



AIAC Pacific – BC Aerospace SME Seminar

Cedric Savineau

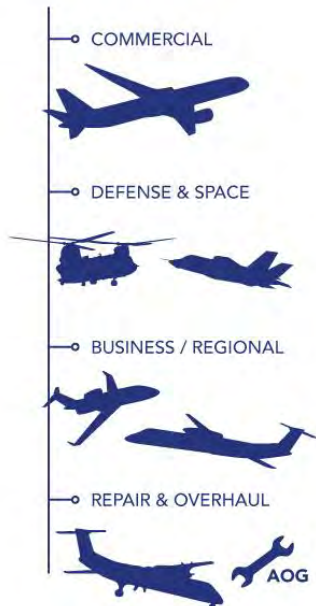
General Manager – ASI Delta

2018-12-18

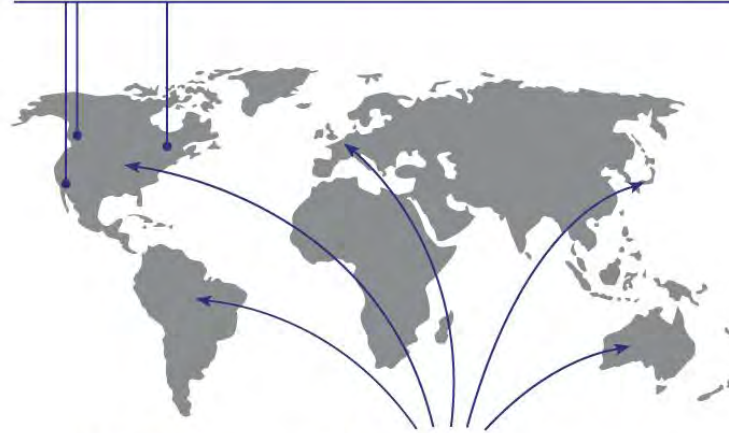
AVCORP 
BETTER SOLUTIONS

Avcorp at a Glance

4 KEY MARKETS



3 STRATEGIC LOCATIONS



700k sq. ft.
FLOOR SPACE

800
EMPLOYEES

>\$170 mil
ANNUAL REVENUE

OUR SERVICES

- ✓ Component Manufacturing & Assembly
- ✓ Integration
- ✓ Repair & Overhaul

OEM & TIER 118
OPERATOR & MRO >140



158+
CUSTOMERS

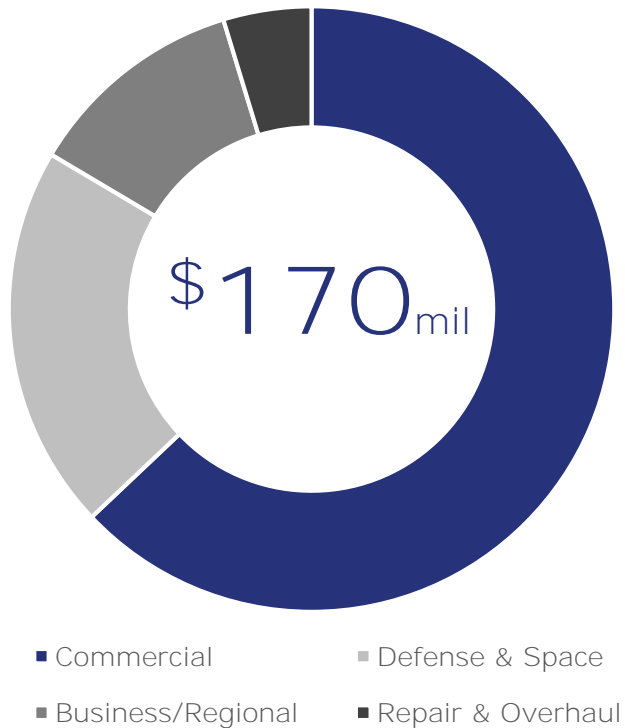
in more than
30 COUNTRIES
WORLDWIDE

Recognized as a
TOP SUPPLIER
