

# The future of flying

*The birthplace of aviation reaches new heights as international airports and aerospace manufacturing extend North Carolina's global reach.*

**A**viators Orville and Wilbur Wright made their historic flight in December 1903, and the world started shrinking. It marked the end of weeks-long trips across the country and months-long crossings of the Atlantic Ocean. Today, North Carolina's international airports are moving people and goods across the globe. They give fuel to a thriving aerospace manufacturing industry producing everything from the next generation of components to the enormous panels on the torsos of the world's most popular planes. The state's aviation industry makes an annual economic impact of more than \$40 billion, according to the N.C. Department of Transportation. Read more about this sector of the state's soaring economy inside these pages.

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*Charlotte Douglas International Airport is the nation's sixth-busiest airport based on takeoffs and landings. As the second-largest hub for American Airlines, the airport has roughly 670 daily departures.*

## Soaring to success

The world is as close as an airline ticket thanks to nearly 40 direct international flights from Charlotte Douglas and Raleigh-Durham airports combined. But there's more to North Carolina's two largest international airports than instant access to the globe. In Charlotte and the Triangle, airport property means jobs, economic growth and connections to foreign interests in trade, travel and business.

"Our economic impact is \$8.5 billion every year," says Kristie Van Auken, RDU's vice president of communications and community affairs. "We contribute 20,000 jobs. This is a significant economic driver. Being an international gateway is huge. There are only two in the state, and the value of that cannot be overstated."

Charlotte Douglas offers flights to 34 international destinations and logged 544,000 takeoffs and landings in 2015 alone. It's the second-busiest hub behind Dallas/Fort Worth International Airport for American Airlines, the nation's largest airline. Rapid growth and demand drives Destination CLT, a 10-year, \$2.5 billion expansion project that will bring a 12,000-foot runway able to accommodate nonstop flights to Asia and 40-plus new gates by 2026. Charlotte Douglas is also one of the city's largest landowners, with 6,000 acres bordered by Interstates 85 and 485, Shopton Road and Billy Graham Parkway, some of which is slated for development.

RDU has an eye to the future with Vision 2040, a plan that calls for more than \$2.7 billion in improvements, including a new runway for international flights. The 10,000-foot runway, which could be extended to 11,500 feet, would make possible a dream for RDU: a direct flight to China, which expects to replace the U.S. as the world's busiest aviation market in the next two decades. A symposium to lay the groundwork for recruiting flight service to China is set for this month. An influx of Chinese tourists to North Carolina could translate into big dollars: Visit North Carolina estimates that Chinese and Hong Kong tourists spend an average of \$736 per person, compared with Canadian tourists who spend \$244 each while visiting the state.

RDU's direct flights to London and Paris have already paid dividends — the United Kingdom Consulate opened a trade office last year in Raleigh to connect British and North Carolina companies specializing in technology, manufacturing and life sciences. Other new trade offices are in San Diego and Minneapolis.

"RDU is experiencing tremendous growth," says Andrew Sawyer, the airport's corporate communications coordinator. "Vision 2040 also calls for expansion and reconfiguration of Terminal 2 as volume, need and demand warrant. It puts the framework in place to expand the terminal to up to 23 new gates through the life of the master plan. Finally, we are in

## BY THE NUMBERS

*North Carolina has four international airports in Charlotte, Greensboro, Raleigh-Durham and Wilmington, but only two offer direct flights overseas.*

### Charlotte Douglas International Airport

2016

44 million travelers

154,478 tons of cargo

Future plans: \$2.5 billion in expansion and renovation by 2025

### Raleigh-Durham International Airport

2016

11 million travelers

105,200 tons of cargo

Future plans: \$2.7 billion in improvements by 2040

the early phases of building a consolidated rental car facility to add more convenience for our partners and offer a better customer experience.”

Charlotte Douglas accounts for an annual economic impact of \$16.2 billion, according to a study conducted by UNC Charlotte’s Center for Transportation Policy Studies, a 67% increase from \$9.7 billion in 2005. The study, which includes direct and indirect economic impacts, also notes that airport activities and operations support 224,400 regional jobs, more than double the 100,716 jobs a decade ago.

“Our vision for Charlotte is that we are an economic engine for the Carolinas,” says Stuart Hair, the airport’s

economic affairs manager, “and we do that through facilitating the movement of people and goods. We want to create jobs and enterprise, and the tactic to do that is through the airport.”

