

**GOVERNMENT RESPONSE TO THE REPORT OF THE STANDING COMMITTEE ON PUBLIC ACCOUNTS, ENTITLED: REPORT 2, NATIONAL SHIPBUILDING STRATEGY, OF THE 2021 REPORTS OF THE AUDITOR GENERAL OF CANADA**

**Introduction**

The Government of Canada has considered the report of the Standing Committee on Public Accounts (PACP), entitled: Report 2, *National Shipbuilding Strategy*, of the 2021 Reports of the Auditor General of Canada, and would like to thank the members of the Committee for their study and recommendations.

The reports examined the period from January 1<sup>st</sup>, 2018, to January 31<sup>st</sup>, 2020. While the period of examination pre-dated the COVID-19 pandemic, both reports did acknowledge that the pandemic began affecting shipbuilding projects underway at the shipyards between the end of the examination and the PACP report's release in summer 2021.

The COVID-19 pandemic has exacerbated the challenges faced by the National Shipbuilding Strategy (NSS) that were noted by both the Auditor General (AG) and PACP in their reports. The operations of the NSS shipyards and the supply chains have been disrupted due to employee absenteeism, the implementation of provincial health protocols, and work stoppages. This has resulted in further scheduling delays and increases in costs.

Public Services and Procurement Canada (PSPC), the Department of National Defence (DND), and the Department of Fisheries and Oceans (DFO) (the Departments) remain committed to ensuring progress towards meeting the three objectives of the NSS:

1. Recapitalize the federal fleet in a timely and affordable manner;
2. Create a sustainable marine sector; and
3. Generate economic benefits for Canada.

**Recommendation 1—on managing schedules**

**That, by 31 December 2021, the Canadian Coast Guard, National Defence, and Public Services and Procurement Canada provide the House of Commons Standing Committee on Public Accounts with a progress report regarding A) obtaining complete, current, and reliable schedules to support shipbuilding projects; and B) ensuring that progress toward forecast targets and delivery timelines is monitored to enable timely decision-making. A final report should also be provided by 30 June 2022.**

In the 2021 report, the AG found that most NSS projects were delayed by months or years within the audit period (January 1<sup>st</sup>, 2018, to January 31<sup>st</sup>, 2020). It was concluded that, while the Government identified unreliable schedules as a risk for several projects, efforts to address this risk were not always effective. PACP's findings concurred with the AG that, over the audit period, contracts for the Arctic and Offshore Patrol Ships and the Offshore Fisheries Science Vessels were often amended to postpone the delivery dates as those dates approached. Finally, it was found that schedules were often not an effective tool to manage project timeliness, as schedules provided by the shipyards were often late or considered unsatisfactory by the Government. This lack of information impeded the Government's ability to fully understand expected progress and to monitor performance accordingly.

To address these findings, the Committee recommended that the Departments implement mechanisms to:

- a) Obtain complete, current, and reliable schedules to support shipbuilding projects; and,
- b) Ensure that progress toward forecast targets and delivery timelines.

The Government agrees with this recommendation.

The Departments agreed with the recommendations and affirmed that complete, current, and reliable schedules are essential for decision-making and management of the shipbuilding projects. The Departments will continue to work with shipyards to improve the delivery and accuracy of schedules and to ensure more disciplined reporting of progress towards targets. Current tools, such as the shipyard-produced integrated project schedules, and approaches, including Earned Value Management (EVM), a project management methodology used to assess baseline plans against actual performance and thus forecast future progress, have been further matured to ensure that cost and schedule are properly managed and to support oversight by governance committees at all levels.

