



## SpaceWorks and the NewSpace Industry in Georgia

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## Our Overall Team

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- Systems analysis
- Systems engineering
- Preliminary design
- Concept development
- Market research
- Cost and business case analysis



- Flight test platforms
- SmallSat launch systems
- Liquid upper stages
- In-space stages



- Reentry systems
- Recoverable capsules
- Heat shields
- Precision landing



- CubeSats for M2M/IoT
- Beam-forming antennas
- Low power ground transmitters
- Modular design & assembly

**We are an Atlanta-based group of innovative space businesses focused on commercial markets, space systems analysis, and low-cost space hardware**

# SpaceWorks Enterprises by the Numbers

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- Parent company **founded in 2000**
  - Spinoff from Georgia Tech's Space Systems Design Lab
  - Three subsidiary units founded 2011, 2012, and 2015
  - Operations in Dunwoody and Chamblee
  
- \$3M of annual revenue from a variety of federal and private sources
  - NASA, US Air Force, DARPA, US Navy
  - Major aerospace companies and emerging NewSpace customers in the United States
  - Several international customers in Europe and Japan
  
- ~30 employees and growing
  - Mostly Aerospace, Mechanical, and Electrical Engineers
  - One of the Inc. 500/5000 fastest growing engineering companies in 2011
  
- SEI is actively engaged in the Georgia Space Community
  - SpaceUp, Georgia Space Working Group, Georgia Space Society, Georgia Tech Manufacturing Inst.
  
- SpaceWorks was named **Georgia Small Business of the Year** by the NDIA in 2015



# SpaceWorks Engineering Practice Areas



Generation Orbit

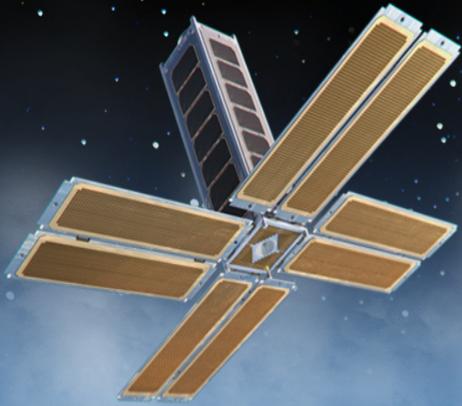


GO Launcher 1 Hypersonic Testbed Rocket

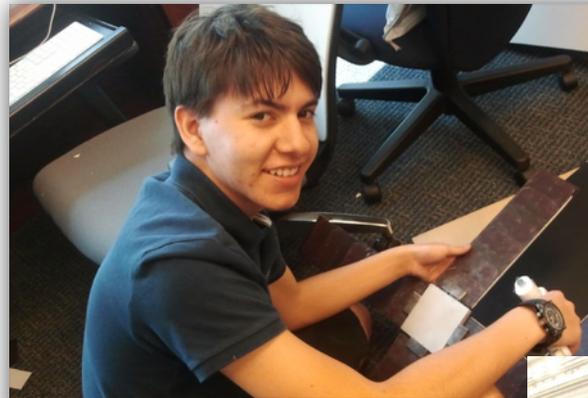
# TVA's RED-Data Flight Recorders



# Blink Astro's Small Satellite Network for Connecting the Internet of Things



# Our High School Outreach Program for STEAM Education



# Challenges and Opportunities for Georgia in Space

## We've Got Some Real Challenges

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- **No** significant **history of participation** in the US Space program
  - No deep roots in space like Houston or Cape Canaveral
- **No** large federal **government “space” facilities**
  - No major military base or NASA center like in Alabama, New Mexico, Maryland, or Colorado
- **No** deep **industrial base** in space-related products and services
  - No large space employers as in California, Colorado, Texas, Florida, and Colorado
- **No** significant **investor community** to support space start-ups or scale-ups
  - No venture capital interest in space compared to Austin, Seattle, or Silicon Valley
  - Georgia’s Billionaires are not engaged (no Musk, Bezos, Allen, or Branson here)
- **No** strong **political engagement** in Congress
  - Georgia Congressional delegation is not motivated to lead on space issues or systems compared to Alabama, Texas, California, Maryland, and others
  - State-level political interest in space is relatively limited (Spaceport Camden may be an exception)

## But There are Also Assets

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- Our **academic institutions are strong** and have relevant space research and education programs
  - Georgia Tech, UGA, GSU, CSU, MGCSU, and others
  - Community college system can provide trained technicians for manufacturing operations
- The **cost of living** and cost of labor here are both **relatively low**
  - Can help with recruiting companies and workers
- The **transportation infrastructure** in Georgia is **strong**
  - Hartsfield-Jackson airport is a key asset
  - Excellent network for logistics (shipping, rail, air cargo, interstate highways)
  - Coastal access for launch and shipping
- **Other assets** of value
  - Coca-Cola Science Center in Columbus
  - Georgia Tech Research Institute (including antenna test facilities and a new ground station)
  - ViaSat, Saft Batteries

# Recommendations Going Forward – Opportunities for Georgia

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- **Set a Bold New Space Vision** for the State of Georgia
  - Establish national leadership in a new area
    - Candidates include space-based power, small satellite launch, SmallSats, orbital debris mitigation, high-speed point-to-point flights for passengers and cargo, hypersonics, etc.
  
- Strengthen the Growing **Entrepreneurial Community**
  - Catalyze the local sources of venture capital
  - Invest Georgia Fund might have been a good start
  - Where are Georgia's Billionaires??!
  
- **Recruit an Anchor Space Company** to Georgia
  - Try to recruit an established or growing space company to relocate to Georgia
  - Some domestic and international companies are in the market for new locations
  
- **Make Space Relevant to Georgians** and Georgia's Largest Companies
  - Create connections with Coke, UPS, Home Depot, Kia, Delta, Mercedes, Georgia Power, and others
  - Make Georgia Space relevant to the industries that Georgia values like farming, forestry, water management, power & energy, sea & air logistics
  - Engage COI-Aerospace to create and **build the Georgia Space brand**



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