

Value Propositions and Industrial and Technological Benefits

Introduction and
Considerations for you
Throughout the Presentation

The Industrial and Technological Benefits Policy

This presentation provides a highlight of the ITB program and the following topics.

- How Value Propositions and Industrial and Technological Benefits Work
- Red River College's Research Partnerships & Innovation Interest in ITBs
- What Canada Wants to Achieve with ITBs
- How Canada is Doing? Corporate and Academic & R&D Involvement and Benefits 2012-2017
- Transaction Types
- Examples of Transactions with Multipliers Involving R&D, Commercialization, SMBs, Consortium – to demonstrate how other companies have benefited
- Relevant OEMs – Current and Potential Obligors and OEM Partner Diversity

Objective of this Session – Develop an understanding ITBs, consider how they could apply to you and leverage tour and networking opportunity

We have provided you with a form to help you keep track of:

Those companies we have identified who you:

- Are currently supplying any product or service to
- Are in the processing of responding to a bid request
- Have submitted a quote to in the past and were not successful
- Would like to do business with

Those procurements you feel you could provide a Good and / or In-Service Support to

Future projects/investments/R&D/Commercialization/Skills Development and Training you are planning to undertake which you think might qualify as a project an Obligor may be interested in supporting

How RRC could be part of your Transaction Team

Companies you have met at the session you'd like to follow-up with

How Value Propositions and Industrial and Technological Benefits Work

Introduction

The Industrial and Technological Benefits Policy

In 2014, The Government of Canada converted the Industrial and Regional Benefits program to the Industrial and Technological Benefits Policy (ITB).

Like the IRB policy, the ITB policy leverages defence, coast guard and security procurements to generate high value-added Canadian business, create jobs and support economic growth.

The ITB policy difference is that the companies are held more accountable for achieving their commitments and that the actual RFP process includes a score for the ITB proposal, which is called the Value Proposition.

Companies with obligations are called Obligor.

Transactions can be directly or indirectly related to the procurement – if they meet Innovation, Science & Economic Development eligibility requirements.

Transactions can be defence or commercial and can occur at any time during the life of the program (Achievement period).

Transactions: Direct and Indirect

Direct ITB Transactions are those achieved through the provision of the goods and services required to deliver the Contract.

Canadian resources should be utilized to the maximum extent possible to develop, produce, integrate and deliver the Contract.

Indirect ITB Transactions are achieved through business activities not related to the Contract.

Indirect ITB Transactions involve a level of technology that is generally the same or higher than that of the Contract, with applications in Canadian advanced technology industries.

Indirect ITB Transactions must have a Canadian Content Value (CCV) of no less than 30 percent of the total value of the ITB Transaction.

The Industrial and Technological Benefits Policy

Transactions can be undertaken by the Obligor or any company that Innovation, Science and Economic Development has approved as an Eligible Donor. This creates a very diverse opportunity base.

“An Eligible Donor is the Contractor, its parent corporation, and all the parent's subsidiaries, divisions and subdivisions; and, the Contractor's Tier-One suppliers related to the performance of the Work under a Contract, their parent corporations and all the parent's subsidiaries, divisions and subdivisions.”

Canadian Content Value (CCV)

The Policy requires companies awarded contracts to do business transactions in Canada equal to the value of their contracts in Canadian Content Value (CCV).

As an example, a \$1 Billion procurement results in a \$1 Billion CCV obligation.

If on average, Canadian Content Value (goods and services) is 33%, then the winner of the contract must identify Transactions and spend \$3 Billion on Canadian goods and services over the Contract Achievement period.

Canadian Content Value (CCV) Calculation

CCV of any Direct and Indirect Transaction will be determined by:

The Net Selling Price Method

$CCV = \text{Price} - \text{Ineligible Costs}$

or

The Cost Aggregate Method

$CCV = \text{Addition of all Eligible Costs}$

The good or service type dictates the best method of calculating CCV

Calculating CCV – Net Selling Method

Eligible Costs:

A product or service which bears a substantiated selling price may have its CCV calculated as follows:

- begin with the total selling price of the product or service;
- subtract the applicable customs duties, excise taxes and applicable Goods and Services Taxes (GST), Harmonized Sales Taxes (HST) and all provincial sales taxes; and,
- subtract any ineligible costs incurred as defined by the CCV criteria.

Calculating CCV – Cost Aggregate Method – Eligible Costs

Any product or service that cannot be assigned a substantiated selling price may have its CCV calculated as the aggregate of the following:

- the cost of parts produced in Canada, and the cost of materials to the extent that they are of Canadian origin, that are incorporated in the equipment in the factory of the manufacturer in Canada
- the cost of parts or materials which the ITB Authority can verify as being of Canadian origin, in that they have been exported from Canada and subsequently imported into Canada as parts or finished goods
- transportation costs, including insurance charges, incurred in transporting parts and materials from a Canadian supplier or frontier port of entry to the factory of the manufacturer in Canada for incorporation in the equipment, to the extent that such costs are not included in the foregoing paragraph
- such part of the following costs (not including GST, HST, all provincial sales taxes, excise taxes, royalties and license fees paid outside of Canada) as are reasonably attributable to the production or implementation of the equipment, service or activity:
 - wages and salaries paid for direct and indirect production and non-production labour in Canada paid to Canadians or to permanent residents as defined in the *Immigration and Refugee Protection Act 2001*, c.27;
 - materials used in the Work but not incorporated in the final products;
 - light, heat, power and water;
 - workers compensation, employment insurance and group insurance premiums, pension contributions and similar expenses incurred with respect to labour referred to above;
 - taxes on land and buildings in Canada;

Calculating CCV – Cost Aggregate Method – Eligible Costs (Cont'd)

- fire and other insurance premiums relative to production inventories and the production plant and its equipment, paid to a company authorized by the laws of Canada or any province to carry on business in Canada or such province;
- insurance purchased specifically from a company authorized by the laws of Canada or any province to carry on business in Canada or such province;
- rent of factory or office premises paid to a registered owner in Canada;
- maintenance and repairs to buildings, machinery and equipment used for product purposes that is executed in Canada;
- tools, dies, jibs, fixtures and other similar plant equipment items of a non-permanent nature that have been designed, developed or manufactured in Canada;
- engineering and professional services, experimental work and product or process development work executed and completed in Canada;
- pertinent miscellaneous factory and office expenses, such as: administrative and general expenses; depreciation with respect to production machinery and permanent plant equipment and the installation costs of such machinery and equipment; and, a capital allowance not exceeding five (5) % of the total capital outlay incurred for buildings in Canada owned by the producer of the work;
- personal travel expenses, including Canadian carriers, accommodations and meals, for travel associated with Direct ITB activities; fees paid for services not elsewhere specified; and
- re-tax net profit upon which Canadian taxes are paid.

Calculating CCV – Cost Aggregate Method – Ineligible Costs

- the value of materials, labour and services imported into Canada;
- in the case of an Indirect Transaction, the value of raw materials and Semi-Processed Goods exported from Canada;
- the value of any living, relocation costs and remuneration paid to non-Canadians for work on the Project;
- the amount of all Canadian Excise Taxes, Import Duties, Federal and Provincial Sales Taxes, Goods and Services Taxes, Harmonized Sales Taxes and other Canadian duties;
- the value of goods and services with respect to which Credits have been received or are being claimed by the Contractor or its Eligible Parties as a Transaction to Canada under any other Obligation or agreement;
- any proposal or bid preparations costs;
- all transportation or travel costs not covered under “Eligible Costs”;
- obligations of the Federal Government (e.g. government furnished equipment);
- license fees paid by the Canadian recipient and any on-going royalty payments;
- Transactions claimed by a Contractor that pertain to its influence or that of one of its Eligible Parties over any country’s purchasing agent/department;
- interest costs associated with letters of credit or other financial instruments to support Transactions;
- fees paid to lobbyists (as per the *Lobbying Act*); and
- fees paid to third-party consultants or agents for work related to obtaining Credit against this Contract. This includes, but is not limited to, providing advice on the ITB Policy, preparation of proposed transactions and/or reports, representing the interests of the Contractor to the ITB Authority, and/or searching for potential recipient companies.

CCV Credit Calculations – Multipliers

Obligors may receive multipliers (4-9X) on the value of their investments for certain Transactions approved by ISED and if they incorporate:

- Applied Research and Development
- Commercialization
- Post-Secondary Institutions
- Public Research and Development Institutes
- Indigenous Businesses and Labour Forces
- Skills Development and Training initiatives
- Special requirements of ISED related to specific procurement
- Small and Medium Businesses
- Key Industrial Capabilities

Red River College could support each of these “multiplier” considerations through our Industry Relationships, Applied R&D capabilities and infrastructure and Academic Institution.

Innovation/R&D Transactions with Multipliers have Changed the Game

– Less Transactions are required for greater Canadian Content and Higher VP Score Contribution

Before Transactions with significant multipliers, benefits accrued to a larger number of companies. With multipliers, less companies benefit. With fewer transactions to manage and a larger CCV benefit for lesser investments, Obligors are continuing to lobby for even greater multipliers.

For example: **For a \$1B CCV commitment.**

Straight Procurement: Assuming an average CCV as 33% of the total cost of something:

\$1B Commitment = Each \$1B achieves \$333,000 CCV Credit

\$3B in purchases may achieve the targeted \$1B CCV Commitment

If you substitute Transactions with Multipliers at an average of 6X CCV:

$\$1.B / 6 = \$.166 B$ investment (cash and in-kind) x 1.25 (assuming 75% CCV)

\$1B CCV credit is achieved with a = \$.208B in investment (cash and in-kind)

\$3B compared to \$.208B
Multiple Companies compared to 1

Red River College's Research Partnerships & Innovation Department (RPI) Interest in ITBs

Red River College's Research Partnerships & Innovation Department (RPI) Interest in ITBs

Red River College (RRC) is Manitoba's most comprehensive institute of applied learning and a leader in applied research and commercialization. Applied Research & Innovation is led by Research Partnerships & Innovation (RPI).

RRC is consistently named among the Top 10 Canadian Research Colleges and Top 3 in Western Canada, validating that RRC plays a key role in economic development and that their knowledge, expertise and facilities are highly relevant.

Over the past five years, the College's ~550 partnerships with Canadian and/or international organizations (SMEs, large companies and community organizations), have resulted in new or improved products, processes, and/or services.

\$85+ Million in external private sector and government investment has been received or awarded to the College, over the last fifteen years, to support research-related equipment and infrastructure. For example, in August, 2019, Red River College received \$3 million in funding from Western Economic Diversification to increase technology adoption and testing capabilities for heavy vehicle manufacturers in collaboration with industry partners and the Vehicle Technology Centre.

Through these facilities, RRC provides students and industry, access to \$35+ million worth of capital equipment. Over 200,000 square feet of new buildings and facilities is available for your use.

Red River College's Research Partnerships & Innovation Department (RPI) Interest in ITBs

RPI has identified a number of research focus areas, sectors and significant investments that could benefit from the ITB Policy. Those centres which support these sectors include:

- The MotiveLab (for on- and off-road Heavy Vehicles)
- Technology Access Centre for Aerospace & Manufacturing (TACAM)
 - Model Factory / Machine Shop
 - Composites Model Factory
 - Smart Factory
 - Centre for Aerospace Technology and Training (CATT) (at StandardAero)
 - Centre for Non-destructive Inspection (at Magellan)
 - Robotics Training Facility
- Stevenson Aviation and Aerospace Campuses (Winnipeg and Southport)
- The Innovation Centre (in development)
- Building Envelope & Technology Access Centre (BETAC)
- Paterson GlobalFoods Institute – Prairie Research Kitchen

Red River College's Research Partnerships & Innovation Department (RPI) Interest in ITBs

RPI has taken the initiative to develop a Value Proposition document which reflects the interests and needs of the ITB Obligor and ISED and is being used to promote RRC and the Manitoba industry base which it serves.

A key section provides brief descriptions of many Manitoba companies. This section is included to demonstrate the breadth and depth of the industry base. Companies here today are represented in this document.

Effort is being undertaken to identify and pursue potential Obligor and Manitoba corporate partnerships and transactions which will utilize RRC's capabilities and create Applied R&D and Skills Development and Training experience for both the faculty and the students.

It is advantageous for RRC and Manitoba companies to be aware of the ITB policy and to ensure that if and when discussion and/or opportunities present themselves – you are at least familiar with the program and its benefits and are able to respond effectively... not simply be a “Me Too”.

Always keep in mind – you may only get one chance to interest these Obligor.

What Canada Wants to Achieve with ITBs

ITB Objectives
Key Industrial Capabilities
Accepted Innovation, Research and
Development Activities
Accepted Commercialization Activities
Transaction Eligibility Criteria

What does Canada Want to Achieve with ITBs

Source: https://www.ic.gc.ca/eic/site/086.nsf/eng/h_00011.html#art2

Significant investments in defence-related goods and services should generate economic benefit with **long-term and high-value impacts on Canadian industry, and support ITB objectives (pillars) which include:**

- **The economic development and long-term sustainment of Canada's Aerospace and Defence Sector**, directly and indirectly related to the procurement
- **Key Industrial Capabilities (KICs) targets**, represent areas of emerging technology with the potential for rapid growth and significant opportunities, established capabilities where Canada is globally competitive, and areas where domestic capacity is essential to national security
- **Increased productivity and competitiveness among Canadian-based suppliers**, through growth and supply chain integration into major global systems

What does Canada Want to Achieve with ITBs (Cont'd)

Source: https://www.ic.gc.ca/eic/site/086.nsf/eng/h_00011.html#art2

- **Strengthened innovation and R&D in Canada**, that positions Canadian Companies to move up the value chain, capture market and commercialization opportunities
- Canadian success in **tapping traditional and non-traditional export markets** that have been leveraged from the Project, sharing in long-term jobs and growth
- **Participation of Canadian Small and Medium Businesses**
- **Participation of companies located in the Designated Regions of Canada**
- **People Oriented Factors** – Skills Development and Training, Diversity and Indigenous people and business involvement
- **Other Factors** specific to the procurement requirements

Key Industrial Capabilities (KICs)

Emerging Technologies

Advanced Materials
Artificial Intelligence
Cyber Resilience
Remotely-piloted Systems
Autonomous Technologies
Space Systems

Leading Competencies and Critical Industrial Services

Aerospace Systems & Components
Armour
Defence Systems Integration
Electro-Optical / Infrared (EO/IR) Systems
Ground Vehicle Solutions
In-Service Support
Marine Ship-Borne Mission and Platform Systems
Munitions
Shipbuilding, Design and Engineering Services
Sonar and Acoustic Systems
Training and Simulation

What are Accepted Innovation / R&D Activities

- Standard test/measurement/analysis
- Test/measurement/analysis report
- Product/process design/engineering
- Related evaluation & feasibility studies
- Applied research projects for new product concepts
- Customized product/process/technology development project
- New technology platforms and new test/measurement/analysis
- Specific thermo-mechanical analysis methodology development projects
- Basic scientific research for creating better understanding and insights in new phenomena
- Research to advance scientific knowledge with or without a specific practical application in view
- Support work in:
 - engineering
 - design
 - operations research
 - mathematical analysis
 - computer programming
 - data collection
 - testing or research

What are Accepted Commercialization Activities

According to ISED, Commercialization activities are a process through which economic value is extracted from knowledge through the production and sale of new or significantly improved goods and services. This can also include advertising, sales promotion and other marketing activities.

Eligible activities must involve one or more of the following:

- Business and market planning
- Project feasibility studies
- Identifying customer needs
- Market engagement and testing
- Profitability analysis and financing
- Launch advertising

ITB Policy Highlights – Transaction Eligibility Criteria

Causality: Each ITB Transaction shall be one which was brought about by either the Contractor or one of its Eligible Donors, due in part to a current or anticipated ITB obligation to Canada.

Example: A company could invest in new manufacturing equipment that could be used for a future Government procurement bid and other uses.

Timing: ITB Transactions shall be implemented within the ITB Achievement Period. Typically the Achievement period starts when the initial Letter of Intent is released and ends a specified time after the contract period ends.

Example: Fixed Wing Search and Rescue LOI came out in 2008 and the contract ends in 2042. This is an ITB Achievement period of 34 years!

Incrementality: Transactions will involve new, incremental or previous work awarded under a new competitive contract process in Canada.

Eligible Donor: An Eligible Donor is the Contractor (Obligor), its parent corporation, and all the parent's subsidiaries, divisions and subdivisions; and, the Contractor's Tier-One suppliers related to the performance of the Work under a Contract, their parent corporations and all the parent's subsidiaries, divisions and subdivisions.

How is Canada Doing? 2012-2017

Excerpts from ISED Report

\$17B in ITBs or \$4.7B and 46,000 Jobs annually

700 Companies Benefiting Across Canada

\$250M in Academic & R&D Institutions with Close
to 50 Such Organizations Benefiting Across Canada

ISED Reports – Economic Impacts of the ITB Policy

Source: ISED - Date modified: 2018-01-17 https://www.ic.gc.ca/eic/site/086.nsf/eng/h_00137.html

ITBs Have a Strategic Approach:

- The ITB Policy now applies more frequently (**all eligible contracts over \$20M**)
- Defence contracts are now **awarded based on each bidder's economic commitment to Canada**, as described in their Value Proposition, alongside price and technical merit
- There is flexibility to structure **Value Proposition (VP) requirements on a procurement-by-procurement basis**. The approach is informed by in-house research, third-party advice and industry engagement.
 - The weighting of a Value Proposition score relative to price and technical merit scores will be determined on a procurement-by-procurement basis (ranged from 10-20%). Cases where bidders are close in price and technical merit, their Value Propositions may become an important differentiator.
- Policy features have been enhanced to **incent more early investment in Canada**
- The Government has also modified their ITB Credit Banking Policy, which enables companies to satisfy up to 50% of a new procurement's ITB obligations with previously banked ITB credits which may or may not be related to the actual procurement or its ISED objectives.