6 consecutive
years



Business Activities

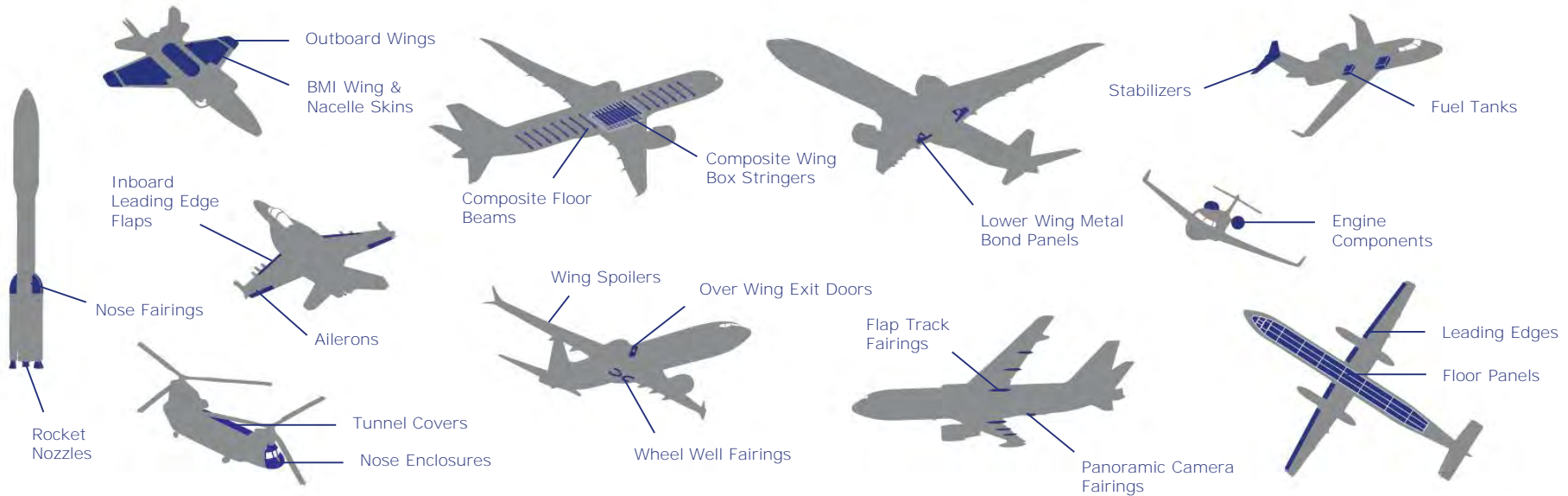
Focused Operations with the Stability of 4 Key Markets



- Services
 - Manufacturing
 - Complex Integrated Assembly
 - Composite and Metallic Component Fabrication
 - Metal Bond
 - Aftermarket Parts
 - Component Repair
- Active OEM Programs
 - Boeing 737, 747, 767, 777, 777X, 787, CH47, FA18
 - Bombardier CH605, CRJ Series, Global Series, Q400
 - Pratt & Whitney Canada Engine Components (PW812, PW814/815)
 - Lockheed Martin F35

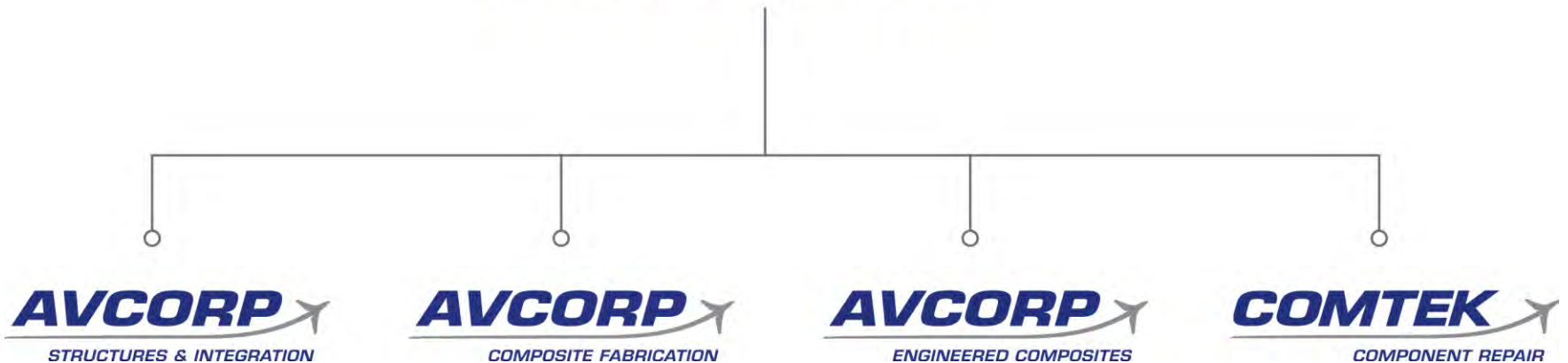
Solutions for Leading OEMs & their Suppliers

