's Vancouver Shipyards were performed at no cost to the Government of Canada, and both shipyards remain committed and continue to progress towards achieving the target state.

A final target state assessment will take place at each yard, and subsequently, similar assessments will be repeated periodically to assess the shipyards' sustained and improving levels of productivity.

NSS IN ACTION – CREATING LONG-TERM EMPLOYMENT

Genoa Design International Ltd, a marine production design company based in St. John's, Newfoundland, provides production lofting and detail design services to marine and offshore industries around the world.

Under the Offshore Fisheries Science Vessels supply contract, Genoa created and is using a 3D model with Seaspan's Vancouver Shipyards to extract information that provides the manufacturing details required in a format that is suitable for the efficient construction of the Offshore Fisheries Science Vessels. The information provided is fully integrated with the construction plan and schedule developed by Seaspan's Vancouver Shipyards.

Working on the National Shipbuilding Strategy's non-combat package has enabled Genoa to hire approximately 30 new full-time employees and will allow them to train new Canadian employees in the skills necessary to produce manufacturing information for this type of vessel, providing an excellent reference for the export market to win additional contracts and maintain long-term employment in Canada.

NSS IN ACTION – WORKING WITH SMALL BUSINESSES

In April 2016, Fleetway Inc., an engineering, technical and logistics company, and Irving Shipbuilding's Halifax Shipyard awarded a \$15 million contract to Halifax-based Bluedrop Training & Simulation for the design of state-of-the-art virtual training and simulation software and technologies to prepare and train personnel for the Arctic and Offshore Patrol Ships being built under Canada's National Shipbuilding Strategy.

Currently, Bluedrop's Halifax office has 25 full- and part-time employees dedicated to the Arctic and Offshore Patrol Ships project, including 8 positions that were created as a direct result of the National Shipbuilding Strategy contract.





SMALL VESSEL CONSTRUCTION

For all small vessel construction projects, a competitive project-by-project procurement process is being undertaken among Canadian shipyards, other than Irving Shipbuilding's Halifax Shipyard, Seaspan's Vancouver Shipyards and their affiliated companies, which are not eligible to bid.

During the reporting period, \$12.9 million of new small ship construction activity was contracted to Canadian shipyards.

The total on-going contracted activity for small ship construction in 2016 resulted in over 150 jobs being created or maintained during the reporting period.

In October 2016, the Government of Canada awarded a \$5 million contract to Kanter Marine of St. Thomas, Ontario, to build two Channel Survey and Sounding Vessels for the Canadian Coast Guard. Once delivered by 2018 these new small vessels will replace the Canadian Coast Guard's two current Channel Survey and Sounding Vessels operating in the St. Lawrence Seaway in the Coast Guard's Central and Arctic region,

which have been in operation for an average of 37.5 years and are nearing the end of their lifespan.

The new Channel Survey and Sounding Vessels will provide private and commercial boaters with information about channel bottom conditions and water depth predictions. These vessels will also provide the Department of Fisheries and Oceans as well as other departments and agencies with the capability to monitor and observe marine and environmental conditions.

In July 2015, Hike Metal Products Limited in Wheatley, Ontario, and Chantier Naval Forillon in Gaspé, Quebec, were awarded competitive contracts to construct new Search and Rescue (SAR) Lifeboats for the Canadian Coast Guard, valued at a total of \$89 million. Under these contracts, the shipyards are building and delivering six Search and Rescue Lifeboats each, with options for an additional three. Construction is currently under way at both shipyards with delivery of the first vessels expected in 2017.

Construction of the first Search and Rescue Lifeboat at Hike Metal Products





REPAIR, REFIT AND MAINTENANCE PROJECTS

Contracts for ship repair, refit and maintenance requirements are competed through publicly announced requests for proposals. In 2016, the Government of Canada continued to invest in ship repair, refit and maintenance by providing work to the broader Canadian marine industry across the country. Maintaining a domestic ship repair capability is critical to supporting Canada's federal fleets. Current repair, refit and maintenance activities include frigates, submarines, as well as Kingston and Orca-class vessels, and the auxiliary fleet of small boats, barges, tugs and diving tenders.

This work has benefitted numerous Canadian shipyards and suppliers right across the country, including Ontario, Nova Scotia, British Columbia and Quebec. During the reporting period, \$188.6 million of contracts were awarded or amended for the Canadian Coast Guard and the Royal Canadian Navy.

Included in this total is the \$3.1 million modernization of CCGS *Sipu Muin*, undertaken by Réparations Navales et Industrielles Océan in Québec City, Quebec. The work, completed in December 2016, included hull repairs,

modifications to the pilot house, upgrades to the electronic navigation suite as well as the replacement of the fuel bladders and skirting of the 19-year old vessel.

The year also marked the completion of a \$2 million contract with Heddle Marine, of Hamilton, Ontario, for the drydocking and repair of HMCS *Haida*. As well, vessel life extension work was completed at Chantier Davie for two Coast Guard vessels: CCGS *Henry Larsen* (\$16 million contract value) and CCGS *Earl Grey* (\$14 million contract value).

The Victoria-Class Submarine In-Service Support Contract (VISSC) contributes approximately \$200 million in work annually and directly sustains approximately 200 jobs in Esquimalt, British Columbia, plus another 200 jobs elsewhere in Canada. In 2016, an additional \$880 million was allocated for the VISSC in order to cover actual maintenance costs over the life of the contract.

The total on-going contracted activity for repair, refit and maintenance in 2016 resulted in over 10,000 jobs being created or maintained during the reporting period.

NSS IN ACTION – DEVELOPING CANADA'S MARINE SECTOR

In August 2016, the Government of Canada awarded an \$8.7 million contract to Verreault Navigation Inc for major refit and maintenance work on Canadian Coast Guard Ship (CCGS) Pierre Radisson. The work will be done in Les Méchins, Quebec. This is part of Canada's commitment to enhancing meaningful economic opportunities for the Canadian marine sector and related industries via the National Shipbuilding Strategy.

