



**NORTH CAROLINA**  
Department of Transportation



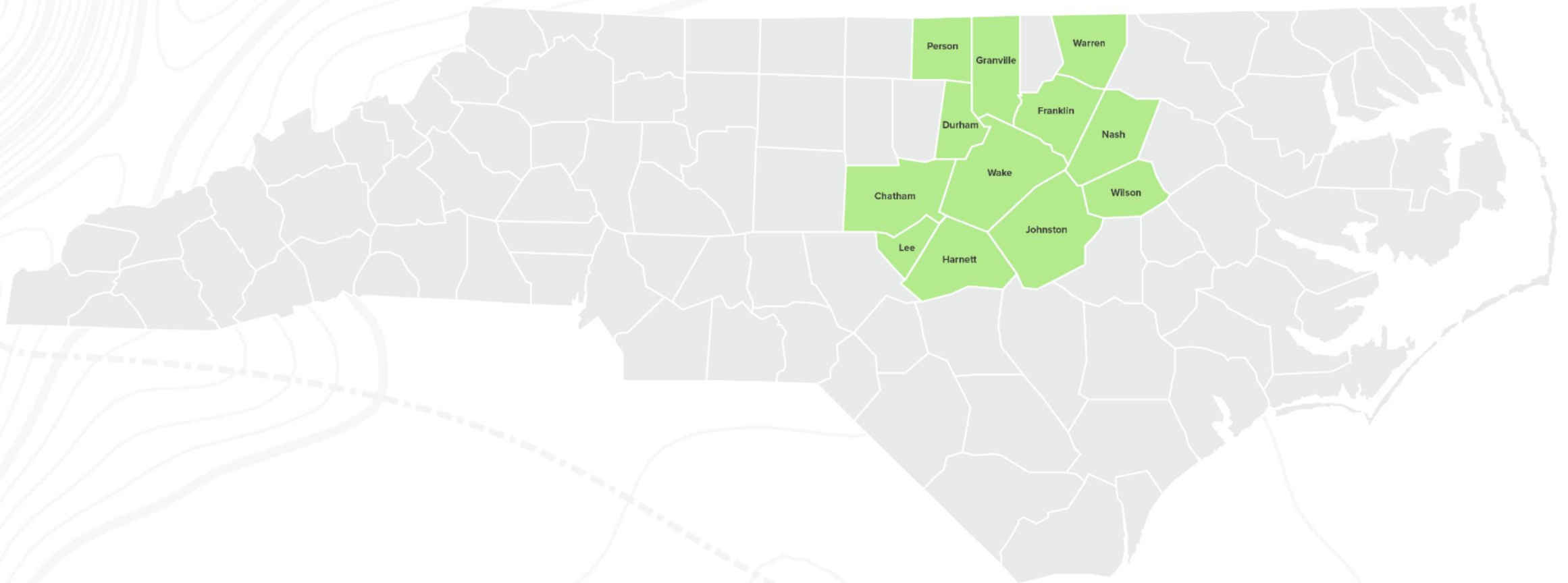
# Expanding North Carolina's Aerospace Economy

Hosted by Research Triangle Regional Partnership  
and Regional Transportation Alliance  
January 19, 2021



# The Research Triangle Region

## Of North Carolina



## Our Region's Airports

- 1) Henderson-Oxford
- 2) Raleigh Regional at Person County
- 3) Triangle North Executive
- 4) RDU
- 5) Rocky Mount-Wilson
- 6) Johnston Regional
- 7) Harnett Regional Jetport
- 8) Raleigh Executive Jetport
- 9) Siler City Municipal



# Economic Impact of Our Region's Airports

## Regional Airports (not including RDU)

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3,120 Jobs

\$567,390,000 Economic Output

## Raleigh-Durham International

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99,335 Jobs

\$15,146,510,000 Economic Output



# Topics for Today



- Why NCDOT Aviation?
- North Carolina Aerospace Impacts
- North Carolina Aerospace Business Development Plan
- Expanding Aerospace in Your Region
- Assessing Regional Assets and Infrastructure
- Next Steps for Collaboration

# NCDOT Division of Aviation Mission



Promote the economic well-being of North Carolina by developing a safe and robust air transportation system



