DRS Technologies Canada

PROVIDING SECURE COMMUNICATIONS FOR CANADA'S NAVY . . . AND MUCH MORE

BY IAN KEDDIE

In an Ottawa suburb, a rather innocuous building houses the Canadian headquarters of DRS Technologies, the exterior of which belies a defence firm with global reach but without the same sort of household name recognition enjoyed by the big multinationals. Part of the reason for this might be explained by the somewhat convoluted corporate structure that DRS Technologies Canada occupies. DRS is a subsidiary of its US-based parent firm of the same name, which is in turn a subsidiary of the global Italian defence firm Leonardo which, further complicating the situation, is the new appellation for the original Finmeccanica.

So, you could be forgiven for not knowing that DRS employs hundreds of people between Ottawa and Halifax and has supplied complex communications and sensor equipment for Canada and her allies for over fifty years. In fact, the company has quietly established itself as a world-leading manufacturer as part of a global firm while remaining firmly grounded in Canada.

CDR recently spoke to Martin Munro, Vice President and General Manager of DRS Technologies Canada, about the company's position as a global provider of secure naval communications, the history of the firm and what opportunities he sees in the future for his company. Born and raised in Ottawa, Martin Munro is a thirty-year veteran of the defence and aerospace industry in Canada, having started his career in government procurement and graduated through a variety of defence suppliers over the years. He joined DRS Technologies in 2016 but took on his current role on the first of

Martin Munro of DRS Technologies says being part of a global firm like Leonardo gives the company an advantage

SHINCOM is a naval communications system developed by DRS Technologies in Canada and deployed on the Halifax-Class ships

January 2017 following the retirement of Steve Zuber. "I'm a local boy, one of the few who's actually in Ottawa and from Ottawa", Munro jokes as he explains his background in the industry, a background that's almost as complex as the history of the company itself.

The story of DRS Technologies, like many defence firms in Canada and around the world, developed into its current form through several waves of acquisition and consolidation. Starting out in the 1960s under the banner of Leigh Instruments, it manufactured air traffic control systems such as tactical air navigation aids (TACANs). The company eventually morphed into SPAR Aerospace in the 1990s, before being purchased by DRS Technologies in 1997 and finally being acquired by Finmeccanica, now Leonardo in 2008.

A TOP 10 DEFENCE COMPANY WORLD–WIDE

Today, DRS exists as Leonardo's largest presence in Canada with its head office in Kanata and its mission critical power division, Pivotal Power in Bedford, Nova Scotia. Another Leonardo subsidiary, Tactical Technologies Inc. also operates out of Ottawa providing electronic warfare solutions. Munro believes that being part of a global firm gives DRS an advantage. "We communicate regularly, we're all part of the Leonardo family", he says of the corporate structure. "Leonardo is massive. It's one of the top ten defence companies in the world and it has a real breadth of technology that can be brought to bear and, of course being a European company it's not typically subject to the same ITAR (International Traffic in Arms Regulations) encumbrances that a US company might be," says Munro, adding that, ". . . the principal advantages are you have an enormous technology base that you can leverage to the benefit of your Canadian customers so there are very few programs that you don't have a past reference on or a technology that you cannot bring to bear". It is clear that Munro is proud of the standing that DRS holds, both within Canada and the Leonardo corporate family.

DRS Technologies Canada, distinct from the US-based parent company, is a world leading provider of secure naval communications through global sales of the Shipboard Interior Communications (SHINCOM) system which DRS designs and manufactures out of a 127,000-square foot facility in Kanata, Ontario. SHINCOM is used on more than 150 platforms in 10 navies, including several classes of ship in the Royal Canadian Navy (RCN) and their largest market, the US Navy (USN). SHINCOM is not the only product that DRS manufactures; other products include infrared electro optics, sensor signal processing systems, flight data recorders, and power conversion equipment which all play a big role in DRS' exports.

Munro also points out that providing products is just one of three business sectors the company operates in. Another important area of business for DRS is acting as a solutions provider, which he explained involves DRS utilizing the wider capabilities the Leonardo family offers and delivering that in a bespoke package to a client,". . . leveraging those technologies that are available through the corporation, combining them with our own systems engineering and

program management expertise to deliver on behalf of Canadian customers", he says.

The final area of business that DRS is involved in, comes from its contract manufacturing capability, where, as Munro explains, DRS is usually contracted for specialized manufacturing, particularly by peers in the industry. ". . . typically large US defence primes," he says. DRS maintains a strategic advantage in contract manufacturing, providing turnkey and build to print services, and it is one of the few space-qualified manufacturers in Canada. It seems the company's edge in this field offers the prospect of strong future growth as the market for space technologies increases.

