



Aerospace

Georgia Aerospace: Industry Trends & Opportunities



September 2011

Georgia Centers of Innovation



- Six key industries as selected by the Governor's One Georgia Commission
- Focused on helping industry bring to develop new products, services & business models
- Georgia Center of Innovation for Aerospace is the only State of Georgia organization focused solely on the aerospace industry

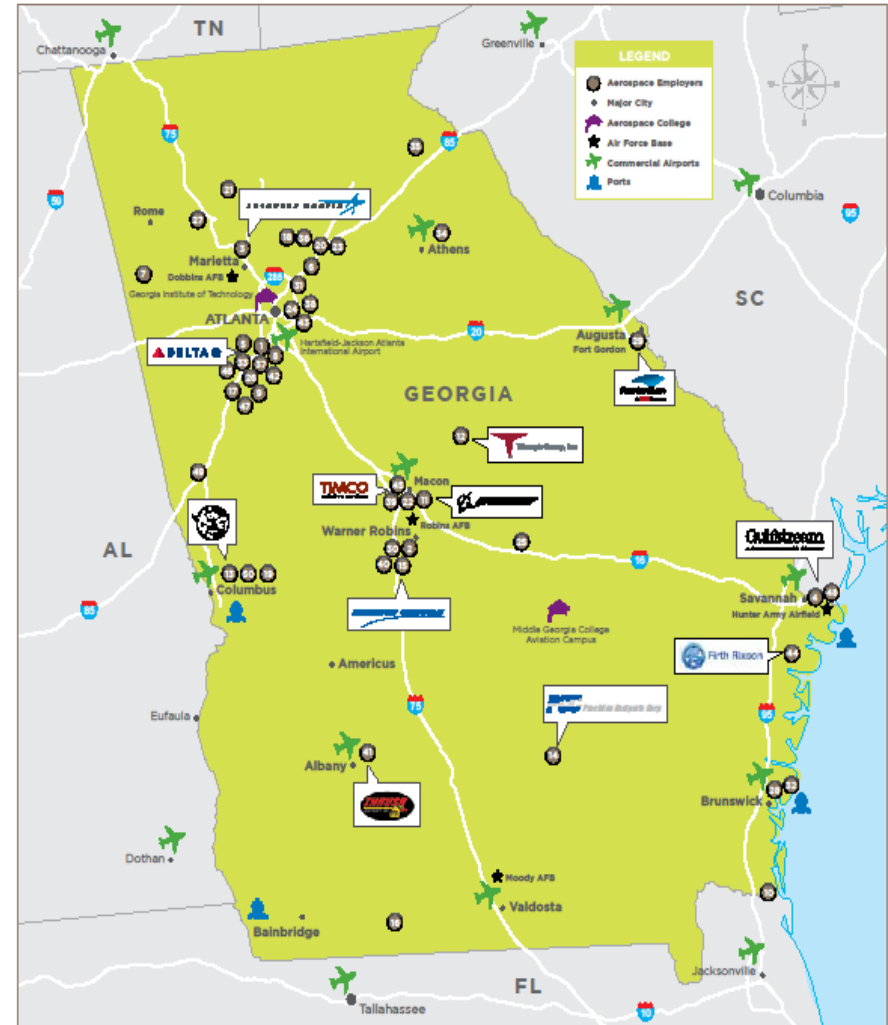
Georgia Aerospace Industry Trends

- Aerospace jobs in Georgia up 4.5% since 2006
 - 84,000 jobs in 2010
 - Ranked #5 among US states
 - \$5.4 billion annual aerospace payroll
 - Average aerospace job earns \$64,600
 - 47% Higher than state average