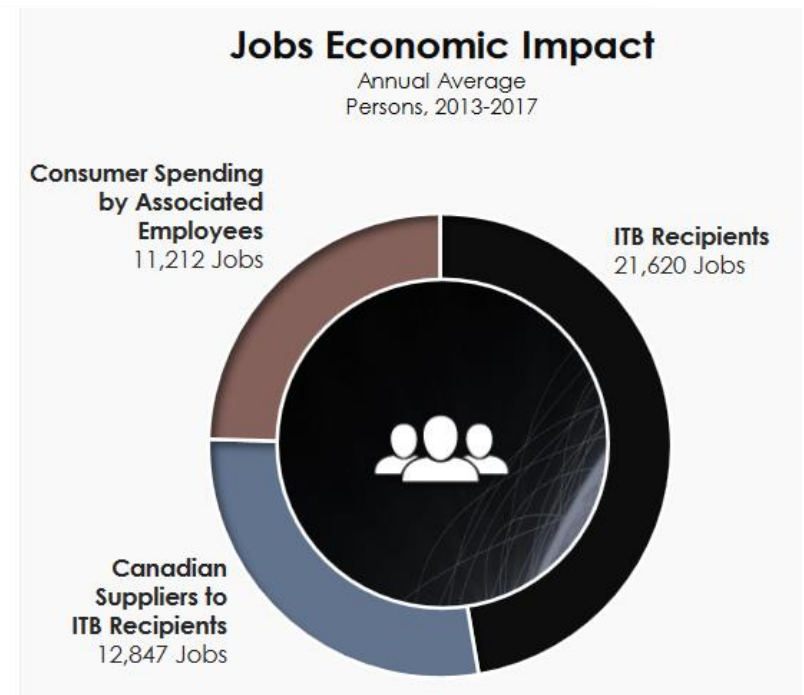
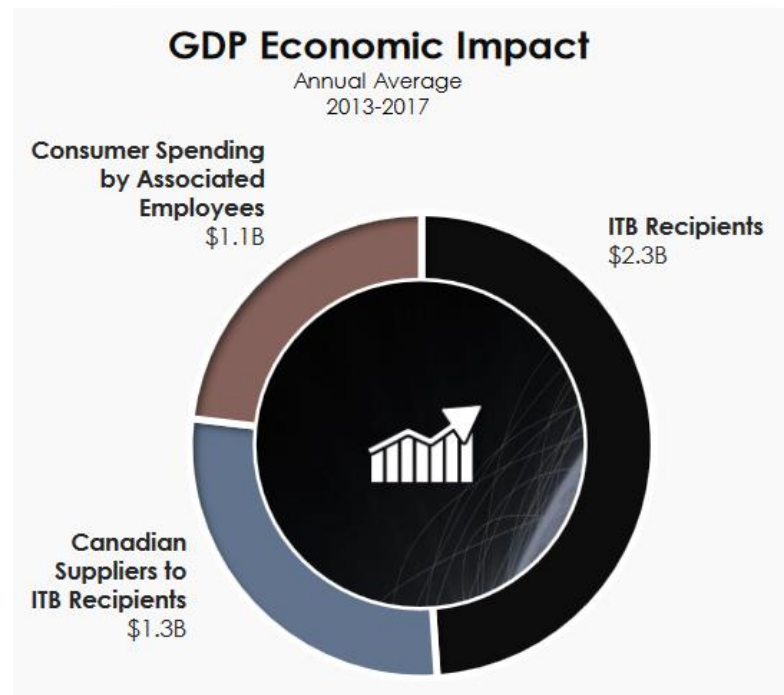
ISED Reports – Economic Impacts of the ITB Policy

Source: ISED - Date modified: 2018-01-17 https://www.ic.gc.ca/eic/site/086.nsf/eng/h_00137.html

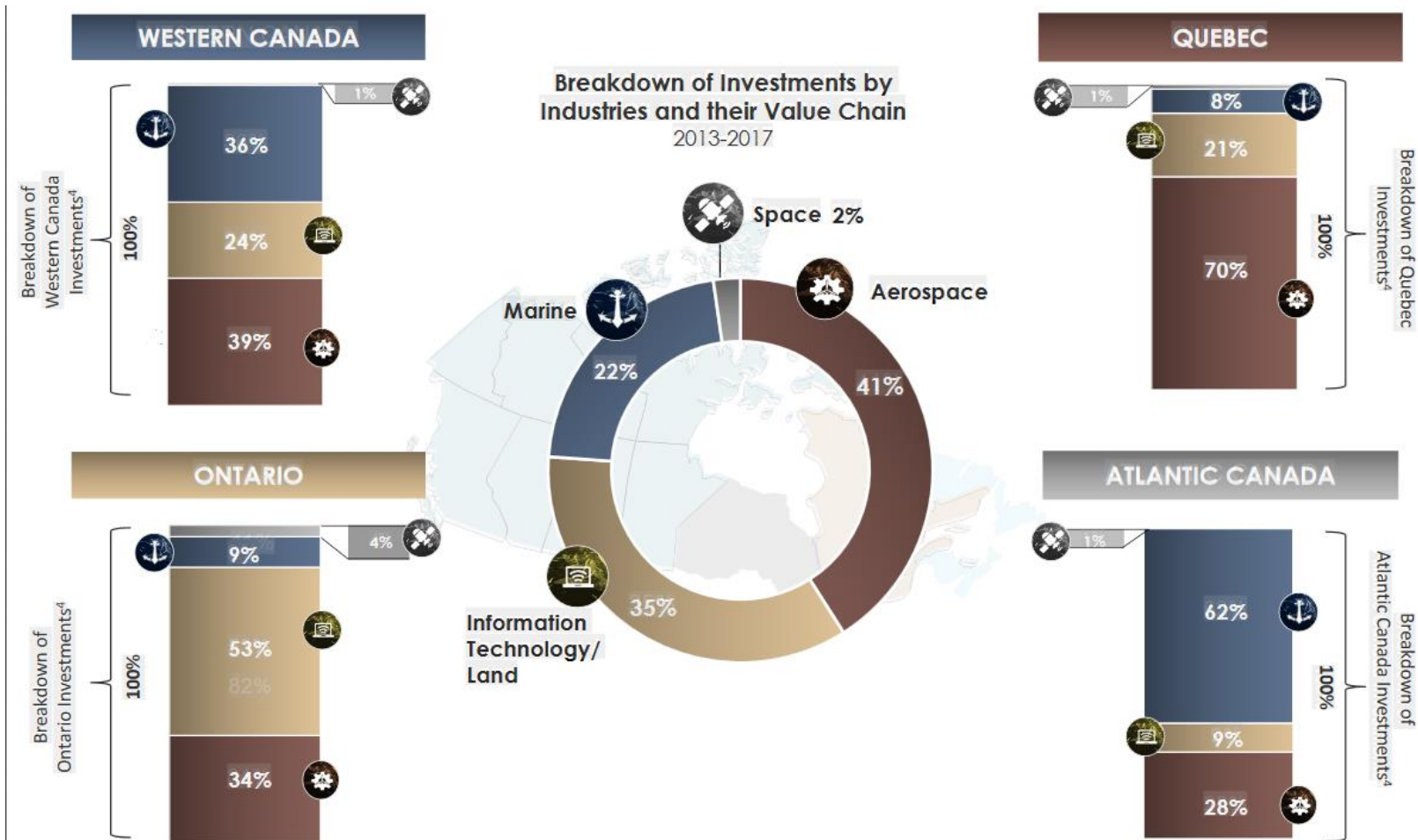
ITBs are Resulting in Generally, High-Value Investments Including:

- Innovation, through Research and Development (R&D) in Canada (Multipliers)
- New export opportunities
- Work in Canada directly on the procurement
- Opportunities for Canadian suppliers
- Boeing, Standard Aero, Magellan and SMEs such as Enduron, Cormer Defence, Argus Industries, Arne's Welding, benefit in Manitoba

According to ISED – ITB Impact on Canadian Suppliers
Using a multiplier of 1.3, the ITB Policy has contributed \$4.7B of GDP annually, and created or maintained 46,000 jobs annually during the period of 2012-2017 in the Canadian economy.
Most ITB Procurements are Related to Readiness and Equipment

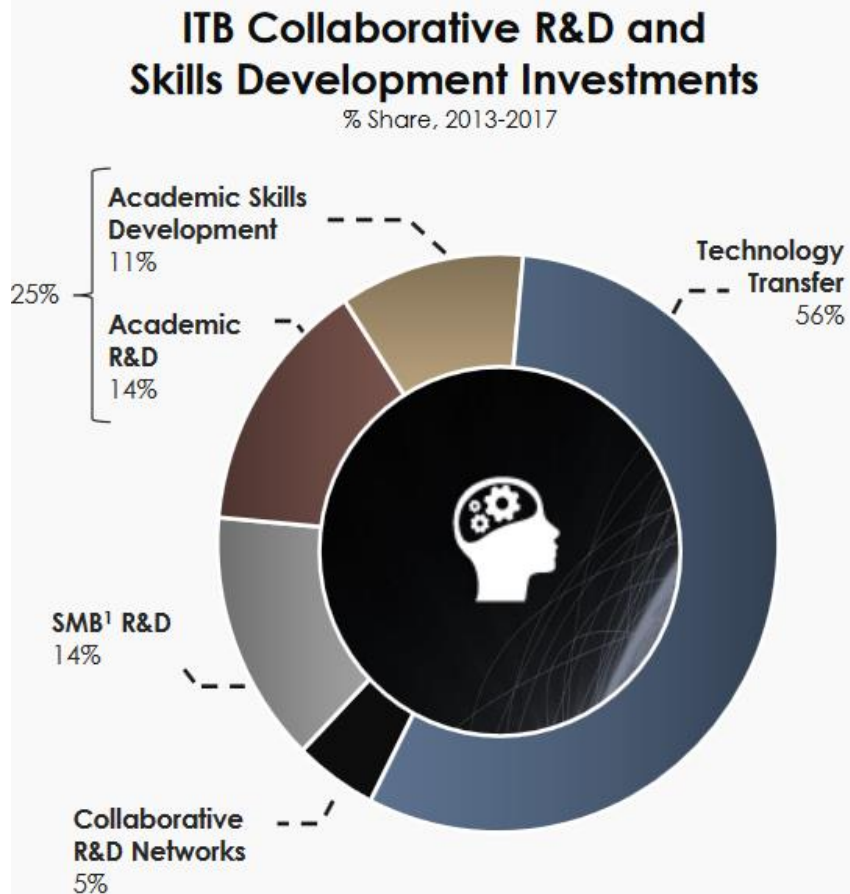


According to ISED – ITB Investments Map Closely with Regional Industrial Strengths – They don't provide the actual investment #s



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Close to \$250M* was invested in collaborative R&D and Skills Development between 2013 and 2017 *not sure what this value reflects, dollars, in-kind, multipliers?



Featured Canadian SMBs benefiting from ITB collaborative R&D investments (mostly Lockheed Martin):

Contextere – Ottawa, Ontario

Edgewater Computer Systems – Kanata Ontario

Gastops – Gloucester, Ontario

Mannarino Systems & Software – Saint-Laurent, QC

Nanowave Technologies – Etobicock, Ontario

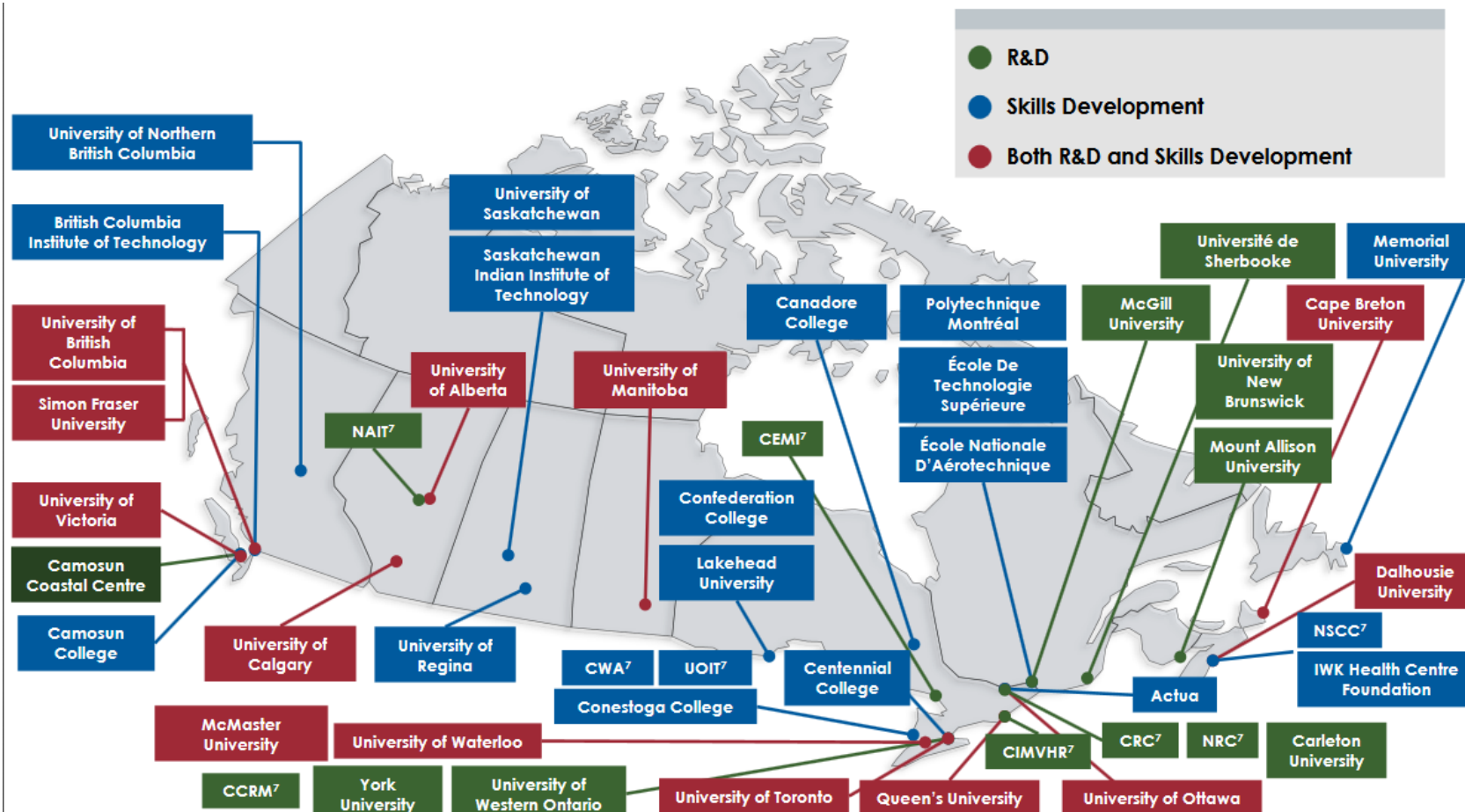
PAL Aerospace – St. Johns, NL

QRA Consulting – Halifax, NS

Solace Power – Mount Pearl, NL

Swiftsure Spatial Systems – B.C.

Close to 50 academic and research organizations are benefiting from ITB innovation and skills development investments from 2012-2017



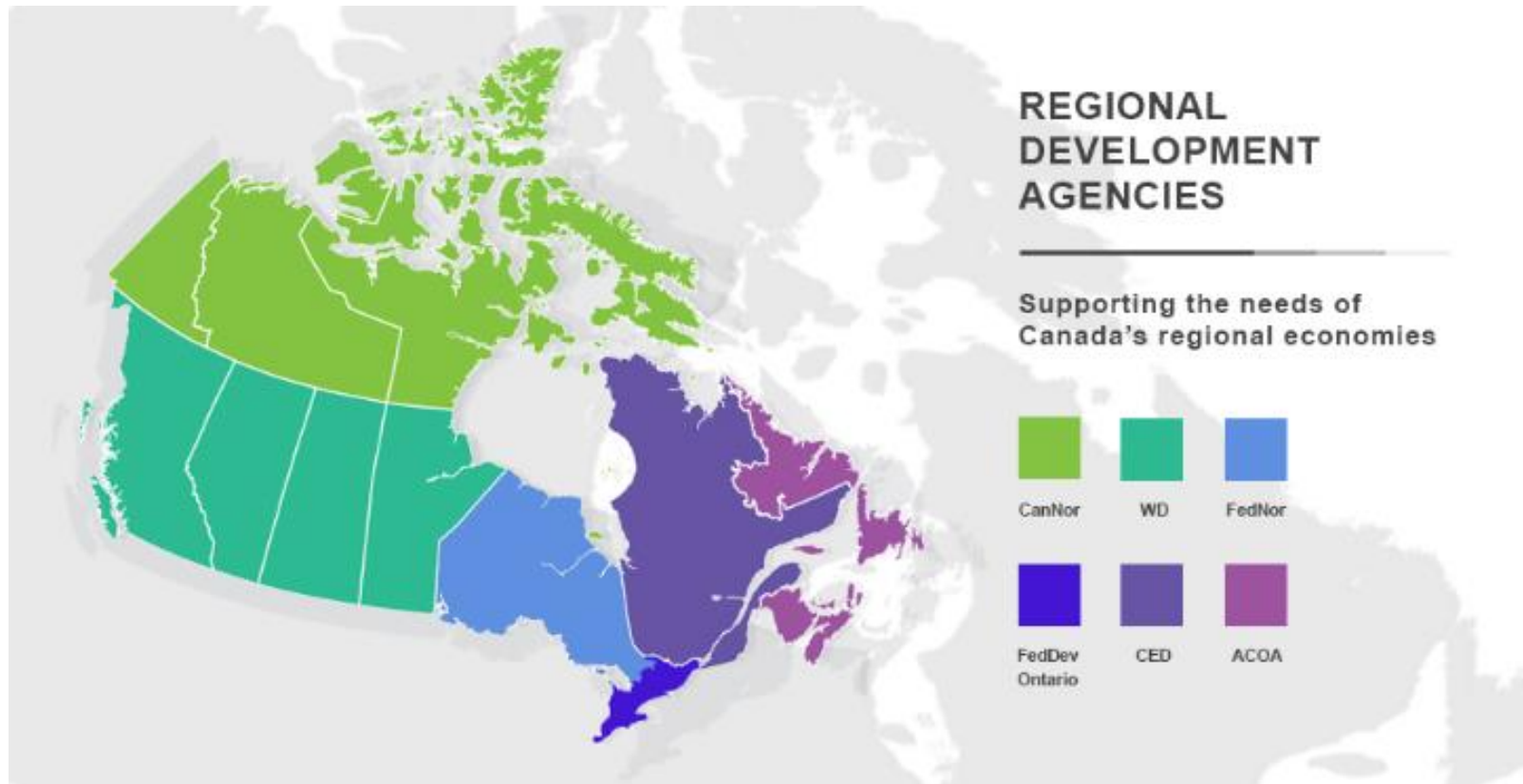
Source: ITB investments administrative database (IRB Policy (2013-2014), ITB Policy (2014-2017)), 2019; ITB investments are based on Canadian Content Value credited according to the ITB Policy before credit multipliers are applied

