Don’t let the lack of grey hair fool you. Brian Carter might be new to the industry in B.C. but he’s no stranger to shipbuilding and he’s especially no stranger to large-scale maritime business development projects with successful results. When BCSN sat down with Brian to find out how the first six months of his new position have been going, it was immediately obvious that his expertise includes a mechanical engineering degree from Seattle University, a naval architecture degree from the University of California-San Diego. About half of my 20 years in the industry were with General Dynamics NASSCO in San Diego, the only major ship construction yard on the U.S. West Coast.

BCSN: First, congratulations on your appointment. You’ve been in this position for six months now but I understand you were no stranger to Seaspan prior to this. Could you provide us with a high level background of your career to this point and your involvement with the NSPS bid?

BC: I’ve known Jonathan Whitworth (Seaspan CEO) for quite some time and during one of our conversations he asked me to assist Seaspan with the NSPS bid, which started in February 2011. Part of my role was to provide guidance in structuring the response. It was a great team and I was amazed at how much work was done by a very small group of people, everyone pitching in where they could. By the time we finished the proposal, I was quite excited about Seaspan and the NSPS program and was very interested in continuing on with the team...
to perform on their existing work —
the Frigate Life Extension Program,
the Vessel In-Service Support Contract
and the HMCS Protecteur at Victoria
Shipyards; commercial ship repair at
Vancouver Drydock; and repair work
and building nine new chip barges at
Vancouver Shipyards. All of this will
help develop skills as we get ready for
the NSPS vessels.

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support block assembly and pre-outfitting capabilities, a very important component for shipbuilding efficiency. A key new addition to the shipyard will be the new blast and paint building which will provide a lot of flexibility for our repair work and new construction. We're also planning for a 300-tonne gantry crane to support grand blocking and the vessel erection process.

Currently, we're completing the details on the new layout and support services and we are also working with the municipal government to get the proper permits in place. We expect to break ground on the first building at Vancouver Shipyards late this year and be tendering construction-type opportunities by August. The project should take two years to complete once construction begins.

Our strategy is to build as much of each vessel as possible in our North Vancouver facility and then, once it's launched, take it to Victoria Shipyards for final outfitting, tests and trials before delivery. Victoria has solid experience in dealing with that final phase and they have the support of the Esquimalt Graving Dock facilities as well. In addition, we're planning a couple of new buildings in Victoria — the cost will amount to about $15 to $30 million out of the approximate $200 million budget for shipyard upgrades.

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**BCSN:** Do you have an update on the status of the vessels as well?

**BC:** We have four vessel types identified thus far — the Offshore Fisheries Science Vessels (OFSV), the Offshore Oceanographic Science Vessel (OOSV), the Joint Support Ships (JSS) and the Polar Icebreaker. We’ll be building the OFSV first. Our goal is to start construction in the third quarter of next year. We're currently working with the Canadian Coast Guard on the design and expect to be under a contract to complete the production design this summer. As the design matures, we’ll start to evolve the equipment requirements — by the first quarter of 2013, we should be ready to start purchasing a good portion of the material.

We also have the concept design for the OOSV. Because there is only one OOSV required, it would be ideal to make it as close to the design of the OFSV as we can and, while we have the concept design in hand, we’re pausing so we can develop the details on the fisheries vessel and integrate those details into the construction of the OOSV.

The JSS will require a big ramp up for us. We’ll see a spike at that point in employment and production. To ramp up like that is risky for a shipyard and we are working with the government on the JSS design development. Our goal is to provide input into the design for those vessels so that they can be built efficiently in our shipyard and mitigate our execution risk. A similar effort will be underway soon for the Polar Icebreaker for exactly the same reasons. The government has been very supportive of that as well.

**BCSN:** There was an announcement in March for additional funding for non-combat vessels. Do you have any additional details on that yet?

**BC:** We’re currently working with the government to understand what those vessels will be and the associated timing. Essentially, the government announced an additional $5.2 billion over 11 years for renewal and refits to the Canadian Coast Guard fleet, including helicopters. A large portion of this will be for new builds that will fall under our umbrella agreement to supply non-combat vessels over 1,000 tonnes, but we’re in early days yet for this.

