

Fall 2013



## Report of the Auditor General of Canada

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### CHAPTER 3

### National Shipbuilding Procurement Strategy



Office of the Auditor General of Canada

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## **CHAPTER 3**

### **National Shipbuilding Procurement Strategy**

## Performance audit reports

This report presents the results of a performance audit conducted by the Office of the Auditor General of Canada under the authority of the *Auditor General Act*.

A performance audit is an independent, objective, and systematic assessment of how well government is managing its activities, responsibilities, and resources. Audit topics are selected based on their significance. While the Office may comment on policy implementation in a performance audit, it does not comment on the merits of a policy.

Performance audits are planned, performed, and reported in accordance with professional auditing standards and Office policies. They are conducted by qualified auditors who

- establish audit objectives and criteria for the assessment of performance,
- gather the evidence necessary to assess performance against the criteria,
- report both positive and negative findings,
- conclude against the established audit objectives, and
- make recommendations for improvement when there are significant differences between criteria and assessed performance.

Performance audits contribute to a public service that is ethical and effective and a government that is accountable to Parliament and Canadians.

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# National Shipbuilding Procurement Strategy

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## Main Points

### What we examined

Several of Canada's federal ships have been in service for more than 40 years and are nearing the end of their useful life. In 2001, the federal government announced that it would continue to procure, repair, and refit ships in Canada. However, past procurements have been few and far between. Canadian shipyards have not designed and built large ships for the federal government since the 1990s, and they have not kept up their capacity and expertise to do so. This has resulted in "boom and bust" cycles of shipyard capacity and expertise to design and build modern, complex federal ships.

The National Shipbuilding Procurement Strategy (NSPS), announced in 2010, instituted a new governance structure to oversee and monitor the design of a long-term sourcing arrangement resulting in the selection of two shipyards that would design and build federal ships. Developed in consultation with industry, the NSPS is intended to help sustain a stronger and viable shipbuilding industry, and make ship procurement affordable for the federal government.

We examined whether Public Works and Government Services Canada, National Defence, Industry Canada, and Fisheries and Oceans Canada have designed and are managing the NSPS to procure federal ships in a timely and affordable manner, in a way that will help sustain Canadian shipbuilding capacity and capability.

As part of this work, we looked at the process to select the shipyards and put in place the applicable agreements. We also examined whether National Defence and Public Works and Government Services Canada, in consultation with the Treasury Board of Canada Secretariat, have, to date, managed the acquisition of the joint support ship, the arctic offshore patrol ship, and the Canadian surface combatant in alignment with the NSPS, to support the timely and affordable recapitalization of the naval fleet.

Our conclusions relate only to the management practices and actions of public servants. We did not audit private sector contractors, their practices, or their performance.

Audit work for this chapter was completed on 30 August 2013. Subsequent to the completion of our audit work, on 7 October 2013 the government announced that Vancouver Shipyards will be building up to 10 additional large non-combat ships for the Canadian Coast Guard fleet at an estimated cost of \$3.3 billion. Further, on 11 October 2013, the government announced that Vancouver Shipyards will commence construction on the Royal Canadian Navy's joint support ships in late 2016, with an expected delivery date of 2019. These ships will be followed by the Coast Guard's polar icebreaker under the NSPS non-combat package. More details on the conduct of the audit are in **About the Audit** at the end of this chapter.

### Why it's important

The National Shipbuilding Procurement Strategy (NSPS) establishes a strategic sourcing arrangement with two shipyards, which will result in the largest procurement in Canada's history. It calls for recapitalizing both the Royal Canadian Navy and the Canadian Coast Guard with over 50 large ships and 115 smaller ones, at a cost exceeding \$50 billion and over a time period of 30 years or more. By strategically sourcing its ships, Canada has an opportunity to help sustain the Canadian shipbuilding industry. Many players in government and industry are interested in seeing the NSPS succeed. Finally, there is a desire among parliamentarians and other Canadians to ensure that these projects are implemented in a way that ensures value for money, transparency, and accountability.

### What we found

- The competitive process for selecting two shipyards resulted in a successful and efficient process independent of political influence, consistent with government regulations and policies, and carried out in an open and transparent manner. The selection process included extensive and ongoing consultation with industry and bidders, monitoring by independent third parties, and using subject matter experts who provided valuable advice and added credibility to the process. The resulting arrangements should help sustain Canada's shipbuilding capacity over the next 25 years in one shipyard, and for 7 years in the other.
- Following the selection, the shipyards negotiated changes to the terms of the draft agreement that was included in the request for proposals (RFP) to ensure they would be compensated for their capital investments should a project be cancelled, delayed, or reduced in scope. As a result, the agreements that were signed with the shipyards differ significantly from the draft agreements that had been included in the RFP, as these did not include such backstop provisions. It was not clear from the wording of the RFP that the

negotiation of backstop provisions was anticipated. Consequently, based on lessons learned from the RFP issued under the NSPS and the negotiations that came after the winning bidders were selected, Public Works and Government Services Canada should consider how the terms of future RFPs could be made clearer and more explicit as to the extent of negotiations of post-bid changes with successful contractors.

- National Defence and Public Works and Government Services Canada, in consultation with Treasury Board of Canada Secretariat, are working to acquire federal ships in a timely and affordable manner consistent with the NSPS. For the three military ship projects we examined, departments have identified and are managing key project risks. These risks include the lack of competition in the shipbuilding industry, schedule delays, unaffordable costs, and technical risks. As it is still early in the 30-year Strategy, not all performance measures are in place. To ensure that Canada acquires ships in an affordable manner, Public Works and Government Services Canada, supported by Industry Canada, National Defence, and Fisheries and Oceans Canada, needs to regularly monitor the productivity of shipyards in terms of competitiveness, cost-effectiveness, and efficiency, including measuring progress against the target state.
- National Defence established budgets early in the planning process, based on rough estimates and historic information. These have not been revised for the changes in the cost of materials and labour since the projects were first approved. The Department has had to reduce the expected number of military ships or their capabilities to remain within budget. National Defence and Public Works and Government Services Canada need to continue to monitor cost/capability trade-offs and make revisions to project budgets, if necessary, to ensure that Canada gets the ships and capabilities it needs to protect national interests and sovereignty.

**The departments have responded.** The departments accept all of the recommendations. Their detailed responses follow the recommendations throughout the chapter.



## Introduction

**3.1** Several of Canada’s maritime fleets are more than 40 years old and must be replaced. It is estimated that over the next 30 years, Canada will need to build more than 50 large ships and 115 smaller ships to recapitalize the Royal Canadian Navy and the Canadian Coast Guard.

**3.2** In 2001, the federal government announced the release of *Focusing on Opportunities: A New Policy Framework for the Canadian Shipbuilding and Industrial Marine Industry*. The policy framework noted that the government would continue to procure, repair, and refit vessels in Canada subject to operational requirements and the continued existence of a competitive marketplace. This “build-in-Canada” policy was reaffirmed in 2007.

**3.3** Canada has successfully acquired ships in the past. However, attempts to procure replacement joint support ships (ships that support Canadian Forces missions) and mid-shore patrol vessels (vessels that can operate up to 120 nautical miles offshore) in 2008 were not successful. The bids received significantly exceeded the fixed budgets for the purchases. One of the reasons for the high bids for joint support ships was that the shipyards needed to be modernized to handle the work, and the anticipated cost of the infrastructure upgrades was included in the bids. Past procurements of large, federal military ships have been few and far between, resulting in the “boom and bust” cycles of shipyard capacity and expertise in modern, complex ship design and construction. Canadian shipyards have not designed and built large, complex federal ships since the 1990s, and they have not kept up their capacity and expertise to do so.

**3.4** In order to develop solutions to the problems encountered in 2008, the National Shipbuilding Procurement Strategy Office (NSPS Office) was established, led by National Defence and supported by an interdepartmental working group. The NSPS Office proposed a new shipbuilding strategy, which was endorsed by industry. It recommended that a strategic sourcing arrangement be established with shipyards. The goal of this arrangement would be to help sustain a more viable shipbuilding industry for the long term, which should make ship procurement affordable for the federal government. As a result, the government announced the National Shipbuilding Procurement Strategy (NSPS) in 2010. The responsibility for implementing the Strategy was transferred from the NSPS Office to the Minister of Public Works and Government

Services Canada, whose department led the creation of the NSPS Secretariat with members from National Defence, Industry Canada, and Fisheries and Oceans Canada.