CCGS Pierre Radisson is a medium icebreaker based in Quebec City, Quebec, normally operating in the St. Lawrence River, the Gulf of St. Lawrence and the Canadian Arctic.

The work began in September 2016 and is scheduled to be completed in 2017, sustaining 100 jobs in the process. Main work items will include steel work, maintenance and repairs on several tanks, hull recoating, reconditioning of the helicopter deck and hangar, replacement of windows and portholes, maintenance on propulsion and steering components, as well as interior repairs.



OTHER MARINE PROJECTS

While the National Shipbuilding Strategy is a long-term plan to build ships in Canada, there will also be, from time to time, other necessary requirements. The Government of Canada engages with industry in open and transparent processes, as requirements are identified to support the Canadian Coast Guard, the Royal Canadian Navy and the entire federal fleet.

For example, following the early retirement of the two Royal Canadian Navy replenishment ships in 2014, the Government of Canada entered into an at sea replenishment services contract with Federal Fleet Services Inc (formerly Project Resolve Inc) to provide the Royal Canadian Navy with an interim at sea auxiliary oiler replenishment capability prior to the delivery of the two Joint Support Ships being constructed at Seaspan's Vancouver Shipyards.

Under the contract, Chantier Davie Canada Inc., a major subcontractor to Federal Fleet Services Inc., is conducting the conversion work that will meet Transport Canada regulations. The procurement is seeing economic benefits realized across the country, with approximately 400 people currently working at Chantier Davie on the conversion of the vessel, as well as another 300 people working as sub-contractors across Canada. The project is expected to be completed by early 2018.

In November 2016, the Government of Canada issued a request for information to seek input from the marine industry on options for filling potential interim needs in the Canadian Coast Guard's delivery of icebreaking services. As part of the Canadian Coast Guard's commitment in the Oceans Protection Plan, the request for information also seeks input on strengthening the Canadian Coast Guard's marine pollution response capacity. Solutions presented by industry will inform decisions on how to best fill potential capability gaps and ensure continuity of service given the age and condition of the Canadian Coast Guard's fleet and the time it will take to deliver new ships. The Government of Canada is currently analyzing the information received through the RFI and, in the short-term, will be re-engaging industry on its towing requirements, and, in the medium-term, on its ice breaking capacity requirements.



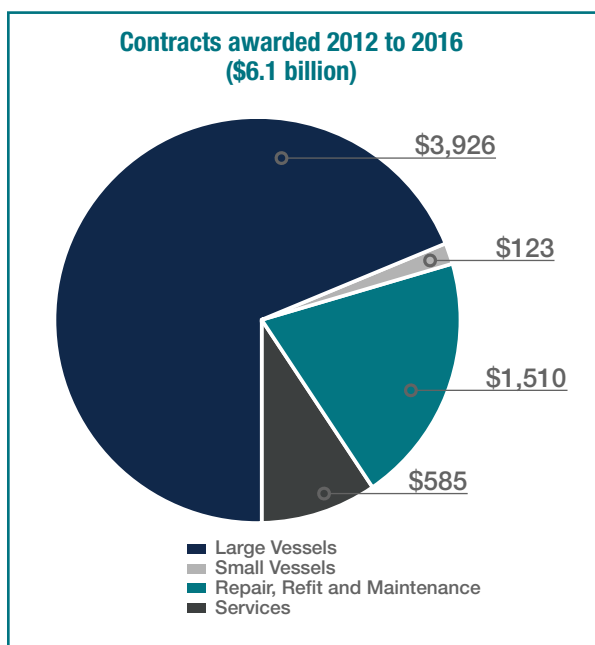


Generating economic benefits



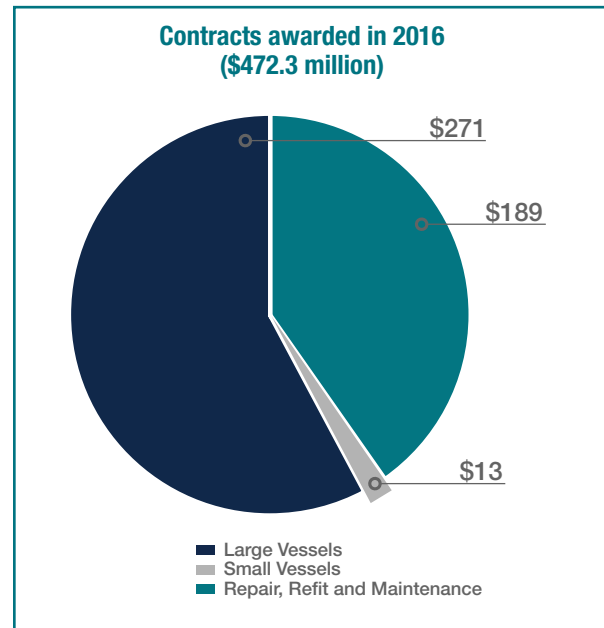
It is estimated that contracts awarded through the National Shipbuilding Strategy to date will contribute close to \$7.7 billion of gross domestic product (GDP)⁴ and close to 7,350 jobs per year on average will be created or maintained between 2012 and 2022.

FIGURE 1.



In 2016, the Government of Canada signed \$472.3 million in strategy contracts, including large vessel construction (\$270.8 million), small vessel construction (\$12.9 million) and repair, refit and maintenance (\$188.6 million).

FIGURE 2.



