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# How to Leverage Collaborative Innovation between Canada and the USA in the Aerospace Industry

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# HOW TO LEVERAGE COLLABORATIVE INNOVATION BETWEEN CANADA AND THE USA IN THE **AEROSPACE** INDUSTRY

- ✦ U.S. Aerospace Exports to Canada were \$6.6 billion in 2014 (top 10 export markets)
- ✦ About 60% is located in Quebec, 28% in Ontario, 8% in Western Canada
- ✦ Estimated growth for 2016 is 3-5%
- ✦ Major Aircraft Programs: Bombardier CSeries, Boeing 787 Dreamliner, Lockheed Martin F-35, Bell Helicopter Textron 429
- ★ **Best Prospects**
- ★ Aircraft parts manufacturing
- ★ Maintenance, repair and overhaul
- ★ Advanced manufacturing and composite materials
- ★ Simulation, training and synthetic environment
- ★ Avionics, communications and mission systems
- ★ Engine and engine parts manufacturing



# AEROSPACE DATA CONTINUED...

- World's 5<sup>th</sup> largest aerospace market
  - \$20 billion in sales in 2014
- On average, Canadian aerospace companies purchase over 50% of their inputs from
- U.S. suppliers
- Home to large OEMS such as **Bombardier, Pratt & Whitney Canada, Rolls Royce, Bell Helicopter Textron, Boeing Canada, Lockheed Martin Canada**
- Approx. 83% of the industry focuses on civil aircraft manufacturing; 17% on military aircraft manufacturing



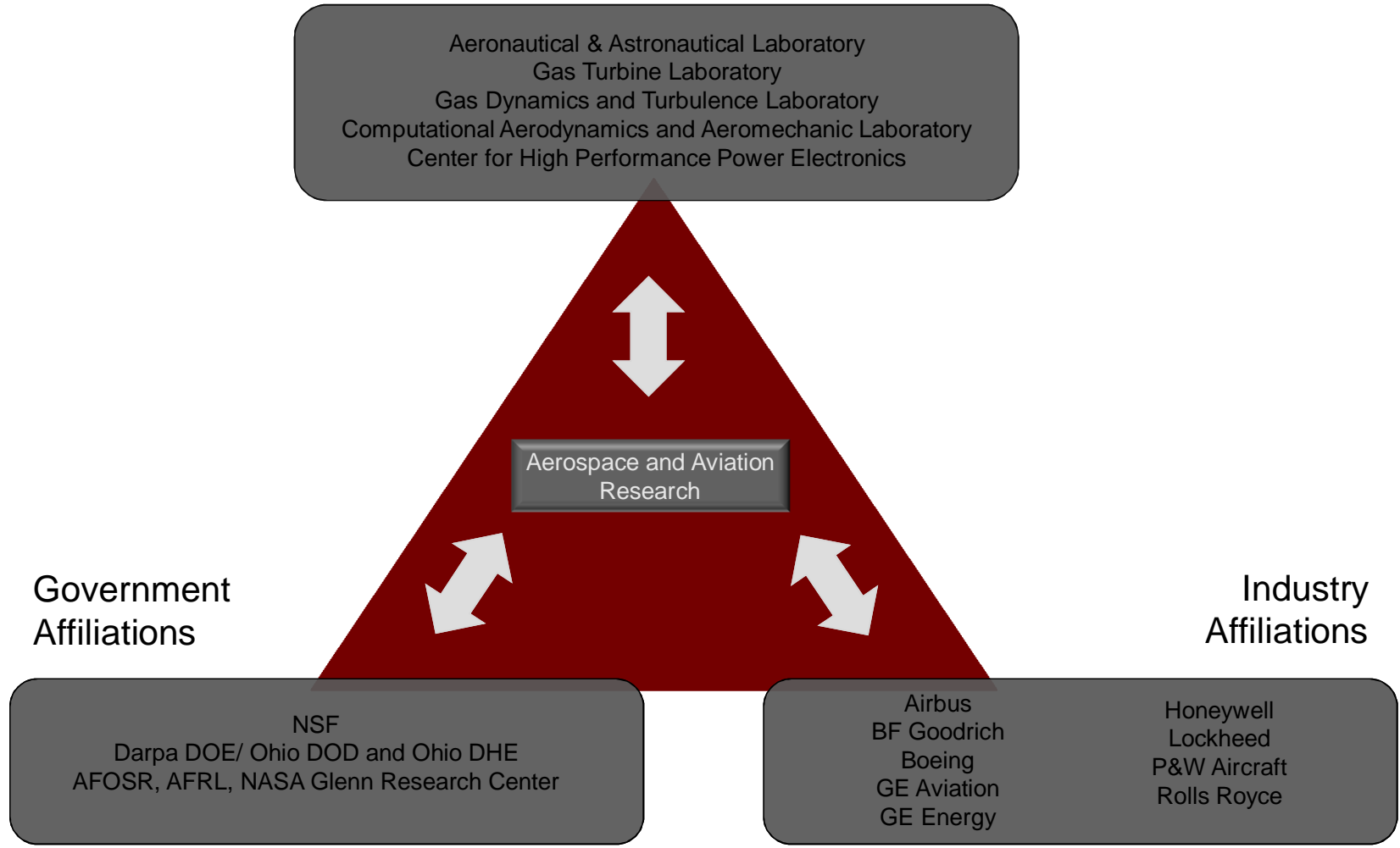
# AEROSPACE IN OHIO

*OHIO-Largest  
supplier to Boeing  
and Airbus*



**The Ohio Center  
for Propulsion  
and Power (OCPP)  
Universities**

*Aerospace  
Innovation in  
Ohio—Over \$4B*





# University Collaboration Across the Globe

## China:

- Beijing University of Aeronautics and Astronautics
- Shanghai Jiao Tong University

## France:

- ENSMA—École Nationale Supérieure de Mécanique et d'Aérotechnique

## Germany:

- University of Stuttgart
- Munich Technical University

## Poland:

- Institute of Aviation, Warsaw
- Warsaw University of Technology



# OHIO G.R.E.A.T.

What's New and  
GREAT in Ohio?



 **HIO G.R.E.A.T.**

Global Reach to Engage Academic Talent™

*An initiative of the Ohio Department of Higher Education*

# OHIO G.R.E.A.T.



PROMOTE OHIO AS A  
POSTSECONDARY DESTINATION,  
GLOBALLY

**ENCOURAGE INTERNATIONAL TALENT TO REMAIN ENGAGED WITH OHIO BUSINESS** **ENHANCE GLOBAL ECONOMIC OPPORTUNITIES FOR OHIO NATIVE STUDENTS**



# OHIO G.R.E.A.T.

and CANADA

**EXPLORING and WORKING TOGETHER  
toward....**

- Canadian and Ohio industry benefit
- Student-to-business opportunities & exchanges
- Exploration of Canadian/Ohio research opportunities
- Student mobility with research engagement
- Other opportunities that organically evolve

# INNOVATION OPPORTUNITIES



**G.R.E.A.T. Effort + Increased Focus Will Yield VAST Opportunities**



# BEST OPPORTUNITIES

- FOCUS on OEM's with G.R.E.A.T. Canada/Ohio Partnerships *SHORT RANGE*
  - Examples: GE, Pratt & Whitney
  - Foster G.R.E.A.T. Connections with Industry, Education & Talent
- FOCUS on University Partnerships *LONG RANGE*
- Proposed Thought: CRIAQ *Cooperation in Research and Innovation in Aviation* with Ohio G.R.E.A.T. to advance the cooperation