⁶ Academic and research organizations resulting from 2013-2017 ITB Investments

⁷ CCRM: Centre for Commercialization of Regenerative Medicine; CWA: Canadian Welding Association Foundation; CEMI: Centre for Excellence in Mining Innovation; CIMVHR: Canadian Institute for Military and Veteran Health Research; CRC: Communications Research Center; NRC: National Research Council; NSCC: Nova Scotia Community College; NAIT: Northern Alberta Institute of Technology; UOIT: University of Ontario Institute of Technology

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ISED – Regional Development Agencies Across Canada – Differing Policies, Objectives and Budgets to Support Economic Development and ITB Initiatives



Example of Regional Development Agency Budgets from Public Accounts 2014

Economic Development Agency	Budget	% of Total Regional Economic Development Budget	% of CND Population in that region	What the numbers would be if distributed by population	Delta
Western Diversification	\$121 million	18%	31.41%	\$211 million	- \$90 million
Southern Ontario	\$74 million	11%	38.49%	\$258 million	- \$184 million
Quebec	\$212 million	31.5%	23%	\$154 million	+ \$58 million
ACOA	\$231 million	34.4%	6.6%	\$44 million	+ \$187 million
Northern Canada	\$34 million	5%	.4%	\$2.7 million	+ \$31 million
Total	\$672 million				

Example of Regional Development Agency Budgets from government websites 2018-2019

Economic Development Agency	Budget	% of Total Regional Economic Development Budget	% of CND Population in that region	What the numbers would be if distributed by population	Delta
Western Diversification	\$138 million	15.66%	31.88%	\$281 million	- \$139 million
Southern Ontario + FedNor*	\$201 million	22.8	38.73%	\$341 million	- \$140 million
Quebec	\$212 million	24.0	22.59%	\$199 million	+13 million
ACOA	\$287 million	32.6	6.6%	\$58 million	+ 229 million
CanNor	\$43 million	4.9	.33%	\$1.4 million	+ 42.6 million
<i>FedNor *</i>	<i>\$30 million</i>	3.4			
Total	\$881 million			\$881 million	

Example of Non-ITB Related Department of National Defence – Professional and Special Services Contracts over \$100,000 – 2014

Source: Public Accounts of Canada, 2014

Expenditure Category	Total Expenditure per Category	# of MB Entities Receiving Contracts (over \$100,000)	Total Contracts per Category (over \$100,000)	Total MB Contract Value (excluding those under \$100,000)	Total MB Contract as % of Total (excluding those under \$100,000)	Service Contracts under \$100,000 - # of Payees	Value of Service Contracts under \$100,000
Business Services	\$300,981,461	6	168	\$1,558,665	0.518%	2,852	\$40,273,001
Engineering & Architectural Services	\$1,760,015,442	11	361	\$6,083,796	0.346%	1,077	\$39,667,617
Health and Welfare	\$185,955,414	0	12	\$0	0.000%	435	\$27,050,416
Informatics Services	\$74,540,025	0	66	\$0	0.000%	336	\$5,408,025
Interpretation and Translation	\$22,129,616	0	4	\$0	0.000%	41	\$442,063
Legal Services	\$13,320,287	0	3	\$0	0.000%	81	\$1,463,090
Management Consulting	\$33,121,642	1	47	\$117,727	0.355%	86	\$3,431,992
Protection Services	\$78,228,961	0	6	\$0	0.000%	98	\$2,250,250
Scientific Services	\$15,504,057	0	24	\$0	0.000%	72	\$1,500,886
Special Fees and Services	\$5,214,840	0	1	\$0	0.000%	883	\$5,103,785
Temporary Help Services	\$25,673,036	0	56	\$0	0.000%	153	\$1,717,589
Training and Educational Services	\$107,931,343	3	111	\$695,932	0.645%	2,204	\$41,158,595
Other Services	\$322,268,597	7	240	\$5,141,213	1.595%	3,085	\$39,033,319
Total	\$2,944,884,721	28	1,099	\$13,597,333	0.462%	11,403	\$208,500,628
MB Population as % Total CDN	3.61%				0.462%		
Under-performing by \$	\$92,711,530						

Transaction Types

Direct and Indirect
Without Multipliers
With Multipliers

ITB Game Changers:

Transactions with Greater CCV Multipliers –
Investment Framework

Banking Credits and Use of Banked Credits – Eligible
for 50% of CCV Commitment

Source: https://www.ic.gc.ca/eic/site/086.nsf/eng/h_00011.html

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Post-Secondary and Public Research Institution Transaction

5X Multiplier

A multiplier of five (5) is permitted on Transactions involving:

- cash contributions to Post-Secondary Institutions for research or the establishment of research chairs
- investments in advanced technology skill development at Post-Secondary Institutions
- collaborative research undertaken with Public Research Institutions

Example – Assuming Transaction Meets Eligibility Criteria of: Causality, Timing, Incrementality and Eligible Donor

Contractor Invests cash in training initiative with College	\$250,000
Contractor Invests in cash establishing a research chair at a University	\$50,000
Contractor Investments cash in a collaborative Research Project with Public Research Institution	\$200,000
Total Investment cash	\$500,000
Multiplier of Five and Total ITB Credit assuming all Eligible	\$2,500,000

Consortium Transactions – 5X Multiplier

Post-Secondary Institute and/or Public Research Institution + Canadian Company + Contractor or its Eligible Donor

Project must undertake Research and Development

Contractor Invests Cash: \$1,000,000 (eligible for credit and multiplier)

Other Consortium Member Invests Cash: \$500,000 (eligible for credit and multiplier)

Post Secondary Inst. Invests In-Kind: \$100,000 (not eligible for credit or multiplier)

Total Eligible for Multiplier **\$1,500,00 (sub-total eligible for credit & multiplier)**

X5 ITB Credit \$7,500,000 (credit - not including in-kind)

Contractor's In-kind IP contribution: **\$2,000,000 (not eligible for multiplier)**

Total ITB Credit **\$9,500,000**

Investment Framework (IF) Transactions – 4-9X Multipliers

Investment must be linked to R&D and/or Commercialization activities.

Investment must be made directly by the Contractor or its Eligible Donor with a Canadian SMB.

Example: Investments are made to assist SMB in commercializing process which will have a considerable new market in the coatings industry.

Year 1 Investment (assuming all investments made in Year 1)	Investment	ITB Credit
Cash for R&D activities: Nine X (9) Value	\$1,000,000	\$9,000,000
Licence for IP (3 rd party valued): Nine X (9) Value	\$5,000,000	\$45,000,000
In-kind transfer of Equipment: Seven X (7) Value	\$500,000	\$3,500,000
In-kind transfer of Knowledge: Four X (4) Value	\$250,000	\$1,000,000
Total Investment in Cash and Kind	\$6,750,000	
Total Potential ITB Credit		\$58,500,000
ITB Credit at Year One (50%)		\$29,250,000
ITB Credit at end of 5 years (50%)		\$29,250,000

Skills Development and Training Transactions

Recognizing that a skilled workforce is critical to meeting the challenges of an innovative economy, Skills Development and Training has been added as a fifth pillar to the VP Guide.

On a procurement-by-procurement basis bidders will be encouraged to identify skills development and training opportunities for Canadians. This approach will ensure that investments advance employment opportunities for Canadians.

This pillar may also consider under-represented groups (e.g. women, Indigenous Canadians) in the defence industry and other economic sectors.

Through the VP, investments in skills development and training will be encouraged that address current or anticipated skills gaps and training opportunities.

Further, points under this pillar may be awarded whether directly related to a specific Key Industrial Capability, the defence industry, or other sectors of the economy.

Skills Development and Training Transactions – Some Transactions have Multipliers

Where gaps and opportunities have been identified through workforce analysis and industry engagement, bidders will be encouraged to identify initiatives to develop skills through:

- work integrated learning programs (e.g., co-operative education; work placements);
- apprenticeship programs;
- a new or existing skill development program at or through a post-secondary institution; and
- other activities that align with the ITB objectives for skills development and training.

Skills Development and Training Transactions - \$ for \$ CCV

A Skills Development and Training Transaction will receive Credit for the value of the cash contribution or in-kind contributions if it involves:

- **Donations of equipment or resources** intended for skills development or training purposes at current market value (e.g. computers or software)
- The **hourly rate of pay** associated with knowledge or technology transfer (e.g. the hourly rate of pay for an employee loaned for teaching or training)
- **Salaries of students** for work-integrated learning (e.g. co-operative education and work placements)
- **Sponsorship costs for apprentices** enrolled in a nationally, provincially, or territorially recognized apprenticeship program to obtain the necessary training to complete an apprenticeship program

Skills Development and Training Transactions - \$ for \$ CCV (Cont'd)

A contribution to the personal certification of a Canadian citizen or permanent resident granted by a provincially, territorially, nationally, or internationally (if no equivalent Canadian association exists) recognized trade association or representative body of a specific profession

A contribution to skills development programs, including a contribution to a charity registered with the Canada Revenue Agency or a not-for-profit organization incorporated federally or in the province or territory where it operates, for work related to Skills Development and Training (e.g. science, technology, engineering, or mathematics summer camps)

Educational costs, including tuition or course fees, and travel expenses incurred in Canada and covered by the Contractor or Eligible Donor to provide employees with new or upgraded skills that are demonstrably different, improved, or expanded as compared to employees' current skills and which will enhance their career or employment potential

Skills Development and Training Transactions – With Multipliers

The Transaction will receive a Credit multiplier of five (5) times if it involves a contribution to Skills Development and Training for Indigenous Peoples or majority Indigenous-controlled educational or training facilities.

The Transaction may be eligible to receive a Credit multiplier of five (5) times if it involves a contribution to Research Skills Development * (knowledge and expertise acquired by students through the conduct of research at a Post-Secondary Institution or through Collaborative Research led or supervised by a faculty member in Canada) under Article 7.5.1 or 7.6.1.

7.5.1. A Research and Development Transaction shall receive a Credit multiplier of five (5) times if it involves:

- **7.5.1.1.** a cash contribution to a Post-Secondary Institution for research or the establishment of research chairs or Collaborative Research undertaken with a Post-Secondary or Public Research Institution.

7.6.1. An Allowable Investment into a consortium shall receive a Credit multiplier of five (5) times if it involves:

- **7.6.1.1.** the Contractor or an Eligible Donor;
- **7.6.1.2.** a minimum of one (1) Canadian Company as a Recipient; and
- **7.6.1.3.** a minimum of one (1) Post-Secondary Institution or Public Research Institution as a Recipient.

Skills Development and Training Transactions

7.4.4. The following will not be eligible for Credit

- **7.4.4.1.** any contribution made directly to the Contractor or Eligible Donor by any level of government to cover the cost in whole or in part of the Skills Development and Training activity; and
- **7.4.4.1.** the value of an in-kind contribution that involves a licence for Intellectual Property.

7.4.5. Valuation for Credit purposes

- **7.4.5.1.** the initial value will be the cash contribution from a Contractor or Eligible Donor to a Recipient; and
- **7.4.5.2.** the value of any in-kind contributions would then be added.

Examples of IRB and ITB Transactions with Multipliers Involving R&D, Commercialization, SMBs, Consortiums

Sourced from ISED Success Stories
and Public Press Releases

Nova Scotia Community College and Irving Shipbuilding Centre of Excellence – Skills Development and Training

In order to diversify their workforce and respond to the growing need for skilled workers in their community, Irving Shipbuilding Inc. (ISI) has developed the Irving Shipbuilding Centre of Excellence with Nova Scotia Community College which creates an entry point for underrepresented groups to train for careers and benefit from Canada's revitalized shipbuilding industry, including:

- Pathways to Shipbuilding for **Indigenous Canadians**,
- Pathways to Shipbuilding for **African Nova Scotians**, and
- A partnership with **Women Unlimited** (for under- or unemployed women).



MAN Energy Solutions Selects Modest Tree (NS) to Provide VR Training for Canada's Arctic and Offshore Patrol Ship GE Engines

In 2015, Irving Shipbuilding, the prime contractor and shipbuilder, selected GE Canada to provide electrical power, propulsion systems, installation and commissioning services for each ice-capable Arctic and Offshore Patrol Ship (AOPS).

MAN Energy Solutions is a subcontractor of GE Canada.

Modest Tree is a NS-based simulation and training software developer that is creating:

- A first-of-its-kind VR training solution in the marine sector to help train the men and women of the Royal Canadian Navy to operate and maintain the engines of the AOPS) currently under construction at Halifax Shipyard. Seven new full-time technology positions in software will be developed.



Boeing partners with Vancouver-based RaceRocks on data analytics project – May 29, 2019

The Boeing Company (Boeing) has made an Industrial Technological Benefit (ITB) Investment Framework (IF) placement into RaceRocks 3D Inc (RaceRocks) based in Victoria, BC. The data analytics platform will allow Boeing and other Aerospace and Defence (A&D) primes that collect and store big data to get data out of limited in-house IT infrastructures and deploy it to an ITAR and CGP compliant cloud based platform.

The ITB IF placement will enable the R&D project, now in a prototype stage, to move into Minimal Viable Product (MVP) and through to commercialization and will allow highly scalable processing and use of industry best practices, artificial intelligence (AI), and machine learning (ML). Initial testing of the prototype has shown the ability to take a project that took 16 hours to solve with existing capabilities and solve it in 22 seconds. The increased efficiency and throughput this represents will greatly enhance the predictive maintenance capabilities of Boeing's data scientists and support their various solutions for military aircraft In Service Support (ISS) and Performance Based Logistics (PBL) programs, as they will be able to iterate faster, on larger datasets, and deliver value to customers quicker.

"We are working to have a first to market solution that will win market share," explains RaceRocks CEO, Scott Dewis.

RaceRocks has been supporting Boeing Vancouver's data science team for over a year, particularly on C-17, KC-135 and KC-46 programs. RaceRocks will be able to work outside the rigid processes that internal IT teams would need to go through, while still maintaining compliance with security and IT requirements. RaceRocks also currently supports other A&D primes with data analytics as a service—demonstrating a near-term market interest to exploit with a functioning data analytics production environment.

Bluedrop to Develop a V-22 Osprey Special Mission Aviator Ramp Trainer for Boeing

HALIFAX, Nova Scotia — Bluedrop Performance Learning Inc. (TSX-V: BPLI) and its subsidiary, Bluedrop Training & Simulation Inc. (“Bluedrop”), secured an investment from Boeing to develop a next-generation Special Mission Aviator Ramp Trainer (SMART) for the V-22 Osprey.

The program was funded under the Innovation, Science and Economic Development Canada (ISED), Investment Framework Transaction program by Boeing. The program includes funding to Bluedrop, engineering support from Boeing and a three-year commitment to support the development and ongoing sales of the new product within the Boeing global supply chain. This is the second Boeing investment in Bluedrop—the first successful project was to develop a next-generation Special Mission Aviator Ramp Trainer (SMART) for the CH-47 Chinook.

The development phase is expected to take between 12 and 18 months to build a full-sized virtual reality ramp trainer with a high fidelity immersive environment, and enhanced specific mission capabilities including ramp operation, hoisting systems, gunnery systems and various mission critical procedural training capabilities. The new SMART is expected to interface to the Boeing’s cockpit training devices to allow full interactive crew training and mission scenario training.

Boeing and C-CORE partner to advance remote sensing systems capability in Atlantic Canada – 30/05/2019

Following closely on the success of the initial Integrated Remote Sensing for the Canadian Arctic (IRSCA) project, The Boeing Company partners again with C-CORE for a second project – IRSCA2. IRSCA's goal is to advance remote sensing technologies (space-borne, airborne and ground segment), as well as the data analytics that convert sensor data into insights that support decision making.

The initial IRSCA project established C-CORE's presence in the Arctic with a smallsat satellite reception station and advanced the company's geospatial analytics capability as well as its capability to analyze various concepts of operations through modelling and simulation techniques. C-CORE's Arctic ground station has been receiving greenhouse gas emissions data for the past eighteen months from GHGSat's world-leading satellite technology.

IRSCA2 builds on the previous project's developments and expands C-CORE's ground station capability to include mission management and control functions for airborne and satellite platforms. Over the next 18 months, IRSCA2 will result in an integrated mission management and control system for C-CORE's ground segment that can fly multiple platforms. Seamatica Aerospace, also based in Canada, will be contracted to develop an expert system to work with the mission management and control system, and autonomously fly various airborne systems.

"The confidence that Boeing has placed in C-CORE with the IRSCA initiative has been extremely helpful in expanding C-CORE's services and markets," states Paul Griffin, President and CEO of C-CORE. "We have developed innovative satellite ground systems and, more importantly, a relationship with Boeing that is building towards future systems".

Boeing's partnership on the IRSCA2 project is a result of the Government of Canada's Industrial Technological Benefits (ITB) policy that promotes innovation, technology development, job creation and economic growth in Canada.

Bluedrop Performance Learning – Develops Aircrew Training and Maintenance Training for CAE IRB Transaction

Bluedrop is a business based in **Atlantic Canada** which provides advanced e-learning courseware, learning platforms and simulations to support the defence and aerospace sectors, providing mission critical training solutions.

CAE selected Bluedrop on two of its projects:

- To provide aircrew training analysis and courseware development on CAE's Operational Training Systems Provider (OTSP) contract; and
- To provide maintenance technician training courseware on CAE's C130J (Lockheed Martin Hercules) Maintenance Training Program contract.

Working with Bluedrop will help CAE meet its overall **IRB** obligations on these projects as well as KIC Training and Simulation.