# Division of Aviation Core Functions



Airport  
Development  
Grants  
Administration



Unmanned Aircraft  
Systems  
Integration



Education &  
Professional  
Development

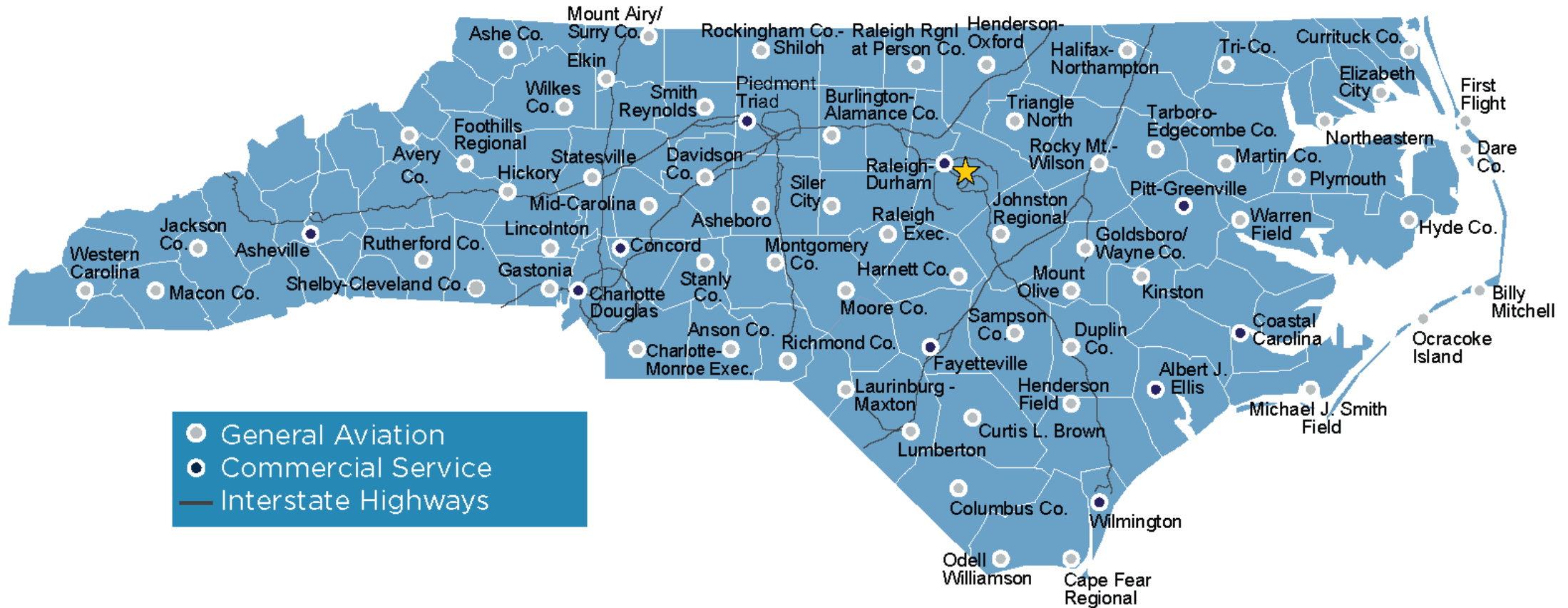


Passenger &  
Photogrammetry  
Services for State  
Agencies



Aerospace  
Economic  
Development

# North Carolina's Public Use Airports



72 Airports | 10 Commercial Service | 62 General Aviation  
*94% of North Carolina's population lives within a 30-minute drive of a public airport*



# Recent State Airport Project Investments

## **Harnett Regional Jetport**

- Parking apron expansion design
- Airfield lighting rehabilitation design

## **Henderson-Oxford Airport**

- T-hangar, taxilane, access road construction

## **Johnston County Airport**

- Midfield development environmental assessment
- Apron expansion, site development for multi-use facility

## **Raleigh-Durham International Airport**

- Runway rehabilitation design, construction
- Runway land acquisition
- Runway preliminary planning
- Runway schematic design
- Taxiway rehabilitation design, construction
- Parking apron rehabilitation design, construction
- Terminal carpet replacement
- Terminal checkpoint Expansion
- Terminal 2 replacement of air units
- International Drive improvements assessment/design
- John Brantley Boulevard construction
- Roadway sign improvements

## **Raleigh Executive Jetport at Sanford-Lee County**

- New terminal building
- Parking lot, access road rehabilitation
- Terminal development area

## **Raleigh Regional Airport at Person County**

- Obstruction removal
- Pavement rehabilitation
- Lighting, signage rehabilitation

## **Rocky Mount-Wilson Regional Airport**

- T-hangar design and construction
- Runway, taxiway pavement rehabilitation
- Access road improvement design

## **Siler City Municipal Airport**

- Runway, apron, taxiway turnarounds and helipad parking pavement rehabilitation
- Land acquisition for runway protection zone

## **Triangle North Executive Airport**

- Runway, taxiway, parking apron pavement rehabilitation design
- Airfield lighting rehabilitation design

# N.C. Public Airport Impacts

## 10% of State GDP



Rutherford County Airport



# Filed Flight Plans Dashboard

## Filed Flight Plans for North Carolina Airports (FFY 2019)

Filed flight plans from the Federal Aviation Administration (FAA) for Federal Fiscal Year 2019 for the 72 publicly-owned airports in North Carolina

### North Carolina

Total flights:  
1,049,109

Arrivals from 68  
states and/or countries

North Carolina	311,852
Florida	229,474
Virginia	174,082
Georgia	155,544
New York	124,748
South Carolina	103,748



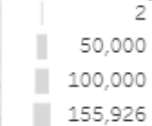
View:

- ☒ All
- ☐ Arrivals
- ☐ Departures

Airport

Total

Number of Flights



# Your Airports Connect People and Cargo to the World

Airport	Total Flights	States/Countries
Harnett Regional Jetport (HRJ)	1,873	31
Henderson-Oxford Airport (HNZ)	483	25
Johnston Regional Airport (JNX)	2,568	42
Raleigh Regional Airport at Person County (TDF)	902	38
Raleigh Executive Jetport at Sanford-Lee County (TTA)	4,234	43
Raleigh-Durham International Airport (RDU)	187,637	72
Rocky Mount-Wilson Regional Airport (RWI)	1,627	41
Siler City Municipal Airport (SCR)	326	26
Triangle North Executive Airport (LHZ)	1,307	38