**3.5** Exhibit 3.1 shows expected key federal ship purchases under the NSPS and other costs related to acquiring these ships. The NSPS establishes a strategic sourcing arrangement with two shipyards, which will result in the largest procurement in Canada’s history.

**3.6** National Defence, Public Works and Government Services Canada, and the Canadian Coast Guard (under Fisheries and Oceans Canada) have significant responsibilities for managing the acquisition of federal ships. Industry Canada is also administering the industrial and regional benefits resulting from the NSPS, and the Treasury Board of Canada Secretariat is providing oversight. Exhibit 3.2 outlines the interrelationships between these key entities. The roles of governance committees are discussed starting at paragraph 3.27.

**Exhibit 3.1 Scope of the National Shipbuilding Procurement Strategy**

<b>Combat vessel package</b> Combat ships with complex design and construction, including infrastructure upgrades	6 arctic offshore patrol ships (Royal Canadian Navy)	\$3.1 billion
	15 Canadian surface combatant ships (Navy)	<u>\$26.2 billion</u>
	<b>Preliminary estimate of total acquisition cost (over 30 years)</b>	<b>\$29.3 billion</b>
<b>Non-combat vessel package</b> Ships with simpler construction and closer to commercial specifications	2 joint support ships (Navy)	\$2.3 billion
	1 polar icebreaker (Canadian Coast Guard)	\$0.8 billion
	4 offshore science vessels (Coast Guard)	<u>\$0.4 billion</u>
<b>Preliminary estimate of total acquisition cost (over 7 years)</b>	<b>\$3.5 billion</b>	
<b>Small ship construction</b> Set aside for national competition (not open to contractors for the above packages)	115 ships (e.g., Coast Guard lifeboats and fisheries research vessels, Navy tugboats)	
	<b>Preliminary estimate of total funding (over 30 years)</b>	<b>\$2.0 billion</b>
<b>Ongoing repair and refit work</b> Open to national competition	National Defence and the Coast Guard have requirements to maintain their current fleet of ships	
	<b>Preliminary estimate of annual ongoing costs</b>	<b>\$500 million to \$600 million</b>

Note: Figures are unaudited.

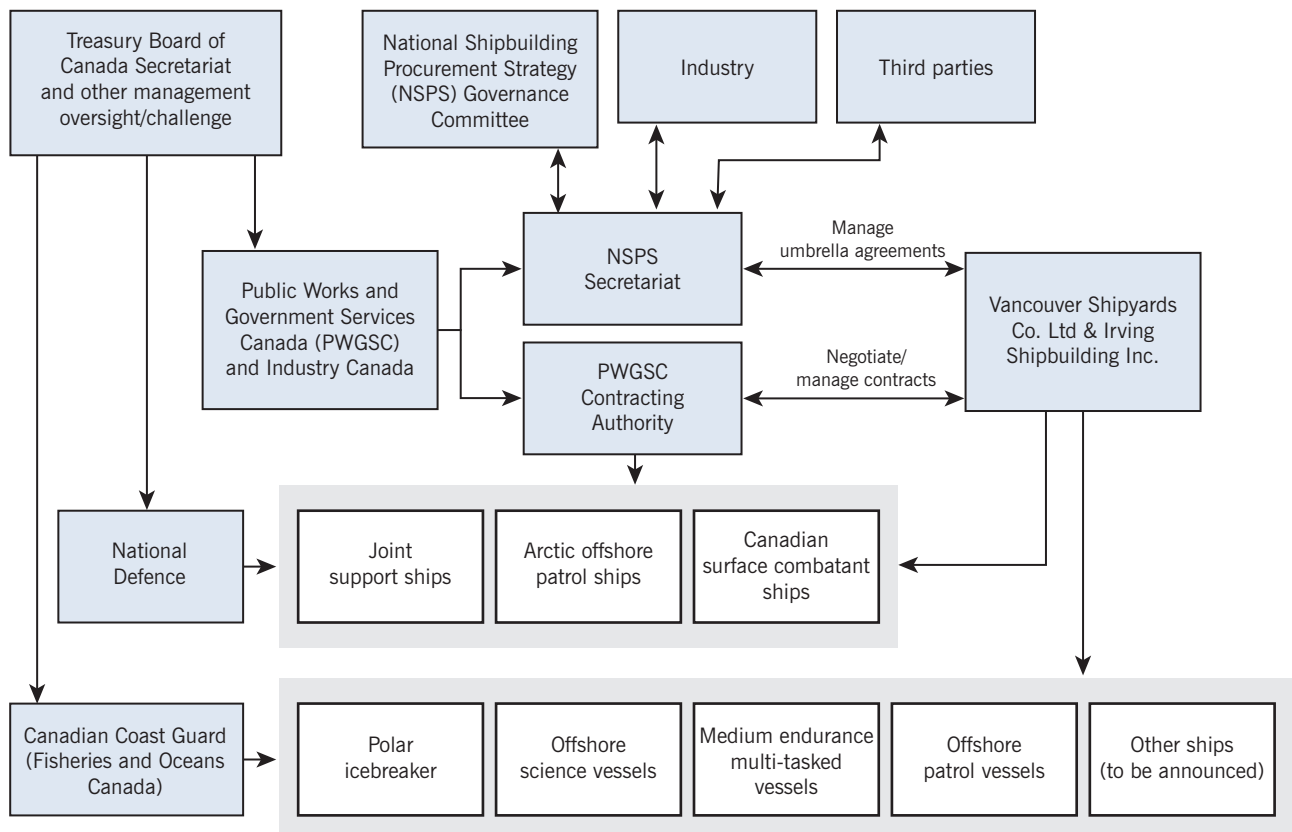
This exhibit provides information on expected small ships and large ships that had approved funding in place at the time of the audit.

Source: National Shipbuilding Procurement Strategy Secretariat and official documents used for planning purposes, effective 2010.

**3.7** In October 2011, as a result of the NSPS competitive selection process, Irving Shipbuilding Inc. was selected to build up to 21 combat ships; Vancouver Shipyards Co. Ltd. was selected to build the non-combat work package for which 7 ships had been announced at the time of our audit. Decisions have not been made on how to select the contractors for various elements of the Canadian Surface Combatant project (see Exhibit 3.3 for an explanation of this project), including such things as the integration of the combat systems.

**3.8** The small ship construction component of the NSPS is to go through a competitive procurement process for each class of ship involving Canadian shipyards other than the yards that were selected to build the large federal ships and their affiliates. Ongoing repair and refit work will be open to the broader Canadian marine industry, using competitive procurement processes.

**Exhibit 3.2** The interrelationships between key entities in the National Shipbuilding Procurement Strategy






**3.9** Exhibit 3.3 describes the three military ship projects that we examined and provides background on Canada’s military shipbuilding projects included in the NSPS. The dollar figures cited in the exhibit are preliminary estimates (indicative costs). See paragraph 3.55 for further information.

