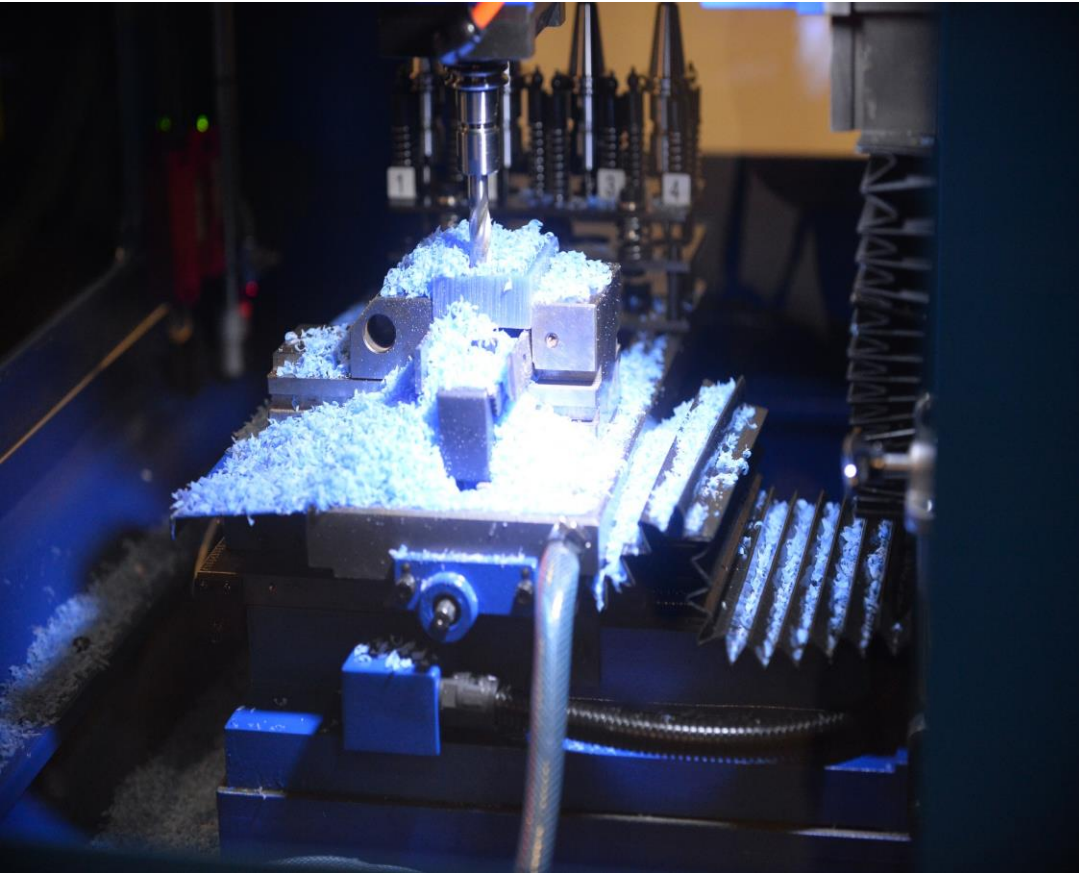




Vermont Manufacturing & Aerospace Program Overview

February 2021



For House Committee on
Commerce and Economic
Development

Chris Carrigan

V.P. of Business Development

Vermont Chamber

Agenda

- Aerospace & Manufacturing Program
- Vermont - Québec Aerospace Corridor
- State of Aerospace Industry
- Trends & Opportunities
- Montreal Office for Recruitment, Trade & Tourism



Vermont Aerospace

- \$2 B aerospace manufacturing & civil aviation industry
- Civil aviation
 - \$1.17 B in economic output
 - \$298 million in earnings
 - 9,505 direct jobs
 - 2.2% of GDP (\$704 M)



Vermont Aerospace

- Aerospace Manufacturing
 - \$1 B of Vermont's 3 billion manufacturing economy
 - 29,850 jobs (9.5%)
 - \$2.81 B (9.23%) of GDP
 - \$2.69 B in exports (2/3 of all exports)



Vermont Aerospace

- Home to industry leaders:
 - General Dynamics (Williston)
 - Collins Aerospace (Vergennes)
 - GE Aviation (Rutland)
 - KAMAN (Bennington)

GENERAL DYNAMICS
Ordnance and Tactical Systems



Collins Aerospace



GE Aviation

KAMAN
Composite Structures

Vermont Aerospace

- Home to supplier base:
 - Aircraft maintenance, repair & overhaul (MRO)
 - Avionics & Sensors
 - Fuel management
 - Precision machining
 - Turbomachinery



G.S. PRECISION, INC.