**Flight Data Dashboard:** [go.ncsu.edu/airportarrivalsanddepartures](https://go.ncsu.edu/airportarrivalsanddepartures)

Daniel\_Findley@ncsu.edu



## New Division Initiative

# Grow North Carolina's Aerospace Economy

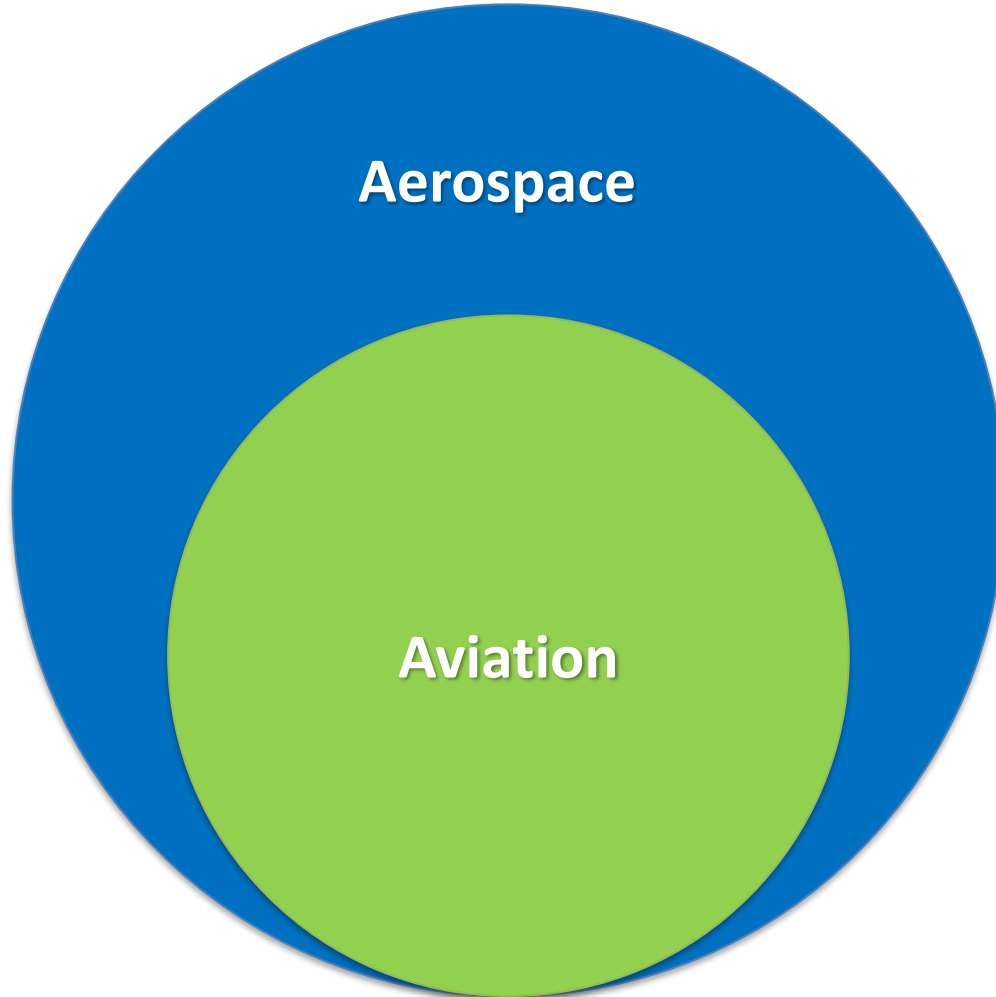
**Goal: Extend the economic benefits and opportunities that aviation enables to every corner of the state.**



Amanda Conner

- Hired business development manager June 2019
- Role:
  - Create a strategic plan for expanding aviation's economic impact
  - Facilitate statewide collaboration to implement
  - Provide subject matter expertise, technical assistance, lead generation, support recruiting and expanding aerospace businesses