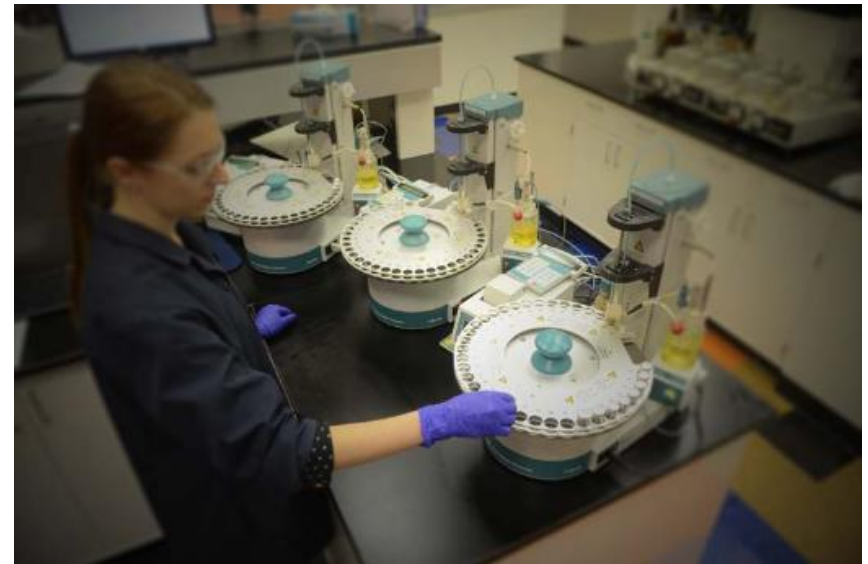
Bluedrop's work with CAE has helped it expand its business, cement its position in the aerospace and defence sector, and given Bluedrop the opportunity to be a key partner in providing aircrew and technical training for other military platforms in Canada.

Lockheed – Investment Framework Projects – Gastops Ltd. Summer 2017

<https://vanguardcanada.com/2017/05/31/lockheed-martin-invests-in-four-companies-as-part-of-itb-obligations/>

Gastops Ltd. is an **Ottawa** firm that provides **state-of-the-art sensing equipment for use in advanced fluid testing (oil analysis)**.

This Gastops/Lockheed Martin **Investment Framework Agreement** will lay the foundation for the introduction of **an innovative** and highly cost effective new approach to health management for operators of aircraft and other high value equipment.



Lockheed – Investment Framework Projects – Contextere Summer 2017

<https://vanguardcanada.com/2017/05/31/lockheed-martin-invests-in-four-companies-as-part-of-itb-obligations/>

Contextere is an emerging **Industrial Internet of Things** software company in **Ottawa** that is **developing a new wearable and mobile technology** to help industrial workers **be safer and more efficient**.

The **\$1.1 million USD** investment will allow *contextere*, an emerging Artificial Intelligence (AI) software company based in Ottawa, Ontario, to **design, develop and deliver** an intelligent personal agent for aerospace and defense maintenance personnel.

The system will be applicable in field service and industrial inspection activities as well as more complex maintenance, repair and overhaul (MRO) tasks.

Lockheed Martin is making this investment as part of their ITB obligation for the in-service support of the 17 CC-130J Super Hercules transport aircraft, which were delivered to the Royal Canadian Air Force in 2010.

KIC – Artificial Intelligence – has R&D and Commercialization components

Lockheed – Investment Framework Projects – Summer 2017

<https://vanguardcanada.com/2017/05/31/lockheed-martin-invests-in-four-companies-as-part-of-itb-obligations/>

Metamaterial Technologies Inc. is a **Halifax** company that is **designing and developing** new multi-functional materials to **help solar panels absorb more light**; **\$5.6M** agreement with Lockheed Martin.

MTI has signed an **Investment Framework Agreement** under the Industrial and Technological Benefits (ITB) Policy with Lockheed Martin. Lockheed Martin is making these investments as part of its ITB obligations for the in-service support of the C-130J Super Hercules, a transport aircraft.

KIC – Advanced materials – has R&D and Commercialization components



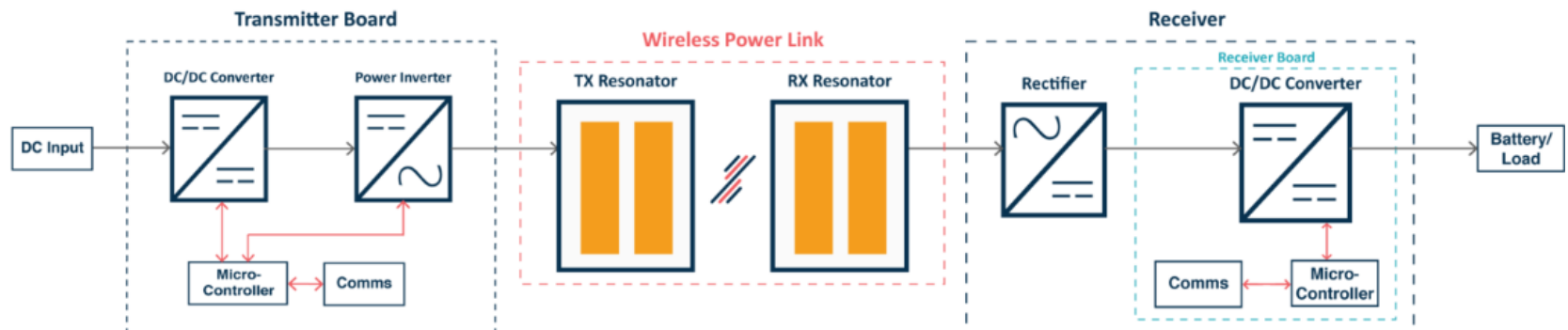
Lockheed – Investment Framework Projects – Summer 2017

<https://vanguardcanada.com/2017/05/31/lockheed-martin-invests-in-four-companies-as-part-of-itb-obligations/>

Solace Power Inc., a **wireless power research and development company** based in **Mount Pearl, Newfoundland and Labrador**. The **\$2.3 million USD** investment will enable Solace Power, an Atlantic Canada-based, small and medium-sized enterprise (**SME**) **research and development company**, to accelerate **commercialization** of its wireless power technology called Resonant Capacitive Coupling, or RC².

Solace's RC² technology enables **unmanned aerial vehicles (UAVs)** to stay in the air longer by recharging autonomously. **Beyond UAVs, the versatility of RC² has been demonstrated in the automotive and office furniture markets, and in manufacturing and maintenance processes.**

KIC – Autonomous Technologies – has R&D and Commercialization components



Mannarino awarded largest ever Canadian SME offset investment by Lockheed Martin – Investment Framework

<https://www.skiesmag.com/press-releases/mannarino-awarded-largest-canadian-sme-offset-investment-lockheed-martin/>

MONTREAL, April 3, 2017 /CNW Telbec/ - Mannarino Systems & Software, Inc. (MANNARINO) announced today that it has signed an Investment Framework Agreement under the Industrial and Technological Benefits (ITB) Policy with Lockheed Martin (NYSE: LMT), which represents the largest investment ever made by Lockheed Martin into a Canadian Small and Medium-Sized Enterprise (SME).

This agreement enables MANNARINO to **develop and commercialize** its own proprietary airborne software products and will complement MANNARINO's existing airborne engineering and certification services offering.

The offset investment relates to the 17 CC-130J Super Hercules aircraft ITB obligation.

This important and groundbreaking investment by Lockheed Martin into MANNARINO will result in job creation of **20+ engineering R&D positions**, as well as **new jobs in product commercialization**, all at MANNARINO's offices in Montreal, Quebec.

KIC – Aerospace Systems

Lockheed – Investment Framework Projects – Summer 2018

KIC – Materials

<https://privatecapitaljournal.com/lockheed-martin-provides-us-5m-funding-equispheres/>

Ottawa, May 31, 2018 – Equispheres has received a \$5million USD investment from Lockheed Martin under the IRB and ITB Policy. This investment enables Equispheres, an Ottawa based materials science company, **to accelerate its growth in the provision of High-quality materials required for advanced technologies** such as additive manufacturing, 3D printing and cold spray deposition.

KIC – Advanced Materials – has R&D and Commercialization components

**\$5M USD = \$6.5M CDN with a likely average multiplier of 7
= \$45.5 Million CCV**



Relevant OEMs – Current and Potential Obligators

Contractors (OEMS and the Eligible Donors)
Currently Have ITB Obligations

Bidders and their Partners (Future Eligible Donors)
Undertake and Plan for ITB Transactions to
Support Bids

Select Outstanding Commitments of Major OEMs as of August 2019

Source: <https://www.ic.gc.ca/eic/site/086.nsf/eng/00001.html>

Company	Outstanding ITB Commitment	Deadline for Achievement	Upcoming Bids
Rheinmetall – Various Divisions and Contracts	\$44M	2026	Various Heavy Vehicle programs
Raytheon – Phalanx Depot Support – Omnibus 3	\$143M	2027	Various contracts including North Warning System
Mack Defence / Volvo	\$9M	2022	All vehicle programs
MacDonald Dettwiler – Radar, ISS, +	\$40M	2023	All space related projects
Lockheed Martin – C130J Tactical Airlift ISS 2	\$55M	2024	FAcT, Future Fighter, Maritime Programs, Trainers/Simulators
Lockheed Martin – Halifax Class Ship Modernization – Combat Systems Integrator + Victoria Class	\$181M	2019	FAcT, Future Fighter, Maritime Programs, Trainers/Simulators
Lockheed Sikorsky – Maritime Helicopter Project – Maintenance	\$207M	2028	FAcT, Future Fighter, Maritime Programs, Trainers/Simulators
CAE – CH-147 Training Systems	\$44.7M	2035	FAcT, All Trainers/Simulators
CAE – FWSAR Training System	?	?	FAcT, All Trainers/Simulators
FFG – Flensburger Fahrzeugbau Gesellschaft (FFG) mbH	\$44M	2018 (was 2017)	Future Heavy Vehicle Programs - Tanks

Select Outstanding Commitments of Major OEMs as of August 2019

<https://www.ic.gc.ca/eic/site/086.nsf/eng/00070.html>

Company	Outstanding ITB Commitment	Deadline for Achievement	Upcoming Bids
L3 Harris – CF – 18 Avionics – Optimized Weapon System Support	\$167M	2020 (was 2017)	Super Hornet Upgrades – Radio programs, FAcT, Future Fighter
Bell Helicopter – Canadian Coast Guard Medium and Light Helicopters	\$8M	2020	FAcT, All Trainers/Simulators, Vehicle programs
Babcock – Victoria In-Service Support	\$197M	2018	Navy Programs, FAcT
Irving Shipbuilding + Thales JV – Artic Offshore Patrol Ship – Halifax Class Modernization	\$1.5B	2018-2026	Navy Programs
Seaspan – Joint Support Ship, Offshore Fisheries Science Vessels, Halifax Ship Modernization	\$173M	2018-2021 (was 2020)	Navy Programs
Textron Systems Canada – Tactical Armoured Patrol Vehicle – Maintenance	\$22M	2022	FAcT, Land Vehicles, Simulation, Aircraft
StandardAero	\$47M	2025	Future Aircraft engine programs
General Dynamics – Multiple Contracts and Divisions	\$535M \$3Billion (LAVs?)	2017-2025 ????	FAcT, Land Vehicles, PM, Data Management, Radios etc.

Other Defence Companies Active in Canada With or Pursuing Contracts

- **Bluedrop Training and Simulation**
- **Magellan**
- **IMP and Cascade Aerospace**
- **Weatherhaven**
- **Airbus**
- **Armatec**
- **DEW Engineering**
- **Nortrax**
- **Oshkosh**
- **Rolls Royce**
- **General Electric**
- **Polaris**
- **SED Systems (A division of Calian Ltd.)**
- **Ballard Power Systems**
- **Bobcat**
- **Marshall Aerospace and Defence Group**
- **Liebherr**
- **CSE Software (CAT)**
- **CAT/FINNING**
- **Mercedes Benz – Daimler**
- **Navistar**

Other Defence Companies Active in Canada With or Pursuing Contracts

- **KF Aero**
- **Soucy Group**
- **Toromont**
- **NP Aerospace**
- **J Squared**
- **Nexter**
- **BAE Systems**
- **BAE Bofors**
- **DRS Technologies**
- **ADGA**
- **Dassault**
- **Saffran**
- **SAAB**
- **EODC**
- **Boeing**
- **Leonardo**
- **ATCO Frontec**
- **Bombardier**
- **SkyAlyne**
- **Kinetics Drive Solutions**
- **GSTC**
- **MTU Maintenance**
- **Iveco**
- **CHN**

Major Upcoming Procurements Relevant to Manitoba's Industrial Sectors

Heavy Vehicles

Aerospace

Logistics Vehicle Modernization



Logistics Vehicle Modernization Project – Implementation Phase – RFP not Yet Released - \$1.5+ Billion

The Logistics Vehicle Modernization project will acquire new fleets of light and heavy logistics vehicles, trailers, vehicle modules, armour protection kits, initial in-service and logistic support and fund associated permanent infrastructure upgrade and construction requirements.

The project will mainly replace the Light Support and Heavy Logistics Vehicle Wheeled fleets (LSVW and HLVW) with new light trucks and trailers of a 4 to 5 tonne cargo capacity, modules to mount on the trucks and trailers that will provide accommodation space to conduct various tasks (such as office space and workshops).



Logistics Vehicle Modernization Project – Implementation Phase – RFP not Yet Released - \$1.5+ Billion

The project will also deliver a heavy truck and trailer with a 16.5 tonne cargo capacity, trailers for engineer construction equipment and to transport a main battle tank, modules for accommodation and specialized cargo (such as fuel) and an armoured protection kit for the cab.

This fleet of trucks will be supported by an in-service support arrangement that provides for parts and sustainment for the planned 20-30 year life of the vehicles.

This capability will be used for domestic and expeditionary training and operations.



Logistics Vehicle Modernization Project – List of Qualified Suppliers

On July 8, 2019, Canada established a list of qualified suppliers who have demonstrated the technical ability to develop and propose solutions for the Logistics Vehicle Modernization project.

Only these suppliers will be invited to participate in the next phases of engagement and to submit bids in response to the Request for Proposals (RFP).

This does not include the team members or Tier 1 Suppliers.

Daimler AG

General Dynamics Land Systems

Iveco Defence (CNH Industrial)

Mack Defense LLC – Volvo

Navistar Defense LLC

Oshkosh Defense

Rheinmetall Canada Inc. and Rheinmetall MAN Military Vehicles GmbH

Common Heavy Equipment Replacement (CHER)



Common Heavy Equipment Replacement – RFP not Released

\$250-500M Estimated Budget

<http://dgpaapp.forces.gc.ca/en/defence-capabilities-blueprint/project-details.asp?id=1016>

Objective:

By recapitalizing existing fleets of Heavy Support Equipment (HSE), this project will improve Canadian Armed Forces (CAF) to execute both combat and stability operations.

It must provide:

- mobility (obstacle breaching)
- road and bridge construction and maintenance)
- counter-mobility (obstacle construction)
- survivability (camp, decoy, protective position construction)
- sustainment support (loading, moving, unloading aircraft, watercraft, and land-based vehicle cargo) to CAF units

Common Heavy Equipment Replacement (CHER) – RFP not Released

\$250-500M Estimated Budget

<http://dgpaapp.forces.gc.ca/en/defence-capabilities-blueprint/project-details.asp?id=1016>

CAF will be capable of activating and operating extended lines of communication from Canadian ports of embarkation to theater ports of disembarkation.

It will include capabilities to conduct large scale horizontal construction activities ranging from runway repairs to road construction and maintenance.

It will also provide an air-transportable capability that is able to operate on rough terrain and off road surfaces and function effectively in both moderate and extremes of climate.

Vehicles will include capabilities such as operator protection, engines capable of burning high-sulphur diesel or kerosene-based fuels, and platforms able to meet CAF and NATO strategic and operational transportability requirements.

Special Requirements of CHER

Drawing on its extensive experience in Afghanistan and projecting future engagements, the Army has developed common high-level mandatory requirements (HLMR) for most of its logistics and support equipment. For CHER, those include:

Armour

The ability to negotiate off-road

Operate with NATO standard fuels in dry & humid conditions ranging from –46 to +49°C

Chemical resistant surfaces

Be air transportable by the C-17 Globemaster

“It’s no longer just your traditional construction equipment, and that opens the door to a lot more companies.”

While companies such as John Deere, Caterpillar, CASE (CNH) and Mack Defense will all be interested in the CHER project, it is unlikely any of them would be able to deliver both heavy support vehicles with the necessary armour and material handling equipment on their own.

The requirements have been bundled and there may now be different bidders for each bundle and different ITB requirements as well.