**Focus of the audit**

**3.10** This audit was an assessment of certain components of the National Shipbuilding Procurement Strategy.

**3.11** We wanted to know whether the design and management of the Strategy will help sustain Canadian shipbuilding capacity and

**Exhibit 3.3** Three Royal Canadian Navy ship projects were audited

Arctic Offshore Patrol Ship (AOPS) project	Canadian Surface Combatant (CSC) project	Joint Support Ship (JSS) project
 <p>Illustration of the arctic offshore patrol ship Source: National Defence</p> <p>The AOPS project is to acquire six to eight ships and infrastructure at Halifax, Esquimalt, and Nanisivik (Nunavut) for \$3.1 billion, net of GST. In addition, the estimated cost for personnel, operations, and maintenance is \$5.5 billion for 25 years. The AOPS is a new capability that will provide the Navy with the ability to patrol Canada’s exclusive economic zone year-round on both coasts and in the Arctic during the navigable season in order to assert Canadian sovereignty in the region. The delivery of the first AOPS is scheduled for 2018.</p>	 <p>HMCS Iroquois (centre) and HMCS Regina (background) — The two classes of vessel to be replaced by the Canadian surface combatant Source: National Defence</p> <p>The CSC project, as announced in the 2008 Canada First Defence Strategy, was to acquire fifteen combatant ships to replace Canada’s existing destroyers and frigates, including ammunition and infrastructure upgrades. The estimated acquisition cost is \$26.2 billion, net of GST, and the estimated cost for personnel, operations, and maintenance is \$64 billion for 30 years. This project will deliver warships capable of meeting multiple threats across a range of warfare areas in both the open ocean and the highly complex coastal environment. These ships will use common elements such as a common hull design, where possible. The delivery for the first CSC is scheduled for 2025.</p>	 <p>Illustration of the joint support ship Source: National Defence</p> <p>The JSS project is to acquire two new support ships with an option for a third vessel, for \$2.3 billion, net of GST. In addition, the estimated cost for personnel, operations, and maintenance is \$4.5 billion for 30 years. The JSS will replace two auxiliary oiler replenishment ships, which were built in the 1960s and are well beyond their original service life expectancy. The JSS would be able to provide essential at-sea support to deployed naval task groups, limited sealift operations, and support to operations ashore. The delivery of the first JSS is scheduled for 2017.</p>

Note: The number of ships in each class was announced in the 2008 Canada First Defence Strategy. The sources for the estimates of costs are a variety of departmental documents.

All dollar figures are in budget-year dollars, which reflect the expected purchasing power of the dollar in the year the cost will be incurred.

Source: National Defence documents

capability. As part of this work, we looked at the process to select the shipyards and to put in place the applicable agreements.

**3.12** We also wanted to know if National Defence and Public Works and Government Services Canada, in consultation with the Treasury Board of Canada Secretariat, are managing the acquisition of military ships in alignment with the Strategy to support the recapitalization of the naval fleet in a timely and affordable manner.

**3.13** We did not audit private sector contractors, their practices, or their performance. We also did not audit the results of the contracts following the umbrella agreements with the shipyards.

**3.14** The audit covered the period between January 2007 and April 2013. Subsequent to the completion of our audit work, on 7 October 2013, the government announced that Vancouver Shipyards will be building up to 10 additional large non-combat ships for the Canadian Coast Guard fleet at an estimated cost of \$3.3 billion. Further, on 11 October 2013, the government announced that Vancouver Shipyards will commence construction on the Navy's joint support ships in late 2016, with an expected delivery date of 2019. These ships will be followed by the Coast Guard's polar icebreaker under the NSPS non-combat package. Further details on the audit objectives, scope, approach and criteria are in **About the Audit** at the end of this chapter.

## Observations and Recommendations

### Creating a National Shipbuilding Procurement Strategy

**Tonnes displacement**—A measure of ship size based on the weight of the water that a ship displaces when it is floating.

**3.15** The National Shipbuilding Procurement Strategy (NSPS) is a new model for the government to undertake complex procurement. The overall objective of the NSPS is to bring predictability to federal ship procurement and help eliminate cycles of boom and bust among shipyards while providing benefits to the entire marine industry. It establishes a strategic sourcing arrangement with two Canadian shipyards to build combat and non-combat ships over 1,000 **tonnes displacement** that the federal government needs to acquire over the next 30 years. Under this arrangement, these ships are to be delivered in a timely and affordable manner.

**3.16** We examined whether the Strategy was designed to meet the government's objectives. Our examination included whether there was sufficient analysis to support the design of the Strategy. We also examined whether the selection of the shipyards followed a competitive process consistent with government policies and the

NSPS, and whether performance measures were being developed to monitor the productivity of the shipyards.

### **The Strategy's design was supported by analyses**

**3.17** National Defence, Public Works and Government Services Canada (PWGSC), Industry Canada, and Fisheries and Oceans Canada needed to conduct sufficient analyses, including incorporating lessons learned from past procurements, to support the design of the Strategy. We looked at whether the NSPS was based on suitable analysis, and whether it was designed to overcome previously identified procurement issues.

**3.18** We found that the NSPS Office conducted a number of analyses between 2008 and 2010 and incorporated lessons learned from the unsuccessful 2008 procurement process for joint support ships (see paragraph 3.3), including increasing consultation with industry. The NSPS Office also reviewed the experiences of other countries and found that most of Canada's allies had already formed strategic sourcing arrangements with their national shipbuilding industries to build and maintain their own military ships to protect their long-term national security interests. Based on these analyses, the NSPS Office recommended that Canada establish a strategic approach for the recapitalization of its federal fleet.

**3.19** In addition, a 2009 NSPS Office analysis indicated 100 million **person-hours** of labour would be necessary to build the planned federal fleet of 53–55 large ships over 1,000 tonnes displacement (24–26 National Defence ships and 29 Canadian Coast Guard ships). According to another study, this number of person-hours would be sufficient to build these ships in one modern shipyard or shipyards over 30 years. However, the analysis, based on the uncertainty of projected budgets and requirements, estimated that only 70 million person-hours of labour would be affordable. Consequently, the study determined that the best solution was for the ships to be built in one shipyard. A proposed alternative was to select two shipyards and either reduce the labour force or decrease the proportion of the shipyards' work fulfilled by federal fleet renewal projects.

**3.20** By 2010, the government had announced and approved funding for 23 National Defence ships and 5 Coast Guard ships. Additional ships are expected to be added at a later date. Following consultation with industry in July 2009, the Government of Canada decided to divide the work for large ships between two shipyards: one to build the combat package of military ships (arctic offshore patrol ships,

**Person-hour**—The amount of work performed by the average worker in one hour.

Canadian surface combatants) and one to build the non-combat package of vessels (joint support ships and all large Coast Guard ships).

**3.21** In our opinion, these ship projects should provide sufficient work to help sustain the shipyard with the combat package for approximately 25 years. However, the shipyard with the non-combat package could still experience the boom and bust cycle if the number of funded projects is not increased in future years. The current number of ships is not enough to help sustain the shipyard beyond 7 years of work.

**3.22** Overall, we found that the NSPS Office conducted sufficient analyses and actively listened to and incorporated industry's advice.

### **The selection of shipyards was efficient and successful**

**3.23** We looked at whether PWGSC implemented adequate controls over the selection of the shipyards and whether these were consistent with government regulations and policies. We also examined whether a governance structure was designed to implement the NSPS and whether the departments carried out and sought appropriate oversight and approvals at key decision points.

**3.24** The shipyard selection process was guided by three principles:

- open and transparent consultation with industry and bidders,
- use of third parties to participate in and oversee the process, and
- a non-political governance structure for the selection decision.

**3.25** Throughout the design of the NSPS and the selection of the shipyards, the departments consulted extensively with industry. Engagement with potential shipyards began with a Shipbuilding Forum in the summer of 2009, which helped shape the Strategy's design. Government representatives maintained discussions with the shipyards throughout the selection process. In August 2010, an Industry Day was held to provide more information on the shipyard selection process and timelines to potential stakeholders. Industry provided comments and received responses to questions on draft solicitation documents and drafts of the request for proposals.

**3.26** During the selection of the shipyards, there was also extensive use of independent third parties to monitor the process, including a fairness monitor. We found that First Marine International (FMI), KPMG LLP, and PricewaterhouseCoopers LLP (PwC) provided valuable advice and added credibility to the selection process based on their experience and expertise. For instance, FMI was hired to

benchmark the processes and practices and to assess the capability of short-listed Canadian shipyards. In addition, FMI and PwC reviewed bids and provided analyses of the technical and financial portions of the bids as part of the evaluation process. Departmental officials also told us that the fairness monitor added value to the selection process.