**BCSN:** One of the elements in your contract with the federal government is a “value proposition”. Could you describe some of the initiatives being planned for this?

**BC:** Yes, it’s an important part of our strategy. We’re not trying to just build NSPS vessels — we’re creating a shipbuilding company in perpetuity and to do that, we need to foster an ecosystem that will support it. We will be active in maximizing value for our customers — partnering with the right people and organizations, including First Nations, universities, research and development institutes and trade schools to make sure we have a sustainable industry for the future. We’re exploring investments in programs that, in the future,
would allow us to draw from a talent pool and also investments that could allow us to buy shipbuilding material here in Canada. There are also potential investments for funding new technology development. We're still in the planning stages for how to manage the value proposition. It will likely be the middle of next year before we start executing the plan.

**BCSN**: Have you had much experience with the U.S. National Shipbuilding Research Program (NSRP)? Would this be the kind of initiative you would consider as part of the value proposition?

**BC**: The companies I worked with in the U.S. participated in the NSRP. The program focuses on projects that could potentially reduce costs for shipbuilding for the U.S. government — mostly naval-related technology. It's partially funded by the government but managed by a private company and it is effective as a vehicle for the industry to share information. For example, we're meeting with a company who developed a shipyard simulation tool under the NSRP program. It's now a proven system and the company is out marketing it commercially.

The main difference between the NSRP and our value proposition is in the funding and we will not necessarily just focus on shipbuilding. The total funding for the value proposition is about $40 million ($15M from Seaspan, $5M from the Province and $20M from BC Ferries).

We're looking to foster the development of the overall maritime industry in Canada. It's very clever of the government to require this. For us, there is a regional strategy and a national strategy and I think partnerships with companies like Irving Shipyards and others to execute an NSRP-like program nationally is something that could potentially be explored.

**BCSN**: Could you compare Canada’s shipbuilding industry to that in other countries?

**BC**: Canada's NSPS program is the most interesting opportunity in the global shipbuilding industry today.
I think that our open Vice President, Technical position is one of the most attractive jobs in the shipyard world right now just by the nature of what’s ahead of us.

From a volume standpoint, Canada hasn’t had enough steady volume to allow us to be internationally competitive. If we compared ourselves to some of the higher-wage shipbuilding countries and, believe it or not, our costs are about on par with Korea, but they have the volume that allows them to be more efficient and we can’t compete with that. Where we are going to be able to compete is in specialty vessel construction — for example, research vessels and icebreakers for foreign governments or commercial use.

Comparing us to lower wage countries, for example China (although China is unique and their wages will increase in the coming years), you need to focus on those variables that you can control to become competitive. If labour is not your cost driver then it’s material so you do everything you can to minimize the material costs. When we design vessels here, we’re looking to optimize our “touch” labour because that’s our main cost driver.

One of the benefits of using STX Korea for our facility design is that they have the same cost drivers as we do here in Canada so their recommendations have been very useful to allow for greater efficiency and flexibility.

Once we have some of the NSPS work under our belt, we’ll be more competitive internationally on specialty vessels and this will hopefully be attractive to other governments and operators like BC Ferries.

Shipbuilding efficiency is really a function of highly repeatable processes — it’s more a series of small gains that will add to efficiency improvements.

**BCSN: What sort of new technology will be part of the upgrade to the facilities here?**

**BC:** In terms of technology, shipbuilding hasn’t really changed that much in 20 years. There were some companies 10 or 15 years ago that heavily got into robotics but I don’t think they achieved what they wanted and might have created more problems than they solved. Shipbuilding efficiency is really a function of highly repeatable processes — it’s more a series of small gains that will add to efficiency improvements. With more work, you gain more experience. The workforce is the best place to get ideas for improvements — listening to the people who are living it every day, learning how we can do it better and getting that information into our processes and designs.