SHINCOM A CANADIAN SUCCESS STORY

DRS holds up SHINCOM as a Canadian success story, and it is hard to argue with that description as it's so widely trusted since it was first developed in the 1980s. The system is described in official literature as "a modern, all-digital, mission-critical, red/black-certified voice and data communications switch". SHINCOM enjoyed investment from the Government of Canada in the 1990s under an industrial cooperation program in order to meet the requirements of the Canadian Patrol Frigate (CPF).

Today, the government is preparing to embark on the largest defence procurement program in Canada's history. The Canadian Surface Combatant (CSC) will once again provide a platform for DRS to develop an integrated communications system on a domestic platform before leveraging that development in the export market. "DRS and our teammate Rockwell Collins Canada are bidding to the Combat Systems Integrators (CSIs) and we look forward to being the integrated communication systems provider delivering both the internal and external communications subsystem for the CSC requirement," Munro says. He explains, that DRS is in talks with all potential bidders, "We are responding to all of the identified prime bidders for CSC and our goal is to be the selected integrated communications systems provider by each of these prime bidders."

CSC represents 20 years' worth of development for a system like SHINCOM, even though the total number of systems required is only 15, for all vessels planned in the class, this happens to be roughly the number of SHINCOM systems that DRS currently exports annually, primarily to the US Navy. But, despite the small number of physical systems CSC would represent, it carries huge symbolic significance and DRS sees confidence and investment from the domestic market as key to its export success.

Opportunities on Super Hornet for Canadian program

Munro spoke about how important it has been that the RCN has used SHINCOM for so long. "That's critical, in terms of your credibility. If you're providing a system and your armed service doesn't use it, if it uses an alternate then it's very difficult to sell internationally and that's something that most Canadian companies face." He added, "We have been very fortunate in that we were originally the provider for the CPF Program, we provided the updated internal communications system for the Halifax-class modernization through Lockheed Martin Canada and, as I say, we're competing to provide it for the current CSC requirement."

CAPTURING A PIECE OF CSC IS CRITICAL

CSC has been the subject of much discussion in the Canadian press, and with so much at stake for not only the future of Royal Canadian Navy capability but also for Canada's defence industrial base, the Liberal government has faced intense pressure to ensure the CSC program goes ahead as planned. When it was announced in February that Public Services and Procurement Canada made the decision to extend the deadline for bids from April 27th to June 22nd 2017, it led to speculation about problems with the program.

Procurement Minister Judy Foote had pre-empted the announcement by reassuring the public that the government was taking all concerns into consideration, "We will always consult with industry, and that is why we were successful in terms of the CSC," Foote said. "The fact that some people are questioning it is something we'll look at, but in reality, of the 12 primes, eight have not expressed any issue with respect to the deadline." As a stakeholder offering systems to the primes, Munro expressed a sincere opinion that the decision to push back the submission date by two months was something DRS was happy with.

"From my perspective, it's been a very pragmatic decision on the part of Irving Shipbuilding and the Crown. Previous schedules, in our estimation, were unrealistic and the 2 month delay simply makes it far more manageable and feasible. It's a complex bid and the demands from the bidders in terms of the information and also commitment. Its firm fixed price for the first 3 ships and it goes out some years - 2025 I think is the last system delivery to the initial 3 ship order. So you're asking for a fairly significant commercial commitment and to do the necessary analysis and get the approvals. It's not something you take out of a catalogue and price up."

Integrated Communications is not the only subsystem that DRS is bidding on for CSC. The company is offering its Infrared Search and Track (IRST) as an early warning system to detect air and surface threats and

in particular incoming sea-skimming missiles. As was the case with SHINCOM, DRS has the advantage of being the incumbent provider of the "SIRIUS" IRST system onboard the HALIFAX class frigates. SIRIUS was one of the first generation of Naval IRST, and was built on Canadian developed technology inherited from SPAR Aerospace. DRS also delivered 4 systems to the Royal Netherlands Navy as part of the SIRUS program.

DRS' bid for CSC is an IRST system requiring development above and beyond anything currently in service due to the specifications laid out by CSC. Munro talked about the CSC requirement, "They are asking for a very, very capable sensor, most of the requirements are classified as secret so I can't really get into details on the requirements but it will be, to our knowledge, the most capable IRST sensor in the world." Munro added, ". . . there are no off the shelf solutions that will meet the performance requirements of CSC". In order to put forward a compliant bid for this, DRS will be working in conjunction with Thales Optronique France (TOSA) in Paris and Thales Optronique Canada (TOCA) in Montreal.