Common Heavy Equipment Requirements as of Latest Buy and Sell Document

https://buyandsell.gc.ca/cds/public/2018/06/11/fdda3dc30ad7fc9978e9804ecc391746/ABES.PROD.PW__HS.B634.E74903.EBSU002.PDF

Dozer	36	High Speed Armoured Backhoe	12
-Armoured Operator Protection	6	Dumb Box Module	40
Loader	30	Lowbed Trailer	8
-Armoured Operator Protection	6	Tilt Trailer (Commercial)	69
Grader	25	Backhoe (Commercial)	31
-Armoured Operator Protection	6	Dump Truck (Commercial)	31
Exavator	25	Rough Terrain Container Handler	12
-Armoured Operator Protection	6	Rough Terrain Forklift (Heavy)	20
Compactor	17	Rough Terrain Forklift (Medium)	66
-Armoured Operator Protection	4	Rough Terrain Forklift (Telescope)	114
Medium Crane	14	Rough Terrain Forklift (Light)	81
-Armoured Operator Protection	4	Heavy Equipment Simulator System	8

CHER - Preliminary Proposed Bundle Strategy – Unsure How ITBs Apply to Each Bundle

https://buyandsell.gc.ca/cds/public/2018/10/09/23fbd152968913a299c972f52d7ce43d/ABES.PROD.PW__HS.B634.E74903.EBSU006.PDF



Common Heavy Equipment Replacement – Probable Bidders and/or Team Members

Nortrax Canada (John Deere)

Allied Brands

Caterpillar – Finning / Toromont

Rheinmetall

Mack Bidder using Volvo Construction

Oshkosh

Liebherr

Case / New Holland

Cummins

Armatec

EODC

Hitachi

Brandt

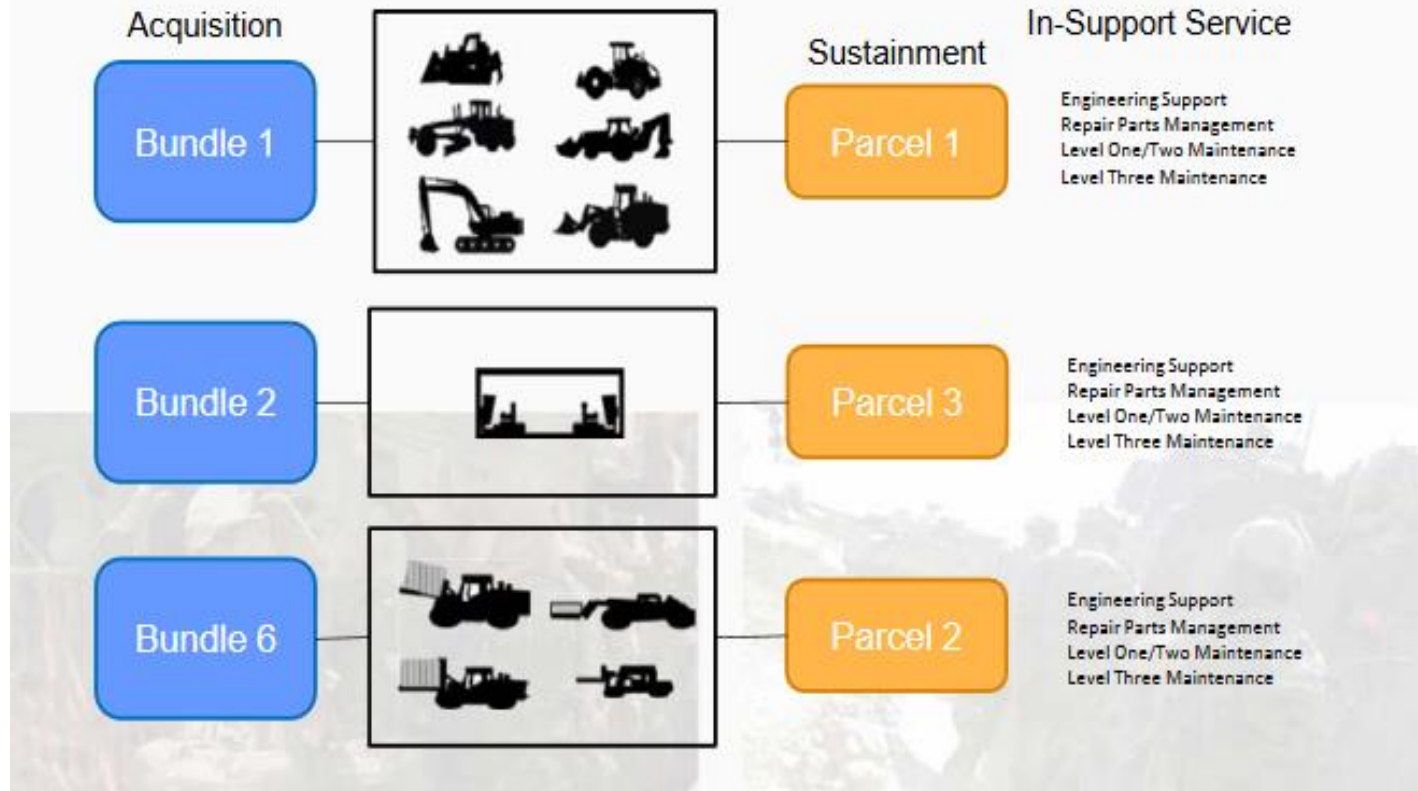
Bobcat

CHER - Preliminary Proposed Bundle Strategy – Acquisition and Sustainment Bundled

CHER Sustainment Strategy



In-Service Support (ISS) Linked to Acquisition: one RFP resulting in two contracts to the same supplier

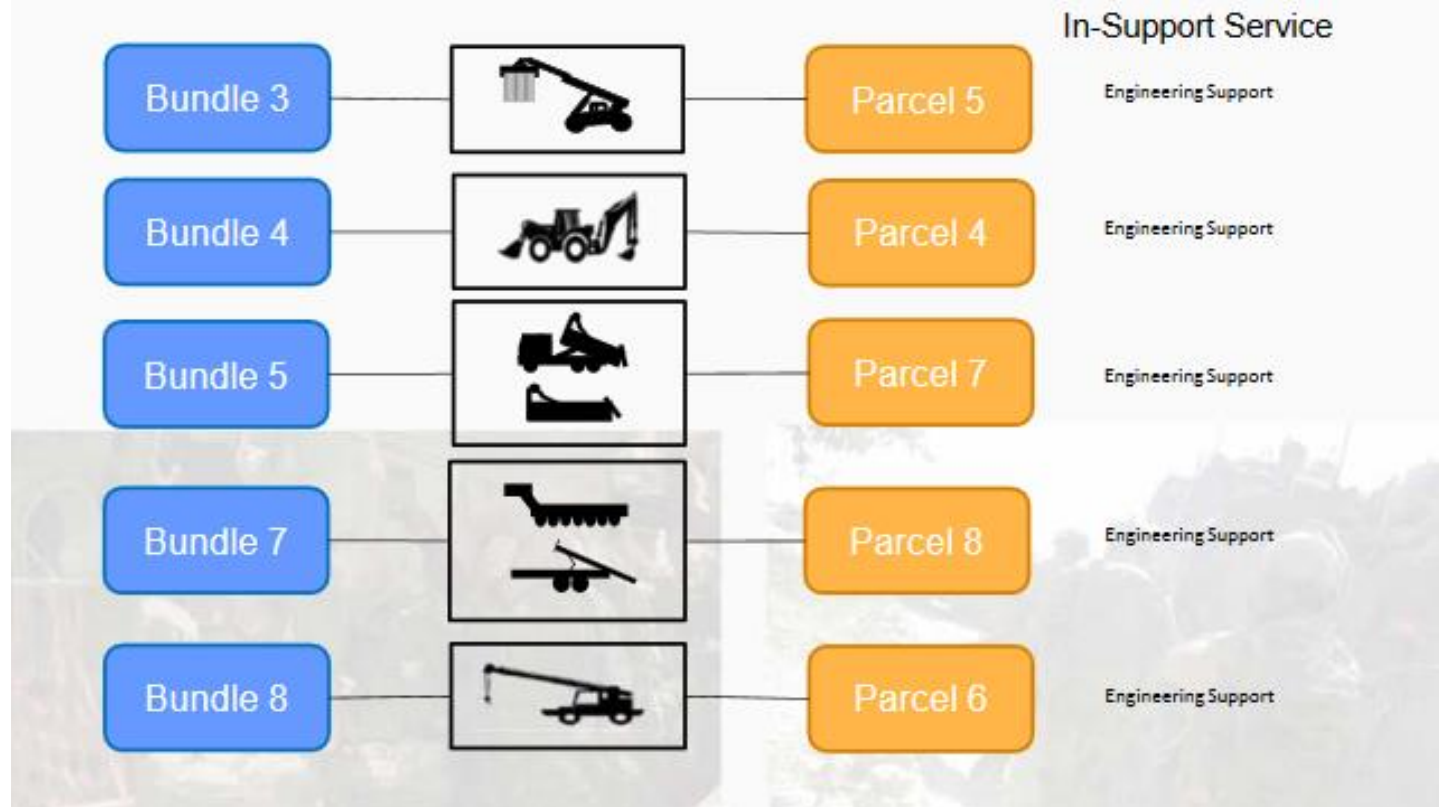


CHER - Preliminary Proposed Bundle Strategy – Acquisition and Sustainment Bundled

CHER - Sustainment Strategy (Cont.)



ISS Linked to Acquisition: one RFP resulting in two contracts to the same supplier

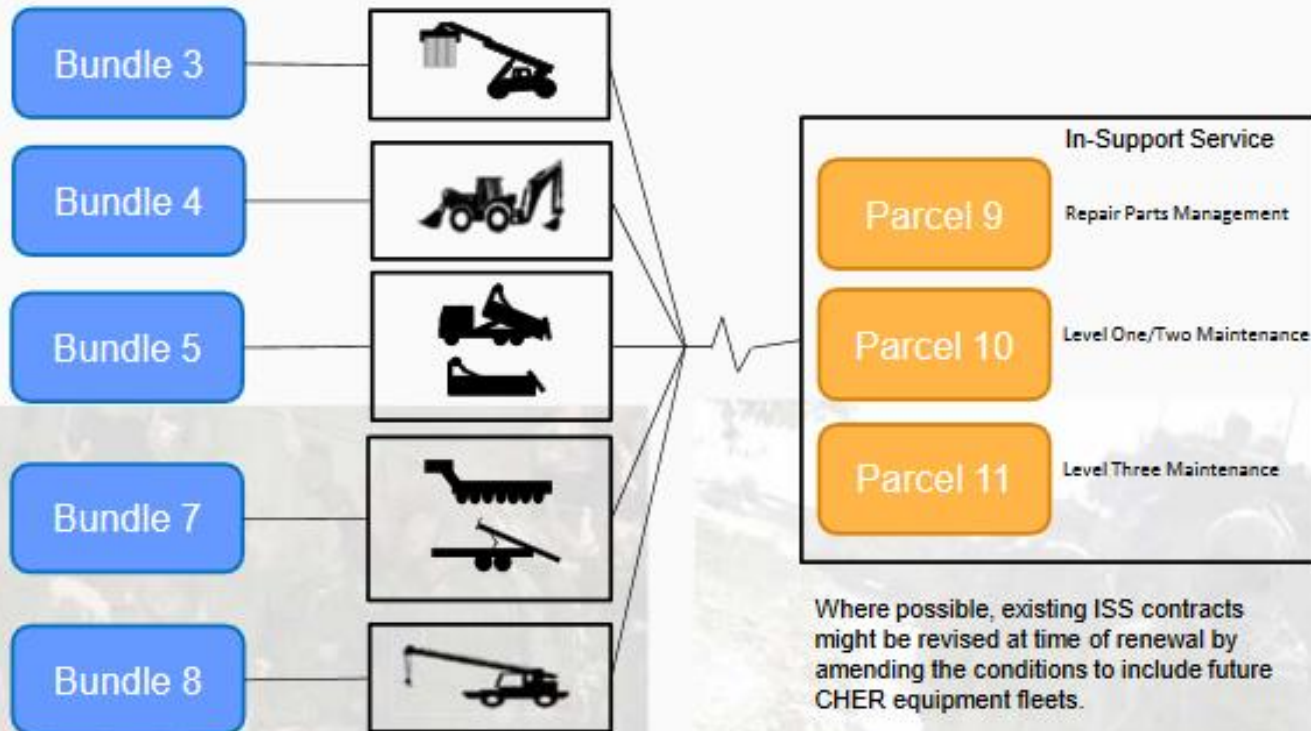


CHER - Preliminary Proposed Bundle Strategy – Acquisition and Sustainment Bundled

CHER - Sustainment Strategy (Cont.)



ISS Separate from Acquisition: ISS contracts awarded through separate RFPs.



Future Aircrew Training (FAcT)



Future Aircrew Training (FAcT) – RFP not Released \$5-6 Billion over 20 years

The Department of National Defence (DND) is seeking an aircrew training services provider in support of the FAcT program.

These services will be provided in collaboration with DND.

FAcT services will include classroom instruction, simulator and flight training, as well as numerous on-site support activities at Southport, Moose Jaw and Winnipeg.

The future program will include delivery of pilot training as well as aircrew training for air combat systems officers and airborne electronic sensor operators currently being performed in-house by the Royal Canadian Air Force in Winnipeg.

No international or other domestic students will be trained at the facilities.

Detailed information will be provided in the procurement documents for Phase 3 – RFP expected 2021.

Future Aircrew Training (FAcT) – RFP not Released

\$5-6 Billion over 20 years

The Industrial and Technological Benefits Policy will be applied to this procurement, requiring the winning supplier to make investments in Canada equal to the value of the contract.

The objective of the policy is to maximize opportunities for Canadian companies, support innovation through research and development, and grow export opportunities from Canada.

Additionally, this procurement will leverage the strength of the Canadian industry in areas related to training, simulation and in-service support.

Value Proposition will be 15-25% of total score

15% of contract will be for SMBs

Future Aircrew Training (FAcT) – Procurement Strategy not Finalized \$5-6 Billion over 20 years

The project will develop and implement a relevant, cost-effective, flexible, and efficient aircrew training program to meet future aerospace requirements of the CAF.

The project must ensure a seamless transition with existing aircrew training delivered by programs like NATO Flying Training Canada, Contracted Flying Training and Support, and the training provided by 402 Squadron. Note that Fighter Lead-In Training (FLIT) is not incorporated into the FAcT Project.

The project must deliver agile and flexible courses to meet the future needs of the CAF.

Aircrew standards and control of training content will be maintained by the RCAF.

The training must meet the unique challenges of the Canadian environment, exploit technical advances to maintain relevant and cost effective training, and maximize simulation and emulation to create efficiencies and provide the best value for Canada.

FAcT is envisioned as an acquired service contract.

Future Aircrew Training (FAcT) – One Contract Covering All

On December 10, 2018, Canada established a list of qualified suppliers that demonstrated their ability to meet Canada's needs, as defined in the Invitation to Qualify. Here is the list of qualified suppliers (in alphabetical order):

Airbus Defence and Space

Babcock Canada Inc.

Leonardo Canada

Lockheed Martin Canada Inc. and L3

SkyAlyne Canada Limited Partnership (CAE and KFAero – both incumbents)

Only these suppliers are invited to participate in the next phases of engagement and to submit proposals in the competition.

KFAero currently holds the CFTS contract at Southport, Manitoba

CAE currently holds the NATO contract at Moose Jaw, Saskatchewan

ACSOs and AESOs in Winnipeg

Entire counteract could be a P3 – similar to that of the RAF

FAcT Scope – Summary

https://buyandsell.gc.ca/cds/public/2018/11/15/4f308d03150f881579561dca26f02817/ABES.PROD.PW__NP.B002.E27061.EBSU000.PDF

For the duration of the goods and services contract (i.e., likely for a period of 20 or more years), the scope of the goods and services to be provided by the successful FAcT Supplier will include:

- courseware development
- flight training in live aircraft and simulators
- classroom instruction
- all support services required to enable the FAcT program—such as:
 - aircraft
 - ground-based training systems (GBTS)
 - simulator and infrastructure asset management
 - base support functions
 - air traffic control
 - on-site support activities

Potential Platforms for FAcT

There are a significant number of equipment suppliers in the running for FAcT – from Simulators, Rotary, Single and Multi engine Aircraft – as well as the Engines, Landing Gear, Rotor and Fixed Wing Blades, etc.

Some of the companies who will be offering platforms to the aforementioned bidders could be:

Grob G 120 TP Prefect	Bell helicopter	Beechcraft King Air 350
Beechcraft T-6C (Texan II)	CAE simulators	Leonardo TH-119 Helicopter
TRU simulators (Textron)	Leonardo M-346 aircraft	Boeing/Saab trainer
Bluedrop simulators	Hawk T-6	Cessna Citation
Beechcraft T-6C	Embraer Phenom 100	Pilatus PC-21
Airbus EC120 helicopter	Bell 407	Airbus AS350B2 Helicopter

FAcT Infrastructure and Site Services

https://buyandsell.gc.ca/cds/public/2018/11/15/4f308d03150f881579561dca26f02817/ABES.PROD.PW__NP.B002.E27061.EBSU000.PDF

Infrastructure and site services for training facilities include:

- classrooms
- student study areas
- instructor spaces
- briefing and debriefing rooms
- ground-based training systems and full flight simulator bays

Infrastructure and site services for aircraft maintenance will include:

- hangars
- tool storage
- other work areas

Accommodations

FAcT Infrastructure and Site Services

https://buyandsell.gc.ca/cds/public/2018/11/15/4f308d03150f881579561dca26f02817/ABES.PROD.PW___NP.B002.E27061.EBSU000.PDF

Depending on the location, infrastructure and site services for airfield support may include:

- fire and rescue facilities
- aircraft refuelling and de-icing facilities
- aircraft life support equipment

Depending on the location, infrastructure and site services for administrative support may include:

- orderly rooms
- supply, messes
- medical and dental clinics

FAcT Infrastructure and Site Services

https://buyandsell.gc.ca/cds/public/2018/11/15/4f308d03150f881579561dca26f02817/ABES.PROD.PW___NP.B002.E27061.EBSU000.PDF

Aerodrome requirements include; infrastructure within an airfield General Restricted Area (GRA), training areas, and typically include:

- airfield pavement
- ramps
- runway lighting
- communication and air navigation facilities
- hangars (new builds)
- air operations support facilities
- control towers
- aircraft rescue and firefighting facilities
- security infrastructure to current DND standards
- IFR control centres (if applicable)
- navigation aids

FACt Infrastructure and Site Services

Support Services include:

- House Keeping. Janitorial and cleaning services for all spaces less hangar floors
- Accommodations. Manage single quarters for student assignment for janitorial, weekly laundry of bedding, in and out routines
- Food Services. Dining service for three meals per day for the student load as provided, to included additional meals for night flying operations

Assume provisioning kitchenettes will be negotiated through a change order

- Property Management. Grounds keeping, building preventative maintenance inspections, maintenance with re-capitalization and new construction by change order
- Recreation Facilities
- Air Traffic Control

FAcT Scope - Details

https://buyandsell.gc.ca/cds/public/2018/11/15/4f308d03150f881579561dca26f02817/ABES.PROD.PW__NP.B002.E27061.EBSU000.PDF

The scope of FAcT covers the period from post-aircrew selection to ab initio graduation to wing standard and transfer to the Operational Training Units. Specifically, it includes the following:

Pilot

All training in the undergraduate Pilot training program:

Basic Flying Training (BTF)

Advanced Flying Training – Jet

Basic Rotary Wing

Advanced Flying Training – Fixed Wing

Advanced Flying Training – Multi-Engine

Advanced Flying Training – Rotary Wing

ACSO and AES Op

All training in the undergraduate ACSO and AES Op training programs:

Air Combat Systems Operations – Basic

Air Combat Systems Operations – Tactical

Airborne Electronic Sensor Operator – Basic

Airborne Electronic Sensor Operator – Basic

QFI and proficiency training for all training courses within the ACSO and AES Op programs.

FAcT Scope - Details

https://buyandsell.gc.ca/cds/public/2018/11/15/4f308d03150f881579561dca26f02817/ABES.PROD.PW__NP.B002.E27061.EBSU000.PDF

Ground-Based Training Systems

The delivery, support and maintenance of ground-based training systems will be conducted in accordance with Transport Canada TP 9685 Aeroplane and Rotorcraft Simulator Manual (latest edition) or equivalent United States Federal Aviation Administration or European Aviation Safety Agency standards. For pilot training, ground-based training systems will include:

- Full flight simulators certified to Level D for rotary-wing and fixed-wing multi-engine aircraft;
- Flight training devices certified to Level 7 with Level D visuals (or higher) for fixed-wing advanced trainer; and
- Lower fidelity flight training devices certified to Level 4 (or higher).