In addition to new contracts signed in 2016, over \$1.2 billion in ongoing contracted activity was undertaken during the year across all three pillars of the NSS. Of these expenditures, small ship construction during the year accounted for \$13 million, in support of the construction of search and rescue vessels for the Canadian Coast Guard. This total will increase in the coming years with the full realization of the build contracts for the delivery of these vessels by Hike Metal Products and Chantier Naval Forillon and the construction of channel survey and sounding vessels by Kanter Marine of St. Thomas, Ontario.

⁴ Gross Domestic Product is one of the primary indications used to gauge the health of Canada's economy. It represents the dollar value of all goods and services produced over a specific time period.



Repair, refit and maintenance work accounted for over \$660 million, including \$512 million by the Department of National Defence in support of contracts for Kingston and Orca-class vessels, and the auxiliary fleet of small boats, barges, tugs and diving tenders, Halifax-class modernization multi-ship contracts and submarines. Approximately \$150 million supported vessel life extension and vessel maintenance activity for the Canadian Coast Guard.

IMPACT OF THE NATIONAL SHIPBUILDING STRATEGY

Ongoing NSS activity had a significant impact on the Canadian economy, both in terms of GDP and employment. While the current and ongoing values of National Shipbuilding Strategy contracts are significant, overall economic benefits will continue to grow over time as new contracts are awarded by the Government of Canada for projects under the strategy.

As well, through the application of Canada's Industrial and Regional Benefits and Industrial and Technological Benefits policies, and required shipyard-driven investments in the Canadian marine industry through the National Shipbuilding Strategy Value Proposition, additional economic benefits will continue to be leveraged. Both the offset and Value Proposition requirements are set out and defined in National Shipbuilding Strategy Umbrella Agreements.

In 2016, there was significant growth in the number of suppliers engaged in strategy contracts by both Halifax Shipyard and Seaspan's Vancouver Shipyards. Over this period, 129 new Canadian suppliers were engaged by the shipyards to support their NSS respective activities. Of these Canadian suppliers, 99 were Small or Medium Sized Enterprises. Over the period \$243.8 million in new contracts were issued by the shipyards of which \$185.5 million were awarded to SMEs.

EXPORT OPPORTUNITIES

Through active participation in domestic National Shipbuilding Strategy projects, Canadian companies are developing and demonstrating required competence to not only support domestic shipbuilding efforts, but also to position themselves for export opportunities now and in the years to come.

Historically, Canadian marine-industry firms such as AutoNav, Curtiss-Wright/Indal, Hepburn Engineering, L3 Mapps, Ultra Electronics and DRS have leveraged their domestic shipbuilding work to pursue competitive opportunities internationally. In 2014, Lockheed Martin Canada, a subcontractor for Irving Shipbuilding, was selected as the Prime Systems Integrator to upgrade the combat systems on New Zealand's ANZAC-class ships, given its proven track record in combat systems integration methodology on Canadian marine platforms, including the Arctic and Offshore Patrol Ships.





NATIONAL SHIPBUILDING STRATEGY VALUE PROPOSITION: BENEFITING THE GREATER MARINE INDUSTRY

A unique element of the National Shipbuilding Strategy is the Value Proposition, designed to benefit the greater Canadian marine industry and help ensure its long-term sustainability.

In exchange for a long-term commitment from the Government of Canada to build ships at Irving Shipbuilding's Halifax Shipyard and Seaspan's Vancouver Shipyards, each shipyard is committed to investing 0.5% of the value of their NSS contracts towards three priority areas: human resources development, technology investment and industrial development. These investments will help to strengthen and grow Canada's marine industry as a whole.

Both shipyards have been active in realizing their commitments over the past year, with Irving Shipbuilding's Halifax Shipyard, and Seaspan's Vancouver Shipyards investing \$4 million and \$1.1 million respectively in NSS Value Proposition activities in 2016.

INDUSTRIAL AND REGIONAL BENEFITS

Canada's Industrial and Regional Benefits Policy is playing an important role in leveraging Canada's defence spending to generate economic benefits for

NSS IN ACTION – FUNDING ARCTIC RESEARCH

In October 2016, Halifax Shipyard announced the recipients of a new funding commitment of \$2 million in partnership with the Nunavut Arctic College for nine applied research projects focused on areas of importance to Canada's Arctic communities and the marine industry.

The \$2 million commitment is being made as part of Halifax Shipyard's value proposition commitment under Canada's National Shipbuilding Strategy. Irving Shipbuilding is committed to spending 0.5% of contract revenues with the aim of creating a sustainable marine industry across Canada. This will amount to approximately \$12 million over the duration of the AOPS contract.

"This initiative, made possible by Halifax Shipyard and the National Shipbuilding Strategy, will develop Arctic community capacity to engage in research," said Joe Kunuk, president of Nunavut Arctic College. "We look forward to supporting innovative proposals designed to develop and enhance marine safety."

Canada. The policy requires Irving Shipbuilding's Halifax Shipyard and Seaspan's Vancouver Shipyards and their major suppliers to undertake business activities in Canada equal to the value of the contracts they are awarded by the Government of Canada. The policy also requires Canadian industry participation directly in the vessels, ensures work with Canadian small and medium-sized businesses, and encourages the distribution of opportunities across Canada.

The economic impact of the National Shipbuilding Strategy work is generating significant benefits throughout the Canadian economy. From 2012 to 2016, over \$791 million in Industrial and Regional Benefits commitments have been completed, including \$410 million in 2016. Approximately one third of that work was performed by small and medium-sized enterprises, with much of the work focused on design, construction engineering and production. In addition, \$984 million of contracts are now underway, including

NSS IN ACTION – WORKING WITH CANADIAN COMPANIES

Thordon Bearings Inc. is the world's leading manufacturer of oil- and grease-free polymer bearing and seal solutions. Established in 1911, Thordon is a privately owned Canadian company located in Burlington, Ontario.