**3.27** The NSPS governance structure included a committee of deputy ministers and a committee of assistant deputy ministers. The committee of deputy ministers made key decisions related to the Strategy's implementation, while the committee of assistant deputy ministers was charged with overseeing the development and implementation of the Strategy. In addition, these committees ensured that third-party experts and the dispute resolution processes supported the principles of openness and transparency. A full-time NSPS Secretariat was created to implement the strategy and to support the governance structure. Responsibilities for managing individual vessel projects remained with the respective departments.

**3.28** The NSPS governance structure successfully monitored and addressed issues during the selection process. This included a dispute resolution mechanism to resolve issues at the lowest level in the governance hierarchy before unresolved issues were passed to the next governance level. For instance, during the selection process, participants escalated issues about the content of the request for proposals (RFP) and its closing date, as well as the legal status of one shipyard, through the NSPS dispute resolution mechanism. All issues were resolved without delaying the process significantly, and results were shared with the three firms that bid, without legal challenges from the parties involved. We found that the departments sought and secured key approvals from the NSPS governance structure and the Treasury Board before the selection process results were announced in October 2011.

**3.29** We found that PWGSC implemented adequate controls, including an effective governance structure, over the selection of the shipyards. These controls were consistent with government regulations and policies, and the NSPS objectives of openness and transparency. Further, we noted that PWGSC successfully conducted a unique and efficient process independent from political influence to select the shipyards. We would encourage PWGSC to consider using this approach in other future major capital acquisitions.



## Changes were made to the draft umbrella agreements after the selection process

**Umbrella agreement**—A strategic sourcing arrangement under which the government will then negotiate fair and reasonable individual contracts with the selected shipyard to build federal ships for each project.

**Solicitation of interest and qualification**—An invitation by the federal government to potential suppliers to indicate their interest and ability to meet the requirements of a competition.

**3.30** The NSPS selection process followed a standard competitive process that led to the signing of an **umbrella agreement**. After the selection process, the two selected shipyards and the federal government negotiated changes to the terms of the draft umbrella agreement that was included in the RFP.

### **3.31 RFP provisions for funding infrastructure upgrades.**

The requirements outlined in the **solicitation of interest and qualification** (SOIQ) and in the RFP were not specific to any particular ship project but were focused on the ability of shipyards to become viable, long-term strategic sources. The selection process did not guarantee that any future contracts to design or build ships would be awarded to the shipyards. The September 2010 SOIQ released on MERX, the electronic tendering service, established a pool of five short-listed companies that would be eligible to participate in the RFP competitive process. Bidders were required to accept the umbrella agreement included in the RFP subject to negotiation of some of its elements within a 30-day period following the selection.

**3.32** Before drafting the RFP, it was recognized that significant costs would be required to upgrade the shipyards' infrastructure to the level necessary to efficiently build the ships. Third-party experts raised the issue that very few companies would be willing to assume responsibility for millions of dollars in upgrades with no assurance of future contracts.

**3.33** In an effort to deal with this issue, the February 2011 RFP included a section titled Cost to Canada, which required shipyards to identify the costs for shipyard improvements and the portion of this cost (net cost to Canada) to be reimbursed by the government. It also included a guarantee to reimburse any unrecovered costs should the work packages be cancelled, delayed, or reduced in scope. In either case, the amount of reimbursement would be limited to the amount specified in the Cost to Canada component of the bid submitted by the shipyard. This component represented 20 percent (20 points) of the scoring of the bid evaluation.

**3.34** The way the RFP was designed, the Cost to Canada component gave more weight to bids containing the lowest amount. By bidding \$0 for the cost to Canada, a bidder would receive the full 20 points. In our opinion, this created an incentive for bidders to bid zero and, according to the RFP and the draft umbrella agreement, assume all the risks associated with the financing of shipyard upgrades.

**3.35** The three companies that bid on the project did submit bids that included a \$0 net cost to Canada for their infrastructure upgrades, electing to fund these upgrades from their own resources and expected profits from future contracts. Consequently, each bidder received the full 20 points. Furthermore, they were not guaranteed any reimbursement for infrastructure upgrades. The bidders chose to assume the financial risk of any needed upgrades.

**3.36 Subsequent change to the umbrella agreements.** Following the announcement of the shipyard selection results in October 2011, negotiations related to the umbrella agreements began. At this time, both Irving Shipbuilding Inc. and Vancouver Shipyards Co. Ltd. raised concerns about incurring infrastructure upgrade costs without a guarantee or assurance of future contracts. Therefore, the winning bidders each requested a **backstop provision** be included in the umbrella agreement to ensure that they would be compensated for upgrades needed to reach the **target state**, in the event of project cancellation, delay, or reduction in scope.

**Backstop provision**—A commitment to allow shipyards to recover a portion of their costs for the improvements identified in their proposals if Canada cancels, delays, or reduces the scope of the planned work packages.

**Target state**—The level of capability identified by independent experts in terms of people and infrastructure that must be attained by the shipyard within three years (six years for the Canadian Surface Combatant project) in order to build the federal ships in an efficient manner.

**3.37** After Treasury Board ministers had initially approved the umbrella agreements that would be signed by the parties, the Deputy Ministers Governance Committee considered the requests to include a backstop provision in each agreement. It was noted that shipyards could be faced with financial difficulties if the backstop was not accepted. The Committee endorsed the proposal to accept the backstop. As this was a significant change, the Committee agreed that departments would again need approval from Treasury Board ministers.

**3.38** We found that when departmental officials were seeking approval for the backstop provisions, they stated that a backstop provision would be a prudent risk mitigation measure and fair and equitable to all parties, as all three shipyards had bid \$0 cost to Canada. While Canada was under no obligation to agree to such a provision, according to officials it provided a benefit to Canada, because shipyards would upgrade their facilities to achieve target state earlier than required in the RFP.

**3.39** As all bidders had identified \$0 cost to Canada for infrastructure upgrades, the risk-sharing model that Canada had included in the RFP was no longer applicable. Departments considered a backstop provision as a way to help address the financial risk to the shipyards of reaching the target state while recognizing that Canada was committed to build ships. Officials advised us that changes to the umbrella

agreement were always anticipated during this long-term sourcing arrangement. Officials also told us that this was not a significant change to the draft umbrella agreement within the RFP.

**3.40** In February 2012, the backstop provision was included in the signed umbrella agreements with Irving Shipbuilding and Vancouver Shipyards. The amount included in each backstop provision, as of 2013, was based on the revised total estimated capital cost of each shipyard's infrastructure program, which is approximately \$300 million for Irving Shipbuilding and \$200 million for Vancouver Shipyards.

**3.41** We noted that according to the backstop provision in each agreement, the amount payable by Canada is reduced by the value of the contracts awarded to the shipyards to design and build ships. Nevertheless, the changes to the umbrella agreements create a risk that Canada will have to reimburse shipyards for infrastructure upgrades if the value of such contracts is not high enough to reduce the backstop amount to zero. In addition, there is nothing in the RFP or in the umbrella agreement that would limit further increases to the backstop provision. However, Irving Shipbuilding has confirmed that it will not in the future request any further increases to the backstop. According to PWGSC officials, Vancouver Shipyards will be required to make the same commitment.

**3.42** The backstop provisions negotiated with the selected shipyards were not included in the original RFP. While the RFP contained terms that can be interpreted as permitting broad negotiation, it is not clear from the wording in the RFP that the negotiation of the backstop provisions was anticipated. In our opinion, the RFP was not explicit about whether the procurement was subject to restrictive rules that apply to certain types of competitive processes, which prohibit the negotiation of significant post-bid changes, or whether the parties were permitted to openly negotiate all of the terms and conditions of their long-term strategic sourcing arrangement before it began. Wording in some clauses contained in the RFP could be interpreted to support either conclusion.

**3.43** When considered on their own, given the uniqueness of the NSPS procurement process, the backstop provisions can be viewed as a reasonable way to increase certainty surrounding the amount the government would have to pay if it reduced or cancelled anticipated work. In our opinion, the terms of future RFPs need to be clearer and more explicit on the extent of negotiations of post-bid changes with successful contractors.

**3.44 Recommendation.** Public Works and Government Services Canada should review the National Shipbuilding Procurement Strategy (NSPS) request for proposal process, including the negotiations with the successful bidders, to ensure that lessons learned are captured, examined, and considered for application in future complex procurements and strategic sourcing arrangements.