Courseware, Training Plans and Learning Management Systems

The design, development, delivery and maintenance of courseware, training plans and learning management systems will be conducted to DND standards.

FACt Scope Details – Supporting Infrastructure for Southport, Moose Jaw and Winnipeg

Airfield(s)	Air traffic control	Hangars (new builds)
Accommodations	Recreation facilities	Food services
Multiplex training buildings (new builds)		

Buildings, infrastructure and services will be required to have features and benefits which meet “special” requirements of DND as well as environmental, energy, design, function, Canadian Suppliers and content, innovation etc.

The actual vehicles and their operations will also have to meet special requirements – likely all being energy efficient, hybrid and/or 100% electric as examples and thus the infrastructure for this will need to be designed and developed and again – Canadian content is required.

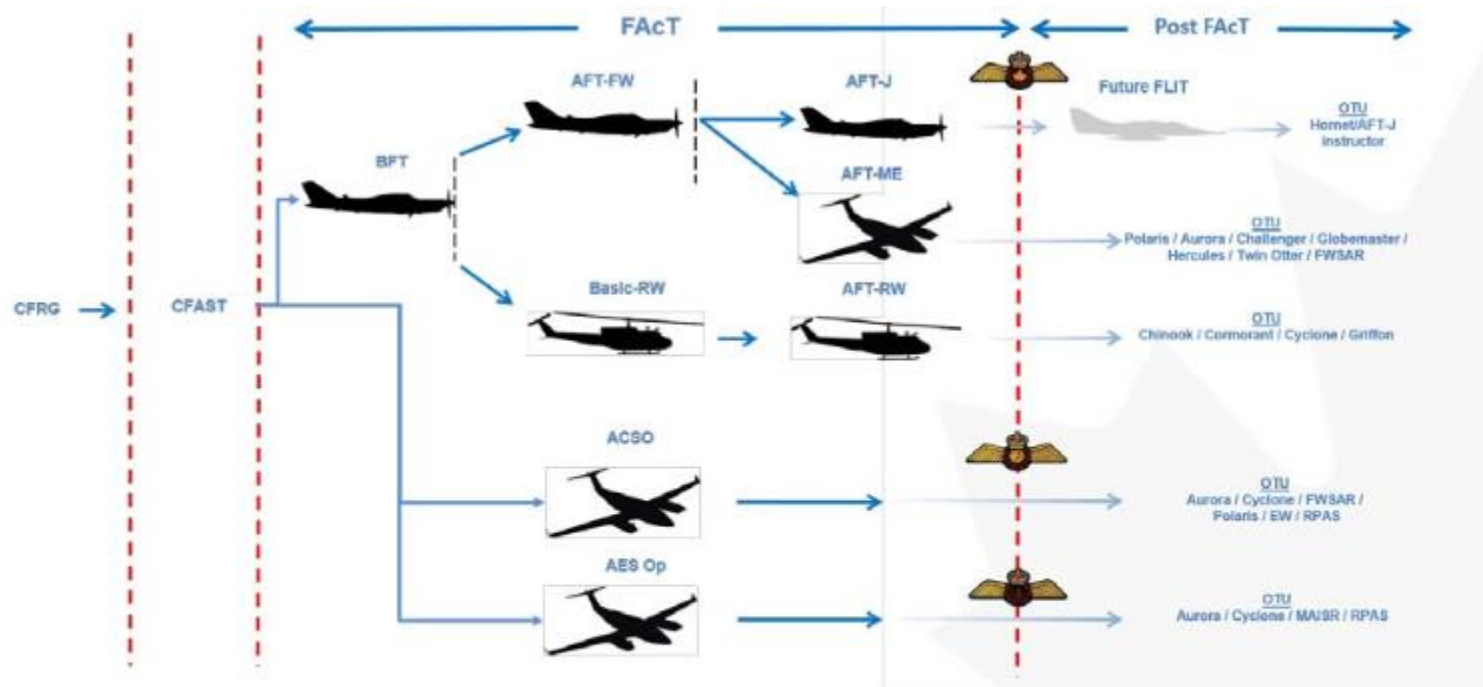
Indigenous companies, employment and training must be a significant part of this project.

Whatever solution is developed and implemented would also require applied R&D to measure effectiveness and efficiencies etc. for continuous improvement/tweaking of all activities.

It is important to maintain the heritage, memorabilia, artifacts of these bases, and given that this could be the first exposure of new CAF members to the force, it is important that these buildings and facilities are impressive and meet the student requirements.

FAcT Conceptual Design

https://buyandsell.gc.ca/cds/public/2018/11/15/4f308d03150f881579561dca26f02817/ABES.PROD.PW__NP.B002.E27061.EBSU000.PDF



FAcT = Future Aircrew Training; CFRG = Canadian Forces Recruiting Group; CFAST = Canadian Forces Aircrew Selection Testing; BFT = Basic Flying Training; AFT-FW = Advanced Flying Training – Fixed Wing; RW = Rotary Wing; ACSO = Air Combat Systems Officer; AES Op = Airborne Electronic Systems Operator; AFT-J = Advanced Flying Training – Jet; AFT-ME = Advanced Flying Training – Multi Engine; AFT-RW = Advanced Flying Training – Rotary Wing; FLIT = Fighter Lead-In Training; OTU = Operational Training Unit; FWSAR = Fixed-Wing Search and Rescue; EW = Electronic Warfare; RPAS = Remotely Piloted Aircraft Systems; MAISR = Manned Airborne Intelligence, Surveillance and Reconnaissance

Figure 1: FAcT Conceptual System Design

Future Fighter Capability Program (FFCP)



Future Fighter Capacity Program – Economic Benefits

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Canada has developed an economic benefits approach that will motivate strong economic outcomes – **This is being challenged by SAAB and Boeing – as Airbus has withdrawn from the competition**

- A highly weighted VP will motivate strategic investments in Canada
- The VP is designed to address unique requirements of the FFCP and encourage a strong competitive process

The ITB Policy will continue to be Canada's main tool to leverage long lasting economic outcomes from defence procurement.

The goal of the information session was to provide insight into the development of the FFCP Value Proposition to help Canadian industry better position themselves with the bidders on this project.

Future Fighter Capacity Program – Project Information

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PROJECT OBJECTIVE

The successful acquisition and entry into service of 88 advanced fighter aircraft along with the associated equipment, weapons and sustainment capability that leverages Canadian capabilities and contributes to economic growth and jobs.

ACQUISITION BUDGET

- \$15B-\$19B Canadian announced as part of “Strong, Secure, Engaged” Defence Policy.
- Addresses the acquisition scope as well as internal costs, such as project management costs.

TIMELINE

Request for Proposal Released to eligible Suppliers	23 Jul 2019
Submission of Preliminary Security Offer	Sep 2019
Submission of Proposals	Mar 2020
Evaluation of Proposals & Finalization with Top Ranked Bidders	2020 – 2021
Contract Award	2022
First Aircraft Delivery in Canada	Mid 2020s
Initial Operational Capability	Mid 2020s
Full Operational Capability	Early 2030s
Project Closeout	Early 2030s

Future Fighter Capacity Program – Project Information – Scope

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	AIRCRAFT	SUSTAINMENT SET-UP	SUSTAINMENT	ECONOMIC BENEFITS	INFRASTRUCTURE
Will be acquired through the FFCP competition resulting instruments	<ul style="list-style-type: none"> 88 advanced fighter aircraft 	<ul style="list-style-type: none"> publications technical data training devices (including simulators) training services electronic information environment mission data reprogramming capability spares 	<ul style="list-style-type: none"> Transition services for: aircraft and component maintenance materiel management engineering training program and device maintenance and upgrades reprogramming publications maintenance 	<ul style="list-style-type: none"> Value Propositions (VP) where Industrial targets are equal to the value of the contracts 	
May be acquired through the FFCP competition resulting instruments*	<ul style="list-style-type: none"> weapons expendables & ammunition 	<ul style="list-style-type: none"> tools, support and test equipment 	<ul style="list-style-type: none"> Transition maintenance of support and test equipment Steady-state sustainment services 		
Acquired outside of the FFCP competition		<ul style="list-style-type: none"> information management architecture required for the future fighter 			<ul style="list-style-type: none"> infrastructure required for the future fighter

* Note: Existing, or separate contracts/government arrangements, may be used for weapons, expendables, ammunition and common tools, support & test equipment while the FFCP competition resulting instruments are more likely to be used for aircraft specific tools, support and test equipment.

Future Fighter Capacity Program – Project Information – Evaluation Categories

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TIER 1 CRITERIA	TIER 2 CRITERIA
Capability (60%)	Mission Performance Evaluation
	Upgradability
	Sustainment
	Technical Criteria
	Security
	Delivery Schedule & Capability Delivery Risk
Life Cycle Cost (20%)	Acquisition
	Sustainment and Operations
ITB/VP (20%)	Acquisition
	Sustainment
Other	
Economic Impact Assessment	

Future Fighter Capacity Program – Economic Benefits – Mandatory Requirements

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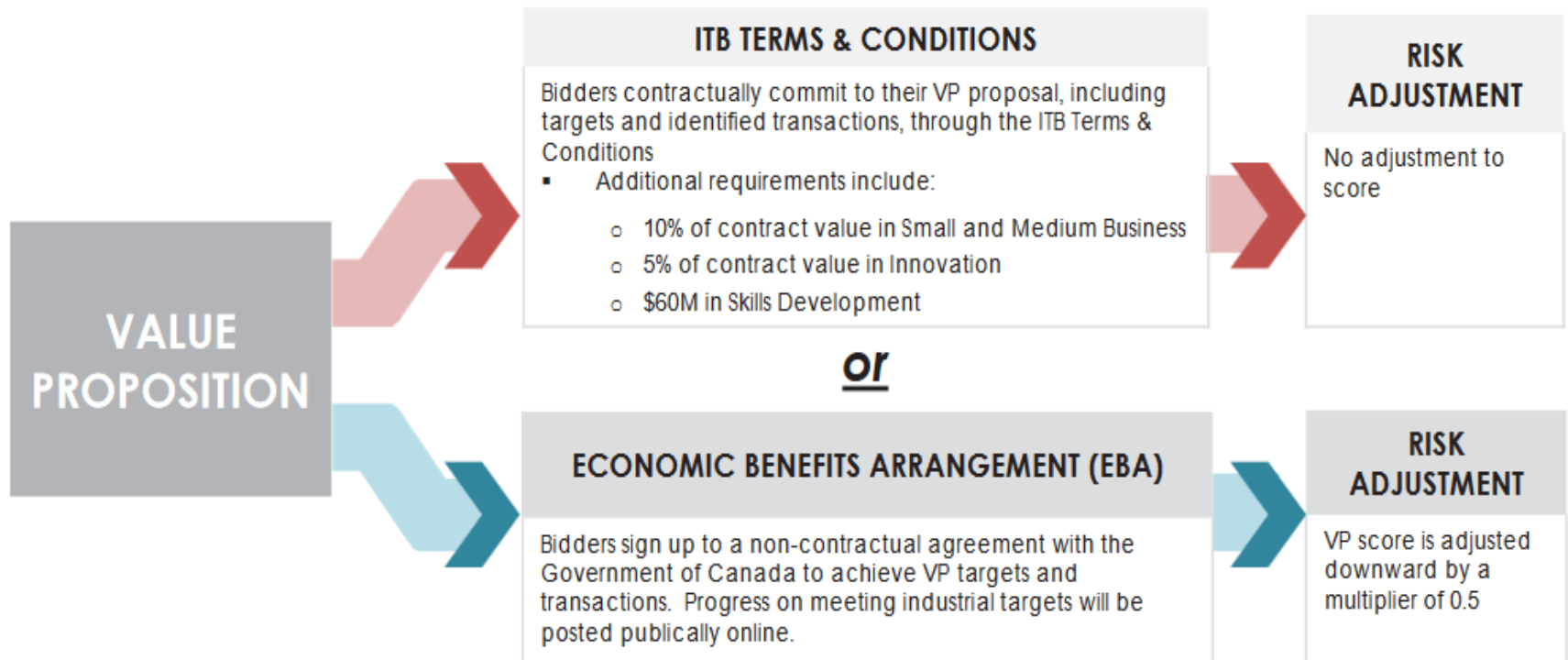
ALL BIDDERS MUST AGREE TO THE FOLLOWING KEY MANDATORIES:

- 100% contract value target to be achieved within 25 years
- 10% of contract value in identified transactions submitted at bid submission
- Mandatory VP sustainment targets:
 - 60% Training
 - 40% Maintenance Support
 - 15% Weapon System Management & Engineering
 - 40% Materiel Management
- Submission of annual reports to Canada outlining progress to achieving targets
- Submission of plans outlining the Bidder's long term vision for economic benefits in Canada

Future Fighter Capacity Program – Economic Benefits – Scoring and Evaluation

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Bidders submit a VP proposal and select the standard ITB Terms & Conditions
or an Economic Benefits Arrangement



Future Fighter Capacity Program – Value Proposition

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- The high-level project objective of the Future Fighter Capability Project is:
 - The successful acquisition and entry into service of 88 advanced fighter aircraft along with the associated equipment, weapons and sustainment capability that leverages Canadian capabilities and contributes to economic growth and jobs.
- As indicated during the release of Canada's Defence Policy, Strong, Secure, Engaged, the project acquisition budget is \$15 to \$19 Billion. This includes the establishment of the capability as well as covering the other costs associated with running the project.
- This budget does not include the sustainment or operations of the new fleet which have a separate budget.
- The key project timelines are shown on the right side of the slide, including the release of the Request for Proposal to eligible Suppliers last month on the 23rd of July.

Future Fighter Capacity Program – Value Proposition

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- The next step is for bidders to submit their preliminary security offers in September 2019. In this submission, the bidders will identify to Canada how they intend to meet Canada's security requirements.
- Canada will review the submissions and provide feedback to the bidders for the bidders to consider in the preparation of their proposals. No bidders will be eliminated at this step.
- The proposals are then due in March 2020. From there, Canada will conduct the bid evaluation process as described by Hugo, which considers multiple proposals and evaluations, as well as discussions with bidders, leading to contract award by 2022.
- The first aircraft is to be delivered in Canada in the mid-2020s followed by establishing an Initial Operational Capability.
- The capability will then be rolled out Squadron by Squadron until we achieve the full operational capability and close-out the project in the early 2030s.

Future Fighter Capacity Program – Value Proposition

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Strategic Objective and Areas for Investment

Canada's VP aims to **maximize economic outcomes** for the aerospace and defence industry

STRATEGIC OBJECTIVE	POINTS DISTRIBUTION (OUT OF 20 VP POINTS)	AREAS FOR INVESTMENT
Leverage Canada's significant aerospace and defence capabilities to maximize Canadian industry's involvement in global supply chains, the sustainment of the future fleet, support skills development, build export capacity, and invest in innovation.	ACQUISITION 14 VP points	DIRECT FIGHTER PRODUCTION
		SUPPLIER DEVELOPMENT & EXPORTS
		INNOVATION
		SKILLS DEVELOPMENT
		IMPACT
	SUSTAINMENT 6 VP points	DIRECT FIGHTER SUSTAINMENT

Future Fighter Capacity Program – Production

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Direct Fighter Production

Objective: Motivate production and assembly opportunities in Canada for the Canadian fighter fleet

Desired Outcomes: Production and assembly of fighter systems, components, and aero structures

Key Industrial Capabilities:

- Aerospace Systems & Components
- Higher points for identified work means bidders are motivated to partner with Canadian companies prior to bid submission for production and assembly work

Supplier Development & Exports

Objective: Strategic work packages for Canadian industry in global aerospace and defence, including exports

Desired Outcomes:

- Continuous high-value work for Canadian industry over the long-term ☐
- More globally competitive and innovative Canadian supply chain participants☐
- High-quality exports, including world product mandates for components and systems on commercial and defence platforms

Key Industrial Capabilities:

- Aerospace Systems & Components☐
- In-Service Support
- Remotely-Piloted Systems and Autonomous Technologies☐
- Space Systems☐
- Training & Simulation

Future Fighter Capacity Program – Production

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Innovation

Objective: Drive leading-edge, collaborative R&D with Canadian industry, research organizations and academic institutions, and commercialization of innovative technology

Desired Outcomes:

- Long-term research partnerships with Canadian industry, research organizations, and academia?
- R&D investments that align with key Government policy initiatives, such as Innovation & Skills Plan, Innovation for Defence Excellence and Security (IDEaS), and others

Key Industrial Capabilities:

- Aerospace Systems & Components?
- In-Service Support?
- Remotely-Piloted Systems and Autonomous Technologies?
- Space Systems?
- Training & Simulation

Skills Development

Objective: Develop the talent base of the Canadian aerospace and defence industry

Desired Outcomes:

- Advanced skills and knowledge development in Canadian aerospace workforce
- Increased participation of women and other under-represented groups in the Canadian aerospace workforce, and related STEM study areas

Key Industrial Capabilities:

- Aerospace & Defence Production and Maintenance?
- Aerospace Business Management?
- Science, Technology, Engineering and Math (STEM)
- Skills investments with Indigenous peoples could be eligible for a 5x credit multiplier
- Priority areas and Underrepresented Groups and K-12 Age Group

Future Fighter Capacity Program – Production

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Impact Pillar

Objective: Once-in-a-generation investment, project, or program that leaves a lasting, positive impact on Canada

Desired Outcomes:

- Lasting, large-scale activity that expands upon, or builds a new capability in Canada that continues to have a positive impact beyond the completion of the program

VP Scoring Eligible Activities:

- Bidders must invest a minimum amount of \$100M in the Eligible Activities to score points in this pillar
- Work packages under the Impact Pillar must be in the listed KICs, and must be at least \$10M

Eligible Activities:

- New Industrial Capability
- Expansion of Existing Industrial Capability
- New R&D Centre

Key Industrial Capabilities:

- Advanced Materials
- Aerospace Systems & Components
- Artificial Intelligence
- Cyber Resilience
- Defence Systems Integration
- Electro-Optical/Infrared Systems
- In-Service Support
- Remotely-Piloted Systems and Autonomous Technologies
- Space Systems
- Training & Simulation

Bidders must identify their Impact investments and submit them at bid submission

Future Fighter Capacity Program – Production

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Innovation

Objective: Drive leading-edge, collaborative R&D with Canadian industry, research organizations and academic institutions, and commercialization of innovative technology

Desired Outcomes:

