

Executive summary



I-10 corridor as a microcosm

Any region that wants jobs with good wages and a secure future drools at the prospect of having a piece of the \$219 billion aerospace industry.

It's such an appealing industry that several states in the Southeast joined forces to back EADS' bid to create a multimillion-dollar aircraft assembly plant in Mobile, Ala. They knew the impact would go well beyond the immediate and spinoff jobs. They saw it as a watershed event, like the Mercedes-Benz' decision in 1993 to establish a manufacturing plant in Alabama.

The region lost the bid to build Air Force tankers, but the process brought a spotlight on the significant and widespread aerospace activities in the South. Lockheed Martin builds F-22 Raptors and C-130J transports in Marietta, Ga., and South Carolina will build Boeing 787s, if the company can overcome objections of the union and the National Labor Relations Board.

U.S. aerospace industry	
Sales (est. 2011)	\$219.16 billion
Work force (2010)	624,200
<i>Source: Aerospace Industries Association</i>	

Alabama, Louisiana, Mississippi and Florida all can lay claim to significant aerospace activities. There's the massive aerospace cluster in Huntsville and Decatur, Ala., one of the largest in the nation, the growing aviation region around the Golden Triangle of east central Mississippi, Florida's Space Coast and the multi-state aerospace region along the Interstate 10 corridor, just to name a few.

It's that multi-state corridor that's the focus of this book, in part because it's the one aerospace cluster in the region that includes a piece of all four states. The Florida state line is less than 144 miles from the Louisiana state line.

Executive summary



It's an urbanized area with multiple contiguous metropolitan areas that includes the largest city in Louisiana, second largest in Mississippi and third largest in Alabama. It's something of a microcosm of the aerospace activities found in all four states.

The idea wasn't just to catalogue what's in the 12-county/parish corridor, but to put those activities into context -- to see how it all fits together.

Among other things, the reporting team found the following:

- The region has a heavy concentration of military bases and Coast Guard activities, with three of the bases among the most valuable in the United States in terms of replacement value. Most of the bases are involved in some aspect of aviation. The bases occupy more than 700,000 acres along the Gulf Coast, with aviation activities ranging from pilot training to aerial weapons development. The military's huge complex trains tens of thousands of students each year who earn wings or learn technical skills, including cyber security training.
- Military activities bring billions each year into the region through payroll, contracting and other activities. Some 3,400 companies in 12 Gulf Coast counties and parishes were awarded \$47 billion in DoD contracts between 2000 and 2010.
- The region is part of an exclusive club that has a National Aeronautics and Space Administration presence. One of the 10 NASA centers is located in the region, and a NASA manufacturing center is 40 miles away. The region could benefit from NASA's push to move more of its activities to the private sector.
- Aerospace is a target industry for Alabama, Mississippi and Florida, and Louisiana has targeted advanced manufacturing. Local economic development groups have also targeted aerospace, and state and local leaders have joined in regional alliances to pur-

Executive summary

sue the aerospace industry.

- The region is served by six commercial airports and multiple non-commercial, long-runway airports, allowing easy access to the western, central and eastern portions of the corridor. Many of the commercial airports include military aviation activities, and some of the non-commercial airports play key roles in military and non-military aviation activities.
- Major U.S. aerospace and defense companies have operations in the Gulf Coast region, including many with multiple sites. Foreign aerospace and defense companies and non-aerospace companies also have a sizeable footprint in the region. China's AVIC is the newest entrant in the region.
- There are 16 universities, several with "very high" research activity, that operate or have interests in the I-10 region. Organizations operated by those universities include the National Science Foundation Engineering Research Center, Raspet Flight Laboratory, Polymer Research Institute, High-Performance Materials Institute, Center for Advanced Power Systems, National Center for Advanced Manufacturing, and Research and Engineering Education Facility. One community college, Mississippi Gulf Coast Community College, is among the top associate degree producers in STEM (science, technology, engineering and math) programs in the United States.
- There are multiple technology transfer offices and business incubators across the region. A new group, the Gulf Coast Patent Association, was formed in 2010 to focus on intellectual property issues.
- Research and development activities in the region involve federal, state and corporate

Aerospace activities at a Glance

- Rocket and jet engine testing
- Rocket engine, satellite production
- Piston engine assembly
- Unmanned aerial system plant
- Areas approved for UAS flights
- Military pilot training
- National Guard aerial combat training
- Aerial weapons RDT&E
- Land and water ranges
- National Guard helicopter repair depot
- Multiple MRO activities
- Applied geospatial technologies
- Air Force electronics training
- Human-machine cognition research
- Advanced manufacturing research
- 43-acre manufacturing plant
- Multiple aerospace parks

players. One base alone spends more in R&D each year than many of the nation's most prestigious universities.