Integrated Assemblies, Structures, Skins and Components



Avcorp Group of Companies

Driving Aerostructure Solutions through Four Focused Facilities



Avcorp Sites

Three Strategic Locations



Delta, BC

- Avcorp Structures and Integration (ASI): Product & Program Integration, component manufacture & assembly



Gardena, CA

- Avcorp Composite Fabrication (ACF): Composite structure manufacturing



Burlington, ON

- Avcorp Engineered Composites (AEC): Design & manufacture of composite components
- Comtek Component Repair: Structural component repair

Avcorp Structures & Integration

At a Glance



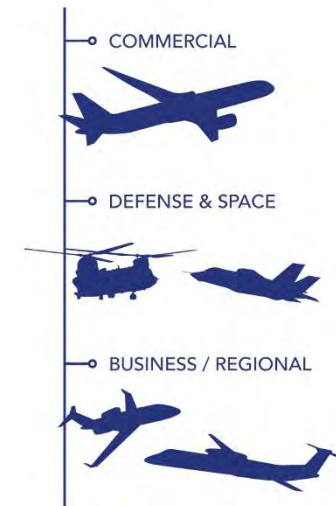
Delivering complex aerostructures while meeting the highest standards of quality and delivery

Services

- Manufacture of Fully Integrated Assemblies & Subassemblies
- Metal bonding of complex structures
- Detailed Component Fabrication

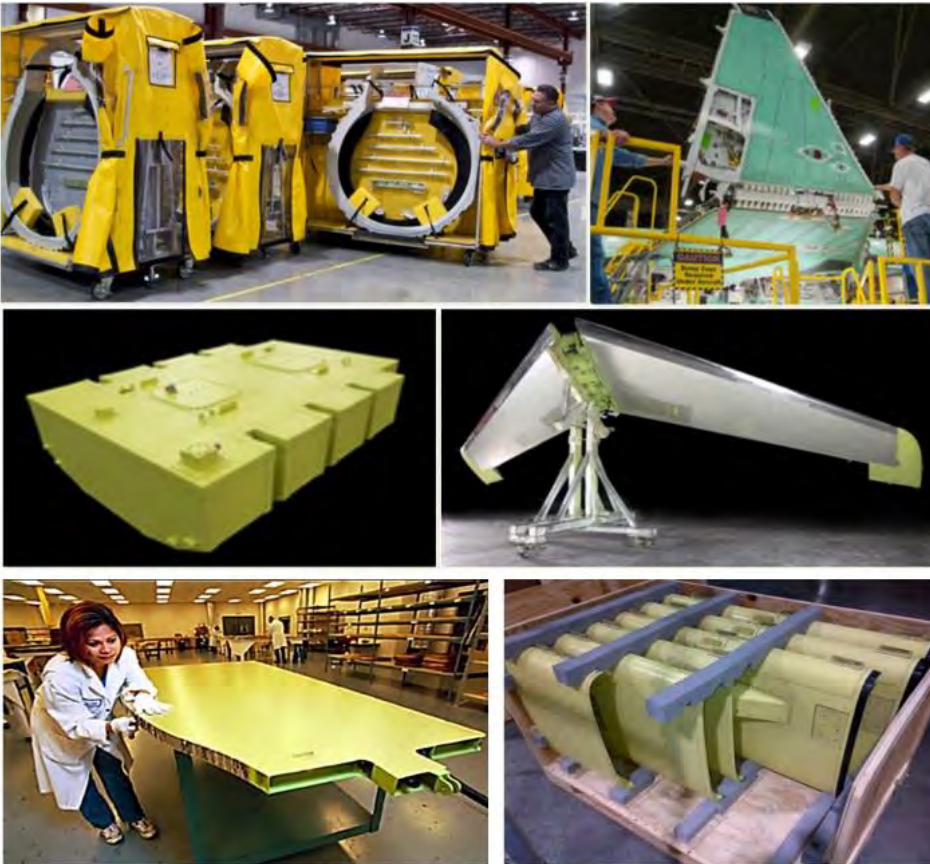
-  61 Years Experience
-  300,000 sq/ft
-  370 Employees

