Fieldnotes from Attending MASS

Report on the 2019 Maritime & Arctic Security & Safety Conference "People & Technology: Making the Connection," 5-7 November 2019 in St. John's, Newfoundland and Labrador
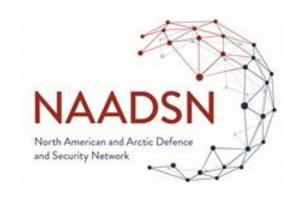
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This report is not intended as a full record of this industry conference but seeks to highlight some of the common assumptions and themes running throughout for NAADSN.

"It's always good to go to MASS."
- Stephen O'Brien, Chief Operating Officer and Managing Director, Davie

Sacred Cows: Buying Canadian and Economic Benefits

MASS 19 is an industry conference for companies to meet and do business at. Indeed, some of the panels accounted for little more than, as one conference presenter put it, "an industry speed dating service" in which firms were advertising themselves to get others to "swipe left." I was not so much interested in these transactions as I was with assumptions animating this conference. I found that the MASS was focused on the sacred cow of buying Canadian. Liturgical rituals around this included offering the praise of regional economic benefits, thanksgiving that the National Shipbuilding Strategy was proceeding and growing in scope, supplication for the continued filling of orderbooks, and even repentance for the taking or losing of market share.[1] This liturgy formed the basis for the defence industry to establish a relationship with divine agency (in this case Public Services and Procurement Canada).

Buying Canadian and regional economic benefits was reflected in the liturgical music guiding this MASS. The chant began with the welcoming address by the Honourable Bernard Davis, Newfoundland & Labrador's Minister of Tourism, Culture, Industry & Innovation, in which he praised the thousands of jobs, billions in revenue, and economic diversification that the security sector provided to the province. Davie's Stephen O'Brien intoned the regional economic benefits that have come with the filling of the shipyard's order book from refit and lease projects[2] and possible future work rebuilding the CCG. Judy Blundon of Seaspan contributed verse outlining her company's long history of work for the country, stressing the economic benefits that have come and will continue to flow from building ships for Canada, in Canada.

While representing an American sub-contractor overseeing the combat systems of a British design being constructed under contract by Irving, Lockheed Martin Canada's Simon Hughes proselytized the supply chain opportunities the Canadian Surface Combatant (CSC) project offered Canadian companies. The $62 billion dollar project was supporting over 9000 research and development jobs in Canada. These job numbers could be expected to grow due to the industrial and technology benefits (ITB) and value propositions (VP) built into the project. Likening the $17 billion in VP to a Ponzi scheme, Hughes outlined how this would generate even more money with suppliers (for example, $1 in VP generates $2 in value in the supply chain). As the CSC would be considered a mature design in 18 months, Hughes stated that most of the sourcing contracts would be in place in 24 months time.

Presentations by government sermonized how they are using public monies to finance private industry. Eric Fournier, Director General, S&T Strategic Decision Support, Innovation for Defence Excellence and Security (IDEaS), explained that the days of government research and development were drawing to an end. Instead, government was shepparding its flock by offering two stages of contracts to incentivize science and engineering ideas by private Canadian companies. The first phase of monies was easy to apply for and secure. The second phase was far more difficult, offering $1 million to

support "game changer" technologies. Offering $1.6 billion over the next 20 years, the government was turning to this incentive model to drive future Canadian defence R&D and save strategic industry.

While Oyvind Haga, Director of Innovation Norway Canada, clearly reflected this dogma by outlining how Norwegian industry is primed by government for international growth, the presentation by Les Shearn (Defence Teaming Centre, Australia) bordered on blasphemy. Comparing and contrasting Australian and Canadian approaches to rebuilding domestic shipyards, Shearn introduced the heretical idea of "defence sovereignty." This notion was based around getting a needed defence capability into Australia that did not necessarily have to be built there. Indeed, Australia did not have the sort of ITB or VP offsets Canada is pursuing. Shearn ended with the suggestion that the two countries collaborate on rebuilding shipyard capacity despite the seemingly incompadible approaches.

Substantive Themes

The presentation by Rear Admiral (RAdm) Craig Baines set up two of the conference's substantive themes. The challenge of developing a persistence presence in the Arctic was the first of these. The second theme was increasing domain awareness there, especially along the Northwest Passage. While the Royal Canadian Navy (RCN) was excited about the delivery of the *DeWolf*-class Arctic and Offshore Patrol Ships (AOPS) and the Nanisivik Naval Facility that will support them (based around a refuelling at sea approach), it was the Canadian Coast Guard (CCG)'s Medium Icebreaker Project that attracted the conference's main focus on generating persistence presence in the Arctic.