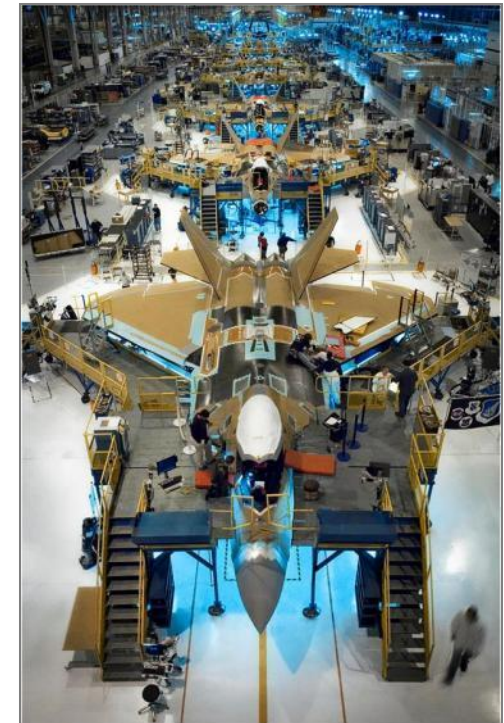
Georgia Aerospace Sectors & Employment

- Over 500 Aerospace Companies
- Geographically Diverse
- Three main sectors
 - Aerospace Manufacturing
 - Air Transportation
 - Maintenance, Repair & Overhaul (MRO)



Aerospace Manufacturing

- Aerospace exports of \$4.4 billion in 2010, up 100% since 2006
- Aircraft & parts manufacturing for global aerospace programs
 - Military aircraft – fighters & transports
 - Commercial & general aviation aircraft
 - Aircraft engines
- Leading manufacturers:
 - Boeing, Gulfstream, Lockheed Martin, Maule, Northrop Grumman, Pratt and Whitney, Raytheon, Thrush and Triumph (Vought)



Aerospace Manufacturing

- Georgia ranked #4 in US
- Exports greater than all but 7 top aerospace exporting countries

Rank	State	2010 Intl Aerospace Exports (US Dollars)	% Change 2010/2009
1	Washington	23,315,843,425	-11.9
2	Connecticut	6,706,037,936	9.6
3	California	5,993,300,721	-10.49
4	Georgia	4,396,604,708	30.87
5	Florida	4,384,640,421	13.99
6	Texas	4,356,793,641	-8.26
7	Ohio	4,283,040,063	10.3
8	Kentucky	3,552,154,685	-24.41
9	New York	2,422,107,029	-11.97
10	Kansas	2,129,848,452	-25.72

Rank	Country	2010 Intl Aerospace Exports (US Dollars)
1	United States	79,687,160,232
2	France	46,200,410,724
3	Germany	32,395,432,088
4	United Kingdom	13,579,053,268
5	Canada	9,651,165,065
6	Italy	4,922,160,970
7	Singapore	4,634,737,356
	Georgia	4,396,604,708
8	Brazil	4,366,240,018
9	Spain	3,448,764,538
10	Japan	2,611,536,292
11	Russia	1,986,530,193
12	India	1,531,181,207
13	Netherlands	1,404,299,841
14	Switzerland	1,316,539,683
15	China	1,264,762,816

Maintenance Repair and Overhaul (MRO)

- Warner Robins Air Logistics Center
 - Over 13,000 civilian employees
 - Economic impact at \$4.4 billion
- Major civilian MRO operations
 - Delta Air Lines, ASA, Airtran Airways, TIMCO Aviation Services, Bombardier, Gulfstream & StandardAero



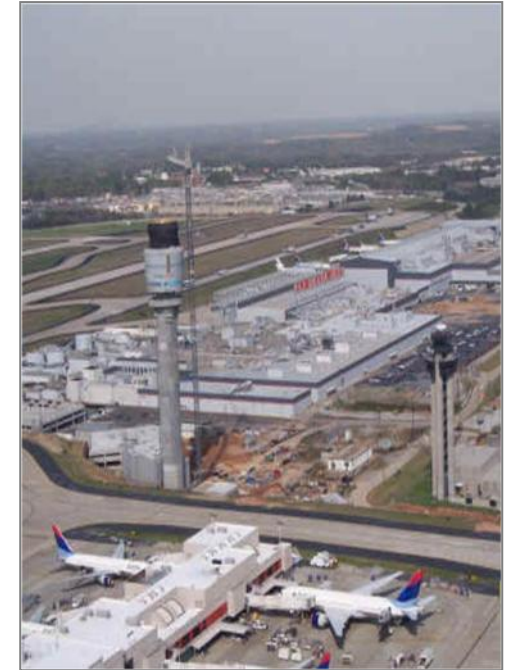
Maintenance Repair and Overhaul (MRO)