DRS' Pivotal Power Division also plans to participate in the CSC program. With approximately 40 people working out of its facility in Bedford, Nova Scotia, Pivotal designs and manufactures power conversion and conditioning equipment primarily for the naval market. The company's Uninterruptible Power Supplies and Inverters are installed on all of Canada's surface ships as well as the majority of the US Navy's surface fleet. Munro is very impressed with Pivotal's capabilities and highlighted their importance to the CSC Program. "Pivotal's strategic location next to Irving Shipbuilding, along with their track record of delivering quality and value make them an excellent choice for CSC's power conversion and conditioning requirements".

SUPPLYING ADFR TO US NAVY

Beyond the immediate concerns of CSC and the domestic opportunities it offers, DRS also manufactures and exports a variety of flight recorders to the aerospace industry including Cockpit Voice, Flight Data Recorder, and Emergency Locator Beacons. Notably, they supply an Automatic Deployable Flight Recorder (ADFR) to a number of civil and military operators including on F/A-18s for the US Navy, the Indian Navy's P-8 Maritime Patrol Aircraft (MPA), CP-140 Aurora, CH-148 Cyclone and CH-149 Cormorant for the Royal Canadian Air Force (RCAF).

ADFR is a unique system which releases the integrated flight recorder / locator beacon from an aircraft at the onset of a crash and provides improved recoverability over the more traditional 'black box' flight recorder which is, instead designed to survive an impact but remains on board the aircraft. By being able to deploy the solid-state flight recorder from the aircraft, an ADFR offers greatly improved survivability as well as allowing for easier recovery, particularly in the event of a crash at sea or over remote terrain.

The improved survivability of an ADFR brought it into many discussions surrounding the crash of Malaysia Airlines Flight 370 (MH370) in 2014 and the subsequent search for the flight recorder. Airline manufacturers discussed making changes to notification and beacon systems to prevent another situation such as MH370 and ADFR was touted as one such solution.

While there was no requirement for the newly announced Canadian Fixed Wing Search and Rescue (FWSAR) program, Munro expressed a hope that the CF-18 interim replacement Super Hornets that Canada is expected to buy, may come with a requirement for a deployable flight recorder. Munro points to the ADFR as further evidence that domestic investment can reap great industrial export success, "Again, it's the result of what I'll describe as a successful Canadian Government industrial strategy. The National Research Council did the initial development work in this technology area back in the 1960s. They've been supporting us with some of their advanced aerodynamic modelling over time and this has already resulted in over $200M in export sales. We are soon expecting to be able to announce a $100 million opportunity that'll be designed, developed, and built here in Canada as a result of these early Government investments. A real Canadian innovation success story from, as I say, a government industrial strategy perspective."

A couple of DRS operations, beyond the products it brings to market, are its role as a systems integrator and also its leveraging of its own contract manufacturing capability. In these fields DRS has seen strong success, most recently working in collaboration with armoured vehicle manufacturers providing a driver vision enhancement system. Munro was unable to provide specifics on this project other than to say it was for a significant export customer.

Supporting the wider Leonardo Company is also an important area of business for DRS and the in-house manufacturing capability they can offer is extremely valuable for such projects. "We're supporting another DRS division with the Land Reconnaissance Surveillance System (LRSS) program. The other DRS division is providing the systems and sensors and we're supporting them through contract manufacturing to manufacture some elements of that system here in our plant in Kanata", said Munro.

These types of projects are undertaken on an ad hoc basis, where DRS looks at opportunities and decides whether or not they can contribute in a meaningful way. It seems this sense of independence, while remaining connected to a larger entity is a significant factor in DRS' success. Operating as a mid-size firm they offer a small number of specialized products to the market but benefit from an extremely canny position where their undeniable Canadian credentials help to ensure support from the government.

Also, the oversight and expertise from the Leonardo brand provides a global presence and continued external consultation. Not to say that DRS is unique in its position; there are many heritage defence manufacturers who have been acquired by multinational defence firms in order to exploit their position in a local market. By striking the right balance between independence and a global network, a structure such as that of DRS Technologies Canada, shows that global firms can provide local benefits.

Canada's government supports a product such as SHINCOM because it fills a requirement of the RCN and supports local high-tech jobs and DRS gets the investment required to export to a global market. Munro points out that this investment is mutually beneficial. "I guess one of the key things the government is looking for in its industrial benefits policy is to use defence procurement as an economic stimulus to create export oriented jobs so DRS is bit of a poster child for that with the SHINCOM system," he says, pointing out that the policy appears to be mutually beneficial for Canada and Leonardo. ■

***Ian Keddie** is a regular contributor to CDR and a former officer in the Royal Navy*