**BCSN: What about labour and the workforce? Are there any evident differences between Canada and other countries?**

**BC:** One thing I’ve noticed about Canada — and I can see it when I walk around the shipyard here — is the training has been much better than...
anything I’ve seen in other yards. I’ve had the opportunity to tour BCIT as well as the Pipefitters’ training facility and they’ve really done a great job. Those types of schools are rare in the U.S. so a shipyard often has to train its own workforce. I’d have to say from an efficiency standpoint we’re pretty equivalent — they have more experience but our guys are better trained. An apprenticeship here is like getting a four-year university degree; in the U.S., it’s often just a couple of months’ worth of training. And it’s not just the skills of the trade but also aspects like safety, rigging and generally a more organized approach. That was a nice surprise for me as I came into this position.

With the stable, long-term work that we’ll be able to offer, it’s attractive and a great opportunity...

**BCSN:** Do you anticipate any issues related to an aging workforce — losing technical skills or knowledge as the surge of baby boomer retirements begins? Also, do you anticipate any difficulties in filling all of the positions you’ll need?

**BC:** When we start on the production phase of NSPS, we expect that the average age of our workforce will naturally go down. In the early stages we’ll see positions being filled by fairly senior people due to the nature of our collective bargaining agreements, but over time this will change. We are partnering with our unions, First Nations groups and other organizations that are interested in ensuring we have a workforce to draw from in the future so we’re not too worried about difficulties in finding labour. With the stable, long-term work that we’ll be able to offer, it’s attractive and a great opportunity for someone who wants a wage that allows for a family and a great Vancouver lifestyle.

There are some obvious labour markets that we’ll be able to tap into — for example, people working in the oilsands or from other provinces who are looking for a career in Vancouver.
INDUSTRY INSIGHT

The good news also is that the contract announcement and the work we are doing creates a lot of interest in skilled trades, so as people progress through their apprenticeships and schooling, shipbuilding will be an appealing option. I think BCIT’s application volume went up dramatically after the NSPS announcement was made in October.

BCSN: For companies looking to get involved in the NSPS and offer their services and supplies, what sort of opportunities do you anticipate?

BC: First, I strongly recommend they register with our Suppliers Registration Site at www.seaspan.com. Since going live in January we’ve had over 500 new suppliers register — and that’s in addition to our existing supply base.

As far as the types of supplies and services we’ll need, think of everything that goes into a ship — the material to support the structure, the pipes and pipefittings, etc., and then there is the specialty equipment to support the operation of the vessel.

Beyond the shipbuilding, there are opportunities to support the facilities upgrades as well. We’re currently in the market for shipyard equipment like panel lines, etc. The upgrade is a two-year project and we’ll be actively procuring materials for quite a while. For the vessels themselves, you won’t see much this year but as the vessel construction begins to peak in 2016, we’ll be purchasing over $350 million of material and equipment per year. And because we’ll be trying to sustain that level of activity beyond 2017 there will be some good long-term opportunities for outside suppliers.

People should also remember that the federal government has set aside $2 billion for over 100 small vessels (under 1,000 tonnes) plus another $500 million per year for repairs and refits.

We’re making the most of this opportunity to create a sustainable shipbuilding industry in B.C.

BCSN: I’d like to spend a minute looking at government involvement — not just as a customer for the vessels but other agencies and how they’re contributing?

BC: There are a lot of resources available within the government and with the interest that surrounds the NSPS program we’re seeing a number of agencies wanting to make sure it’s successful. A good example was the workshop recently organized by Western Economic Diversification Canada. That forum gave a good overview of some of the initiatives being taken that will benefit the project — programs like tax credits for training incentives through the B.C. Ministry of Jobs, Tourism & Innovation and the Ministry of Finance; the Canadian Innovation Commercialization Program through Public Works & Government Services Canada; or the BC Shipbuilding and Repair Workforce Table created through the BC Jobs Plan.

While I can’t speak for the government, our goal for a sustainable shipbuilding industry on the West Coast is shared by them. We’re really not focused on just building vessels for the government and then folding up our tent and going away. We’re making the most of this opportunity to create a sustainable shipbuilding industry in B.C. — that’s the priority and the NSPS provides a fantastic springboard. BCSN