- Aerospace activities include many in growth sectors, including unmanned aerial systems, propulsion systems, advanced materials and geospatial technologies. One university activity focuses on micro air vehicles that use nano-sensors. In addition to unmanned aerial systems, at least three federal operations are involved in some aspect of unmanned underwater vehicles.
- Two areas in South Mississippi are authorized by the Federal Aviation Administration to fly unmanned aerial vehicles. Unmanned systems are also flown at Eglin Air Force Base, Fla., in military air space.
- Aerospace and technology parks have been established or are developing across the region, including a 3,900-acre park at Sten-

Executive summary

nis Space Center, Miss. In addition, NASA hopes to turn more than 800 acres around New Orleans' Michoud Assembly Facility into an advanced manufacturing park. Michoud is home to the National Center for Advanced Manufacturing.

- Brookley Aeroplex in Mobile, Ala., has been focusing on aerospace activities for years. It has been a finalist three times for major aircraft plants. It was chosen by one foreign company, but economic problems in that country forced the cancelation of the project. It was also a finalist for a Boeing plant, and was chosen by EADS to build tankers. That project died when the Air Force awarded the contract to Boeing. Another site in Hancock County, Miss., has been a finalist for aircraft plants twice.
- States and local areas have workforce programs to train blue and white collar workers for the aerospace and related industries. Many of the programs are company specific. Alabama, Louisiana, Mississippi and Florida are right-to-work states.
- According to a study, the Fort Walton Beach-Crestview-Destin MSA in Florida has the third highest concentration of aerospace engineers in the nation behind Huntsville, Ala., and Melbourne, Fla.
- High schools in the region have programs targeting aerospace, advanced materials and geospatial career fields. A career academy in Northwest Florida allows students to engage in real-world projects in science and math to achieve high school and college credit and industry-recognized certification. It's become a national model.

Those are just some of the findings in what amounted to a long list. The authors found that the Gulf Coast region's aerospace activities are

deep and widespread, and cover a large assortment of fields.

The region along the Interstate 10 corridor has built its aviation infrastructure over the past 100 years, and owes much of its growth to military and space flight endeavors of the federal government.

Today the Gulf Coast's aerospace footprint includes federal and commercial space activities, aerial weapons development, unmanned aircraft production, aircraft parts and avionics manufacturing, military aviation activities, and R&D that includes three detachments from two highly regarded military research laboratories.

Three of four states with a piece of the I-10 aerospace corridor have targeted aerospace, a lucrative market in the United States, with sales expected to top \$219 billion in 2011. It involves everything from Earth-bound flights to voyages into deep space. The fourth state, Louisiana, has targeted advanced manufacturing, aerospace and non-aerospace alike.

Local economic development professionals along the Gulf Coast have also targeted the industry, and have formed cross-border alliances to pursue aviation. One reason for cooperation is the recognition that a large aerospace activity in any part of the I-10 region is likely to have a spillover impact on nearby areas.

The cooperation is in part because aerospace pay is generally higher than other industries, and has room for workers ranging from skilled blue collar production line workers to white collar engineers. Aerospace also relies on several complementary industries, like advanced materials and sensor technologies.

The federal aerospace activities, both NASA and the military, have poured billions into the Gulf Coast. Personnel at the mix of bases, aviation and non-aviation, receive better-than-average paychecks, and the facilities spend billions buying services locally, from construction work to defense equipment. In 2010 alone, contractors in the 12 counties/parishes were awarded 6,225 contracts totaling \$3.97 billion.

Executive summary

The federal military and space activity led to another, lesser known pillar of the Gulf Coast aerospace corridor: research, development, test and evaluation. The region has a piece of the nation's \$397.6 billion R&D enterprise, with federal, university and private companies all involved. Florida's Eglin Air Force Base alone spends more on research each year than many of the nation's foremost universities. There are also aerospace-related research and applied technology activities, notably advanced materials and remote sensing/geospatial technologies.

To protect the lucrative activities, local officials make it a priority to protect their bases and the NASA facilities from encroachment. While it's clear that one reason is the value of the bases to the economy, another factor may be the pro-military population itself. Counties and parishes in the region have a higher proportion of veterans than the nation as a whole.

With a population that's decidedly pro-military and political leaders who support the military, the region has gained more than it's lost from base closings. Every branch of the military, active duty and reserve, is represented, as is the Department of Homeland Security's U.S. Coast Guard.