Primary Markets



Avcorp Structures & Integration

Active Programs



Boeing (737, 767, 777X, CH47, F18)

- Wheel Well Fairings
- Overwing Exit Doors
- MAX Wing Spoilers
- Flap Track Fairings
- Panoramic Fairing
- Lower Wing Panels
- Attendant Panels
- Multi-Model Attendant Panels
- Tunnel Covers
- Cockpit Nose Enclosure Assemblies
- Ailerons & Inboard Leading Edge Flap
- Tanker Ruddevator

Bombardier (CL605/650/850)

- Fuel Tanks
- Horizontal Stabilizer

Lockheed Martin / BAE Systems (F35)

- Outboard Wing

ASI Summary

- Capabilities
 - Precision Machining
 - Metal Fabrication
 - Metal Bonding
 - Metal Finishing
 - Inspection, Measuring & Testing
 - Assembly
 - System Integration
 - Tool Design & Fabrication
 - Kitting
 - Just In Time Delivery
- Recognized Performance
 - Boeing Commercial Supplier Excellence Award (Silver) 2011-2015
 - Boeing Canada Operations, Supplier of the Year Award (Gold) 2016
 - Boeing Canada Outstanding Performance Award (Gold) 2012-2015
- Proprietary Process Approvals
- Experienced tier 1 supplier on high rate programs and work transfers
- Delegated MRB authority with Bombardier
- Demonstrated Performance Metrics

Avcorp Composite Fabrication

At a Glance



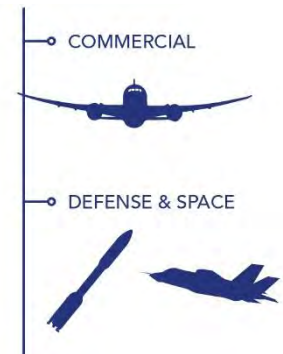
Advancing technology that maximizes the weight-saving and design flexibility benefits of carbon composites.

