Human Capital and the National Shipbuilding Procurement Strategy

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After a very successful National Shipbuilding Procurement Strategy (NSPS) workshop entitled “Charting the Course” held in June 2014, the Centre for Foreign Policy Studies (CFPS) at Dalhousie University undertook a second workshop. This workshop, “Human Capital and the NSPS,” was held on 14 November and looked at the personnel considerations behind the NSPS.

Unlike other workshops that have examined NSPS from the policy, process and industrial perspectives, this workshop examined the human elements. It focused in particular on the need by government and industry to develop the human capital necessary to build the ships and to address future warship crewing concepts. This workshop brought together representatives from industry, academia, the navy and government to discuss and share their perspectives on the potential challenges and issues concerning the human capital dimension of the NSPS.

The second human capital element is the crewing of the new ships. Given that over 50% of the budgets of many navies and coast guards is consumed by personnel costs, it is vital that we take a comprehensive look at the people issues of the NSPS before we begin to cut steel on the new fleets. It is important to get the crew size right and to learn the lessons from the experience of others before the plans are finalized.

This one-day workshop tackled the issues in three panels. The panels were: Building: skills and labour regeneration in the shipbuilding sector in Canada; Crewing: new trends in the crewing of modern warships; and Sustaining: retaining the 30+ year shipbuilding workforce. The key takeaways from each of the panels are summarized below along with concluding observations.

In the first panel government officials, academics and defence/security training experts discussed how they could contribute to the development of the labour force necessary to build the ships listed in the NSPS. It was refreshing to see that there has been inter-stakeholder discussion on both the East and West Coasts about the human resources necessary to build the ships. However, it was also clear that there needs to be greater national dialogue in Canada about broader labour issues beyond the nascent regional collaboration. Key NSPS human capital issues that arose that require further investigation include enhancing labour mobility of skilled trades personnel within Canada, using temporary foreign workers to close the gap while developing a Canadian labour force, and revitalizing and expanding the worker base in the shipbuilding sector from its traditional demographic.

Given the fact that shipbuilding in Nova Scotia is also a core component of future economic development and prosperity for the province, there is a need for greater co-development of shipbuilding training initiatives among the various private, public and government stakeholders. Labour-focused governance structures will need to be defined in order to institutionalize these early examples of collaboration.

Clearly one of the main challenges will be to transform Canada’s marine workforce from a ship-repair to a shipbuilding capacity by comparing Canadian industry best practices against those of global leaders in the shipbuilding industry. This will involve updating and/or expanding the training and design courses for the trades and professions.
necessary to build ships. Some participants observed that many of Canada's training methods and systems are out of date, and industry must incorporate the advances in web-based training, distance learning and simulation.

The second panel brought together defence researchers from Canada, France and Germany to investigate how novel approaches to crewing might allow navies to generate their fleet capabilities more flexibly, leading to higher readiness at potentially lower cost. All presentations in this panel highlighted that in future warships crew size and skills composition must be looked at as key contributors to the operational effectiveness of naval platforms. Early research on optimized crewing focused too much on minimum manning and the effectiveness of this strategy is now being questioned. In the French and German cases the reduced manning levels were mandated by the government early in the design phase, but it has since been discovered that the reduced crews may have led to reduced effectiveness and endurance of the ships. After a period of trial, these navies had to increase the crews to achieve the mission capabilities for which the ships had been built.

The RCN has begun to take delivery of the ships coming out of the Halifax-class Modernization (HCM) program. This program will enhance and extend the viability of the Halifax-class frigates for decades. While the RCN waits for the next classes of ships to be delivered, it has a good opportunity to study the effects that the advanced automation and enhanced weapons systems in the HCM ships may offer in terms of future crewing strategies. In this panel RCN staff and defence research scientists explained how they have collaborated to ensure that modern research techniques have been incorporated into the crewing studies for the Harry DeWolf-class Arctic Offshore Patrol Ships.

The third panel looked at some of the long-term human capital issues that will affect the ability of industry and the government to meet the demands of the NSPS. Panelists described the challenges that they have faced while trying to bring the experienced workforce back into the shipbuilding sector from other parts of the country at the same time as they try to train the next generation of apprentices to fill in behind the experienced labour force as it ages. Some initiatives that are being considered include establishing shipbuilding apprenticeship agencies to support individuals as they proceed through their training, and more effective alignment of personnel training programs with labour market information to ensure that the correct type and number of apprentices are being generated. There was also discussion of the need for Centres of Excellence in Shipbuilding and the importance of having qualified Canadians to fill all the jobs. It is clear that there will be many challenges ahead to build and retain the 30+ year workforce necessary to complete the shipbuilding envisaged in the NSPS.

Beyond the individual panel discussions some larger themes emerged during the day's activities. Many voiced the concern that they have not seen a clear indication of what is being done under the NSPS to avoid the traditional boom and bust cycle of Canadian naval procurement. Some of the participants observed that the NSPS has put in place a system that is more transparent and thus expectations may actually be higher now but much risk still lies in the fundamental uncertainty of political commitment and budgetary stability over the long term. Given the froth that has been seen in the media, there will need to be better management of expectations of all parties, including those of the public as the NSPS slowly proceeds.

Concerns also arose about the potential time gaps that might appear between the various project start-ups and the transition from one project to the next (AOPS to CSC in Nova Scotia and JSS to Canadian Coast Guard icebreaker in British Columbia). Getting these points of transition wrong will create a gap between projects and the kind of doubt that will prevent skilled people from leaving one employment situation for another in shipbuilding. As a result, it is critically important both for the success of the NSPS and for the employment prospects of people hoping for quality job opportunities in this industrial sector that the program be managed skillfully to avoid gaps and a return to the past situation of boom and bust. In the event of unforeseen political, economic or other negative developments, it is essential that 'bridging' plans be developed that mitigate the detrimental effects and continue the progress toward the strategic goal of developing the national industrial base.

Federal government announcements to date have claimed that an estimated 15,000 jobs and $2 billion of economic activity are expected to be generated annually through the NSPS. The new Defence Procurement Strategy lists three important objectives: (1) ensuring Canadians in uniform get the equipment they need at the right price for taxpayers; (2) streamlining defence procurement processes; and (3) leveraging the purchase of defence equipment to create domestic jobs and growth. These goals are lofty so we will need to continue to monitor carefully the progress of the programs to see them through to fruition. The Centre for Foreign Policy Studies looks forward to playing a leading role in the continued analysis of the NSPS. 🌐