Looking beyond aerospace, the business-friendly region offers tax breaks and other incentives to new and established businesses alike. They promote their generally lower cost of living and lower cost of doing business. While there are unions, Alabama, Florida, Louisiana and Mississippi are all right-to-work states, considered by some to be a major plus.

Those factors may be partly responsible for the influx of foreign-owned companies, aerospace and otherwise, looking to establish a foothold in the United States marketplace. Indeed, while much of the country frets over jobs moving off shore, the Gulf Coast has been a beneficiary of what some call "insourcing."

The Gulf Coast Aerospace Corridor isn't the largest in the nation or the Southeast. But its broad range of activities, multiple seaports and

airports, road and rail systems allow easy access from within the United States and abroad, and may provide it with a competitive advantage.

But no area is perfect, and that's the case with the Gulf Coast region. There remain issues with insurance as a result of the hurricanes that have hit the region. And educational attainment has been a concern for years. Federal data, admittedly dated, shows the number of high school graduates and degree-holders as a proportion of the population to be below the national average.

But caution must be taken in viewing those county-wide figures. The numbers go up when individual cities are considered. Pensacola, Fla., for example, has a higher proportion of high school graduates in the population and a significantly higher number of people with college degrees, 32.4 percent compared to the nation's 24.4 percent. Mobile, Ala., too, has higher numbers than the national average. Individual schools also have singled themselves out for their academic achievements.

And while the military has been and will continue to be a pillar of the region's economy, at least one public official sees that as both good and bad. Florida State Sen. Don Gaetz, R-Niceville, is concerned that there's too much reliance on tourism and the military in his part of Florida. He and others want to see more diversity, through attracting a range of high-tech and mid-tech industries that can take advantage of the trained workforce.

It's possible this book may provide the public, economic development officials and politicians with a better understanding of the considerable capabilities of this region, not only in aerospace, but in other science, technology, engineering and math fields. The tools are there, and it's just a matter of understanding how to leverage them, and working together in a manner that will benefit the entire region.

*Gulf Coast Reporters' League
May 2011*

County/parish snapshots

<i>Counties/parishes and states</i>	<i>Square miles</i>	<i>Population (2010)</i>	<i>People per sq. mile (2010)</i>	<i>% H.S grads (2005-09)</i>	<i>% Bachelors Degree (2005-09)</i>
Orleans, LA	180.56	343,829	1,904.2	81.5	29.3
St. Tammany, LA	854.15	233,740	273.7	88.2	30.2
Hancock, MS	476.88	40,692	90.1	77.9	17.3
Harrison, MS	580.98	181,191	326.3	80.3	18.4
Jackson, MS	726.90	132,922	180.8	81.0	16.5
Mobile, AL	1,233.09	412,992	334.9	82.1	19.7
Baldwin, AL	1,596.35	182,265	114.2	87.5	26.6
Escambia, FL	662.35	297,619	449.3	86.1	23.7
Santa Rosa, FL	1,016.93	151,372	148.9	87.4	23.9
Okaloosa, FL	935.63	180,822	193.3	90.5	27.5
Walton, FL	1,057.56	55,043	52.0	83.6	24.9
Bay, FL	763.68	168,852	221.1	85.8	20.2
<i>Counties/parishes and states</i>	<i>Private non-farm establishments (2008)</i>	<i>Private non-farm employment (2008)</i>	<i>% change private non-farm employment 2000-2008</i>	<i>Manufacturers shipments 2007</i>	
Orleans, LA	8,193	149,286	-28.4	\$3,088,945,000	
St. Tammany, LA	5,944	69,095	33.4	\$436,331,000	
Hancock, MS	751	10,673	7.0	*	
Harrison, MS	4,244	72,555	-9.2	*	
Jackson, MS	2,388	46,270	8.5	*	
Mobile, AL	9,238	161,755	3.4	\$12,407,151,000	
Baldwin, AL	5,006	56,124	26.1	\$1,410,273,000	
Escambia, FL	6,889	103,376	-3.0	\$2,117,030,000	
Santa Rosa, FL	2,574	22,066	23.9	\$74,894,000	
Okaloosa, FL	5,154	60,644	4.0	\$656,730,000	
Walton, FL	1,767	17,026	84.2	*	
Bay, FL	4,664	59,960	11.2	\$1,254,295,000	
<i>* Suppressed to avoid disclosure of confidential information</i>					
<i>Source: U.S. Census Bureau, QuickFacts. (Updated June 2011)</i>					