Leveraging available land around the airport will play a key role, Hair says. It’s an attractive spot for cargo facilities, data centers and research-and-developments labs. Project AMP, or Airport Master Plan, is designed to put unused land in a 25-square-mile area around the airport to its highest and best uses. “There’s going to be a lot of companies that want to be located near the airport, and they don’t all want to be at our front door,” Hair says. “They’re going 15, 20 minutes away into Belmont and Mount Holly.”

Planned projects at the airport’s “front door” on Wilkinson Boulevard leading to downtown Charlotte include a 400-room hotel, global business center and innovation campus plus “destination entertainment” such as an auto experience center and track, and a commercial center with dining, entertainment and other retail.

On the airport’s south side, Hair says, “there’s already a huge interest in industrial development. About 168 acres is being rezoned from residential to industrial use. It’s changing dramatically. This has all been driven by the private market. We’re responding to the private market interests in how we use our land.”

North Carolina’s 72 general aviation airports have an annual economic impact of more than \$31 billion and support more than 123,000 jobs. Who knows? World-class airports could be the tipping point for Amazon as it considers North Carolina for its so-called HQ2, not to mention a new campus for Apple Inc. It’s a good thing the state has its share. ■

— *Kathy Blake is a freelance writer in eastern North Carolina.*



*Raleigh-Durham International Airport exceeded 11 million travelers in 2016 and was on pace to surpass that in 2017.*



# Find Your Future

The Center of North Carolina Aerospace



**Piedmont Triad International Airport is an economic generator in central North Carolina, with Interstate highway access, on-site training for aviation workers, and plenty of room for businesses to locate and grow.**

- **Central Location:** Located in the heart of North Carolina, PTI is at the center of an aerospace boom that has attracted nearly 200 aerospace companies to the region.
- **Highway Access:** Significant investment has been made in the Interstate highway system surrounding the airport. This network ensures easy access to the airport from Interstate highways stretching north, south, east and west.
- **Workforce Training:** Our regional aviation workforce benefits from an aggressive North Carolina Community College system that emphasizes careers in all facets of aerospace and custom-trains workers to individual company specifications.
- **Industry Leaders Locate at PTI:** The airport's central location and state-of-the-art facilities have already attracted industry leaders such as Honda Aircraft Company, HAECO Americas, FedEx and Cessna. Honda Aircraft world headquarters is located at the airport as is HAECO's North American headquarters.
- **Land Available:** The airport has more than 1,000 acres ready for development, including an 800 acre tract that may be developed in its entirety or in parcels. The land is connected to the airport by a taxiway bridge and has received preliminary NEPA approval.

Visit [LandatPTI.com](http://LandatPTI.com) to learn more.



PROVIDED BY HONDA

*Honda Aircraft's assembly line at Piedmont Triad International Airport in Greensboro is approaching full capacity, when it will build as many as eight jets a month. Called the business jet of the future, the HondaJet cruises at 423 mph at higher than 43,000 feet and has a price tag of about \$5 million.*

## Ready for takeoff

**N**orth Carolina catapulted back into the top 10 most attractive states for aerospace manufacturing in 2017, jumping 14 spots from the year before.

The state benefits from the lowest corporate tax rate in the U.S., low electricity rates and access to deep-water seaports and an extensive rail network, says accounting giant PricewaterhouseCoopers. Its ranking places North Carolina at No. 4, behind Georgia, Michigan and Arizona. Companies are taking notice, including newcomers like Los Angeles-based DAE Systems, which plans to build a \$7.3 million headquarters in Catawba County, and familiar faces such as Spirit AeroSystems driving a \$55.7 million expansion over the next five years at the state-owned Global Transpark in Kinston. Kinston is producing both the massive fuselage panels used in Airbus planes and the operators who fly some of the smallest aircraft — Lenoir Community College was first in the state to launch a degree in drone piloting.

From Kinston to Asheville, more than 1,000 companies make up a thriving aerospace supply chain.

In between, Kevin Baker knows his way around every acre of Piedmont Triad International Airport in Greensboro. As executive director since 2010 and deputy director before that, Baker has watched PTI's metamorphosis from small airfield to global aerospace destination. Today, it's the Triad's ninth-largest

employer with 5,225 workers and an economic driver for the companies that surround it. "You can really see the economic impact all around you," Baker says. "You cannot go to lunch within 5 miles of this airport and not see someone dressed in a Honda uniform in their white overalls."