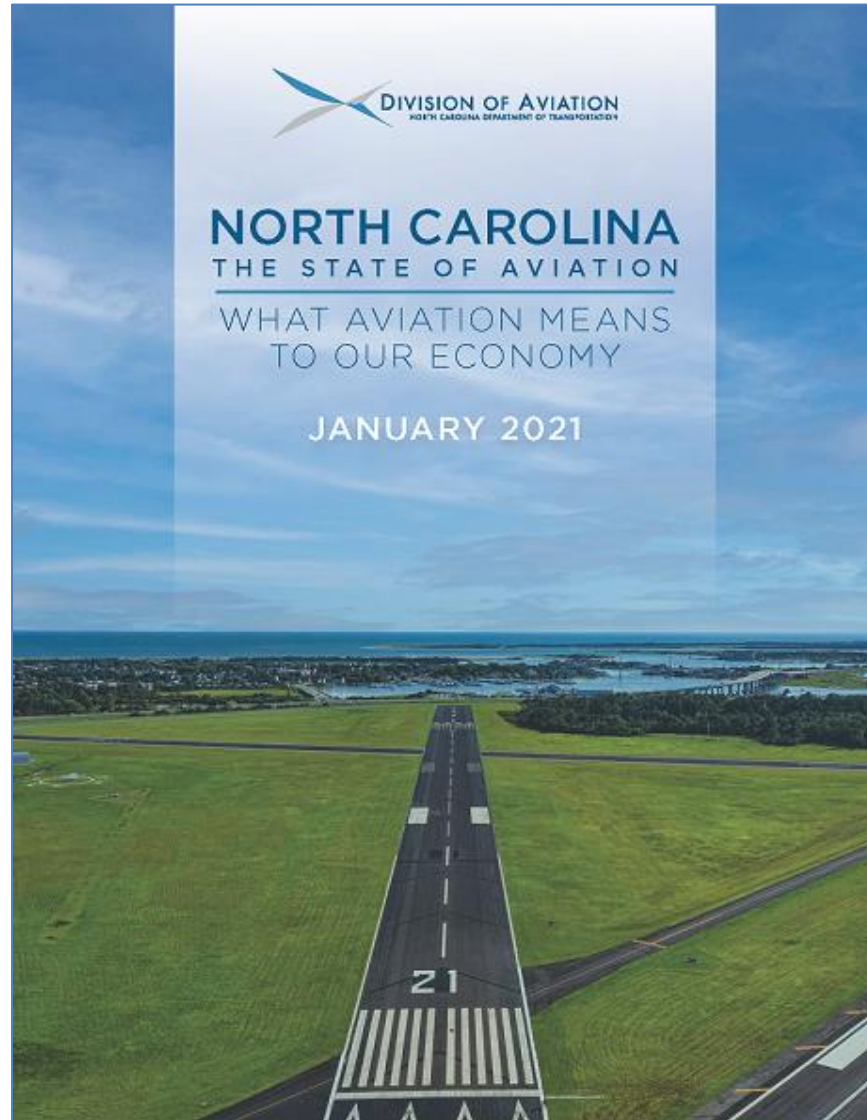
# Aerospace/Aviation Defined



**Aerospace** – activities related to both flying and creating things that fly

**Aviation** – activities related to flying or operating of aircraft:

- Businesses that require aircraft – both manned and unmanned
- Vendors and suppliers that support them
- Facilities that support them (e.g., our 72 public airports)



*Michael J. Smith Field, Beaufort*

# North Carolina: The State of Aviation

January 2021

[www.ncdot.gov/aviation](http://www.ncdot.gov/aviation)

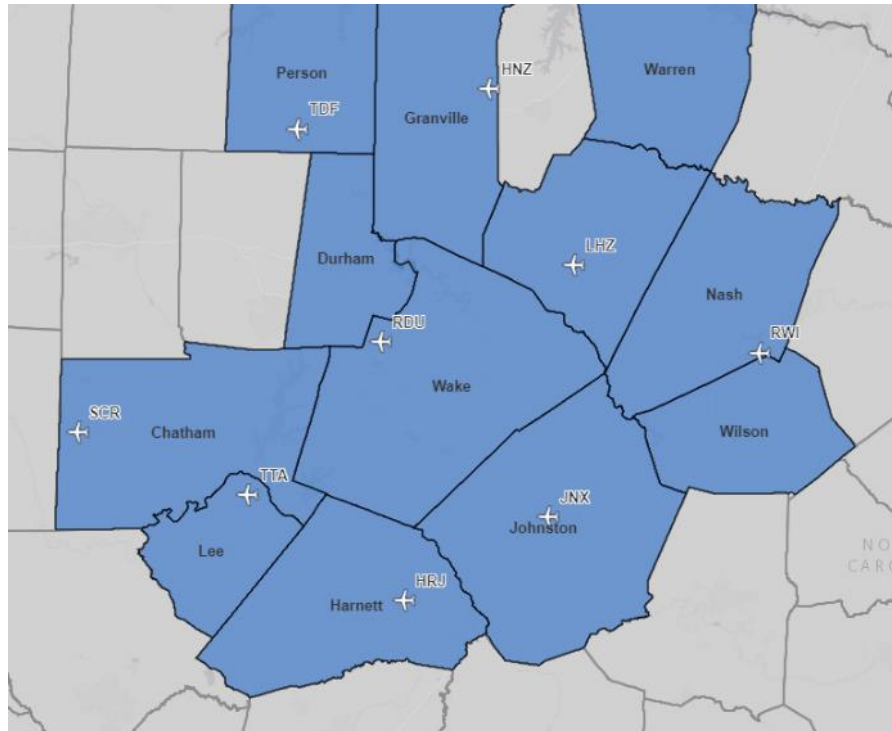
# N.C. Public Airport Impacts



Rutherford County Airport



# Research Triangle Region Airport Impacts



## Airports

Harnett Regional Jetport (HRJ)  
Henderson-Oxford Airport (HNZ)  
Johnston Regional Airport (JNX)  
Raleigh Regional Airport at Person County (TDF)  
Raleigh-Durham International Airport (RDU)  
Raleigh Executive Jetport at Sanford-Lee County (TTA)  
Rocky Mount-Wilson Regional Airport (RWI)  
Siler City Municipal Airport (SCR)  
Triangle North Executive Airport (LHZ)

**9 Airports | \$15.7 billion economic impact | 100,200 jobs**  
**\$3.63 billion personal income | \$536 million state/local tax revenue**