Services

- Fabrication of Medium/Large, Complex Shape Composite Structures

-  94 Years Experience*
-  450,000 sq/ft
-  250 Employees

Primary Markets



Avcorp Composite Fabrication

Active Programs - Commercial



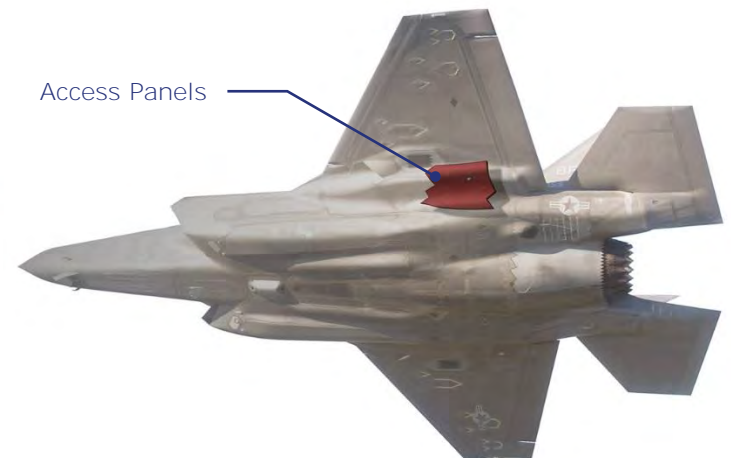
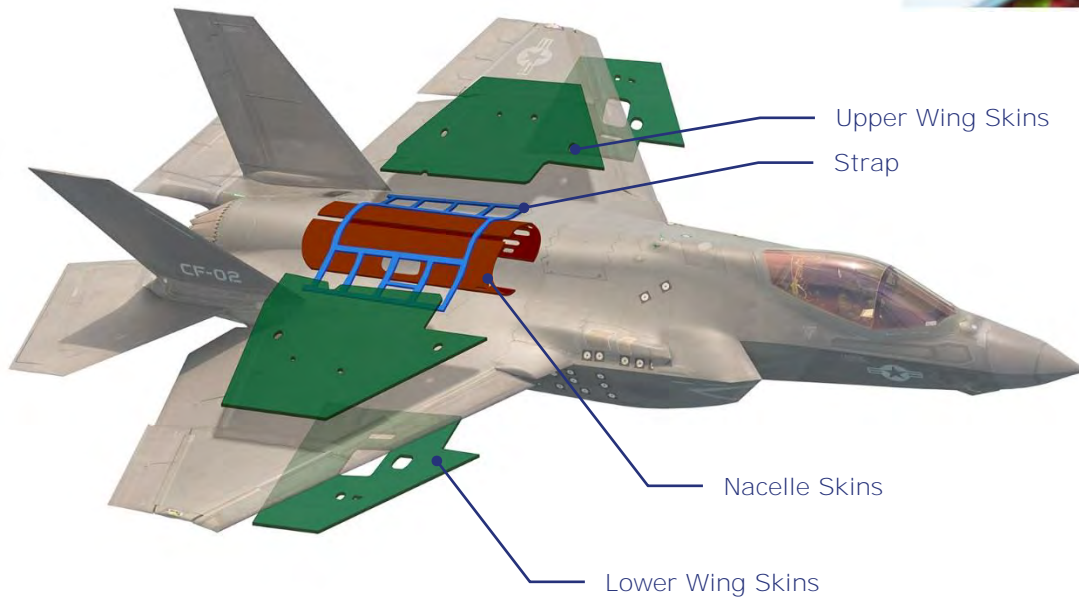
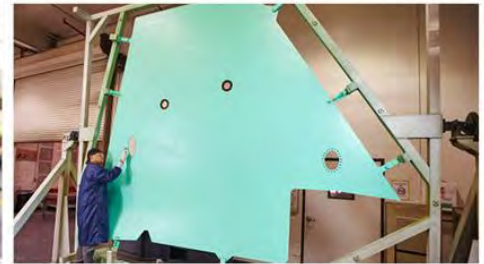
- Boeing Programs
 - Floor Beams
 - Center Wing Box Stringers



Avcorp Composite Fabrication

Active Programs – Defense: JSF

- Lockheed Martin/BAE Systems
 - F-35 composite structures



ACF Summary

- Capabilities
 - Composite Fabrication
 - *Automated Tape Lay-up*
 - *Automated Fiber Placement*
 - *Automated Noodle Fabrication*
 - *Hot Drape Forming*
 - *Hand Lay-up*
 - Industrial curing
 - *Range of autoclave technology*
 - Detailed machining
 - Inspection, measuring & testing
 - Kitting and distribution
 - Just In Time Delivery
- Numerous proprietary process approvals
- Experienced tier 1 supplier on high rate programs
- Invested in technology to support the future of aerospace composites

Avcorp Engineered Composites

At a Glance



Design and manufacturing of composite components with a focus on improved durability and shorter lead times.

Products & Services

- Composite Component Design and Manufacture
- Aftermarket Components



22 Years Experience



50,000 sq/ft



100 Employees

Primary Markets



Avcorp Engineered Composites

Active Programs



- Bombardier (Q400, CRJ700/800/1000, Global 5000/6000/7000/8000)
 - Floors
 - AV Racks
- Pratt & Whitney Canada
 - Engine Components
- Aftermarket Parts
 - Leading Edges
 - Bombardier Q Series
 - Upgrade Floor Panels
 - *Most Regional Aircraft Models*



AEC Summary

- Capabilities
 - Component Design & Airworthiness Certification
 - Manufacturing Process Design
 - Composite Fabrication
 - VARTM
 - Resin Infusion
 - Oven Cured, Wet Layup
 - Oven Cured, Prepreg Layup
 - Component Finishing
 - Inspection, Measuring & Testing
 - Kitting and Distribution
 - Just In Time Delivery
- Pratt & Whitney Canada Best New Supplier Award in 2015
- Largest floors supplier in the Regional & Business segment
- Design Approval Organization (DAO)
- Experienced tier 1 supplier on high rate programs and work transfers

Comtek Component Repair

At a Glance



Providing operators and MROs with experienced design and rapid repair of extensively damaged components.