Precision controlled production machining and assembly

101 John Seitz Drive • Brattleboro, VT 05301-3642 USA
Phone: 802-257-5200 Fax: 802-257-7937 Email: sales@gsprecision.com

If we can measure it, we can make it.™

Vermont Aerospace

- OEMs
- Boeing Supply Chain in VT
 - 23 suppliers
 - \$88.1 M spend
 - 2,800 Vermont jobs



GE Aviation



Collins Aerospace



**Pratt & Whitney
Canada**

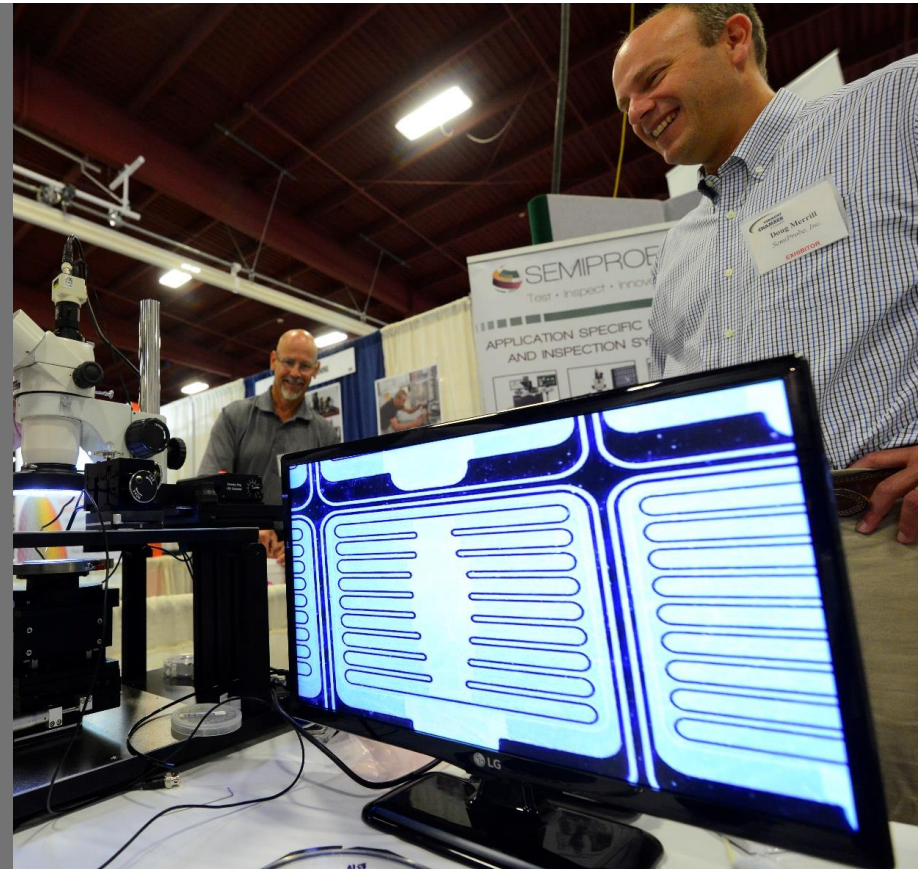
Vermont Chamber Manufacturing Program

- Manufacturing as an economic development opportunity
- Need to deliver contacts, buyers, suppliers and contracts
- A supply chain program for aerospace and defense



Vermont Chamber Manufacturing Program

- Holding **20** matchmaking events over **12** years
- Transforming Vermont into a Supply Chain Hub
- Annual Manufacturing Summit
 - 100% virtual in 2021



Vermont Chamber Manufacturing Program

- 2019 Highlights & Results:
 - 120 exhibitors NE and CA
 - 500 B2B Mtgs (125 hrs)
 - 20 OEMs
 - 30 Canadian companies for VT-QC Aerospace Trade Corridor
 - 600 + participants
 - 4 countries



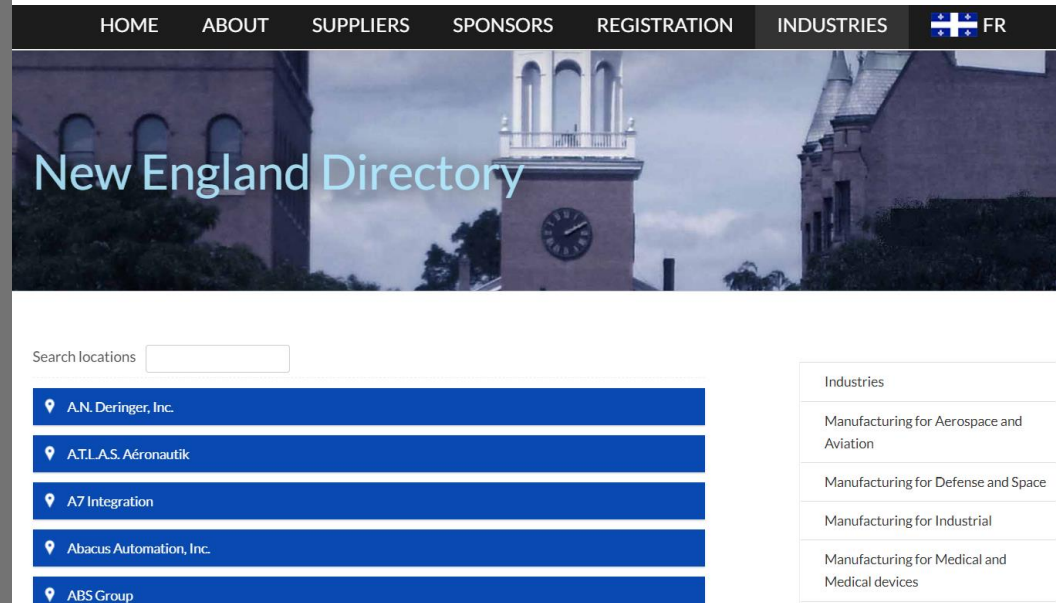


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Vermont Chamber Manufacturing Program