# N.C. Airport Support Industry Impacts



*Albert J. Ellis Airport. Jacksonville*

- 13 airport-based rental car companies
- \$94 million tax revenues from short-term leases and rentals of motor vehicles
- 527 million gallons of fuel sold annually

# Based Aircraft Impacts



*Statesville Regional Airport*

735 aircraft based at Research Triangle Region airports (valued at \$410 million) pay \$3 million in local property taxes, equal to approximately 2,000 \$200K homes



## N.C. Aerospace Companies and Jobs

Sector	Companies	Jobs
Aerospace Manufacturing	180	9,500
Aerospace Maintenance	148	4,400
Military Aviation (Bases)	8	70,000
Commercial Airlines	14	14,000
Air Freight Services	26	2,500



# N.C. Aerospace Manufacturing Impacts



**6,887**  
JOBS



**2.5%**  
CORPORATE  
TAX RATE

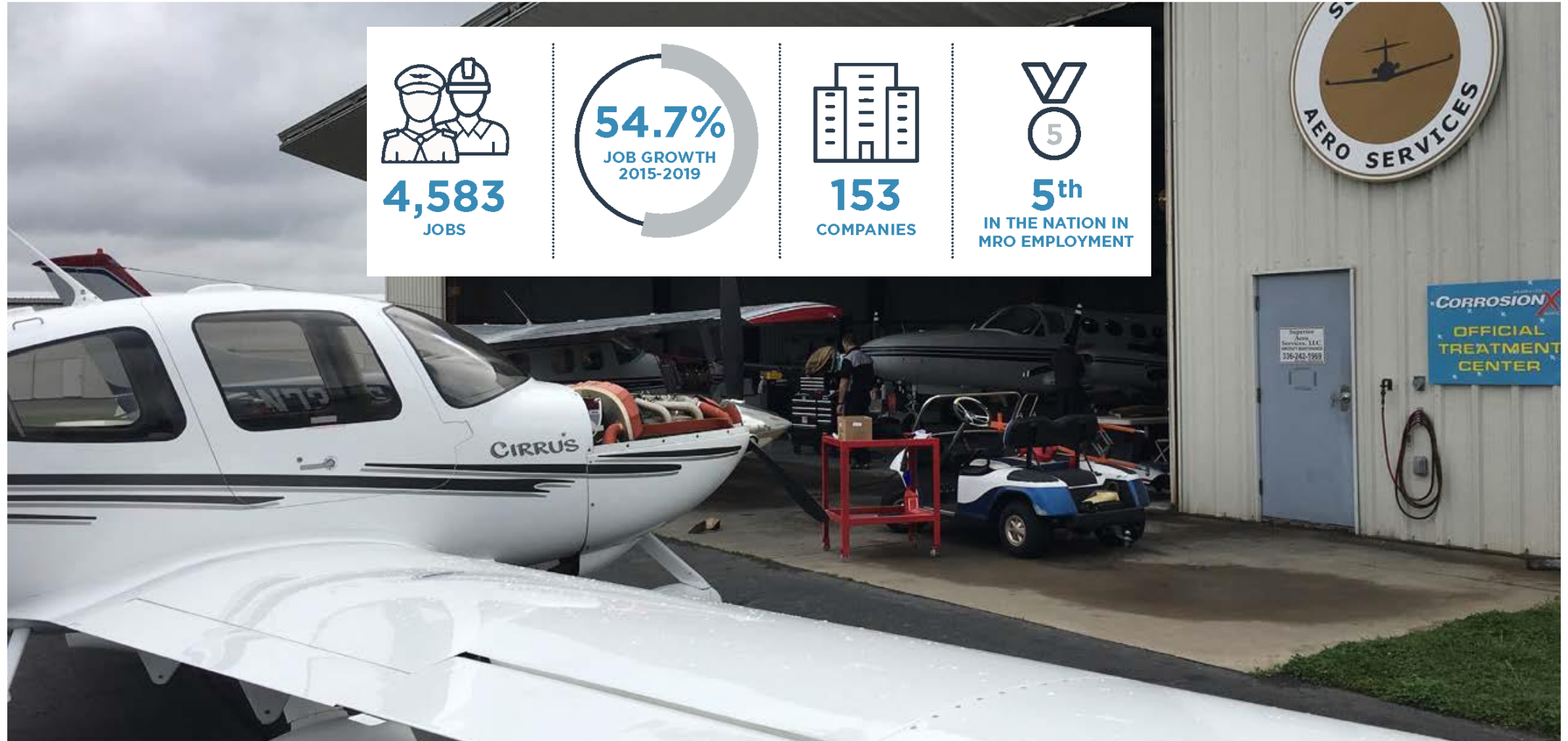
**200+**  
COMPANIES



**2<sup>nd</sup>**  
FASTEST-GROWING AEROSPACE  
MANUFACTURING SECTOR  
IN THE COUNTRY

*Left, Honda Aircraft Co., Piedmont Triad International Airport. Right, Mountain Air Cargo, Kinston Regional Jetport*

# N.C. Maintenance Repair & Overhaul (MRO) Impacts



Superior Aero Services, Davidson County Airport

# N.C. Military Aviation Impacts

- 1 POPE FIELD AT FORT BRAGG | FAYETTEVILLE
- 2 SEYMOUR JOHNSON AIR FORCE BASE | GOLDSBORO
- 3 MARINE CORPS AIR STATION CHERRY POINT | HAVELOCK
- 4 MARINE CORPS AIR STATION NEW RIVER | JACKSONVILLE
- 5 ELIZABETH CITY COAST GUARD AIR STATION