Honda Aircraft Co., one of several aerospace companies that call PTI home, is ramping up production of its HondaJet as CEO Michimasa Fujino hinted late last year at the possibility of a second, larger aircraft. HAECO Americas plans to open its new, \$60 million aircraft-maintenance hangar early this year at PTI, where it expects to add 400 employees.

Jim McArthur works to recruit new aviation companies to the region as senior director for Triad aerospace development, a position created last year. "The effort by the Greensboro Chamber, Piedmont Triad International Airport and the Piedmont Triad Partnership to combine resources for recruiting aerospace to the Triad tells you how serious we are about economic development and the aerospace industry for our region," he says. With about 15,000 employed in the Triad's aerospace industry, "Our region has the largest percentage of manufacturing jobs in North Carolina and ranks fourth in the Southeast."

While the Triad's role in aerospace manufacturing is well-known, perhaps less visible is Buncombe County, more famous for its mountain tourism but also home



to one of four N.C. facilities for Even-dale, Ohio-based GE Aviation. Plants in Wilmington and West Jefferson produce internal components for a new jetliner engine called the LEAP, which is built in Durham. The Asheville plant is the aerospace industry's first to produce ceramic matrix composite (CMC) components, a space-age material that may one day replace metals in GE's machines.

"No one knows the exact recipe except the people at GE," says Clark Duncan, director of business development for Asheville-Buncombe County. "What's important is the ability to make parts that are stronger than steel and a huge percentage lighter than metal. So the implication is you have safety and strength, but you have [that] ability with a lighter aircraft."

Training many of those GE workers is Asheville-Buncombe Technical Community College. Within weeks of GE opening the CMC facility in 2014, A-B Tech opened its Composite Training Center of Excellence. "There are conversations right now for expanding what GE does in composites and taking on more," says Kevin Kimrey, the school's director of economic and workforce development.

Duncan predicts the county's identity as an aviation hotbed will expand. "Population growth, talent and tech continue to be the primary economic drivers in Asheville — GE Aviation is central to the region's success. The innovative and open-door culture of the company has been a real asset to regional manufacturing and a significant draw to our prospects in aerospace, advanced materials and related technologies."

Aerospace manufacturing has turned Union County into an industry nucleus, growing from three companies in 2002 to 23 supporting 4,000 jobs within an 8-mile radius of Monroe. Cyril Bath, part of France-based Aries Alliance, fabricates large components for companies like Boeing. Pittsburgh-based Allegheny Technologies Inc. is one of Union Coun-

ty's largest employers with a Monroe operation that makes titanium alloys for the aircraft and aerospace industries.

"In aerospace, we are the largest cluster in the state, according to the Department of Commerce," says Chris Platé, executive director of Monroe-Union County Economic Development. "We have an aerospace academy at one of our high schools. It's in our community college. It's part of the fabric of the community."

Charlotte-Monroe Executive Airport has fueled Union County's economic development and not just in aviation. Nearby Monroe Corporate Center has attracted international companies including Austria-based Greiner Bio-One, which manufactures plastic medical equipment. At the airport itself, manager Peter Cevallos says, "We have no room in the inn. We have four hangars at 10,000 square feet, and they're full. We have over 70 parking spots, mostly

for small twin-engines, and they're full. We also have T-hangars, which are elongated buildings with individual garages, and all 20 of those spots are full. We have over 100 airplanes permanently based at the airport."

Construction on a new 12,000-square-foot hangar with office space should be complete by late summer. About 40 acres of the 460-acre airport are in use, Cevallos says, and consultants are working on ideas for how to utilize some of the space for service hangars and manufacturing and cargo operations. The new hangar is sure to be a boost to Monroe's Aerowood Aviation flight school.

"The world of global business in aerospace is a seven- or eight-year cycle," Platé says, "and we're in a super cycle, with 15 years' growth that continues to look strong. We caught the wave at the right time." ■

— *Kathy Blake is a freelance writer in eastern North Carolina.*

## Where Connectivity is the Key to Opportunity –



### Charlotte Douglas International Airport is Diversifying and Strengthening the Regional Economy.

Introducing **Project AMP** (Area Master Plan), a plan designed with the region in mind. Project AMP is an engine that will power business growth for the entire region, focusing on a 25-square-mile area with Charlotte Douglas International Airport at the core. The plan optimizes the use of infrastructure and resources, where each zone of the development will include businesses and services that thrive with proximity to the Airport.

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