As part of the Arctic and Offshore Patrol Ships project, Thordon Bearings was selected as the key supplier for major propulsion equipment. Thordon Bearings provided the complete shaftline bearing solution to Irving Shipbuilding's Halifax Shipyard, and ultimately the Royal Canadian Navy. Thordon Bearings also provided water quality packages to supply conditioned and monitored seawater to lubricate the shaft bearings. In addition, Thordon Bearings will be supplying corrosion protection for the propeller shaft.

This complete package represents over \$1,000,000 in revenue for Thordon Bearings. All the products supplied for this project are manufactured in Canada.





\$155 million of new contracts signed during the reporting period.

TRAINING AND CAPACITY BUILDING

The active workforce at both Halifax Shipyard and Seaspan's Vancouver Shipyards comprises both non-production workers and tradespeople.

Both shipyards are actively engaged in the training and development of their respective workforces. Through the use of on-site simulators that replicate the vessels under construction and the development of employee learning and advancement initiatives, the shipyards are ensuring that they have and will continue to develop a highly trained and capable workforce to deliver on National Shipbuilding Strategy projects. These initiatives include:

- mentorship programs
- skills training
- apprenticeship programs
- safety and security procedures
- management development and supervisory training programs
- new hire evaluations
- quarterly apprentice reviews
- support for skills transfers, including service training to their respective workforces

IRVING SHIPBUILDING'S HALIFAX SHIPYARD

In terms of staffing, between January and December 2016, Irving Shipbuilding's Halifax Shipyard hired 187 individuals bringing the total number of staff at Irving Shipbuilding's Halifax Shipyards, Woodside Industries and Marine Fabricators to 522. During this same time period, over 276 new tradespeople were hired, bringing the active total of tradespeople to 1,006.

As well, through the Irving Shipbuilding Centre of Excellence at the Nova Scotia Community

INVESTING IN THE FUTURE OF B.C. SHIPBUILDING

In June 2016, Seaspan and the Dennis & Phyllis Washington Foundation announced a multi-year, multi-million dollar investment in the future of British Columbia's marine industrial sector.

The commitment totals \$2.9 million and includes a three-year, \$900,000 donation by the Dennis and Phyllis Washington Foundation to three institutional trades training programs in Canada. Recipients include the British Columbia Institute of Technology to support Aboriginals in trades, Camosun College to support women in trades, and the Canadian Welding Association Foundation for both new welding equipment and teacher professional development. The investment is a direct result of Seaspan's Vancouver Shipyards Industrial and Regional Benefits obligations under the strategy.

In addition, the commitment also includes a \$2 million investment by Seaspan's Vancouver Shipyards in supporting innovative teaching and research for the naval architecture and marine engineering programs at the University of British Columbia's Faculty of Applied Science. The investment is a direct result of Seaspan's Vancouver Shipyards value proposition obligations under the strategy.

College, two successful training programs are under way for groups currently underrepresented in the shipbuilding industry:

- **Women Unlimited** – In 2016, 17 female students enrolled in welding and metal fabrication programs at the Nova Scotia Community College as part of the Irving Shipbuilding-Women Unlimited pilot program. It is anticipated that after they complete the two-year program in June 2017, the students will come and work at Irving Shipbuilding as welders or metal fabricators and pursue their apprenticeship, assuming positions are available and they meet Irving Shipbuilding requirements. Recruitment for a second program will start in spring 2017
- **Pathways to Shipbuilding** – In partnership with the Government of Canada, the Government of Nova Scotia, the Mi'kmaw Native Friendship Centre, Nova Scotia Community College, GE Canada and Unifor, 19 Indigenous students were enrolled in 2016 in the metal fabrication program at Nova Scotia Community College as part of the Pathways to Shipbuilding program. It is anticipated that after this two-year program, the students will work at Irving Shipbuilding's Halifax Shipyard as metal fabricators and pursue their apprenticeship, assuming positions are available and they meet Irving Shipbuilding requirements

SEASPAN'S VANCOUVER SHIPYARDS

In 2016, Seaspan's Vancouver Shipyards hired 326 tradespeople, bringing their active total of tradespeople to 650. Furthermore, Seaspan's Vancouver Shipyards filled 164 staff positions, 128 of which were new hires, bringing the total number of staff to 1,070.

During the reporting period, Seaspan's Vancouver Shipyards invested in employee training and human resources development to support building capacity in Canada's marine sector by:

- establishing a University of British Columbia Endowed Research Chair in Naval Architecture and Marine Engineering; and
- partnering with the British Columbia Institute of Technology, Camosun College and the Industry Training Authority to create an accredited marine fitter program for boilermaker, metal fabricator and welder trades

NSS IN ACTION – TRAINING FUTURE SHIPBUILDERS

As part of the strategy, Irving Shipbuilding's Halifax Shipyard has invested in training and education programs to develop 21st century shipbuilders by providing \$250,000 per year to the Nova Scotia Community College to develop and sustain Irving Shipbuilding's Halifax Shipyard Centre of Excellence. The centre provides bursaries to individuals interested in shipbuilding careers with a focus on growing opportunities for underrepresented groups. Through this initiative, two successful programs, Women Unlimited and Pathways to Shipbuilding, have been designed to provide training and employment opportunities for 20 female students and 20 Indigenous students, respectively, in areas of welding and metal fabrication.



APPRENTICESHIPS

Apprenticeship continues to be an extremely important facet in the creation of a long-term sustainable, Indigenous pool of qualified professionals and tradespeople, so as to manage the production of ships in Canada for generations to come. Over the course of the reporting period, the number of apprentices at Irving Shipbuilding grew by 96 to a total of 294, 36 of which have graduated to journeyman status. During the reporting period, Seaspan's Vancouver Shipyards employed 57 apprentices on-site, an increase of 22.