**The Department's response.** Public Works and Government Services Canada (PWGSC) accepts the recommendation. PWGSC concurs with the Auditor General's assessment in paragraph 3.29 that the NSPS approach be used in other future major capital acquisitions. The Department is reviewing the process used through the NSPS to strategically source two shipyards in order to draw best practices and lessons learned as they might apply to future complex procurements and strategic sourcing arrangements.

**The National Shipbuilding Procurement Strategy Secretariat is developing performance measures**

**3.45** Over the 30-year life of the umbrella agreements, the government will need to monitor whether the NSPS is meeting its objectives of providing affordable federal ships in a timely manner and avoiding the boom and bust cycles of shipyards. Departments recognize the need for performance measures. We found that the NSPS Secretariat created a matrix identifying and assessing a number of risks that could jeopardize the success of the NSPS and has suggested creating key performance measures to ensure that any productivity slippages in the shipbuilding are addressed as soon as possible. As it is early in the process, not all performance measures are in place. For example, one performance measure will be needed to measure whether Canadian shipyards are competitive and efficient over the life of the NSPS agreement.

**3.46** According to a 2009 economic analysis commissioned by Industry Canada, if there were to be additional costs for building ships in Canada as opposed to offshore, then those costs should also factor in the wider economic benefit to Canada and be offset accordingly. The Strategy does not include a provision for the regular monitoring of the expected additional cost or the benefit to Canada. This monitoring could be done by third-party experts regularly measuring whether the productivity of shipyards allows them to remain competitive in the industry. In addition, there needs to be ongoing monitoring of the shipyards' progress against the target state. Without such a measure, there is a risk that Canada will not meet the NSPS objective of delivering the federal ships in a cost-effective and affordable manner.

**3.47 Recommendation.** Public Works and Government Services Canada, supported by Industry Canada, National Defence, and Fisheries and Oceans Canada, should regularly monitor the productivity of shipyards in terms of competitiveness, cost-effectiveness, and efficiency, including measuring progress against the target state.

**The departments' response.** Public Works and Government Services Canada, Industry Canada, National Defence, and Fisheries and Oceans Canada accept the recommendation. The National Shipbuilding Procurement Strategy Secretariat, which is led by Public Works and Government Services Canada with membership from Industry Canada, National Defence, and Fisheries and Oceans Canada, will establish a set of standardized measures that will provide Canada with regular insight into the productivity of the two selected shipyards. In accordance with the terms of the signed umbrella agreements, the National Shipbuilding Procurement Strategy Secretariat will also continue with its plans to develop a strategy for the engagement of third-party experts to measure the shipyards' progress towards the achievement and maintenance of the target state.

### Managing the Strategy's impact on military acquisitions

**3.48** Given that the National Shipbuilding Procurement Strategy (NSPS) introduced a new strategic sourcing arrangement, we examined whether National Defence and Public Works and Government Services Canada (PWGSC) have identified, have assessed, and are managing the related risks as well as the key activities to support decision making for acquiring military ships. According to the Treasury Board Framework for the Management of Risks, departments must take risk-informed approaches to decision making and demonstrate that risks are successfully identified, assessed, and managed.

#### Departments have identified and are managing key risks

**3.49** We found that the NSPS and the three military ship projects we examined each had a register of risks that was being managed as the projects progressed. Managing a complex **developmental project** like designing a new military ship involves many risk factors. Some of the key risks identified include lack of competition in the shipbuilding industry, schedule delays, and unaffordable costs and technical risks related to new ship design.

**3.50 Risk of lack of competition.** To ensure that there continues to be a competitive market for maintenance and repair, in-service support contracts for National Defence were separated from the contracts to build the military ships and will be awarded through a competitive process at a later date. The Department saw this approach as a way to

**Developmental project**—A project to develop a product that does not yet exist or requires further work, testing and/or certification before the design is proven to meet requirements and is ready to enter the production phase.

maintain competition among different industries, but it introduces additional risks for the ship projects. For example, the builder may not devote the same level of quality workmanship knowing that it does not need to maintain the military ships. National Defence and PWGSC have identified this risk and are developing mitigation strategies.

**3.51** In addition, the strategic sourcing arrangement may allow less room for negotiating future contracts, since this is not a fully competitive environment. One control is that PWGSC and the shipyards have agreed to using open-book accounting. This method would allow the government to review the financial information to ensure that costs and profits claimed by shipyards are reasonable.

**3.52 Scheduling delays.** Potential project delays need to be managed. For example, when the NSPS awarded Vancouver Shipyards the non-combat work package, both the Canadian Coast Guard and the Royal Canadian Navy had their own construction schedules for their particular ships. However, these two schedules were in conflict, and two projects—the construction of the Coast Guard polar icebreaker and the Navy joint support ships—shared the same proposed dates. A decision is needed about the order of construction, which will result in a delay for whichever project comes second. Delays will mean potential loss of purchasing power due to increased costs of construction and costly maintenance for the extended use of existing ships.

**3.53** In addition, ship project teams have identified the risk of shipyards not achieving the target state on schedule. However, there is no penalty to the shipyards should this occur. If it does occur, this could result in delayed construction and increased costs.

**3.54 Cost and technical risks.** In addition to separating the in-service support contracts, each project strategy also separated the different phases for designing and building the military ships to help address the cost, technical, and scheduling risks. Separating the project into these phases is in contrast to the original procurement strategies for the joint support ships (JSS) and arctic offshore patrol ships (AOPS), which involved awarding a single contract to design, build, and maintain the ships. According to National Defence, the new approach (known as the “design-then-build” approach) will allow the shipyard to refine the design before negotiating the build contract. Having a more accurate design at this stage will result in lower technical risk, lower cost premium, and more definite cost estimates. It will also allow for greater risk sharing between the shipyard and the government, for example by allowing consultation on design decisions and cost/capability trade-offs before awarding the build contract.

**Total substantive costs**—A cost projection based on a sufficiently high degree of quality and reliability to support project approval for the specified deliverables and time frame of the project.

**Total indicative costs**—A rough cost projection used for budget planning purposes in the early stages of a project, based on the operational requirements, a market assessment of products, technological availability, and life-cycle costs.

**3.55** In order to implement the design-then-build approach for the AOPS project, it was necessary to modify the traditional Treasury Board approval process, which is normally based on **total substantive costs**. Currently, National Defence has not asked the shipyards to provide substantive costs because shipyards would include risk premiums to cover uncertainty in the proposed scope of work. Therefore, National Defence asked that Treasury Board ministers provide advance contract and expenditure approval based on **total indicative costs** in the design/definition phase. The departments have advance contract and expenditure approval for the design/definition phase contract based on indicative costs. Each task outlined in the contract will be negotiated and approved by the departments, at which time the negotiated amount becomes a substantive cost. So long as they do not exceed the approved amount for each task, departments can proceed without returning to the Treasury Board.

**3.56** It should be noted that only the first two tasks of the AOPS project have been negotiated and approved. According to the Department, this was done to reduce the risk of greater delays, to reduce costs, and to prevent a stoppage of design work. In our opinion, while this approach is meant to allow the project to move quickly into the next phase, there is some risk that the time taken to negotiate and approve each task may delay the project.

#### **Budget caps were set early and could result in a reduced number of ships or capabilities**

**3.57** As part of our examination of the risks and key activities involved in acquiring military ships, we looked at the budgets established for the ship projects.

**3.58 Initial budgets.** National Defence established indicative budgets for all three ship projects early in the options analysis phase based on rough estimates and parametric modelling. (Parametric modelling provides cost estimates based on ships constructed in the past with similar requirements and characteristics.) These rough estimates have been treated as budget caps. The budgets for the AOPS and Canadian surface combatants (CSC) have not been revised since the former project was first approved in 2007, and the latter's initial budget was established in 2008. The JSS project was allocated an additional \$340 million in funding when the project relaunched in 2010, but this amount was mostly to cover the expenses of the project management office and inflation. However, according to National Defence, there have been significant increases in cost elements, which are impairing the affordability of the military ships. These include costs of raw

materials, labour, and military components for the ships. Additional costs related to implementing the NSPS, such as third-party and NSPS Secretariat oversight, and the potential cost related to the backstop provision (see paragraph 3.40), will be charged to the projects.