- Aviation maintenance industry employs ~12,500 workers in Georgia
- The aviation maintenance industry's total annual direct impact on Georgia's economy is \$1.3 billion
- Ranked #5 among US States



Air Transportation

- Hartsfield Jackson Atlanta International Airport is the busiest passenger airport in the world with economic impact of \$32.5 billion in 2009
 - 151 U.S, 80 Intl. destinations daily
 - 2,700 arrivals and departures daily
 - 240,000 passengers a day



Air Transportation

- Metro Atlanta is headquarters to several airlines
 - Delta Air Lines – largest private employer in the State (32,000+)
 - Atlantic Southeast Airlines (ASA) – major regional airline
 - World Airways - Leading charter/cargo airline
 - UPS – Major air cargo airline
 - Major Hub for Airtran Airways



Air Transportation

- General Aviation
 - Over 18,700 pilots in Georgia
 - 6,674 general aviation aircraft which flew 709,500 flight –hours in 2008
 - 104 public & 339 private airports
 - Peachtree-DeKalb (PDK) airport ranked in top 25 among US general aviation airports



Defense In Georgia

- **Army**
 - Ft. Benning
 - Ft. Gordon
 - Ft. Stewart
 - Hunter Army Airfield
- **Air Force**
 - Moody AFB
 - Robins AFB
- **Navy**
 - Kings Bay

*164,000 Personnel
in Georgia*

- **Marines**
 - Marine Logistics Base
- **Coast Guard**
 - Kings Bay
 - Savannah



Center of Innovation For Aerospace

Connecting Industry to Georgia Resources - Technology

- Georgia Tech
 - \$500M annual Engineering Research
 - #1 Aerospace Research University in U.S. (~\$40M annually)
 - Georgia Tech Research Institute (GTRI)
 - Enterprise Innovation Institute
- Mercer Engineering Research Center
- Middle Georgia College Applied Aerospace Research Institute
- Herty Foundation - Aerospace Fabrics & Biofuels



Center of Innovation For Aerospace

Connecting Industry to Georgia Resources - People

- Engineering
 - Georgia Tech (Atlanta)
 - Southern Polytechnic (Marietta)
 - University of Georgia (Athens)
 - Georgia Southern (Statesboro)
 - Mercer University (Macon)
- Aviation & Technical Training
 - Middle Georgia College Aviation (Eastman)
 - 7 Technical Colleges with FAA Approved Aviation Programs
- Quick Start & Work Ready Programs



Center of Innovation For Aerospace

Connecting Industry to Georgia Resources - Partnership

- Innovation Projects
- Working Groups
- Advisory Groups
 - Georgia Aerospace Advisory Council
- National & Intl Committees
- Business to Business Connections
- Industry Database



Success Story – Thrush/MGC Flight Test Innovation Project

- Flight test new Thrush 510G with GE H80 engine
- Innovation grant funds purchase specialized flight test sensors & data collection systems for MGC - loaned for Thrush 501G flight test program.
- Thrush provides flight test data & expertise to MGC
- **Addition of 30 jobs with \$900,000+ annual payroll to local economy!**



Science and Technology Strategic Initiative Joint Study Commission (www.scitechplan.georgia.gov)

- Develop specific recommendations with regard to the scope and content of a strategic plan for science and technology in Georgia
- Submit recommendations to Governor & Legislature by January 2012

Upcoming Meetings

- * 12 October at Tellis Science Museum, Cartersville
- * **25 October at Mercer University, Macon**
Aerospace Panel
Military & Defense Panel
- * 15 November at Georgia Health Sciences University, Augusta
- * 30 November at TSYS, Columbus
- * 15 December at GTRI, Atlanta

Center of Innovation for Aerospace

Aerospace.georgiainnovation.org



R. Steven Justice P.E.
Executive Director
sjustice@georgia.org
478.308.3097

Gary O'Neill
Deputy Director
gary.oneill@gatech.edu
404.433.8771

Amy Hudnall
Associate Director
ahudnall@georgia.org
478.230.4300