- Trusted referrals and introductions
- Find Your Future Workforce
 - UVM and Vermont TECH
- Online manufacturing website & directory
 - Québec French website



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Tapping Québec Aerospace

- Our work extends to a \$28 B Canadian aerospace industry
- \$13.8 B Québec aerospace cluster in and around Montreal
 - 3rd world capital of aerospace manufacturing after Seattle, WA and Toulouse, FR



Tapping Québec Aerospace

- Québec aerospace cluster home to:
 - 204 aerospace companies
 - 190 SME suppliers
 - 41,750 workforce
 - Aerospace OEMs
 - Airbus Americas
 - Bell Flight
 - Bombardier
 - Magellan Aerospace



Aerospace Trade Corridor

- Link \$2 B VT aerospace with \$13.8 B Québec aerospace
- 2013 MOU with Aéro Montréal
- Record of Vermont Chamber work and investment in Québec
 - \$1.1 million
 - 2,412 B2B meetings (603 hrs)



Extending Aerospace Trade Corridor

- Extended to Connecticut aerospace in 2019 with ACM



CT Aerospace

- 91,500 workforce
- Raytheon Technologies
- Pratt & Whitney
- Sikorsky
- KAMAN



ACCD Partnership

- STEP Grant Funding
- Events and Delegations
- Virtual 2020 Aerospace Innovation Forum Delegation
 - Beta Technologies
 - CADMICO
 - KAD Models & Prototypes
 - Liquid Measurement Systems
 - Mansfield Heliflight
 - North Country Engineering
 - Stephens Precision



Pandemic Impact:

- A decline in passenger traffic for commercial aviation and impacted global aerospace manufacturing supply chains.
- Air travel won't recover until 2023.
- Aviation industry lost 3 years of air travel and demand for new aircraft.
- 50% decline in maintenance, repair and overhaul services (MRO)

Pandemic Impact:

- **Accelerated:**
 - Aircraft retirements (5,300 through 2025)
 - Sustainability and the demand for carbon neutral hydrogen aircraft (2035, France)
 - Downgauging with a focus on single-aisle aircraft for mid-market
 - Benefit smaller aircraft: A220, CRJs and business jets

Market Opportunities:

- **U.S. aerospace market less impacted than Canada**
 - \$1 trillion dollar U.S. defense market (not impacted)
- **A pivot to U.S. Defense Contracting**
 - Cybersecurity (NIST 800 171 rev2, NIST 800 151, CMMC)
- **Lean MRO for greater cost efficiencies & competitiveness**
 - 6% aviation sales tax exemption MRO (Pratt & Whitney CA)
 - FDI recruitment opportunity

Market Opportunities:

- **Aviation Electrification**
- **Beta Technologies: Urban Mobility**
 - eVTOL technology – “Air Taxis”
 - Featured at 2020 Québec Aerospace Innovation Forum
 - FAA Certification: 250 nautical mile and 600 lb payload goals
 - Deliver manufactured organs (Unified Therapeutics) to hospitals



- The Vermont Chamber of Commerce supports having the State hire a Canadian foreign trade representative firm with an office in Montreal, Québec to:
 - Increase foreign direct investment (FDI) and increase tax revenues and jobs
 - Promote tourism as we come out of the pandemic
 - Strengthen our ties with Canada and with a focus on Québec

How the State and Vermont businesses benefit:

- The following would be very helpful for FDIs and cross-border trade:
 - Industry and in-market intelligence and business climate research
 - An understanding of nuances, language, and culture
 - Contacts, trusted referrals, and introductions
 - Liaison with both U.S. and Canadian partners
 - Prospecting and lead generation
 - Business and **FDI lead qualification and management**
 - 2-5 year timeline and require after care services & support

How the State and Vermont businesses benefit:

- *Continued:*
 - Site selection services (workforce, demographic, utility data) and site visit coordination
 - Contract Manufacturing for FDI recruitment
 - Momentum Manufacturing and MSI Inc.
 - Mnf cells for Canadian companies seeking a U.S. footprint for U.S. contracting
 - ZEN Metal Technologies
 - Determining company's eligibility for business incentives
 - Coordinating financing programs and assistance



Montreal Office for Recruitment, Trade & Tourism

February 2021

How the State and Vermont businesses benefit:

- *Continued:*
 - *Business and attraction promotion for enhanced tourism*

For all of these reasons, and, to have a foreign trade office based with our most important trading partner, Vermont would be better positioned to compete with surrounding states and recruit quality foreign direct investments from Canada with a focus on Québec. This effort would also give Vermont companies access to new markets for their products and services.



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QUESTIONS?



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