## N.C. NATIONAL GUARD

- 6 145TH AIRLIFT WING | CHARLOTTE DOUGLAS AND STANLY COUNTY
- 7 449TH THEATER AVIATION BRIGADE | RALEIGH-DURHAM
- 8 449TH THEATER AVIATION BRIGADE | ROWAN COUNTY



**21,000**  
TRANSITIONING  
MILITARY



**70,000**  
JOBS



**21,000**  
TRAINED VETERANS  
ENTERING THE  
WORKFORCE ANNUALLY

**\$3  
BILLION**  
IN DEFENSE CONTRACTS EARNED  
BY NC COMPANIES IN 2019



# N.C. Unmanned Aircraft Systems Impacts



*Cape Hatteras National Seashore*



**33,293**

RECREATIONAL PILOTS



**5,000**

COMMERCIAL PILOTS



# N.C. Aviation Education Impacts



**20,500**

ANNUAL STEM  
POST-SECONDARY  
GRADUATES



**1,134**

ANNUAL STUDENTS  
IN COMMUNITY COLLEGE  
AVIATION PROGRAMS



**366**

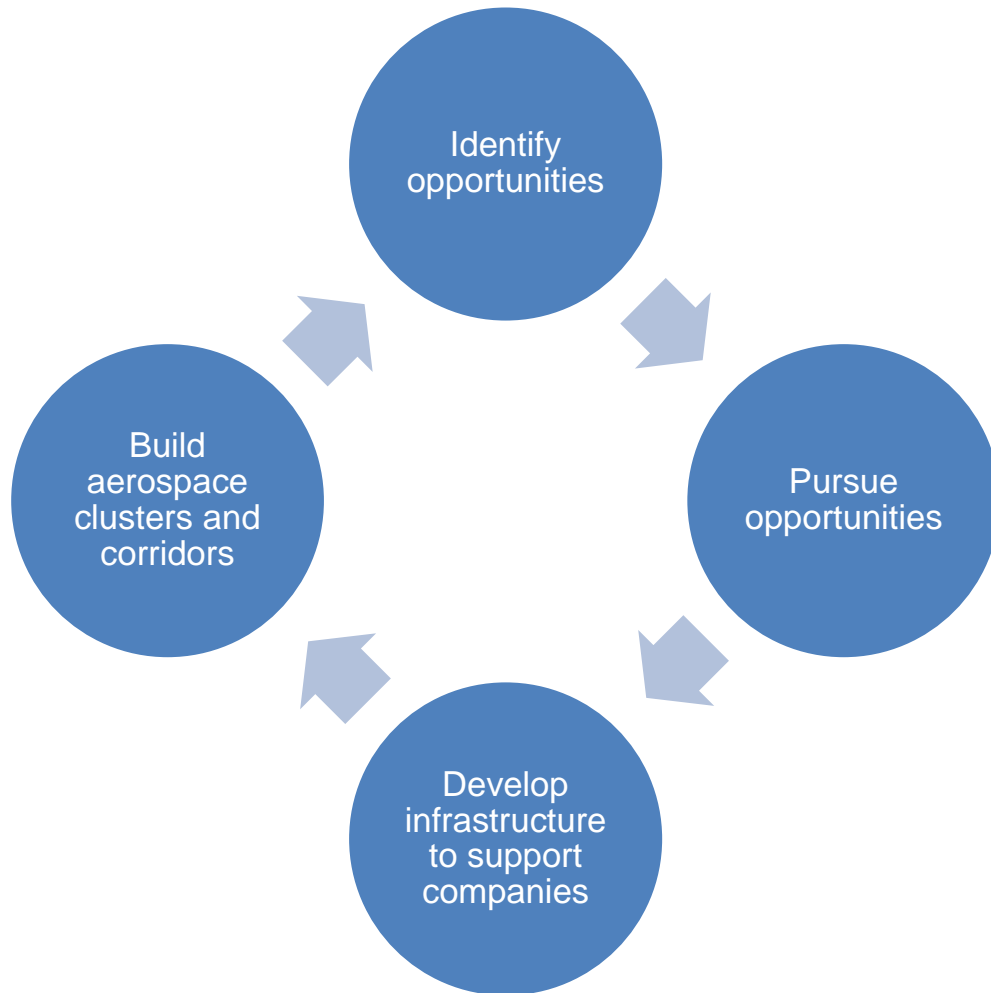
ANNUAL STUDENTS  
IN FOUR-YEAR  
AVIATION PROGRAMS