Services

- Component Repairs



22 Years Experience



50,000 sq/ft



100 Employees

Primary Markets

BUSINESS / REGIONAL



Comtek Component Repair

Repair Activities



- Repair of composite and metallic aircraft components:
 - Engine cowls, inlets, nozzles
 - Leading edges
 - Control surfaces (elevators, rudders, ailerons)
 - Wing body
 - Fairings
 - Access doors and panels
 - Radomes
 - Air Stairs
 - Ducting

Comtek Summary

- Repair Expertise
 - Design Approval Organization (DAO)
 - Design and approve proprietary repairs
 - Repairs beyond typical SRM Limits
 - Repairs to metallic and composite components and structures
- 800+ approved repair schemes with the ability to design and certify new ones through DAO designation
- Fastest component repair turns in the market segment
- Growing customer base >150 in more than 30 countries worldwide

Preparing for the Future
The Learning Factory



The Learning Factory

Avcorp & UBC signed MOU in 2016 to explore development of a Learning Factory at the UBC Innovation Precinct located at the Okanagan Campus in Kelowna, BC



Our Vision: Create a new paradigm in aerospace manufacturing by seamlessly, meaningfully and sustainably bridging the gaps between fundamental research, education and practice, beginning with full-scale production of advanced composites.

Founding Partners

Avcorp

Delta, BC based supplier of major airframe structures to Boeing and other large aerospace manufacturers, such as Bombardier, Subaru, BAE Systems, Lockheed Martin.

Composites Research Network

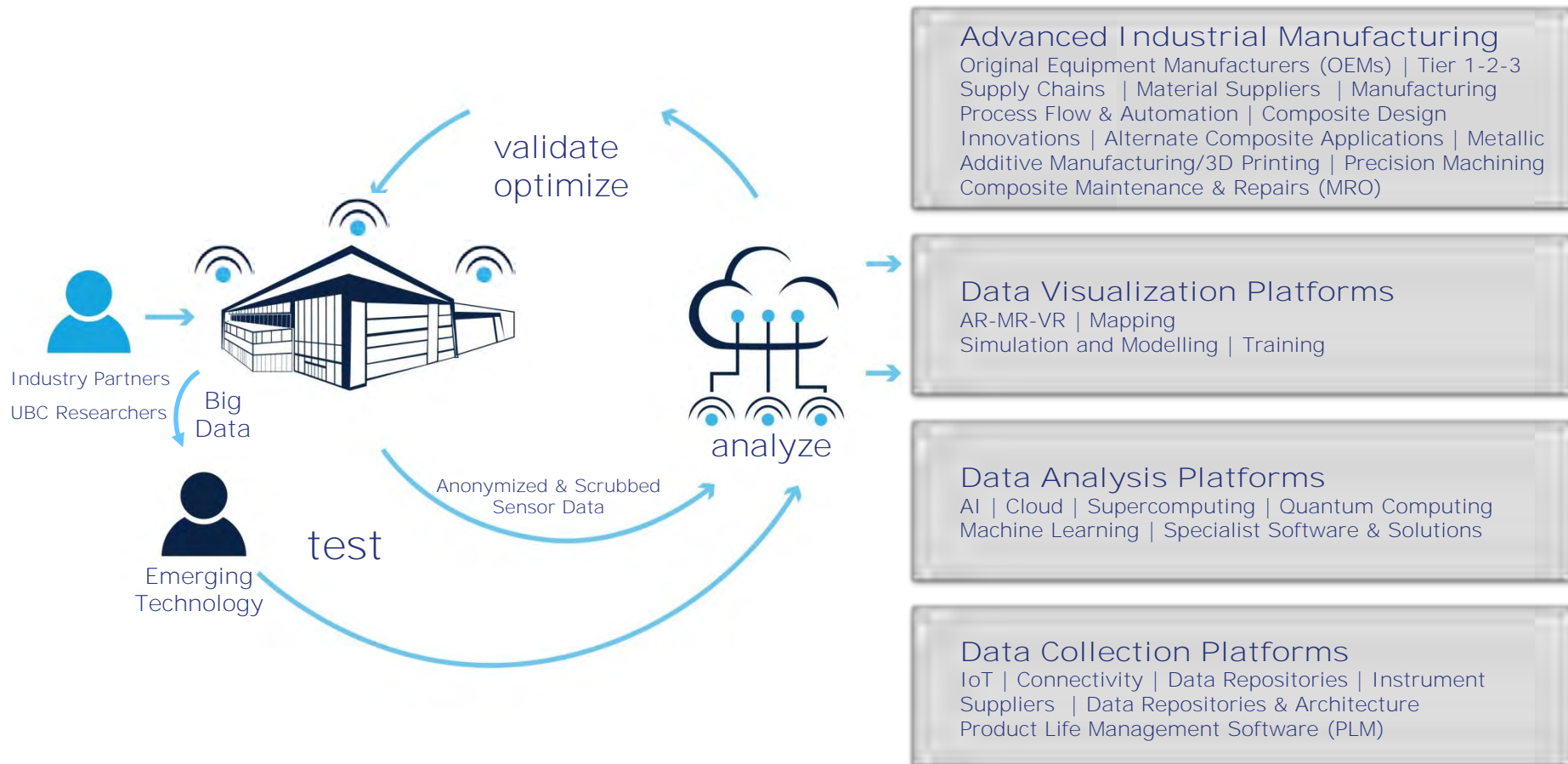
Consortium of academic and industry partners supporting the composites industry in Western Canada, led by Dr. Anoush Pousartip. Strong focus on manufacturing in aerospace. Has played a major role solving composite manufacturing challenges for Boeing for two decades.