Persistent Presence: The Canadian Coast Guard Medium Icebreaker Project

CCG Deputy Commissioner Andy Smith[3] presented the case for an interim icebreaker capability. The current fleet of CCG icebreakers is old – over 30 years on average – with the heavy icebreaker *Louis S. St-Laurent* expected to be past 60 years of age when finally retired. The challenges this increasingly presents to the CCG are compounded by the fact that these ships live under what Smith termed "the tyranny of geography." The CCG had one icebreaker fleet with two distant tasks: Arctic icebreaking and southern icebreaking. Both services are vital to providing economic security to Canadians, Smith stressed, and cannot be neglected. Companies plan three sealifts to Northern communities per year, giving the CCG a 60-80 day maintence window. Anything more could put the third sealift (and the communities it supports) at risk. This does not allow enough time to perform life extension refits on these vessels. Interim icebreakers would provide relief from these duties and thus time to update the CCG fleet.

John Schmidt of Federal Fleet Services explained that "Project Resolute"[4] was an unsolicited bid by Davie to acquire and refit three Swedish vessels to address the CCG's interim icebreaking gap via lease. The bid was eventually accepted last year,[5] which Schmidt characterized as "a good news

CCG Photo: CCGS *Captain Molly Kool* with the disabled *Jana Desgagnes* under tow, March 2019.

story." Deputy Commissioner Smith explained that the three Swedish vessels, designed for the Baltic Sea, had to be heavily "Canadianized" to operate in our Arctic. This means more than replacing the Swedish black and yellow paint with CCG red and white. The "tyranny of geography" dictates that the primary modification is to increase the range of these ships. Icebreaking capability is also being increase to a Polar 4 rating, allowing for operations in thick first-year ice by fitting additional hull plating. Crew spaces are being increased and equipment to assist in Search and Rescue (SAR), a primary CCG mandate, is being fitted. The ships are also having towing slips affixed to their sterns, granting a capability that CCG icebreakers did not previously have.[6] Smith stated that the CCGS *Captain Molly Kool*, the first of these interim icebreakers to enter service, "did great" this past season but that she would have upcoming range extension work done on her as the two sisterships are currently undergoing. Smith concluded that the interim medium icebreakers are halfway through their design lives, granting the CCG another 20 years of possible operations with these ships.

Arctic Maritime Domain Awareness: Next Steps

RAdm Baines concluded his presentation with the topic of Arctic Maritime Domain Awareness (AMDA). While the RCN was moving forward with new kit to address AMDA, Baines emphasized that the service now had to figure out next steps. This raises the question of path dependencies and how this shunting of options could effect future strategies in the Canadian Arctic. Many of the presentations at MASS19 tackled MDA and the various applications that these supporting technologies (domain awareness based on human presence was not addressed) could bring with them when adapted and applied to Arctic use.

Commander Jorge Martinez Marti (Spanish Navy), Strategic Plans & Policy, [Combined Joint Operations from the Sea (CJOS) Center of Excellence (COE)](#), stressed the need for new MDA capabilities built around providing persistence awareness to NATO naval units. The alliance is having to meet emerging challenges (these were not elaborated on) in the North Atlantic, South China Sea, and Arctic waters. Improved MDA technolgoies would allow NATO fleets to detect and respond to these challenges. Daniel Shulten, Director, [MDA LaunchPad](#), demonstrated some of the capabilities that these technologies can provide through the tracking of the new cruiseship [MS Roald Amundsen](#) from its port in Tromso, Norway, through the Northwest Passage, all the way down to the Antarctic waters that it was plying at the time of the conference, supported by RADARSAT 2 imagery. The presentation highlighted RADARSAT 2's ability to detect vessels, along with icebergs and some underwater geographic formations that could threaten these ships. Its inability to track aircraft gestures towards the sort of capability that Cmdr. Marti wants developed.

Beyond the security applications of MDA are their future applicability to issues of maritime safety, especially environmental awareness and the creation and maintenance of Arctic shipping regimes. Jason Roe of the [Arctic Domain Awareness Center (ADAC), University of Alaska](#), spoke of their network of scientists and engineers using AMDA and developing new technologies to better understand the Arctic's physical environment in support of United States Coast Guard (USCG) operations. Professor Masamichi Hasebe, Japan Association of Marine Safety, expanded on this, bring up how AMDA technologies could be utilized to monitor shipping compliance with the Polar Code. Additionally, such technologies would be critical to a larger maritime infrastructure supporting the autonomous and remotely controlled vessels that are starting to come online.

