

COMMERCIAL SPACE: AN EMERGING INDUSTRY FOR GEORGIA



The **Center of Innovation for Aerospace** provides the technical industry expertise, collaborative research and partnerships to help the industry connect, compete and grow. The Center advances recognition of Georgia's strength in the global aerospace industry, including the emerging Space Launch and Operations market. With a strong base of Georgia companies working to support this industry and a strong aerospace education and research system, Georgia is well-positioned to capitalize on this global \$304-billion industry.

Georgia's Aerospace Industry - A Strong Foundation to Fuel Our Space Sector

With more than 80,000 employees and a total economic impact of nearly \$50 billion, Georgia is a domestic leader in the aerospace industry, consistently ranking in the top five of most major categories. More than 500 companies in Georgia provide complete lifecycle support of aerospace systems, including logistical support, research and development, manufacturing, maintenance, repair and overhaul, and operations. Georgia also hosts business units from several large aerospace corporations with ties to the space industry, including Boeing, Lockheed Martin, Northrop Grumman, Pratt & Whitney, and Honeywell (EMS technologies). In total, Georgia companies export more than \$8.5 billion in aerospace products globally, ranking the state fourth among U.S. states.

Educational Institutions - The Technologies and Workforce to Grow a Space Enterprise

The state boasts 31 colleges and universities which conduct \$420 million in overall engineering research and development annually and more than \$56 million in focused aerospace research and development.

The **Georgia Institute of Technology's Guggenheim School of Aerospace Engineering**, the largest aerospace engineering program in the U.S., was ranked third in the 2014 rankings of the best undergraduate engineering programs by the U.S.

News and World Report. Georgia Tech graduates more than 200 aerospace students each year who have strong interests in space systems engineering and space science.

Strengthening their academic endeavors, the **Georgia Tech Center for Space Technology and Research (C-STAR)** immerses faculty and students in space-oriented research and has a strong partnership with the Jet Propulsion Laboratory (JPL) - NASA's center of excellence for robotic exploration. The JPL center is a focal point for space activity at the institution, bringing together a wide range of space science, technology and research activities.

Ranked in the top 20 universities in the nation, **Emory University** provides leading research in the biomedical field that pertains to human spaceflight. **Middle Georgia State College**, the only public aviation college in the state, is building high-tech composite structural components for the upcoming NASA James Webb Space Telescope. **Columbus State University** hosts the **Coca-Cola Space Science Center** which houses a Challenger Learning Center and exhibits the quarter-scale Space Shuttle Test Article high-fidelity engineering prototype.



Georgia's Vision for the Space Sector

From the development of space systems and operations, vertical and horizontal launch, and public outreach, the Center of Innovation for Aerospace is preparing the state ecosystem necessary to support the rapid growth of the commercial space sector.

The emerging commercial space market is poised to fuel the future growth in Georgia's space industry in two key areas:

- **Space Launch Operations:** Both rocket assisted (vertical launch) and aircraft assisted (horizontal launch) of various sized payloads.
- **Small Satellites:** The design, fabrication, launch and operation of small satellites for a wide variety of missions in communication, overhead imagery and space exploration (to the moon, Mars and beyond).

Several companies in Georgia are developing new cutting-edge products in these areas, including:

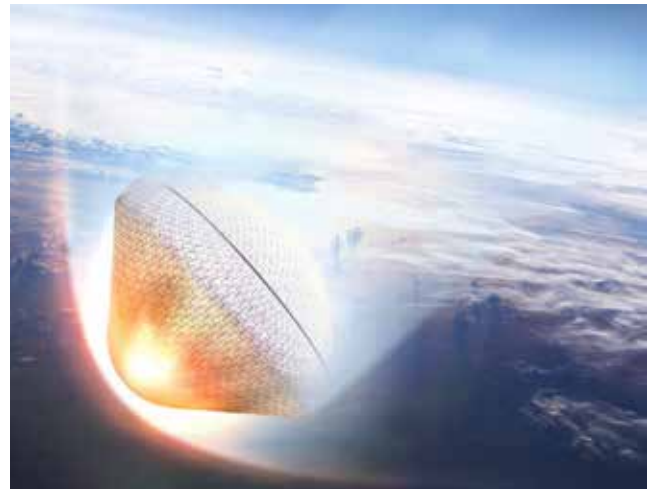
- SpaceWorks Engineering
- Masten Space Systems
- Terminal Velocity Aerospace
- Generation Orbit

Georgia Space Working Group

Established in 2011, the Georgia Space Working Group brings together aerospace leaders from across the state dedicated to growing existing Georgia space companies and attracting more space industry employers to the state. With its strong aerospace industry, Georgia is a natural place for space-related companies to seek educational, manufacturing and research partnerships as well as to hire skilled workers across space sectors which include defense, intelligence, civil/commercial activities and users.

Coastal Georgia's I-95 Space Corridor

All eyes are on coastal Georgia as the next launching spot in the U.S. for space ventures. Located on the I-95 corridor and surrounded by large undeveloped land tracts, coastal Georgia provides ready access to existing space launch sites in Virginia and Florida. In addition, Camden County is home to a former rocket testing facility that is ideal for a space vehicle manufacturing and launch site with nearly unrestricted access to the Atlantic Ocean over a wide range of orbital inclinations.



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