INDIGENOUS PARTICIPATION IN THE NSS

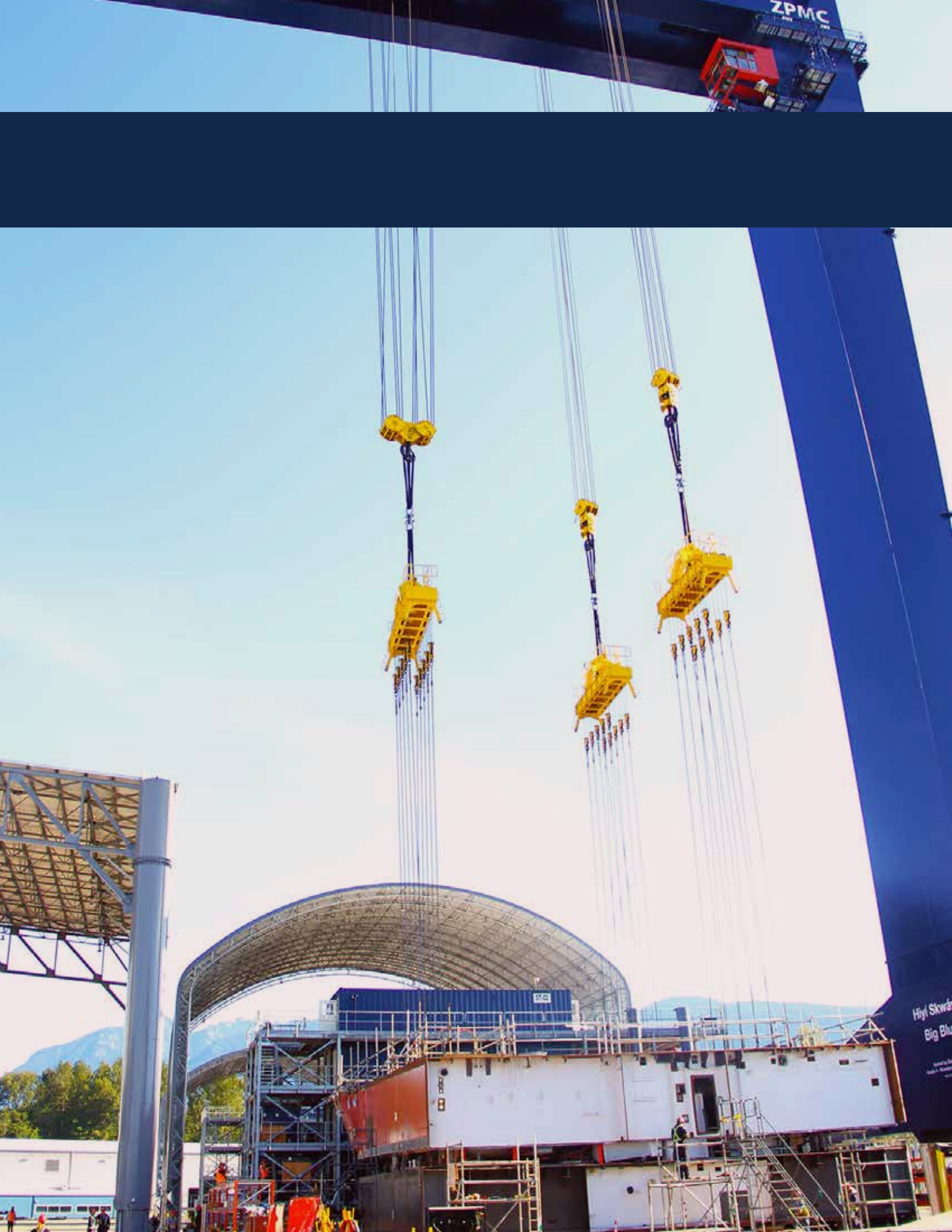
To encourage Indigenous participation in Canada's shipbuilding industry as a whole, Indigenous and Northern Affairs Canada collaborated with other federal departments and agencies, provinces, Irving Shipbuilding's Halifax Shipyard, Seaspan's Vancouver Shipyards and Indigenous partners to develop strategies that address gaps and strengthen Indigenous participation in the strategy.

This collaborative effort resulted in approximately 700 Indigenous people receiving training on the East Coast, with 32 people returning to school for additional training and 316 employed in various jobs, including work as electricians, iron workers, pipefitters, painters/blasters, riggers, welders, engine fitters, sheet metal fabricators, crane operators and machinists. On the West Coast, approximately 783 Indigenous people were trained, 31 people returned to school for additional training and 250 were employed in various jobs, including boilmakers, sheet metal fabricators, pipefitters, and procurement, administration, marine supply chain and material management employees. Furthermore, as reported by Seaspan's Vancouver Shipyards, \$22.2 million in contracts have been awarded to Indigenous businesses since the advent of the NSS.

Both shipyards are helping to develop Indigenous capacity in various aspects of shipbuilding, which will allow Indigenous businesses to enter into many shipbuilding contracts with or without partners.







The year ahead



With the world's longest coastlines bordered by three oceans, Canada has a long and rich shipbuilding tradition. While Canada's shipbuilding industry has been subject to periodic episodes of "boom and bust", the Government of Canada has, through the National Shipbuilding Strategy, re-affirmed its commitment to the sustainability of the shipbuilding industry as well as the timely and affordable delivery of vessels for the Royal Canadian Navy and the Canadian Coast Guard. The strategy has successfully begun the process of renewing these fleets over the next 30 years, as well as executing small ship construction procurements and repair, refit and maintenance efforts to support their needs.

While the strategy is still in the early stages of its implementation, the economic benefits being derived are already substantial and will continue to produce significant wealth and opportunity for Canada, including affording opportunities for the introduction of Indigenous peoples and other underrepresented segments in the workforce to receive training and long-term work.