**28**

POST-SECONDARY  
AVIATION PROGRAMS

# N.C. Aerospace Business Development Plan

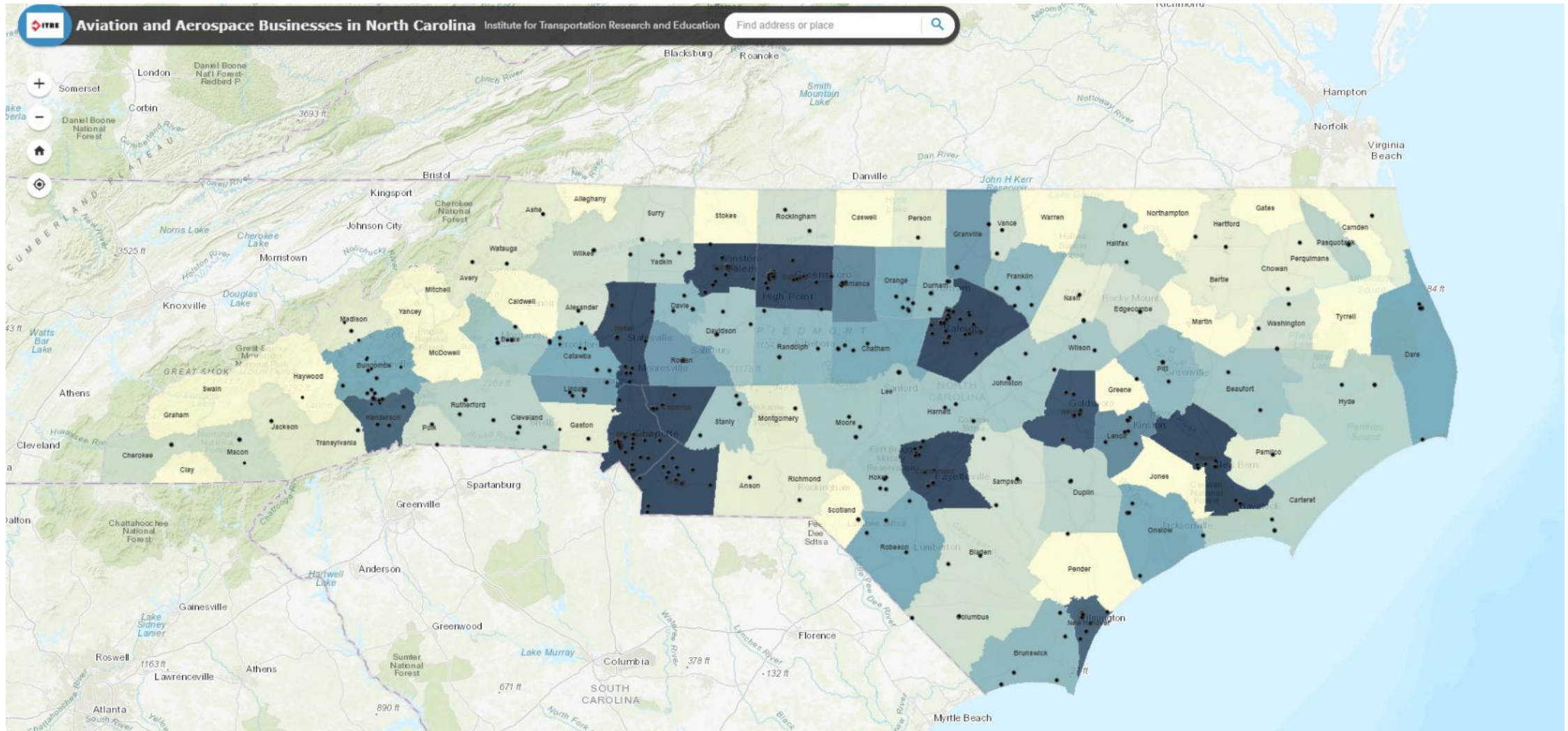


1. Generate leads and support aerospace project development in North Carolina through business recruitment, retention and expansion
2. Map and align existing and future business development opportunities, assets and plans
3. Strengthen aerospace business and workforce development collaborations with local, regional and state partners and stakeholders