**3.59 Reduced capability for JSS.** One of the reasons that the original JSS procurement did not succeed was the inadequate budget for the requirements included in the RFP. When the project was relaunched, National Defence reduced its requirements to two ships, with the option for a third. The decision was made to replace the existing two ships and their capabilities rather than significantly improve them, as had been previously planned. There are no indications that funding will be available for a third ship. Departmental documents indicate that by acquiring fewer than three ships, Canada's ability to respond autonomously to crises and contingency operations will be significantly diminished when one ship is in maintenance.

**3.60 Reduced requirements for AOPS.** In 2009, the requirements for the AOPS were reduced in order to stay within the allocated budget. For instance, National Defence reduced the top speed in order to lower the cost associated with the propulsion system and overall size of the vessel, and to help keep the proposed ship project achievable and affordable. Officials told us that this would not compromise the ability of the AOPS to meet the mission objectives set by the government.

**3.61** As the project advances, the Department needs to continue to compare the overall estimated cost to the total project budget. We found that the current estimated cost to build six ships is very close to the related budget of \$2.3 billion. To remain within the current budget, either the ships' capability may need to be once again reduced or the number of ships to be built may have to be reduced.

**3.62** National Defence officials informed us that they are waiting for the build cost estimates from the shipyard before revising their total project budget, at which time more funding could be requested based on substantive cost estimates. Early budget figures are subject to future Cabinet considerations and therefore may change. There is no guarantee that more funding will be allocated.

**3.63 Fewer CSC ships.** We found that the CSC project budget of \$26.2 billion (**budget-year dollars**) is insufficient to replace Canada's 3 destroyers and 12 frigates with 15 modern warships with similar capabilities. In 2008, the project team conducted an analysis to determine the number of ships that it could afford with the current budget. The government had originally set a requirement of 15 ships

**Budget-year dollars**—Costs that reflect the expected purchasing power of the dollar in the year the cost will be incurred. Budget-year dollars include the effect of inflation/deflation. This is in contrast to costs in constant-year dollars, which reflect prior year, current, and future costs at the level of prices of a defined base year.



under the Canada First Defence Strategy. The project team's original and subsequent analyses indicate that the budget of \$26.2 billion is sufficient to build only a lesser number of ships when considering the effects of inflation and other cost increases, and that the planned date for construction is 2020. The actual number of ships that the project can deliver will not be known for several years. Current plans include a cost-saving proposal to build both the frigate and destroyer versions of the combatants with a common hull. However, through engagement with industry, National Defence was advised to first determine whether such a design will help to efficiently achieve the required capability of each variant.

**3.64 Alignment of budget with design process.** The initial budget for each class of military ship was set years before construction will begin. As such, the estimates were very imprecise and should be regarded as, at most, placeholders. As the military ships are complex developmental projects, their design will be defined more precisely over time, which will result in greater certainty on the cost of the vessels. It is not realistic to expect that the original budget cap will remain the same from a project's conception to completion. This is confirmed by an NSPS Office study that recommended that budgets not be capped until definition activities are sufficiently advanced to develop substantive cost estimates.

**3.65** While budgets are a useful control, Canada may not get the military ships it needs if budgets are not subject to change. For instance, we found that National Defence has already made cost/capability trade-offs on the AOPS and the JSS ship projects. So far, only the JSS project has received a budget increase to cover inflation and project management office expenses. As designs for all three ship projects progress, departments will need to ensure that they continue to involve Treasury Board ministers in the cost/capability trade-off discussions and request budget increases if required. We were told that information is presented verbally to Treasury Board ministers annually for major capital projects; however, we were not provided with any documentary evidence to support this statement.

**3.66 Recommendation.** National Defence and Public Works and Government Services Canada, working with the Treasury Board of Canada Secretariat, should ensure information to Treasury Board ministers includes updated information on changes to costs, capabilities, and schedules and should request additional authorities, as required.

**The departments' response.** National Defence and Public Works and Government Services Canada (PWGSC) accept the recommendation as it is their current practice to inform ministers on Strategy developments. National Defence and PWGSC will continue to meet regularly with the Treasury Board of Canada Secretariat to discuss the shipbuilding projects so as to inform decisions on how and when to appropriately update Treasury Board ministers. As well, upon completion of the definition phase of each shipbuilding project, high-fidelity cost estimates for each project will be available, with a clear indication of capabilities to be acquired and the refined delivery schedule for ships. This information will continue to be reported to Treasury Board ministers, and additional authorities will be requested, as appropriate, in accordance with the relevant Treasury Board policies.

### Treasury Board of Canada Secretariat challenge function is improving

**Challenge function**—A process that officials of the Treasury Board of Canada Secretariat used to conduct a systematic, independent, and impartial review and critical analysis of department proposals before approval. The challenge function considers such issues as priorities, costs, options, and risks to promote informed decision making, oversight, and reporting by departments to Treasury Board ministers and Parliament.

**3.67** As part of our audit, we examined the **challenge function** performed by the Treasury Board of Canada Secretariat during its review of departmental submissions for the Treasury Board ministers' consideration. The Secretariat is responsible for carrying out a timely challenge function and for ensuring that Treasury Board submissions and presentations to Cabinet have been adequately analyzed and reviewed.

**3.68** In our review of the Secretariat's challenge function, we examined nine submissions that were submitted for approval from 2004 to 2012: two related to the NSPS and seven related to the National Defence military ship projects. The Secretariat provided documentation to support its challenge function for seven of the nine submissions, but for two of these seven, it supplied limited documentation. Secretariat officials told us that much of the challenge function performed is done verbally or found in documents to which Cabinet confidence applies, which the Office of the Auditor General cannot access.

**3.69** In reviewing the documentation provided, we found that the challenge function was less extensive for earlier submissions (2010–11) and became more extensive in 2012. At that time, the challenge function focused on ensuring that

- advice was provided in a timely manner,
- relevant policies were respected,
- options and risks were identified, and
- ministerial approvals were sought when required.

## Monitoring military capabilities

**Level of ambition**—Canada’s defence needs as defined by the ability of the Canadian Forces to conduct its planned core missions in Canada, in North America, and abroad.

**3.70** Complex developmental projects such as military ships require years to design and build. It is important that any gap between the government’s **level of ambition** and the Royal Canadian Navy’s capability is regularly measured and minimized. Canada’s last general policy statement on its expected level of ambition was in 2008, through the Canada First Defence Strategy (CFDS). While the CFDS did outline the expected number of Navy ships and the core missions for the Canadian Forces, it did not define the specific naval capabilities required to fulfill the government’s level of ambition.

**3.71** Since the CFDS was announced in 2008, the global economic climate has worsened. It is important for National Defence to monitor its ability to meet the expectations set out in the CFDS. The CFDS states that “the Government is committed to reviewing this comprehensive plan on a regular basis to ensure that it continues to fully meet the needs of the military in service of Canadians.” We therefore examined whether National Defence monitored its ability to meet the expectations set out in the CFDS as it relates to the NSPS.

### Expectations may not be met

**3.72** We found that when seeking decisions on each of the three fleet acquisitions we examined, National Defence has reported to government on the number of military ships it will acquire per fleet within the allocated budget and on their associated capabilities, in comparison to the CFDS. National Defence has provided ministers with an update on the CFDS, and its officials told us that these updates will continue. In our opinion, a gap appears to be developing between the CFDS level of ambition, the evolving naval capabilities, and the budgets. National Defence should continue to monitor the extent to which it will or will not meet the government’s expectations for future military needs, and continue to report to ministers on expected capability gaps, allowing the government to make adjustments to expectations and capabilities.