LARGE SHIP CONSTRUCTION

It is expected that in the coming year, National Shipbuilding Strategy activity will continue to grow. In fact, a formal request for proposals process to select a design for the Canadian Surface Combatant was released in October 2016, with construction of the first ship beginning in the early 2020s. The Joint Support Ship is also expected to move into the design and production engineering stage as a precursor to starting the build phase. As well, the Offshore Oceanographic Science Vessel project will continue with construction engineering. A construction contract will be negotiated with Seaspan's Vancouver Shipyards once the required engineering work has been advanced.

SMALL SHIP CONSTRUCTION

In terms of small vessel construction, in order to support Department of National Defence and Canadian Coast Guard operational requirements, Canadian shipyards will continue to undertake the construction and delivery of vessels under 1,000 tonnes. In the immediate future, these efforts will include the Department of National Defence engaging industry in 2017 as part of the strategy to procure four commercially-designed near coastal tug boats.

As well, the Department of National Defence is currently finalizing requirements with respect to the Halifax-class ship's multi-role boats. Up to 30 9-metre rigid-hulled inflatable boats and 30 new cranes (launch and recovery systems) will be procured. Industry is expected to be engaged in 2017.

Over the coming years, the Coast Guard will procure additional small vessels to renew its fleet, including near-shore fishery research vessels, special Navaid vessels, mid-shore science vessels and specialty vessels.

REPAIR, REFIT AND MAINTENANCE

When the new National Shipbuilding Strategy ships enter service, in-service support will be required. For the Department of National Defence, the first classes of ships to enter service will be the Arctic and Offshore Patrol Ships and the Joint Support Ships. It has been estimated that the potential value of a competitive in-service support contract would be approximately \$5.2 billion over a 35 year duration. A competitive request for proposals was issued in July, 2016, with the contract expected to be awarded in 2017. The winning bidder will serve as primary main-



tainer, Design Agent and overall primary service provider for these new vessels. Further in-service support procurement activities are currently underway to sustain the legacy fleet until its estimated end-of-life in the 2030s.

It is expected that over the next year Vessel Life Extension work and In-Service Support efforts will continue across the country. Over \$60 million of activity is expected to be undertaken over the next year in the regions across Canada to support the Canadian Coast Guard, Transport Canada and Royal Canadian Mounted Police. An example of such Vessel Life Extension work is the efforts currently being undertaken with the CCGS Pierre Radisson. Work began on this ship in fall 2016 with an anticipated completion in 2017.

CONCLUSION

The National Shipbuilding Strategy is a long term commitment destined to cover 30 years of shipbuilding efforts. To date, a significant amount of effort has been undertaken in all areas of the strategy. Construction activity is underway across many regions of the country to support both Royal Canadian Navy and Canadian Coast Guard large and small ship construction requirements. Further, competitive procurements are being executed across the country to support vessel repair, refit and maintenance requirements of the Royal Canadian Navy and the Canadian Coast Guard. Significant yard modernization efforts have been undertaken at the Irving Shipbuilding's Halifax Shipyard and Seaspan's Vancouver Shipyards to enhance capability and to ensure higher levels of productivity are achieved. Supplier development opportunities for Canadian firms, including many small and medium-sized enterprises, have risen dramatically, with current levels of contracts at approximately \$1.3 billion. The National Shipbuilding Strategy has and will continue to produce, significant economic opportunities for Canada.

Looking forward to 2017 and beyond, the Government of Canada will continue to carry out large and small ship construction projects and vessel repair and refit activities, affording Canadian industry with significant industrial opportunities. The government will also continue to work hand-in-hand with the shipyards to implement lessons learned and ensure the shipyards maximize productivity throughout the lifespan of the strategy. As well, the introduction of new technologies and process improvements will pave the way for the continual development of the efficacy of the program itself and, in particular, of the ability to achieve the objectives of Canada's National Shipbuilding Strategy.





Annex A - Status of Large Vessel Projects



ARCTIC AND OFFSHORE PATROL SHIPS



Given that the Arctic and Offshore Patrol Ships are complex vessels and Irving Shipbuilding's Halifax Shipyards is using new equipment and processes, there were initial start-up issues and delays to production. However, the implementation of improvements has yielded very positive results. Full production of the first vessel began in September 2015, as scheduled. By August 2016, the ship-builder had made significant progress on the construction of the future HMCS *Harry DeWolf* and had cut steel on the second vessel, the future HMCS *Margaret Brooke*.

THE YEAR AHEAD

Work continues on the construction of the first two Arctic and Offshore Patrol Ships. Construction of the third vessel will commence in 2017.

The Arctic and Offshore Patrol Ships will conduct armed sea-borne surveillance in Canada's waters, including in the Arctic. They will enhance the government's ability to assert Canadian sovereignty and provide surveillance and support for other government departments. The project includes funding for jetty infrastructure in Halifax and Esquimalt, and a berthing and fuelling facility in Nunavut.

Shipyard of build	Irving Shipbuilding's Halifax Shipyard
Client department	Department of National Defence
Status	Construction in progress
Scope	Five or six vessels
Project budget	\$3.5 billion



CANADIAN SURFACE COMBATANT



The Canadian Surface Combatant fleet will be capable of meeting multiple threats in both the open ocean and the highly complex coastal environment. These ships will ensure that Canada can continue to monitor and defend its waters and make significant contributions to international naval operations. This fleet will replace the Royal Canadian Navy's Iroquois-class destroyers and the Halifax-class frigates.

Shipyard of build	Irving Shipbuilding's Halifax Shipyard
Client department	Department of National Defence
Status	Definition phase
Scope	15 vessels
Project budget	Under review

In June 2016, the government announced a streamlined approach designed to accelerate the delivery of the Canadian Surface Combatant Ships. The new approach will competitively select an existing warship design and design team and, to a large extent, original systems and equipment as the starting point. The design will be tailored to the requirements of the Royal Canadian Navy and in order to maximize the opportunity for Canadian content.