University of British Columbia

10-year old campus of UBC located in Kelowna on a strong growth trajectory. Major emphasis on basic and applied research, leveraging regional strengths, solving significant R&D challenges, and creating unique training opportunities.

Technology Partner Opportunities

With simulation and modeling of all factory processes, researchers and industry partners will be able to apply technology improvements in a way not previously possible.



Preparing for the Future

Canada's Digital Technology Supercluster



Canada's Digital Technology Supercluster

Innovation through Collaboration

Vision

Position Canada as a global leader in digital technology by unlocking the potential of data in the era of the intelligent enterprise.

Avcorp is a Founding Member of the Supercluster

Digital Technology Supercluster

Who are the *current* Members?



NATURAL RESOURCES



Teck

TerraMera

TimberWest

HATCH

HEALTHCARE

TELUS

Providence
HEALTH CARE

careteam

joule
A CIMA Company
Société de l'ANC

METAOPTIMA

CHANGE
HEALTHCARE

Genome
British Columbia
Leading • Inspiring • Connecting

DNASTACK

LifeLabs

molecular
you

INDUSTRIAL

AVCORP

BOEING

CONVERGENT
MANUFACTURING TECHNOLOGIES INC.

MDA

TECHNOLOGY

Microsoft

urthecast

AMPD

D-WAVE
The Quantum Computing Company



GE Digital

Deloitte.

FINGER
FOOD

llama
ZOO

POST-SECONDARY



POST-SECONDARY EDUCATION NETWORK

BCIT

EMILY
CARLE
UNIVERSITY
OF YORK

SFU

UNBC

University
of Victoria

- \$360 Million in Funding: \$153 million in federal funding over \$200 million from members.
- 29 Members representing 33 organizations, and 500 + Associates.
- Diversity in Membership. 14 SMEs, 13 large companies and six post-secondary institutions.
- Focused on Digital Technology Leadership. Digital technology innovation through the application of data analytics, quantum computing, and virtual/augmented reality.
- Results in Economic Growth and Jobs.

Digital Technology Supercluster

Program Streams for Projects



Precision Health

To create a targeted, predictive and personalized approach to health care, prevention, detection and treatment strategies.



Digital Twins

To create real-time, virtual production environments for operations management, simulation, modelling and training.

Avcorp teams with academia, small, medium, and large innovative Partners to collaborate on better solutions with global reaching benefits.



Data Commons

To aggregate big data resources from multiple stakeholders and platforms for exploration, machine learning and application development.

Phase 1 Projects (in Development)

Avcorp is engaged in two Phase 1 Digital Twin Projects

The Learning Factory Digital Twin (LFDT)

AVCORP

AMPD

BOEING

CRN
Composites Research Network

CONVERGENT
MANUFACTURING TECHNOLOGIES
Efficient composites processing

llama
ZOO



Predictive Analytics for Advanced Manufacturing

AVCORP

D:wave
The Quantum Computing Company™

SolidStateAI

SFU **SIMON FRASER UNIVERSITY**
ENGAGING THE WORLD

Thank you!
Questions & Answers





www.avcorp.com

For additional information contact:
Cedric Savineau – General Manager ASI
cedric.savineau@avcorp.com

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