#### Enhanced Project Performance Through Detailed Schedule Analysis

The Departments will continue to leverage the EVM methodology that integrates schedule, costs, and scope to measure project performance, with results presented to senior government officials through the established NSS governance structure that monitors progress and provides direction on strategic and programmatic issues as they arise and ensures they are integrated into risk management discussions. To ensure in-house capacity is in place to review the quality of shipyard-produced Integrated Project Schedules (IPS), DND and CCG are providing management officers with project management training at an industry-standard level for the type of project and supplementing their human resources with third party specialists when needed. PSPC, for its part, will work with CCG and DND to confirm the capability to perform detailed EVM analyses, or will contract on their behalf to obtain third-party expert support to do so. The EVM analysis is enabling schedule and cost forecasting, identification of opportunities to address potential issues, and adjustment of project parameters in a timely and effective manner. NSS management uses EVM to produce reports on a monthly basis. PSPC undertook a process to engage all NSS project management offices to ensure that both the desired approach and the actual process itself would satisfy the projects needs in terms of utilizing EVM data to manage projects. This led to the development of a Statement of Work for the engagement of a single supplier to provide EVM analysis capability to support both projects and the Strategy as well. Included in this EVM effort is the provision of a consolidation of key activities and milestones from the Integrated Master Schedules of NSS project management offices to create a High Level Program Integrated Master Schedule for the NSS. This is a high level schedule that will be used by Canada to track and monitor the progress of key events and milestones across the NSS Projects. While specific work by departments on interim milestones may be completed in advance, the objective is expected to be fully implemented by Q3/Q4 2022.

#### Comprehensive Review and Adjustment of Contracts

PSPC will lead the review of new and existing shipbuilding contracts to verify the inclusion of

appropriate EVM and schedule-related obligations and deliverables, with support from CCG and DND as members of the integrated project teams. Of note, the build contracts for the Arctic and Offshore Patrol Ships, the Joint Support Ships and the Offshore Oceanographic Science Vessel currently contain EVM-related obligations. On an as-required basis, NSS governance will be utilized to consider proposed amendments to existing contracts, aimed at ensuring that EVM and other shipyard-related schedule obligations and deliverables are included in shipbuilding contracts. Contracts will be amended to provide that a contract risk register shall be maintained by the Contractor and to identify uncertain events or conditions that would have a positive or negative impact on one or more project objectives, in relation to the execution of the contract. This will integrate the concepts of performance, schedule and risk within a singular process and will ensure that Canada has appropriate contractual mechanisms in place for shipyards to produce robust risk adjusted Integrated Master Schedules (IMS) and for integrated project teams to manage overall shipbuilding project schedules. While specific work by departments on interim milestones may be completed in advance, this work is expected to be finished by Q3/Q4 2022.

Lessons learned from the review of existing contracts will also be applied to the creation of new contracts.

#### Focused Governance Reviews and Decision-Making

PSPC has established a standing agenda item on the review of integrated schedule information (including performance results based on EVM data and long-term project and program schedules) at the regular NSS Assistant Deputy Minister and Deputy Minister level Governance Committee (ADMGC and DMGC) meetings. This item will be directly linked to the risk management information and will be reviewed in a consolidated and timely manner so that project and program schedules can be comprehensively discussed and decision-making can be effectively informed. This promotes a collective understanding of shipyard programmatic challenges, thereby informing broader strategic decisions to manage overall shipbuilding project schedules.

In addition, the shipyards are required to present robust IMS during NSS governance committee meetings. A robust IMS is achieved through regular dialogue within the integrated project teams (DND and CCG project management offices and shipyards) to ensure detailed shipyard-produced risk adjusted IMS, outlining a clear critical path to meet quality requirements for accuracy and completeness, supported by scheduling metrics. These dialogues are held on an ongoing and regular basis between shipyards' management and DND and CCG project management offices at the Director General, Assistant Deputy Minister and Deputy Minister level.