THE YEAR AHEAD

In October 2016, Irving Shipbuilding's Halifax Shipyard issued the Request for Proposals to the bidders which have qualified to participate in the solicitation process for the selection of the starting point design and design team. Given the scope and complexity of the solicitation and the corresponding work involved in preparing and evaluating bid responses, it is expected that the announcement of the selected bid team will be made in 2018. Canada will then award the prime design contract to Irving Shipbuilding's Halifax Shipyard who will subsequently issue the design sub-contract to the successful bidder. The Canadian Surface Combatant project will then commence work with the entire design team to complete the design work necessary to optimize the bid design to meet the Royal Canadian Navy's requirements and to incorporate Canadian content in accordance with the winning bid's Value Proposition proposal.





OFFSHORE FISHERIES SCIENCE VESSELS



The Offshore Fisheries Science Vessels are being built by Seaspan’s Vancouver Shipyards and will be the first large vessels delivered under the National Shipbuilding Strategy. The non-combat package, with its short production runs and two government clients, represents a formidable challenge for any shipyard, especially one that has had to expand and reconfigure to the extent that Seaspan’s Vancouver Shipyards has over the past few years. Seaspan’s Vancouver Shipyards has undertaken significant work to upgrade its infrastructure, hire staff and establish key systems and processes. Construction of the first two ships is well under way, having commenced in June 2015 and March 2016, respectively.

The Offshore Fisheries Science Vessels will provide an important platform from which scientific research and ecosystem-based management can be performed. These “floating laboratories” will contribute to Canada’s stewardship of fishery and ocean resources and will replace the aging CCGS Teleost, CCGS Alfred Needler and CCGS W.E. Ricker on Canada’s west and east coasts.

THE YEAR AHEAD

The third and final Offshore Fisheries Science Vessel began construction in February 2017. Construction on all three Offshore Fisheries Science Vessels is expected to continue throughout the year ahead.

Shipyard of build	Seaspan's Vancouver Shipyards
Client department	Fisheries and Oceans Canada
Status	Construction in progress
Scope	Three vessels
Project budget	\$687 million





OFFSHORE OCEANOGRAPHIC SCIENCE VESSEL



The Offshore Oceanographic Science Vessel will support oceanographic, fishery, geological and hydrographic survey missions, contributing directly to our understanding of the oceans and the impacts of climate change. It will be outfitted for scientific research on ocean currents and on the seabed. This ship will replace the oldest vessel in the Canadian Coast Guard's fleet, CCGS Hudson, which operates on Canada's east coast.

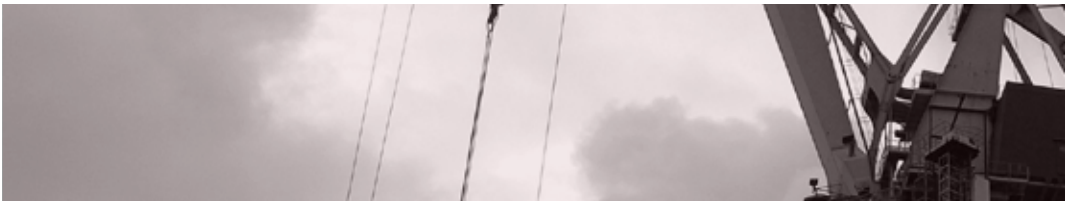
In November 2015, Canada awarded the initial construction engineering contract to Seaspan's Vancouver Shipyards to commence the work required for the preparation of construction. In February 2016, Canada awarded the long lead items and material contract to Seaspan's Vancouver Shipyards, enabling the shipyard to initiate early discussions with potential suppliers and to purchase required material and equipment.

THE YEAR AHEAD

Over the coming year, the Offshore Oceanographic Science Vessel project will continue with construction engineering, including the functional and production design stages. A construction contract will be negotiated with Seaspan's Vancouver Shipyards once the required engineering work has been initiated.

Shipyard of build	Seaspan's Vancouver Shipyards
Client department	Fisheries and Oceans Canada
Status	Basic Design Development underway
Scope	One Offshore Oceanographic Science Vessel
Project budget	Under review





JOINT SUPPORT SHIP



The Joint Support Ship will increase the range and endurance of naval task groups, permitting them to remain at sea for significant periods of time without having to return to port for replenishment. They will also provide a home base for helicopter maintenance and operation, limited sealift capability and support for operations ashore. They will replace the Royal Canadian Navy's retired Protecteur-class auxiliary oiler replenishment vessels.

Shipyard of build	Seaspan's Vancouver Shipyards
Client department	Department of National Defence
Status	Definition phase
Scope	Two Support Ships (with option to build a third)
Project budget	Under review

The Joint Support Ships are being built by Seaspan's Vancouver Shipyards based on the TKMS Bonn/Berlin design and will include Canadian modifications. The initial design review work is now complete, and procurement activity has started on competitively selecting the major equipment and systems to be installed in the first ship.

THE YEAR AHEAD

With the awarding of the Joint Support Ship design and production engineering contract in December 2016, the design work on the Joint Support Ship project will move into high gear in 2017. Concurrently, the Government of Canada will engage in contract negotiations with VSY for the construction phase, presently scheduled to start in 2019.

Advanced procurement of major equipment identified as long lead items and required for the construction phase will also commence in 2017. Seaspan's Vancouver Shipyards and its subcontractors will be procuring the long lead items from various suppliers in Canada and abroad.



POLAR ICEBREAKER



Canada has committed to keeping CCGS Louis S. St-Laurent in service at least until the delivery of the Polar Icebreaker. The project has successfully completed the necessary initial design work and will transition to construction engineering once work on preceding projects has advanced.