- Long-term research partnerships with Canadian industry, research organizations, and academia?
- R&D investments that align with key Government policy initiatives, such as Innovation & Skills Plan, Innovation for Defence Excellence and Security (IDEaS), and others

Key Industrial Capabilities:

- Aerospace Systems & Components?
- In-Service Support?
- Remotely-Piloted Systems and Autonomous Technologies?
- Space Systems?
- Training & Simulation

Skills Development

Objective: Develop the talent base of the Canadian aerospace and defence industry

Desired Outcomes:

- Advanced skills and knowledge development in Canadian aerospace workforce
- Increased participation of women and other under-represented groups in the Canadian aerospace workforce, and related STEM study areas

Key Industrial Capabilities:

- Aerospace & Defence Production and Maintenance?
- Aerospace Business Management?
- Science, Technology, Engineering and Math
- Skills investments with Indigenous peoples and groups could be eligible for a 5x credit multiplier
- Priority areas and Underrepresented Groups and K-12 Age Group

Future Fighter Capacity Program – Sustainment

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Direct Fighter Sustainment

Objective:

In-country, Canadian sustainment solution that leverages our leading industrial capabilities, and ensures a strong role for Canadian industry over the life of Canadian fleet

Desired Outcomes:

- Maximize world-class Canadian capability for fighter sustainment

Key Industrial Capabilities:

- In-Service Support²
- Training & Simulation

Value Proposition Mandatories

Bidders must agree to a minimum percentage target for work activities in the following categories:

- 60% of all Training
- 40% of all Maintenance Support
- 15% of all Weapon System Management & Engineering (WSM)
- 40% of all Materiel Management

VP Scoring:

- Bidders score points for more direct sustainment work they place in Canada ²
- Bidders score points for a percentage target in work activities above the mandatories in: Training; Maintenance Support; WSM; and Materiel Management

ITB Procurement Projects

Air

Land

Marine

ITB Procurement Projects – Air

https://www.ic.gc.ca/eic/site/086.nsf/eng/h_00056.html

Awarded, Bid In Process (i.e. FWSAR) and Future contract obligations

- C130-CP-140 Aircraft Engine – Long-term In-Service Support
Prime Contractor: **Standard Aero**
- C-130J Tactical Airlift – In-Service Support 2
Prime Contractor: **Lockheed Martin Aeronautics**
- C-17 Strategic Airlift – Acquisition – 5th Aircraft
Prime Contractor: **Boeing Defence Space and Security**
- CH-149 Cormorant Mid-Life Upgrade
Prime Contractor: TBD
- Canadian Coast Guard Helicopter – Medium
Prime Contractor: **Bell Helicopter Textron**
- Canada CF-18 Aircraft Engine – Long-term In-Service Support
Prime Contractor: **Magellan Aerospace**
- Contracted Airborne Training Services
Prime Contractor: **Top Aces**
- CP-140 Aurora – Data Management System – Block IV
Prime Contractor: **General Dynamics Mission Systems Canada**
- Enhanced Satellite Communications Project – Polar
Prime Contractor: To be determined
- Fixed-Wing Search and Rescue Aircraft – Acquisition
Prime Contractor: **Airbus Defence and Space**
- Fixed-Wing Search and Rescue Aircraft – In-Service Support
Prime Contractor: **Airbus Defence and Space**
- Future Aircrew Training
Prime Contractor: To be determined
- Future Fighter Capability
Prime Contractor: To be determined
- Griffon Limited Life Extension
Prime Contractor: To be determined
- J85 Engine - Maintenance Repair and Overhaul
Prime Contractor: To be determined
- Manned Airborne Intelligence, Surveillance and Reconnaissance – Acquisition
Prime Contractor: To be Determined

ITB Procurement Projects – Air

https://www.ic.gc.ca/eic/site/086.nsf/eng/h_00056.html

Awarded, Bid In Process (i.e. FWSAR) and Future contract obligations

- Manned Airborne Intelligence, Surveillance and Reconnaissance – In-Service Support
Prime Contractor: To be determined
- Maritime Unmanned Aerial System – Interim Capability
Prime Contractor: To be determined
- Medium Earth Orbit Search and Rescue Project
Prime Contractor: To be determined
- Medium Range Radar – In-Service Support
Prime Contractor: **Rheinmetall Canada**
- Medium Range Radar – Acquisition
Prime Contractor: **Rheinmetall Canada**
- Mercury Global – Strategic Deployable Terminals
Prime Contractor: General Dynamics Mission Systems Canada
- Polar Epsilon 2
Prime Contractor: **MacDonald Dettwiler And Associates**
- Remotely Piloted Aircraft System Project – Acquisition
Prime Contractor: To be determined
- Remotely Piloted Aircraft System – In-Service Support
Prime Contractor: To be determined
- Tactical Control Radar Modernization
Prime Contractor: To be determined
- Tactical Integrated Command, Control and Communications
Prime Contractor: To be determined
- Unmanned Aerial System – In-Service Support
Prime Contractor: To be determined
- Unmanned Aerial System – Acquisition
Prime Contractor: To be determined

ITB Procurement Projects – Land

https://www.ic.gc.ca/eic/site/086.nsf/eng/h_00056.html

Awarded, Bid In Process (i.e. FWSAR) and Future contract obligations

- Area Detection and Identification System
Prime Contractor: To be determined
- Buffalo and Cougar Armoured Vehicles – In-Service Support
Prime Contractor: General Dynamics Land Systems Canada
- Chemical, Biological, Radiological and Nuclear Respirator – Acquisition
Prime Contractor: **AirBoss Engineered Products**
- Chemical, Biological, Radiological and Nuclear Respirator – In-Service Support
Prime Contractor: **AirBoss Engineered Products**
- Combat Net Radio Enhanced – Maintenance
Prime Contractor: **General Dynamics Mission Systems Canada**
- Defensive Cyber Operations – Decision Support
Prime Contractor: To be determined
- Enhanced Recovery Vehicles – Acquisition
Prime Contractor: To be determined
- Ground Based Air and Munitions Defence Capability
Prime Contractor: To be determined
- Headquarters Shelter Systems – Acquisition
Prime Contractor: **Weatherhaven**
- Headquarters Shelter Systems – In-Service Support
Prime Contractor: **Weatherhaven**

ITB Procurement Projects – Land

https://www.ic.gc.ca/eic/site/086.nsf/eng/h_00056.html

Awarded, Bid In Process (i.e. FWSAR) and Future contract obligations

- Land C4ISR Sustainment Project – Cyber Security Engineering Services
Prime Contractor: **General Dynamics Mission Systems Canada**
- Land C4ISR Sustainment Project – Engineering and Integration
Prime Contractor: **General Dynamics Mission Systems Canada**
- Land C4ISR Sustainment Project – ISTAR
Prime Contractor: Rheinmetall
- Land C4ISR Sustainment Project – Software Support
Prime Contractor: To be determined
- Land Vehicle Crew Training System
Prime Contractor: To be determined
- Logistics Vehicle Modernization
Prime Contractor: To be determined
- Network Command and Control Integrated Situational Awareness Capability
Prime Contractor: To be determined
- Non-operational Clothing and Footwear Contract (NOCFC)
Prime Contractor: To be determined
- Operational Clothing and Footwear
Prime Contractor: To be determined
- Tank Replacement – Long-term Maintenance
Prime Contractor: To be determined

ITB Procurement Projects – Marine

https://www.ic.gc.ca/eic/site/086.nsf/eng/h_00056.html

Awarded, Bid In Process (i.e. FWSAR) and Future contract obligations

- Arctic Offshore Patrol Ship and Joint Support Ship—In-Service Support
Prime Contractor: **Thales Joint Venture Canada/Australia**
- Canadian Surface Combatant – ISI Contract
Prime Contractor: **Irving Shipbuilding**
- Canadian Surface Combatant—TSRP
Prime Contractor: To be determined
- Diesel Generator Sets
Prime Contractor: To be determined
- Halifax Class - Ship Hull In-Service Support
Prime Contractor: To be determined
- Halifax Class Frigates - Antenna Replacement
Prime Contractor: **SAAB Microwave Systems Canada**
- Halifax Class Frigates - Combat System In-Service Support
Prime Contractor: To be determined
- Halifax Class Integrated Platform Management System ISSC
Prime Contractor: To be determined
- Halifax Class Ship Modernization—Gas Turbine In-Service Support
Prime Contractor: To be determined
- Maritime Satellite Communications Upgrade
Prime Contractor: L3 - **Harris Electronic Systems**
- MK 46 Torpedo Upgrade
Prime Contractor: To be determined
- Naval Remote Weapon Station
Prime Contractor: **Raytheon Canada**
- Phalanx close in weapon system—support
Prime Contractor: **Raytheon Canada**
- Underwater Warfare Sensor Suite Upgrade
Prime Contractor: **General Dynamics Mission Systems Canada**
- Victoria Class Command and Control System—Maintenance
Prime Contractor: **Lockheed Martin Overseas Corporation**

Diversity of Obligors

Contractors with Current Significant Obligations
based on ISED Data

Other Defence Companies Active in Canada

Irving Group of Companies – Irving Shipbuilding – \$1.5 Billion

Irving Shipbuilding & Fabrication Services

- Saint John Shipbuilding
- Halifax Shipyard
- East Isle Shipyard
- Shelburne Ship Repair
- Woodside Industries
- Fleetway, Inc.
- Oceanic Consulting Corporation

Specialty Printing

- Plasticraft

Personnel Services

- Protrans Personnel Services Inc.

Amateur Sports

- Moncton Wildcats

Irving Retail & Distribution Services

- Chandler
- Kent Building Supplies
- Kent Homes
- Universal Truck & Trailer
- Shamrock Truss
- Atlas Structural Systems
- J&H Industries
- Economy Drywall
- Cavendish Agri Services

Irving Consumer Products

- Irving Tissue (Royale, Majesta, Scotties (U.S.), private labels)
- Irving Personal Care (diapers, training pants)
- Cavendish Produce (fresh vegetables)
- **Cavendish Farms (frozen potato processing)**
 - Indian River Farms
 - Riverdale Foods
- Master Packaging

Irving Group of Companies – Irving Shipbuilding – \$1.5 Billion

Irving Forest Products & Services

- Irving Pulp & Paper Ltd.
- Irving Paper Ltd.
- Irving Tissue Co. Ltd.
- Lake Utopia Paper
- Irving Sawmill Division
- Irving Woodlands Division

Industrial Equipment & Construction

- Irving Wallboard
- Gulf Operators
- Irving Equipment (crane rental, heavy lifting, specialized transportation, pile driving and project management services)
- CFM

JDI Integrated Logistics (formerly Irving Transportation Services)

- New Brunswick Railway Co. Ltd.
 - New Brunswick Southern Railway Co. Ltd.
 - Eastern Maine Railway Co. Ltd.
 - Maine Northern Railway Co. Ltd.
 - Midland Transport
 - Midland Courier
- RST Industries
- Sunbury Transport
- Atlantic Towing
- Kent Line
- JDI Logistics
- Harbour Development

Security Services

- Industrial Security Inc.

Irving Group of Companies – Irving Shipbuilding – \$1.5 Billion

Irving Oil

- Irving Refineries
- Irving Energy Services Ltd. (home heating fuel)
- Irving Energy Distribution and Marketing
- Irving Propane (formerly named Atlantic Speedy Propane)
- Irving Aviation (supplier of aviation fuel & ownership of FBO's in Newfoundland)
- Portage Energy Limited
- Override
- Canaport (deepwater ultra large crude carrier terminal)
- Canaport LNG (25% partner in deepwater liquified natural gas terminal, 75% held by Repsol YPF)
- Irving Blending & Packaging (automotive & commercial vehicle lubricants and degreasers)
- Over 900 retail locations throughout Eastern Canada and New England
- A fleet of tractor-trailers delivering a variety of fuels to its wholesale, commercial and retail customers
- Over a dozen regional distribution terminals

Brunswick News

- Telegraph-Journal (Saint John NB)
- Times & Transcript (Moncton NB)
- The Daily Gleaner (Fredericton NB)
- The Tribune (Campbellton NB)
- La Voix du Restigouche (Campbellton NB)
- The Bugle-Observer (Woodstock NB)
- Le Journal Madawaska (Edmundston NB)
 - L'Étoile (various editions)
 - Édition provinciale
 - Édition La Cataracte (Grand Falls NB)
 - Édition Chaleur (Bathurst NB)
 - Édition Dieppe (Dieppe NB)
 - Édition Kent (Bouctouche NB)
 - Édition Péninsule (Shippagan NB)
 - Édition République (Edmundston NB)
 - Édition Restigouche (Campbellton NB)
 - Édition Shédiac (Shediac NB)
- Kings County Record (Sussex NB)
- Miramichi Leader (Miramichi NB)
- The Northern Light (Bathurst NB)
- Here (Saint John NB, Moncton NB, Fredericton NB)

Irving Group of Companies – Irving Shipbuilding – \$1.5 Billion

Ocean Capital

- Source Atlantic (a group of several companies Gilco Bearings, Mobile Valve, Thornes, CFM Rigging, NL Eldridge, Schooner Industrial, Millennium Welding, Moore Industrial Edmonton Regina Saskatoon Winnipeg and Calgary)
- PetroService, Limited
- Commercial Properties Limited
- Acadia Broadcasting Ltd. (formerly New Brunswick Broadcasting Company)
- A selection of the 15 radio stations owned and operated by Acadia Broadcasting CKBW-FM, CJHK-FM (Bridgewater NS)
- CHSJ-FM, CHWV-FM (Saint John NB)
- CHTD-FM (St. Stephen NB)
- Northwoods Broadcasting Ltd.
- CKDR-FM (Dryden ON)
- CFOB-FM (Fort Frances ON)
- CJRL-FM (Kenora ON)
- CKTG-FM, CJUK-FM (Thunder Bay ON)

• OSCO Construction Group

- Steel
 - Ocean Steel Ltd. (structural steel & rebar)
 - Ocean Steel Corp. (structural steel)
 - Allstar Rebar
 - York Steel
- Concrete
 - Strescon Ltd. (prestressed cast concrete)
 - Borchardt Concrete Products
 - OSCO Concrete
 - OSCO Aggregates
- Construction (commercial, institutional and industrial construction)
 - FCC Construction & Engineering
 - Marque Construction

Boeing Defence Space and Security Division Products/Services

– Major Bid Interests – No Current ITB Obligations



KC-46A Pegasus Tanker



F/A-18 Super Hornet



Integrated Live Virtual and Constructive Training



UAVs



Primary Training Aircraft – with SAAB – T-X and potentially RCAF replacements

General Dynamics Land Systems – Canada – \$3 Billion??



LAV II



LAV 6.0



LAV 700

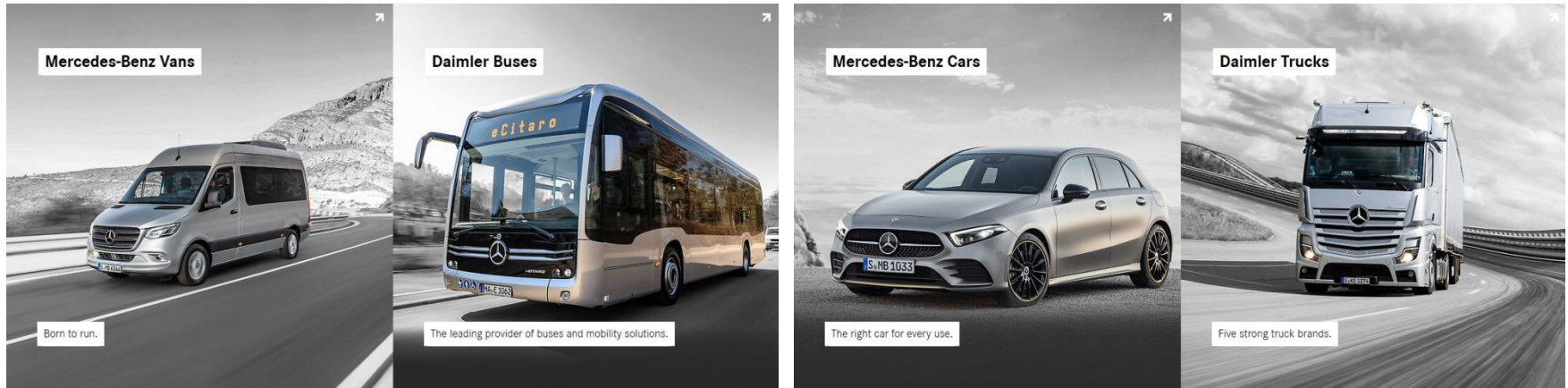


LAV III

General Dynamics Mission Systems – Canada – \$273 M



Daimler – Commercial Business Units



Daimler – Mercedes-Benz Defence Vehicles Bidding on Future – \$2 Billion

Mercedes-Benz Defence Vehicles.
Ready for Future Operations.



CNH Industrial Group – Bidding on Future – Combined \$2 Billion

CNH Industrial is a **global leader in the capital goods sector** that, through its various businesses, designs, produces and sells **agricultural and construction equipment, trucks, commercial vehicles, buses and specialty vehicles**, in addition to a broad portfolio of **powertrain** applications. Present in all major markets worldwide, CNH Industrial is focused on expanding its presence in high-growth markets, including through joint ventures.



Iveco S.p.A. – CNH Industrial Group

Bidding on Future – \$1.5 Billion



**VBM/CENTAURO FAMILY - LAND
ARMoured VEHICLES 8X8**

[DISCOVER MORE >](#)



**SUPERAV - AMPHIBIOUS ARMoured
VEHICLE 8X8**

[DISCOVER MORE >](#)



**VBTP - AMPHIBIOUS ARMoured
VEHICLE 6X6**

[DISCOVER MORE >](#)



LMV - LIGHT MULTIROLE VEHICLE

[DISCOVER MORE >](#)



MPV - MEDIUM PROTECTED VEHICLE

[DISCOVER MORE >](#)



MUV - MILITARY UTILITY VEHICLE

[DISCOVER MORE >](#)



TACTICAL VEHICLES



LOGISTIC VEHICLES



HOMELAND SECURITY

Volvo AB Divisions – Bidding on Future – Combined \$2 Billion



The Volvo brand, which has been built up over decades, enjoys a solid position worldwide.



Volvo Penta

Volvo Penta is one of the world's strongest brands for marine and industrial engines.



UD stands for Ultimate Dependability and offers customers modern, smart efficiency with the brand promise “Going the Extra Mile”.