[Dr. Ian Church](#) of the University of New Brunswick demonstrated the impact of mature AMDA technologies. Since 2003, his multibeam sonar fitted to [CCGS *Amundsen*](#) has mapped over [150,000km² of Canadian Arctic seabed](#)[7] to modern standards. Dr. Church made clear that over half of Canada's maritime Arctic has no mapping data, with a futher 36% of it insufficiently surveyed. 2019 is the first year this technology will be fitted to additional CCG ships, with Dr. Chuch wanting to put the technology on all Arctic vessels evenutally. By having these ships sail a bit off their established tracks, entire sea routes could quickly be mapped through the Arctic Archipelago. Interesting, excercises and actual responses by the *Amundsen* to SAR incidents provided particularly effective conditions for mapping with this AMDA technology.

Heretical Thoughts

Can we be "saved" by buying Canadian? At no time during MASS 19 were the assumptions of buying Canadian and subsequent economic benefits questioned. Is Canada getting the best defence value out of pursuing this course? It also struck me as odd how presenters brought up the idea of loyalty between their company and Canada to help justify this domestic spending. While these companies would take advantage of "buying Canadian," many also indicated that they would have no problem selling themselves to foreign interests.[8] Does it make sense to foster infant/strategic industry if there is not a sense of receiprocity? Why are these sorts of transient shipbuilding jobs seemingly prioritized over

permanent sailing careers in the CCG or RCN? Also, how does talk of developing Canadian industries to compete internationally work if other states (such as Norway and even Australia to some extent) are doing the same? Perhaps this means supplying ships to smaller states without their own defence industries. As Deputy Commissioner Smith made clear, however, Canadian ships sail under the "tyranny of geography" and subsequently must be very capable vessels. How does developing a high-end shipping industry help supply markets that likely do not have the same geographic imperative driving the designs of their ships?

Aside from these questions of faith was the more specific dynamic between Canada's three major shipyards and the revised NSS, and how this would effect maritime security. A recent historical analysis by Professor Elinor Sloan indicates that Canada is in the position of needing roughly 2.5 shipyards to build and service its fleets.[9] Two yards is not enough capacity but three yards could lead to a "bust" in the shipbuilding cycle, damaging the industry as a whole. The August 2019 decision to expand the NSS to three yards could thus be justified in part by growing the CCG fleet to create the necessary demand.[10] A politically elegant solution! However, Deputy Commissioner Smith stated that while the CCG was excited about receiving more ships, it was still unsure how it would use and manage AOPS 7 and 8. I left MASS with the belief that Canadian industry shapes our overall maritime security policies far more than threats.

Notes

[1] Paul Withers, "Trudeau government moves heavy-icebreaker job out of Vancouver," *CBC News,* 12 June 2019, https://www.cbc.ca/news/canada/nova-scotia/icebreaker-vancouver-seaspan-national-shipbuilding-strategy-1.5173027.

[2] See, for example, Joetey Attariwala, "MV Asterix," *Canadian Defence Review,* 22 Oct 2018, http://www.canadiandefencereview.com/Featured_content?blog/126.

[3] For more on Deputy Commissioner Smith and his duties, see Marcello Sukhdeo, "An Interview with Andy Smith, Deputy Commissioner – Strategy and Shipbuilding, Canadian Coast Guard," *Vanguard,* 27 Feb 2018, https://vanguardcanada.com/2018/02/27/an-interview-with-andy-smith-deputy-commissioner-strategy-and-shipbuilding-canadian-coast-guard/.

[4] See "PROJECT RESOLUTE -Canadian Coast Guard Icebreaker Support Program," *Davie,* 4 April 2017, http://www.davie.ca/wordpress/wp-content/uploads/2017/04/icebreaker-briefing-RESOLUTE-1.pdf.

[5] Murray Brewster, "Ottawa makes deal to buy three icebreakers for coast guard," *CBC News,* 22 June 2018, https://www.cbc.ca/news/politics/coast-guard-icebreakers-davie-1.4718592.

[6] "CCGS Capt. Molly Kool Tows," *Halifax Shipping News.ca,* 22 March 2019, https://blog.halifaxshippingnews.ca/2019/03/ccgs-capt-molly-kool-tows.html.

[7] Click "Open Map" and then select "CHS Arctic Surveys" to see the current state of seafloor mapping in Arctic Canada.

[8] See, for example, the opinions of Michael Byers, "How Canada lost its foremost space company," *Globe and Mail,* 28 Dec 2017, https://www.theglobeandmail.com/report-on-business/rob-commentary/how-canada-lost-its-foremost-space-company/article37449474/.

[9] Elinor Sloan, "A Perspective on Canada's Three Shipyard Decision," *Canadian Naval Review* 15:2 (2019): 2-3.

[10] Peter Zimonjic and Andrew Davidson, "Canada to spend $15.7B on new coast guard ships, Trudeau says," *CBC News,* 22 May 2019, https://www.cbc.ca/news/politics/canadian-coast-guard-ships-building-trudeau-1.5144903.