THE YEAR AHEAD

Negotiations on a construction engineering contract are planned to begin in 2017.

The Polar Icebreaker will replace Canada's current largest and most capable icebreaker, CCGS Louis S. St-Laurent. It will become one of the most powerful conventional icebreakers in the world. Expected to be Canada's flagship in the Canadian Arctic, the Polar Icebreaker will significantly enhance on-water capability in the Arctic on a year-round basis. It will be able to consistently operate farther north, in more difficult ice conditions, and for longer periods than is currently the case.

Shipyard of build	Seaspan's Vancouver Shipyards
Client department	Fisheries and Oceans Canada
Status	Contract design stage (completed)
Scope	One vessel
Project budget	\$1.3 billion





Annex B - About the National Shipbuilding Strategy



The National Shipbuilding Strategy will deliver much needed modern ships to the Royal Canadian Navy and the Canadian Coast Guard, and support the Canadian economy by constructing ships that will stimulate reinvestment in the broader Canadian marine sector.

The strategy is also meant to address the boom and bust cycle that has historically plagued Canadian shipbuilding, whereby shipyards expand their operations and hire and train new workers for major government contracts, only to scale back operations and lay off employees during periods of inactivity.

The strategy seeks to reinvigorate Canada's shipbuilding industry by providing long-term domestic shipbuilding work, focused on three tiers:

- large ship construction (vessels of more than 1,000 tonnes of displacement)
- small ship construction (vessels of less than 1,000 tonnes of displacement)
- vessel repair, refit and maintenance

The strategy is helping to restore our shipyards, rebuild our marine industry and create sustainable jobs in Canada, while ensuring our sovereignty and protecting our interests at home and abroad.

A competitive process selected two shipyards, Irving Shipbuilding's Halifax Shipyard and Seaspan's Vancouver Shipyards Co. Ltd, to build the Royal Canadian Navy's and Canadian Coast Guard's large ship combat and non-combat vessels. Irving was selected to deliver the ships for the combat package of the strategy for the Royal Canadian Navy, while Seaspan's Vancouver Shipyards were selected for the non-combat vessels.

For the construction of smaller ships with less than 1,000 tonnes of displacement, Canadian shipyards other than Irving Shipbuilding and Seaspan's Vancouver Shipyards have the opportunity to compete for individual projects, allowing major work to be spread throughout the shipbuilding sector. As well, all Canadian shipyards can compete for contracts for the repair, refit and maintenance of vessels.

In February, 2012, Canada signed umbrella agreements with Irving Shipbuilding's Halifax Shipyard and Seaspan's Vancouver Shipyards, highlighting the principles and general intent of the relationship. The umbrella agreements are long-term strategic sourcing arrangements that define the working relationships and administrative arrangements between the Government of Canada and the shipyards, and serve as the basis on which the government will negotiate fair and reasonable contracts for each project. They also provided a list of the respective ship construction projects within the combat and non-combat packages of work.

The strategy allows the government to make significant investments in Canada's marine industry, such as developing and maintaining expertise and creating sustainable employment across the country. Furthermore, the strategy brings predictability to shipbuilding, eliminating the boom and bust cycles that have weakened the marine industry in the past.



Annex C - Quotes

"The NSS project is a great opportunity for Thales in Canada to secure high-skilled jobs on both the West and the East coasts. Our new maritime lab that we recently unveiled in Ottawa embodies our value proposition as innovative systems integrator and our exceptional capabilities that will benefit future projects."

Dale Potter, Vice President, Defence Mission Systems

"Bluedrop is proud to be part of this important project (AOPS) for Canada. Our state-of-the-art virtual training and simulation centre here in Halifax is the only facility of its kind in Canada and will ensure our Navy is trained to manage their future fleet."

Jean-Claude Siew, Vice-President, Technology and Simulation, Bluedrop Training & Simulation

"Shipbuilding has given me the opportunity to pursue my passion for welding, setting a positive example for my daughter and other women who want to pursue a career in trades."

Vicki Berg, Welder, Irving Shipyards

"Having a stable career that keeps me in Nova Scotia with my family means the world to me. I am so happy to have the opportunity to watch my little girl grow each and every day."

Dale Boudreau, Fabricator, Irving Shipyards

"Shipbuilding has provided me with the opportunity to complete the Naval Architecture and Marine Engineering program at the University of British Columbia."

Corey Lutes, Liaison Engineer, Seaspan's Vancouver Shipyards

"The NSS has given me a lot of confidence. My day consists of working together with a diverse range of individuals, all with the same goal of delivering great ships on time!"

Kendall Trout, Steel Fitter Apprentice, Seaspan's Vancouver Shipyards

"A very large opportunity is the shipbuilding contract, which has the potential to transform the region for many years to come. It's a great feeling to contribute to retaining and attracting high-tech talent to Halifax."

Jordan Kyriakidis, President and CEO of QRA Corp

"We very much appreciate this contract, that we were chosen. It means a great deal to us. . . . It will give us and our employees some more security. . . . I'm very proud of the group we have here."

Manfred Kanter Jr., President of Kanter Marine Inc

"Our Lockheed Martin Canada team is proud of our longstanding support to the Royal Canadian Navy for more than three decades on the most successful naval projects in Canada's history—from the Canadian Patrol Frigate project of the mid-80s to the Halifax-Class Modernization project of today."

Rosemary Chapdelaine, Vice-President and General Manager, Lockheed Martin Canada, Rotary and Mission Systems

"Ideal Welders Ltd is pleased to be involved in the process of rebuilding the shipbuilding industry in Canada via the National Shipbuilding program. We hope to build our participation in this program to become competitive on a global basis in the shipbuilding industry."

Dale Hamill, Vice President, Operations, Ideal Welders Ltd.