Terex Trucks

Terex Trucks is a leading manufacturer of articulated and rigid haulers.



Renault Trucks

Renault Trucks is one of the largest European manufacturers of commercial vehicles.



Prevost

Prevost is a leading North American manufacturer of premium touring coaches.

Volvo AB Divisions – Bidding on Future – Combined \$2 Billion



Nova Bus

Nova Bus stands as a North American leader in the design, production and marketing of urban transit buses.



Mack Truck

Mack is one of the largest manufacturers of heavy trucks in North America.



Joint Ventures and Strategic Alliances

Sunwin Bus

Sunwin Bus is a leading Chinese bus producer.



SDLG

SDLG is a leading brand in the Chinese construction machinery industry, especially for wheel loaders.



Eicher

Eicher is the premium choice for modernization in the Indian transportation industry and in the emerging world.



Dongfeng

Dongfeng Trucks is one of China's leading truck brands.

Volvo Construction Equipment – North America – Bidding on Future – \$500 Million

A complete product range

Volvo Construction Equipment designs and manufactures an entire product portfolio of machines. Each and every machine comes with the quality, performance and safety you expect from the Volvo name.



Excavators ›



Wheel Loaders ›



Articulated Haulers ›



Skid Steer Loaders ›



Compact Track Loaders ›



Asphalt Pavers ›



Compactors ›



Pipelayers ›



Demolition Equipment ›

Caterpillar – Heavy Equipment – Bidding on Future – \$500 Million

ARTICULATED TRUCKS >



ASPHALT PAVERS >



BACKHOE LOADERS >



COLD PLANERS >



COMPACTORS >



COMPACT TRACK AND MULTI TERRAIN LOADERS >



DOZERS >



DRAGLINES >



Caterpillar – Heavy Equipment – Bidding on Future – \$500 Million

DRILLS



ELECTRIC ROPE SHOVELS



EXCAVATORS



FELLER BUNCHERS



FOREST MACHINES



FORWARDERS



HARVESTERS



HYDRAULIC MINING SHOVELS



KNUCKLEBOOM LOADERS



MATERIAL HANDLERS



MOTOR GRADERS



OFF-HIGHWAY TRUCKS



Caterpillar – Heavy Equipment – Bidding on Future – \$500 Million

ON-HIGHWAY TRUCKS >



PIPELAYERS >



ROAD RECLAIMERS >



SKIDDERS >



SKID STEER LOADERS >



TELEHANDLERS >



TRACK LOADERS >



UNDERGROUND - HARD ROCK >



UNDERGROUND - LONGWALL >



UTILITY VEHICLES >



WHEEL DOZERS >



WHEEL EXCAVATORS >



Novatrax John Deere Construction Equipment Bidding on Future – \$500 Million



ADT's



Backhoe Loaders



Crawler Dozers



Crawler Loaders



Excavators



4WD Loaders



Motor Graders



Pull-Type Scrapers



Scraper Tractors

Novatrax John Deere – Other Equipment Bidding on Future – \$500 Million



Forestry



**Engines &
Drivetrain**



**Landscaping &
Grounds Care**



Golf & Sports Turf



Agriculture



Lawn & Garden

Oshkosh Corporation – Bidding on Future – Combined \$2 Billion



JLG Industries

JLG is the world's leading manufacturer of access equipment that lifts people and/or material into hard-to-reach areas. JLG aerial work platforms are available from 10' to 185' heights. JLG's broad line of high-performance telehandlers are marketed under the **JLG®, SkyTrak® and Lull® brands**.

Oshkosh Defense

Oshkosh Defense is committed to providing the best protection and mobility in its vehicles. Oshkosh Defense produces vehicles that are engineered specifically for difficult missions - to perform in the most threatening of circumstances, through the most treacherous terrain.

Pierce

Pierce® engineers and builds a full line of **pumpers, tankers, rescues, aerals, homeland security and wildland fire trucks**. This brand is considered the best in the industry because Pierce® apparatus perform like no other.

McNeilus

McNeilus® brand **concrete mixers** are used by more concrete producers than any other on the market. McNeilus continues to innovate with **Compressed Natural Gas (CNG) trucks** to help protect the environment.

IMT

IMT is a leading manufacturer of **field service vehicles and truck-mounted cranes serving the construction, mining and tire service markets**. The IMT® brand is recognized as a leader in product quality, technology development and customer service.

Oshkosh Corporation – Bidding on Future – Combined \$2 Billion



Frontline Communications

Frontline Communications manufactures custom **Broadcast, Communications and Command & Control vehicles for microwave transmission, satellite uplink/downlink, mobile field production applications and Emergency Management.** Frontline specializes in custom design, fabrication and systems engineering. Frontline features a full line of communications vehicles in rack-ready through complete turnkey systems integrated configurations. Services include operational training, systems support, and custom graphics.



CON-E-CO

Concrete Equipment Company, or CON-E-CO®, is a leading supplier of **concrete batch plants** around the world. CON-E-CO expands the company's line of mobile, stationary and portable concrete batch plants.



London Machinery

London Machinery, Inc., a leading manufacturer of concrete mixers in Canada, enhances Oshkosh's product offering and visibility in the Canadian market. **The company is headquartered in London, Ontario.**



Jerr-Dan

Jerr-Dan® is a top brand in the **towing and recovery equipment market**, with a broad product line renowned for its quality and innovation. Jerr-Dan sells a complete line to towing services and salvage companies including light-, medium- and heavy-duty wreckers, and aluminum, steel and industrial carriers.



Oshkosh Airport Products

Oshkosh Airport Products builds some of the toughest **vehicles to handle snow and fire emergencies.** Developed with feedback from customers, Oshkosh's innovative products respond to emergencies to get the job done.

Oshkosh Corporation – Bidding on Future – Combined \$2 Billion

Oshkosh has capabilities which Manitoba Companies could leverage. Examples of these are:

ProPulse: Oshkosh is a leader in the development of next-generation hybrid propulsion systems in heavy trucks.

TAK-4: Oshkosh's TAK-4® independent suspension delivers a ride that's up to three times smoother than a straight-axle design.

TerraMax: Oshkosh's TerraMax™ Unmanned Ground Vehicle Technology (UGV) uses autonomous navigation to get the job done without putting anyone in harm's way.

Command Zone: Command Zone™ is Oshkosh's computer controlled, multiplexed electronics system that operates and diagnoses all major vehicle systems.

Pierce Side Roll Protection: The Pierce Side Roll Protection™ System is an industry first and represents a quantum leap forward in fire fighter safety.

Remote Diagnostics: Remote diagnostics give you the ability to diagnose a vehicle via modem using a laptop or PDA, offering the ultimate service support to our customers.

Oshkosh Light and Medium Tactical Vehicles

Bidding on Future – Combined \$2 Billion

<https://oshkoshdefense.com/heavy-tactical-vehicles/>



Oshkosh Heavy Tactical Vehicles Bidding on Future – Combined \$2 Billion

<https://oshkoshdefense.com/heavy-tactical-vehicles/>



CAE – Simulators – Flight Related

Civil Aviation Training - Training Equipment

CAE offers innovative training solutions, underpinned by the industry's largest simulator installed base and a world-class customer support organization. CAE's innovative XR Series training equipment suite provides high fidelity technology and the right training tools to support the training deliver needs of airlines worldwide.

Full-Flight Simulators

CAE's full-flight simulators (FFS), including the latest CAE 7000XR Series Level D FFS, offers advanced flight training technology for initial, recurrent type rating and specialty training.

Ground School Training

CAE ground school training solutions, including CAE Simfinity XR Series, allow for a structured and engaging approach to cockpit familiarisation, aircraft systems knowledge and FMS Skills, using sophisticated self-paced and classroom technology.

Flight Training Devices

CAE's VR flight training devices (FTD), including the latest CAE 400XR Series and CAE 500XR Series, provide an optimised use of training time for normal and abnormal procedures, ground operations and in-flight training.

Equipment Support

CAE's comprehensive training solutions allow airlines and operators to maintain training assets, upgrade to the latest fleet standard, and operate training centre with peace of mind.



CAE – Commercial Aviation Training

PILOT TRAINING - Cadet to captain

With training programs that span the entire career life cycle of a professional pilot, CAE can provide your commercial airline with solutions that address all of your pilot sourcing needs. Our solutions are flexible and can be completely tailored to suit your airline's training requirements.

CAE's airline pilot training includes aircraft type-specific training courses, refresher training, recurrent training, upgrade/command courses, instructor courses, and Operations (OPS) related training courses. Join the 120,000+ pilots that train with CAE every year.

With 170+ full-flight simulators, CAE provides training on 40+ aircraft platforms worldwide.

Airbus

ATR

BAE

Bombardier

Boeing

Dornier

Embraer

Fokker

Lockheed

Saab

TRAINING LOCATIONS

With 50+ training locations worldwide, CAE has the world's largest commercial aviation training network.



CAE – Health Care – Patient Simulators & Manikins

Patient simulators for practice of technical skills, diagnosis and inter-professional team training for emergency care. CAE sets the standard for innovation and risk-free training.

With lifelike features and responsive physiology, our patient simulators set the standard for high-fidelity realism, allowing learners to develop critical thinking, communication and clinical skills without risk to real patients. Training Centres are located in:

Montreal, Quebec
Longbeach California

Mainz, Germany
Seattle Washington

Morristown New Jersey
Sarasota Florida

Dallas Texas

Products Include:

CAE Juno – Clinical Skills Manikin
CAE Apollo – Adult Patient Simulator
CAE iStan – Adult Patient Simulator
CAE Lucina – Childbirth Simulator
CAE Athena – Femal Patient Simulator
CAE HPS – Anesthesia Simulator
CAE Ceasar – Trama patient Simulator
CAE Pedia SIM – Pediatric Patient Simulator
CAE BabySIM – Infant Simulator



Textron – Bell, Textron Aviation, Textron Speciality Vehicles



Bell Helicopter, a wholly owned subsidiary of Textron Inc., is an industry-leading producer of commercial and military, manned and unmanned vertical-lift aircraft and the pioneer of the revolutionary tiltrotor aircraft. Globally recognized for world-class customer service, innovation and superior quality, Bell's global workforce serves customers flying Bell aircraft in more than 120 countries.



Textron Aviation Inc. is the leading general aviation authority and home to the iconic **Beechcraft, Cessna and Hawker brands**, which account for more than half of all general aviation aircraft flying. Its product portfolio includes five principal lines of business: business jets, general aviation and special mission turboprop aircraft, high performance piston aircraft, military trainer and defense aircraft, and a complete global customer service organization. Its broad range of products include such best-selling aircraft as **Citation and Hawker business jets, King Air and Caravan turboprops and T-6 military trainer aircraft**, all of which are backed by the industry's largest global service network.



Textron Specialized Vehicles is a leading global manufacturer of task-oriented vehicles for commercial and recreational applications. Its product lines include **E-Z-GO® golf cars and personal transportation vehicles, Cushman® commercial and industrial utility vehicles, Bad Boy® recreational side-by-sides and ATVs, and TUG™ and Douglas™ ground support equipment for the aviation industry**. Its vehicles are found worldwide in environments ranging from golf courses to factories, airports to planned communities, and theme parks to hunting preserves.

Textron – Textron Tools & Test, Jacobsen, Kautex



TEXTRON
TOOLS & TEST

Textron Tools & Test is a diverse group of Textron businesses serving the electrical, utility, telecommunication and maintenance markets worldwide. With powerful brands like **Greenlee®**, **Klauke®**, **Sherman + Reilly™** and **HD Electric Company®** along with **Greenlee Communications®**, **Greenlee Utility®**, and **Endura**, these brands are dedicated to delivering the promise of high quality innovative products that drive safety, efficiency and reliability **for contractors, telecommunication and power utilities.**



JACOBSEN

With nearly 95 years of experience in the **turf maintenance industry**, Jacobsen has built a legacy of precision craftsmanship, legendary quality of cut and unmatched expertise. Dedicated solely to delivering perfectly groomed turf, Jacobsen equipment is trusted to maintain some of the world's most prestigious and sacred areas, such as royal palace lawns, football gridirons, legendary golf courses, cemeteries and monuments. Always at the leading edge of turf care innovation, Jacobsen has delivered many industry firsts, such as the first riding greens mower and the first hybrid gas-electric riding greens mower. **The Jacobsen, Ransomes and Dixie Chopper** products are distributed through an extensive international dealer network.



KAUTEX
A Textron Company

Kautex is a Tier One global automotive supplier, developing and producing blow-molded fuel systems, selective catalytic reduction (SCR) systems, clear vision systems (windshield, headlamp and laser wash systems), engine camshafts and plastic industrial packaging solutions. With more than 30 plants in over 15 countries, Kautex is well-positioned as the partner of choice for its customers around the world.

Textron – Textron Financial, Textron Systems, TRU Simulation



TEXTRON FINANCIAL

Textron Financial Corporation is a captive finance company that provides financing programs for products manufactured by its parent company, Textron Inc.



TEXTRON Systems

Textron Systems' businesses develop and integrate products, services and support for aerospace and defense customers, as well as civil and commercial customers including those in law enforcement, security, border patrol and critical infrastructure protection around the globe. Harnessing agility and a broad base of expertise, Textron Systems' innovative businesses design, manufacture, field and support comprehensive solutions that expand customer capabilities and deliver value.

Textron Systems consists of its Advanced Information Solutions, Electronic Systems, Geospatial Solutions, Lycoming Engines, Marine & Land Systems, Support Solutions, Unmanned Systems and Weapon & Sensor Systems businesses.



TRU SIMULATION
+ TRAINING
A Textron Company

TRU Simulation + Training Inc., a Textron Inc. (NYSE: TXT) company, delivers innovative, end-to-end flight training solutions to the commercial and military markets while providing superior technical support and customer service. Headquartered in Goose Creek, S.C., the company is known for its Air Transport Simulation, Business & Military Simulation, Mission & Maintenance Training, and Training Centers & Services.

Lockheed Martin – Canadian Partnerships and Suppliers

<https://screenshots.firefox.com/Nw1BjcoujWltwClZ/www.lockheedmartin.ca>

Suppliers play a key role in the delivery of Lockheed Martin Canada's strategy. Doing business with Canadian-based suppliers and small businesses adds fuel to the engine of the economy and works to deliver enduring economic benefits for Canada.

Success on our programs is in large part attributed to our strong Canadian supply chain. Across all programs, our company has managed over 1300 contracts with Canadian companies spanning nine provinces in the country and continues to grow. This work offers Canadian companies an opportunity to broaden their portfolios to sustain and grow their businesses.



Lockheed Martin – Core Business Areas

<https://www.lockheedmartin.com/en-us/who-we-are/business-areas.html>

Aeronautics



Missiles and Fire Control



Rotary and Mission Systems



Space

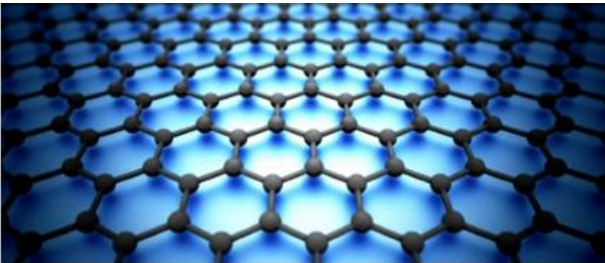


Lockheed Martin – Advanced Manufacturing



Additive Manufacturing

We are pushing the limits of additive technology and bringing design engineers to the factory floor to produce parts, layer by layer, that previously could not be built. Once built, we are qualifying these parts to be used in real-world applications.



Advanced Materials

We can achieve breakthrough performance and lower lifecycle cost by designing and manufacturing next-generation products and systems using advanced polymers, nanomaterials, advanced composites and light-weight modern metals.



Next Generation Electronics

We're finding new ways to improve the way we process, store and move data. Our products are getting drastically smaller and more energy efficient thanks to next-generation electronics that are smaller, more efficient and capable of operating under extreme conditions.



Digital Tapestry

We are pushing the frontiers of digital technology by linking all stages of a product's life cycle. Digital Tapestry seamlessly connects conceptualization, design, verification, manufacturing and sustainment to better understand and improve the ideas we bring to life.

United Technologies Corporation – Obligations Through Primes



Otis elevators, escalators and moving walkways keep people moving. As the world's leading installer and maintainer, we are committed to safety, performance and service.



UTC Climate, Controls & Security's fire safety, security, building automation, heating, ventilation, air conditioning and refrigeration systems and services promote safer, smarter and sustainable buildings.



A global leader in aircraft propulsion, Pratt & Whitney is behind many of the major advances in both military and commercial engines. We design, manufacture and service aircraft engines, auxiliary and ground power units, and small turbojet propulsion products.



Nearly all aircraft today rely on systems and components from UTC Aerospace Systems. We are one of the world's largest suppliers of advanced aerospace and defense products for business, military and international customers.

There are many players involved in ITBs: Suppliers Must Identify and Communicate with Key Entities Who Can Provide Information on Opportunities and Promote Their Value Proposition to Obligators

The Bidders and Obligators Themselves – Make yourselves known to them and Fill out their Online Supplier Registration Forms

Industry Associations and Industry Directories

CADSI Membership Directory	AIAC Membership Directory	Provincial Government Directories
Global Industry A & D Associations	Industry Canada database (CCC)	For Profit Databases i.e. OMX
Aero Montreal	Ontario Aerospace Council	Atlantic Alliance Aerospace Defence
WCDIA	AIAC BC	Manitoba Aerospace Inc.

Government Officials who are Involved in the Procurement Processes and/or Consulted by Obligators

Provincial Government Reps	Canadian Commercial Corporation	Department of National Defence
All Designated Regional Agencies	Global Affairs	International Embassies
Small Business and Export Promo	National Research Council	Export Development Corporation
Defence Research and Development Canada		

Public Services and Procurement <https://buyandsell.gc.ca/>

ISED Canada ITB Directorate <https://www.ic.gc.ca/eic/site/086.nsf/eng/home>

Western Economic Diversification <https://www.wd-deo.gc.ca/eng/19692.asp>

Other VP Influencers

Potential Partners in Industry	Trade Show Attendees
Special Initiative Groups or Funding Entities	Industry Magazines through Articles and Advertising
Industry Sector Studies, Advisory Committees	ITB Consultants
Bid Teams Members	Lobbyists working for OEMs, Obligators and Suppliers

**Thank you. If you have questions,
please reach out to either of us**

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