



**Presentation by
MacDonald, Dettwiler and Associates (MDA)
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MDA is one of Canada's pioneering technology companies, founded over 45 years ago in Richmond, British Columbia. From its early roots as a start-up by two UBC professors with a novel idea for processing satellite imagery, MDA today operates from 11 locations around the world with 4800 employees – 1800 of which are located in Canada at facilities in Richmond, Toronto, Ottawa, Montreal and Halifax.

With over two billion dollars in annual revenues, primarily from exports, MDA is a leading example of using innovation and technology to drive economic growth in Canada. In particular, we have achieved our growth by leveraging technologies developed on Canadian programs into long term exports.

MDA is now globally recognized for leadership positions in satellite communication, space-based robotics, and C4ISR (Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance) solutions. We are proud of our proven track record of reliably addressing complex operational needs that facilitate Canadian sovereignty, security and national defence. These solutions range from working with the Department of National Defence (DND) to monitor and protect our maritime approaches, to providing turnkey solutions in theater, such as the Noctua Unmanned Aerial Vehicle (UAV) program we operated for DND in Afghanistan.

In today's roundtable, MDA would like to focus on two important—yet related—areas outlined in the Defence Policy Review's (DPR) Public Consultation Document – the increasing strategic importance of space to DND operations and the role of defence procurement in strengthening Canadian defence industrial capabilities.

Strategic Importance of Space to DND Operations

MDA strongly supports the assertion in the DPR Public Consultation Document that space is “essential to national security and defence” and space-based capabilities are “becoming an increasingly critical component of military operations.”

Canada occupies a unique position in the world with its large yet sparsely and remotely populated land mass, the Great Lakes, and long coastlines bordering three oceans—much of which are icy and dark for significant portions of the year.

Given these imperatives, Canada became an early adopter of space technologies to meet national civil and defence needs. Canada has since become a leader in satellite communications, which provides vital telecommunications linkages from coast to coast. Canada is also the world leader in space-based radar, with RADARSAT-2 primarily used for ecosystem monitoring and disaster management while providing DND with highly accurate monitoring and surveillance of Canada's Arctic and maritime approaches. MDA is currently building the next generation RADARSAT Constellation Mission (RCM), which is a scalable constellation initially configured with three satellites which will enable more frequent maritime surveillance and advanced ship identification capabilities.

Space assets also provide high value non-combat operational capabilities that Canada can bring to our allies and coalition partners. For example, the space-based radar intelligence, surveillance and monitoring capability of the RADARSAT program is unparalleled globally, and is much valued in the operational domain by our partners, allowing Canada to play an important role in international security. Canada is also the only foreign country to participate in the U.S. Space Surveillance Network with DND's Sapphire satellite, detecting and tracking artificial objects orbiting Earth.

In light of the critical and growing role that space plays in Canadian, North American and global defence and security, Canada's Defence Policy should explicitly articulate the strategic importance of a long-term resilient space capability and mandate the establishment of a space infrastructure strategy, policy, and budget to ensure Canada maintains this imperative operational capability and not risk operational gaps, which in space are not easily or quickly resolved.



The Role of Defence Procurement in Strengthening Innovative Canadian Defence Industrial Capabilities

Procurement is one of the most powerful tools that the Government of Canada has to spur innovation. Defence procurement is universally leveraged by national governments around the world to cultivate strategic domestic capabilities, accelerate innovation and support economic development. This must also be the case in Canada moving forward.

The Canadian defence industry is underpinned by the strong partnership with the federal government whereby the procurement power of major government purchases is applied to build up and advance domestic industry and its associated exports and innovations. The most successful Canadian defence companies have achieved long-term growth based on significant exports from Canada to the rest of the world.

This has been MDA's path to success for more than 45 years. Through our longstanding relationship with the federal government, we have evolved into an important anchor company that builds systems and technology that the Government of Canada needs in areas of national strategic importance, supporting high-skilled employees, technology clusters and innovation ecosystems across the country, building a formidable global export business and then reinvesting back in Canada. This model allows us to provide high value operational solutions back to the Canadian Forces on a very cost effective basis.

MDA supports the impressive work done by Mr. Tom Jenkins in his report on defence procurementⁱ, which recommends maximizing the overall benefit of the government's defence investments by "identifying and supporting key industrial capabilities (KICs) to enable Canada's defence-related industries to better meet the operational requirements of the Canadian Forces while generating sustainable economic growth." Mr. Jenkins further states that "defence-related industries are important sources of technological dynamism and innovation. They are leading-edge participants in global value chains, and generators of high-value exports and well-paying jobs. Accordingly, they should be supported as drivers of long-term growth and prosperity."

The sheer size of Canada's defence spending, along with the complex systems and technologies that are procured, make defence procurement a material lever available to the government to stimulate the domestic economy and capability of local industry. Therefore, the Government of Canada should expressly articulate and document that an objective of defence procurement is to cultivate strategic domestic capabilities which accelerate innovation and promote economic development through exports. This is time critical because we currently stand on the precipice of the largest government procurement in Canadian history – the Canadian Surface Combatant (CSC) program.

As noted by the President of the Canadian Association of Defence and Security Industries, Ms. Christyn Cianfarini, in her submissionⁱⁱ to the Defence Policy Review roundtable in Vancouver on April 27th, this procurement (among others) will "shape the defence industrial base in this country for the next thirty years" and represents a "once in a generation opportunity" that the Government of Canada needs to actively manage in order to maximize the benefits for economic development and innovation and Canada's defence industrial base.

Conclusion

In conclusion, MDA would like to thank the Government of Canada and the Defence Policy Review panelists for this opportunity to highlight a couple of areas of importance to our company. We would be pleased to elaborate on our views this afternoon or in the coming weeks.

ⁱ Report of the Special Adviser to the Minister of Public Works and Government Services, *Canada First: Leveraging Defence Procurement Through Key Industrial Capabilities*. February 2013 (<http://www.tpsgc-pwgsc.gc.ca/app-acq/documents/eam-lmp-eng.pdf>)

ⁱⁱ Canadian Association of Defence and Security Industries, *At a Crossroads: Canadian Defence Policy and the Canadian Defence Industrial Base*. April 27, 2016 (<http://dgpapp.forces.gc.ca/en/defence-policy-review/docs/cianfarani-submission-vancouver.pdf>)