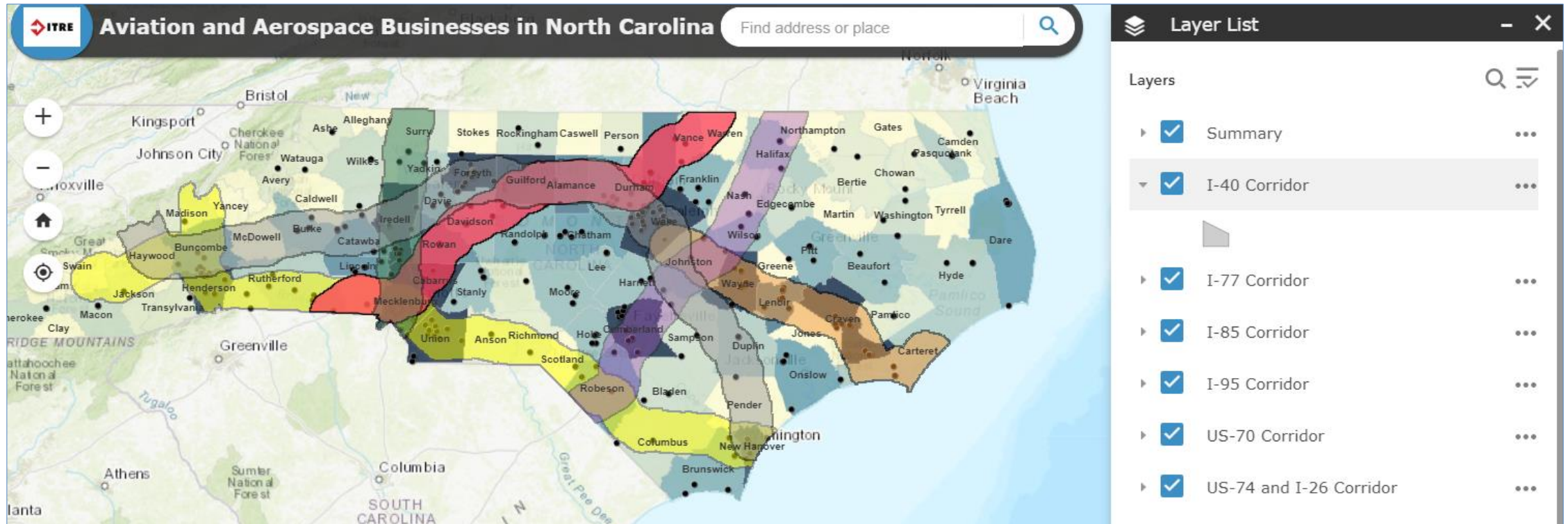
# North Carolina's Aerospace Sector

## 452 Firms





# N.C. Aerospace Corridors



# COVID Impacts on the Aerospace Sector

*Seven years of industry growth decimated in two weeks*

Aerospace Original Equipment Manufacturers



Aerospace Manufacturers Supply Chain



Commercial Air Service



Maintenance and Repair Operations



Aerospace Aftermarket (components parts)



UAS OEM, Supply Chain, R&D



Defense



Air Cargo



Private Charter Service



# Post-COVID Air Travel Could Snap Back Faster Than Expected

## Operations Growing During COVID

Car Rentals	▲
FBO Activity	▲
Leisure Travel	▲
Military Aviation	▲

## Predictions Post-COVID

- Passenger travel revives during second half of 2021
- 80% of 2019 passenger levels reached by summer 2022
- American Airlines averages 700 daily departures from Charlotte during Thanksgiving 2021, up from 460 for 2020
- With effective vaccines, COVID ceases to be a travel factor by the end of 2021

Source: [Forbes Airline/Aviation Outlook for 2021](#)



# Technology Expected to Drive Post-COVID Aerospace and Defense Sectors

## Sectors Growing During COVID

UAS OEM, Supply  
Chain, R&D



Defense



Air Cargo



Private Charter



## Technologies Driving Growth

- Advanced air mobility
- Hypersonics
- Electric propulsion
- Hydrogen-powered aircraft

## Companies' Focus in 2021

- Restructuring
- Cost reduction
- Supply chain transformation

Source: [Deloitte US 2021 Aerospace and Defense Industry Outlook](#)

# Current N.C. Aerospace Initiatives

Organization	Aerospace-Related Activity
NCDOT Division of Aviation	State of Aviation report UAS program annual report Dedicated aviation business development manager Statewide aerospace strategic planning effort
Economic Development Partnership of North Carolina	Marketing N.C. at major aerospace/aviation events (e.g. Farnborough, Paris Air Show) Aerospace industry marketing brochure Defense industry marketing brochure* Autonomous systems industry marketing brochure*
Defense Alliance of North Carolina	Defense industry cluster study* Defense industry asset inventory*
N.C. Defense Industry Diversification Initiative	Defense Industry Summit* Defense strategic planning effort*
N.C. Military Business Center	Defense strategic planning effort* Defense mission (annual) report*
Piedmont Triad Partnership	Aerospace strategic planning effort
North Carolina Global TransPark	Business development strategic plan
North Carolina's Southeast Partnership	Aerospace corridor strategic planning effort

\* includes aerospace

Current Implementation Focus

# Identify Existing Regional Assets, Infrastructure and Interest

- Host regional **briefings** (July-March)
- Conduct exploratory **surveys** to gather data from regions
  - July 29 – North Carolina East Alliance
  - August 11 – NC's Southeast
  - September 8 – CarolinaWest
  - October 14 – Mountain West
  - Jan. 19 – Research Triangle Region



## Next Steps

# Conduct Cluster, Supply Chain and Policy Analyses



- Dig deeply into existing assets and opportunities
- Identify gaps
- Recommend sectors to pursue
- Identify what is needed to pursue them (infrastructure, talent and workforce development, policies)

# Research Focus: What Exists and What is Needed to Support Aerospace Industry Expansion



- Existing aerospace and supply chain companies
- Buildings and sites
- Utilities
- Talent
- Workforce development

## Actions You Can Take Now



- ✓ Get your buildings and sites in the state database
- ✓ Start an industry roundtable
- ✓ Assess transferable skills and create talent development plans



# Key Next Step: Interest/Assets/Infrastructure Survey

## Due Wednesday, February 3



- Is aerospace currently a priority for your organization?
- Are you interested in partnering with this initiative to expand an aerospace sector?
- What can you contribute to this effort?
- Do you have existing aerospace companies, suppliers or support industries in your region?
- Do you have available buildings and sites suitable for aerospace/supply companies (if yes, we'll work with local and regional economic developers to submit them to the state database)

# North Carolina: Forever First In Flight



**Amanda Conner**, NCDOT Aviation Business Development Manager  
(o) 919.814.0590 | (m) 919.618.2051 | [aconner1@ncdot.gov](mailto:aconner1@ncdot.gov)



# The Research Triangle Region

## Of North Carolina