#### Recommendation 2—on risk monitoring

**That, by 31 December 2021, Public Services and Procurement Canada provide the House of Commons Standing Committee on Public Accounts with a progress report regarding how it has improved its risk management practices, including a comprehensive examination of all factors that could lead to cost overruns, regarding the National Shipbuilding Strategy. A final report should also be provided by 30 June 2022.**

While noting the achievements and processes in place under the NSS, the Committee agrees that there is a need to ensure complete analysis and more comprehensive planning to mitigate all NSS risks, as well as to implement approaches to track and report on progress. The Committee report recommended that PSPC improve risk management tools at the NSS management level to enable:

- a) Thorough risk analysis;
- b) Specific, time-bound, and measurable risk mitigation action plans; and,
- c) Better monitoring of the implementation of risk mitigation measures.

The Government agrees with this recommendation.

The PSPC Ministerial Action Plan (MAP) issued in response to the AG report identified PSPC's intent to undertake efforts to ensure clarity, transparency, and completeness of mitigation strategies for all NSS risks, and implement approaches to track and report on progress. Based on the AG's recommendations, a number of enhancements are being undertaken to improve risk management tools.

The Government of Canada has developed a formal and robust risk management approach for the NSS, informed by government and international best practices, to help predict, identify, and mitigate the key risks facing the NSS. Risk management practices support the development of corrective actions under the NSS, to ensure partners are well-positioned to meet the long-term objectives of the Strategy.

A dedicated NSS Risk Management Team is charged with supporting risk management activities and is responsible for the identification and tracking of risks, including mitigation strategies. To ensure cohesiveness and to allow integration between the project and program and strategic levels, a regular series of meetings provides opportunities to exchange information and to discuss approaches and mitigations.

A bi-monthly NSS Risk Management Board meeting is held with Directors General from Innovation, Science and Economic Development (ISED), PSPC, DND, and CCG to review currently identified risks and associated mitigation strategies, and to bring forward new risks for subsequent inclusion within the NSS risk management process. In order to support a more comprehensive and transparent view of mitigation efforts, updates related to overall NSS risk management, including risk identification and process changes, are provided to the NSS governance committees at the Assistant Deputy Minister and Deputy Minister level. Further, Portfolio and Executive Management meetings between Canada and the NSS shipyards afford opportunity for all parties to present and discuss risk-related issues.

To address the recommendations regarding NSS risk management tools, the following efforts are being undertaken:

- Increasing levels of dedicated resources engaged in risk management;
- Pursuing the acquisition of new software to support the collection, monitoring, and communication of risk-related information and mitigation activities;
- Increasing the level of the development, updating, and tracking of risk-related mitigation efforts; and,

- Engagement of third-party expertise to enable process reviews, integrate recommendations, and ensure efficiency of approach as required.

### Holistic Approach to Risk Management

Efforts have been executed to engage projects and shipyards to ensure a comprehensive understanding of risks and the risk management process among all parties. Advances in the integration of risk management from project to shipyard to strategic levels have afforded the opportunity to:

- Determine areas of common concern, and associated mitigation strategies;
- Better understand the rationale and the methodology in place to enable all parties to communicate more clearly and effectively on risk;
- Discuss potential mitigation strategies across a broader spectrum of risks;
- Address and assess new risks at the shipyards when they arise; and,
- Support consistency in risk assessment across the NSS.

Further, the dedicated risk management team has focused its efforts on collecting and managing mitigation elements across NSS risks and has expanded risk-related engagement with key stakeholders, such as Seaspan's Vancouver Shipyards Ltd. (VSY), Irving Shipbuilding Inc. (ISI), the Portfolio Management Committee, the Executive Governance Committee, the departmental officials responsible for the management of each risk (i.e. the "risk owners"), and internal functional groups.

### Increased Focus on Mitigation Activities

Significant efforts have been undertaken to identify and engage Offices of Primary Interest to provide updates on specific risk mitigations, including activities, estimated completion dates, and indications of anticipated results. To support a more comprehensive and transparent review of the NSS risk mitigation efforts, an increased level of discussion of mitigation activities across all levels of NSS governance has been undertaken to inform and to seek potential areas of co-operation/solution. In particular, risk has been identified as a standing item at Assistant Deputy Minister and Deputy Minister-level NSS governance discussions. To support these discussions, a number of tools and documents are prepared and tabled with participants, including risk dashboards and mitigation summaries.