## Conclusion

**3.73** We concluded that National Defence, Public Works and Government Services Canada (PWGSC), Industry Canada, and Fisheries and Oceans Canada have designed and are managing the National Shipbuilding Procurement Strategy (NSPS) in a way that should help sustain Canadian shipbuilding capacity and capability. In addition, the NSPS should help the government to procure federal

ships in a timely, affordable manner, consistent with the build-in-Canada shipbuilding policy. The departments conducted analyses, and the design for the NSPS addressed problems identified from previous unsuccessful procurements. This work included extensive consultation with industry, use of third-party shipbuilding experts, and the introduction of a governance structure to make key decisions on the Strategy's implementation. The competitive process for selecting two shipyards that was led by PWGSC resulted in a successful and efficient process, independent of political influence, carried out in an open and transparent manner.

**3.74** Following the selection, the shipyards negotiated changes to the terms of the draft umbrella agreement that was included in the request for proposals (RFP) to ensure they would be compensated for their capital investments should a project be cancelled, delayed, or reduced in scope. As a result, the agreements that were signed with the shipyards differ significantly from the draft agreement that had been included in the RFP, as it did not include such a backstop provision. It was not clear from the wording of the RFP that the negotiation of backstop provisions was anticipated. Consequently, based on lessons learned from the RFP issued under the NSPS and the negotiations that came after the winning bidders were selected, Public Works and Government Services Canada should consider how the terms of future RFPs could be made clearer and more explicit as to the extent of negotiations of post-bid changes with successful contractors.

**3.75** As the 30-year Strategy is still in its early stages, not all performance measures are in place. Departments have identified potential risks and how they intend to mitigate these risks. To ensure that Canada acquires federal ships in an affordable manner, PWGSC, supported by Industry Canada, National Defence, and Fisheries and Oceans Canada, needs to regularly monitor the productivity of shipyards in terms of competitiveness, cost-effectiveness, and efficiency, including measuring progress against the target state.

**3.76** We also concluded that National Defence and PWGSC—in consultation with the Treasury Board of Canada Secretariat—are, to date, managing the acquisition of military ships in a timely and affordable manner following the National Shipbuilding Procurement Strategy. Because budget caps were established early in the planning process, National Defence has reduced the expected number of military ships or their capabilities to remain within budget. As a result, cost/capability trade-offs need to be monitored and revisions made to project budgets, if necessary, to make sure that Canada gets the military ships it needs to protect Canadian interests and sovereignty.

## About the Audit

All of the audit work in this chapter was conducted in accordance with the standards for assurance engagements set out in *The Canadian Institute of Chartered Accountants Handbook—Assurance*. While the Office adopts these standards as the minimum requirement for our audits, we also draw upon the standards and practices of other disciplines.

As part of our regular audit process, we obtained management's confirmation that the findings reported in this chapter are factually based.

### Objectives

To determine whether Public Works and Government Services Canada, National Defence, Industry Canada, and Fisheries and Oceans Canada have designed and are managing the National Shipbuilding Procurement Strategy (NSPS) in a way that will help sustain Canadian shipbuilding capacity and capability to procure federal ships in a timely, affordable manner.

To determine whether National Defence and Public Works and Government Services Canada, in consultation with Treasury Board of Canada Secretariat, are managing the acquisition of military ships in alignment with the NSPS to support the recapitalization of the naval fleet in a timely and affordable manner.

### Scope and approach

The audit covered both NSPS and the military acquisition projects for three ships—the joint support ship, the arctic offshore patrol ship, and the Canadian surface combatant. We examined whether the departments designed and are managing the NSPS in a way that will help sustain Canadian shipbuilding capacity and capability to procure federal ships in a timely, affordable manner. Specifically, the audit examined how risks, analyses, long-term support requirements, lessons learned, key controls, governance, oversight, and performance measures were integrated into the design of the NSPS and implemented accordingly. The audit also examined how National Defence and Public Works and Government Services Canada (PWGSC), in consultation with the Treasury Board, managed the acquisition of the three military ship projects to align with the NSPS, including risk management, support to decision makers, and challenge function.

The audit examined NSPS documents and analysis in all departments. We also looked at documents and correspondence contained in National Defence's project files and PWGSC's procurement files. We conducted interviews with individuals involved in the selected military ship projects and in implementing the National Shipbuilding Procurement Strategy. Documents were also obtained from the NSPS Secretariat, including information on the bids and selection process. Third-party contractors were interviewed in order to understand their role and involvement in the acquisition process, and some documents were obtained.

Our conclusions relate only to the management practices and actions of public servants. We did not audit private sector contractors and, consequently, our conclusions do not pertain to the contractors' practices or to their performance.

We have scoped out certain decisions that were made, as they are policy-related. As noted in the chapter, there were certain documents that we did not receive due to Cabinet confidences; however, this did not affect our overall conclusion. The audit did not examine the failed procurement for the joint support ships or the ship projects for the Canadian Coast Guard that fall under the NSPS. We also did not audit the results of the contracts following the umbrella agreements with the shipyards.

**Criteria**

Criteria	Sources
<p><b>To determine whether Public Works and Government Services Canada, National Defence, Industry Canada, and Fisheries and Oceans Canada have designed and are managing the National Shipbuilding Procurement Strategy (NSPS) in a way that will help sustain Canadian shipbuilding capacity and capability to procure federal ships in a timely, affordable manner, we used the following criteria:</b></p>	
<p>National Defence, Public Works and Government Services Canada, Industry Canada, and Fisheries and Oceans Canada conducted analyses and incorporated lessons learned to support the design of the National Shipbuilding Procurement Strategy.</p>	<ul style="list-style-type: none"> <li>• Procurement Review Policy, Treasury Board</li> <li>• Policy on the Management of Projects, Treasury Board</li> <li>• Policy on Information Management, Treasury Board</li> <li>• Industrial Regional Benefits Policy, Industry Canada</li> <li>• Focusing on Opportunities: A New Policy Framework for the Canadian Shipbuilding and Industrial Marine Industry, Industry Canada</li> <li>• National Shipbuilding Procurement Strategy Project Charter, National Defence</li> </ul>
<p>National Defence, Public Works and Government Services Canada, Industry Canada, and Fisheries and Oceans Canada assessed and defined the future shipbuilding demand and long-term support requirements, including costs.</p>	<ul style="list-style-type: none"> <li>• <i>National Defence Act</i></li> <li>• <i>Department of Fisheries and Oceans Act</i></li> <li>• Policy Framework for the Management of Assets and Acquired Services, Treasury Board</li> <li>• In-Service Support Contracting Framework, National Defence</li> </ul>
<p>National Defence, Public Works and Government Services Canada, Industry Canada, and Fisheries and Oceans Canada identified, assessed, and managed risks related to the design and implementation of the National Shipbuilding Procurement Strategy.</p>	<ul style="list-style-type: none"> <li>• Framework for the Management of Risks, Treasury Board</li> <li>• Policy Framework for the Management of Assets and Acquired Services, Treasury Board</li> <li>• Procurement Review Policy, Treasury Board</li> </ul>
<p>National Defence, Public Works and Government Services Canada, Industry Canada, and Fisheries and Oceans Canada designed a governance structure and management approach to implement the National Shipbuilding Procurement Strategy, within their mandate and authorities.</p>	<ul style="list-style-type: none"> <li>• <i>National Defence Act</i></li> <li>• <i>Defence Production Act</i></li> <li>• <i>Department of Industry Act</i></li> <li>• <i>Department of Fisheries and Oceans Act</i></li> <li>• <i>Department of Public Works and Government Services Act</i></li> <li>• <i>Financial Administration Act</i></li> <li>• Policy on Financial Management Governance, Treasury Board</li> <li>• Policy Framework for Financial Management, Treasury Board</li> <li>• Policy Framework for the Management of Assets and Acquired Services, Treasury Board</li> <li>• National Shipbuilding Procurement Strategy Terms of Reference</li> </ul>