### Risk Scoring Methodology

A risk scoring review exercise has been completed to improve the accuracy of risk assessments and scoring processes, with particular focus on:

- Addressing overly-optimistic risk sensitivity;
- Ensuring consistency of a scoring approach across all risks; and,
- Ensuring that the application of weighting factors for "impacts" reflects the current environment and priorities (specifically, the application of a particular focus on key impact areas – cost and schedule – has been implemented).

As part of this exercise, a risk sensitivity analysis has been performed, and risk contextual information, including mitigation actions and progress to date, has been verified, updated, and recorded. To support and implement these activities, a Scoring Committee has been established and has re-assessed seven impact categories based on established evaluation criteria, pre- and post-mitigation, to ensure consistency across risk scores.

To better support risk-based decision-making and to understand the NSS shipyards' risk methodology, a risk cross-walk for the non-combat program has been completed and presented to senior management.

#### Risk Management Software

The NSS risk management team has engaged with PSPC's Digital Services Branch and initiated the acquisition of an internationally accepted software to support the collection, monitoring and communication of risk-related information and mitigation activities. Implementation is expected by summer 2022.

#### Recommendation 3—on the achievement of Target State

**That, by 31 December 2021, Public Services and Procurement Canada provide the House of Commons Standing Committee on Public Accounts with a progress report regarding the achievement of Target State for shipyards participating in the National Shipbuilding Strategy. A final report should also be provided by 30 June 2022.**

The Committee concurred with the AG that unreliable schedules were a risk for several projects, and the associated risk mitigation measures were not always effective. It was noted that schedule management was part of the standards for the shipyards to achieve Target State. The Committee also found that PSPC had not yet confirmed that the first two shipyards had achieved Target State. In light of these findings, the Committee report recommended that PSPC consider the experience of the first two shipyards in determining a schedule for the third shipyard.

The Government agrees with this recommendation.

The NSS shipyard selection process included the requirement for the selected shipyards to achieve Target State. Target State is defined as the capability and technologies required to build the specific work package at a reasonable level of economy and efficiency. On behalf of Canada, a third-party expert, First Marine International, conducted initial assessments of all potential shipyards and will measure the selected shipyards' progress towards achieving Target State through an interim and final Target State assessment. Once Target State is achieved, it is expected that a shipyard will:

- Have the capability to build required vessels at the required rate;
- Have the facilities, processes and practices of a good international standard; and,
- Will be equipped to achieve good international productivity levels and continuously improve.

There is significant value for Canada in having its ships built in Target State compliant yards, as the ships would otherwise be built less efficiently, take longer to build, and cost more over the

life of the program. Target State is designed to give the shipyards the tools to eventually achieve high levels of productivity and capacity to manage complex programs of work through continuous improvement. Additionally, Target State was intended to position them to be competitive with long established shipyards, and give them an opportunity to diversify their construction work beyond Government of Canada projects. In that respect, it is in the best interest of both shipyards and Canada that the shipyards achieve Target State in all respects.

Both VSY and ISI have completed their Final Target State assessments. As a result, each shipyard is to provide a Corrective Action Plan (CAP) to address elements that were deemed not to have achieved Target State at the time of the final Target State assessment. Through the execution of the shipyard's respective CAP, the shipyard will have been deemed to address their Target State commitment.

In terms of progress, VSY and Canada have agreed on the CAP and VSY is currently in the process of implementing identified efforts. ISI, given its recent completion of its final Target State assessment, is currently in the process of developing its CAP for submission to Canada.

PSPC is reviewing current approaches to the determination of the timing of Target State assessments, and will extract best practices and develop alternative methodology for the Target State assessment process for the third NSS shipyard. This will be integrated into the third NSS shipyard's Umbrella Agreement, which is expected to be in place in the coming months.