Criteria	Sources
<p><b>To determine whether Public Works and Government Services Canada, National Defence, Industry Canada, and Fisheries and Oceans Canada have designed and are managing the National Shipbuilding Procurement Strategy (NSPS) in a way that will help sustain Canadian shipbuilding capacity and capability to procure federal ships in a timely, affordable manner, we used the following criteria: (continued)</b></p>	
<p>National Defence, Public Works and Government Services Canada, Industry Canada, and Fisheries and Oceans Canada carried out and sought appropriate oversight and approvals at key decision points related to the National Shipbuilding Procurement Strategy.</p>	<ul style="list-style-type: none"> <li>• <i>Financial Administration Act</i></li> <li>• Policy on Internal Control, Treasury Board</li> <li>• Policy on Financial Management Governance, Treasury Board</li> <li>• Procurement Review Policy, Treasury Board</li> <li>• Policy on Information Management, Treasury Board</li> <li>• A Guide to Preparing Treasury Board Submissions, Treasury Board</li> <li>• Project Approval Guide and Project Approval Directive, National Defence</li> <li>• Supply Manual, Public Works and Government Services Canada</li> </ul>
<p>Public Works and Government Services Canada developed performance measures to ensure continuous long-term improvement to meet National Shipbuilding Procurement Strategy objectives.</p>	<ul style="list-style-type: none"> <li>• Policy Framework for the Management of Assets and Acquired Services, Treasury Board</li> <li>• A Guide to Preparing Treasury Board Submissions, Treasury Board</li> <li>• National Shipbuilding Procurement Strategy Governance Terms of Reference</li> <li>• Management Accountability Framework, Treasury Board</li> </ul>
<p>Public Works and Government Services Canada implemented adequate controls at key points in the shipyard selection process, including the award of subsequent agreements, consistent with the National Shipbuilding Procurement Strategy, government regulations, and policies.</p>	<ul style="list-style-type: none"> <li>• <i>Government Contracts Regulations</i></li> <li>• Contracting Policy, Treasury Board</li> <li>• Policy on Decision Making in Limiting Contractor Liability in Crown Procurement Contracts, Treasury Board</li> <li>• Supply Manual, Public Works and Government Services Canada</li> </ul>
<p><b>To determine whether National Defence and Public Works and Government Services Canada, in consultation with Treasury Board of Canada Secretariat, are managing the acquisition of military ships in alignment with the NSPS to support the recapitalization of the naval fleet in a timely and affordable manner, we used the following criteria:</b></p>	
<p>Public Works and Government Services Canada implemented adequate controls at key points in the shipyard selection process, including the award of subsequent agreements, consistent with the National Shipbuilding Procurement Strategy, government regulations and policies.</p>	<ul style="list-style-type: none"> <li>• <i>Government Contracts Regulations</i></li> <li>• Contracting Policy, Treasury Board</li> <li>• Policy on Decision Making in Limiting Contractor Liability in Crown Procurement Contracts, Treasury Board</li> <li>• Supply Manual, Public Works and Government Services Canada</li> </ul>
<p>National Defence and Public Works and Government Services Canada identified, assessed, and are managing the risks related to the acquisition of military ships, as impacted by the implementation of the National Shipbuilding Procurement Strategy.</p>	<ul style="list-style-type: none"> <li>• Framework for the Management of Risks, Treasury Board</li> <li>• Policy on the Management of Projects, Treasury Board</li> <li>• Standard for Project Complexity and Risk, Treasury Board</li> </ul>

Criteria	Sources
<p><b>To determine whether National Defence and Public Works and Government Services Canada, in consultation with Treasury Board of Canada Secretariat, are managing the acquisition of military ships in alignment with the NSPS to support the recapitalization of the naval fleet in a timely and affordable manner, we used the following criteria: (continued)</b></p>	
<p>National Defence and Public Works and Government Services Canada identified, assessed, and are managing key activities of project management to support the decision making related to the acquisition of military ships.</p>	<ul style="list-style-type: none"> <li>• Procurement Review Policy, Treasury Board</li> <li>• Policy on the Management of Projects, Treasury Board</li> <li>• Guide to Costing, Treasury Board</li> <li>• Project Approval Guide and Project Approval Directive, National Defence</li> <li>• Supply Manual, Public Works and Government Services Canada</li> </ul>
<p>Treasury Board of Canada Secretariat carried out a timely challenge function to ensure that the Treasury Board submission(s) and presentations to Cabinet have been adequately analyzed and reviewed.</p>	<ul style="list-style-type: none"> <li>• A Guide to Preparing Treasury Board Submissions, Treasury Board 2007</li> <li>• Project Approval Policy, Treasury Board</li> <li>• Policy on the Management of Projects, Treasury Board</li> </ul>

Management reviewed and accepted the suitability of the criteria used in the audit.

**Period covered by the audit**

The audit covered the period between January 2007 and April 2013. Audit work for this chapter was completed on 30 August 2013.

**Subsequent Events**

Subsequent to the completion of our audit work, on 7 October 2013 the government announced that Vancouver Shipyards will be building up to 10 additional large non-combat ships for the Canadian Coast Guard fleet at an estimated cost of \$3.3 billion. Further, on 11 October 2013, the government announced that Vancouver Shipyards will commence construction on the Royal Canadian Navy’s joint support ships in late 2016, with an expected delivery date of 2019. These ships will be followed by the Coast Guard’s polar icebreaker under the NSPS non-combat package.

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## Appendix List of recommendations

The following is a list of recommendations found in Chapter 3. The number in front of the recommendation indicates the paragraph where it appears in the chapter. The numbers in parentheses indicate the paragraphs where the topic is discussed.

Recommendation	Response
<b>Creating a National Shipbuilding Procurement Strategy</b>	
<p><b>3.44</b> Public Works and Government Services Canada should review the National Shipbuilding Procurement Strategy (NSPS) request for proposal process, including the negotiations with the successful bidders, to ensure that lessons learned are captured, examined, and considered for application in future complex procurements and strategic sourcing arrangements. (3.15–3.43)</p>	<p><b>The Department’s response.</b> Public Works and Government Services Canada (PWGSC) accepts the recommendation. PWGSC concurs with the Auditor General’s assessment in paragraph 3.29 that the NSPS approach be used in other future major capital acquisitions. The Department is reviewing the process used through the NSPS to strategically source two shipyards in order to draw best practices and lessons learned as they might apply to future complex procurements and strategic sourcing arrangements.</p>
<p><b>3.47</b> Public Works and Government Services Canada, supported by Industry Canada, National Defence, and Fisheries and Oceans Canada, should regularly monitor the productivity of shipyards in terms of competitiveness, cost-effectiveness, and efficiency, including measuring progress against the target state. (3.45–3.46)</p>	<p><b>The departments’ response.</b> Public Works and Government Services Canada, Industry Canada, National Defence, and Fisheries and Oceans Canada accept the recommendation. The National Shipbuilding Procurement Strategy Secretariat, which is led by Public Works and Government Services Canada with membership from Industry Canada, National Defence, and Fisheries and Oceans Canada, will establish a set of standardized measures that will provide Canada with regular insight into the productivity of the two selected shipyards. In accordance with the terms of the signed umbrella agreements, the National Shipbuilding Procurement Strategy Secretariat will also continue with its plans to develop a strategy for the engagement of third-party experts to measure the shipyards’ progress towards the achievement and maintenance of the target state.</p>

Recommendation	Response
<p><b>Managing the Strategy's impact on military acquisitions</b></p>	
<p><b>3.66</b> National Defence and Public Works and Government Services Canada, working with the Treasury Board of Canada Secretariat, should ensure information to Treasury Board ministers includes updated information on changes to costs, capabilities, and schedules and should request additional authorities, as required. (3.57–3.65)</p>	<p><b>The departments' response.</b> National Defence and Public Works and Government Services Canada (PWGSC) accept the recommendation as it is their current practice to inform ministers on Strategy developments. National Defence and PWGSC will continue to meet regularly with the Treasury Board of Canada Secretariat to discuss the shipbuilding projects so as to inform decisions on how and when to appropriately update Treasury Board ministers. As well, upon completion of the definition phase of each shipbuilding project, high-fidelity cost estimates for each project will be available, with a clear indication of capabilities to be acquired and the refined delivery schedule for ships. This information will continue to be reported to Treasury Board ministers, and additional authorities will be requested, as appropriate, in accordance with the relevant Treasury Board policies.</p>