

Zephyrhills, Florida Aviation Cluster Study

TBRPC Economic Analysis Program
tbrpc.org/eap

Tampa Bay Regional Planning Council
4000 Gateway Centre Blvd, Suite 100
Pinellas Park, Florida



Tampa Bay Regional Planning Council (TBRPC)

Established in 1962

Economic Development, Emergency Preparedness,
Environmental Planning, Resiliency, and Decision
Support GIS & Visioning

Economic Analysis Program

+400 economic impact studies since 1999 using
REMI PI+ and IMPLAN

Project Staff



Randy Deshazo
Director of Planning
& Research



Sarah Vitale, AICP
Senior Planner



Harry Walsh
Economic Development
Planner



- 6 Counties
- 21 Municipalities
- 13 Gubernatorial Appointees
- 3 Ex-Officios
- 5,000 Square Miles
- 3.6 Million People

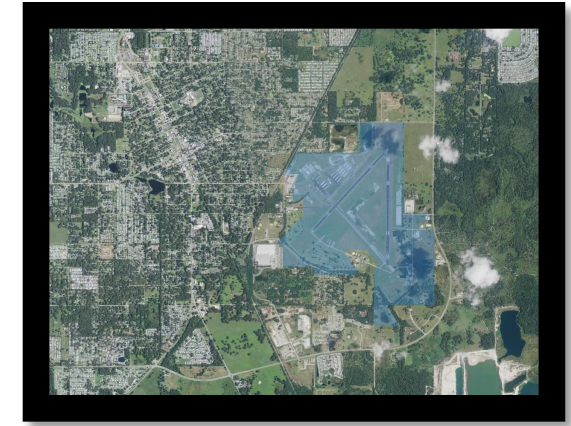
**We do not take a
position on projects.**

Instead, we are focused on
“just-the-facts”



Zephyrhills Aviation Cluster Study

At the request of Pasco EDC and funded by the CARES Act, TBRPC is assisting Tampa Bay area communities with short & impactful studies to support economic recovery. In this case the City of Zephyrhills in Eastern Pasco County.



A high altitude “what-if” analysis of a potential aviation industry center (cluster) located in the area of the Zephyrhills Municipal Airport.

Our perspective: using visualization and economic analysis to inquire, weigh options and answer basic questions.

- Zephyrhills has the start of an aviation cluster, with gaps in key supply/value chains
- Aircraft manufacturing is a noticeable gap in the area’s value chain, as compared to other Aviation clusters such as Orange (Orlando) or Duval (Jacksonville) county
- Public and private convergence is needed for a cluster approach to development...
- ...and industry clusters pay dividends



Cluster Approaches to Economic Development

Michael Porter (Harvard Business School) has promoted taking a broad look at the value chain relationships within industries to help communities build their economies.

Focus on close-by interrelated businesses supported by a network of quality infrastructure, a well-trained work force, and capital investment.

Local economies are not a random collection of businesses, they are webs of mutually dependent economic activity.

What is an Industry Cluster?

- A geographic concentration of interconnected firms, suppliers, and institutions in a particular field.
- Clusters can increase the productivity of the companies in the cluster, driving innovation, and stimulating new businesses.
- Examples: Motor City, Silicon Valley, Wall Street, but also retail centers and airport industrial areas.

Jewelers' Row, Chicago



Magazine St., New Orleans



Magazine St., New Orleans

Building an Aviation Cluster



Clusters thrive on locational advantages (airport, access to large metro area).

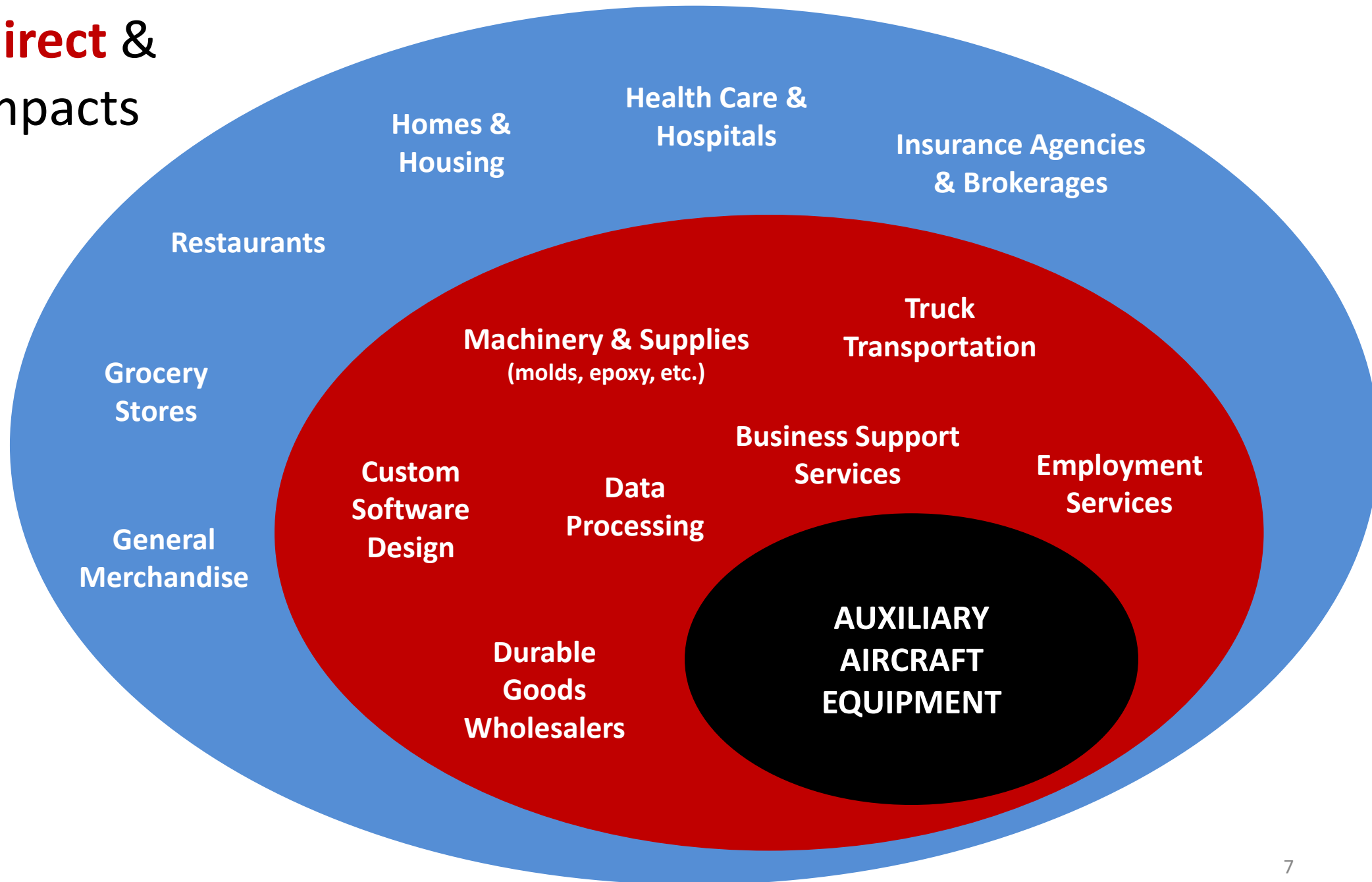


Is there a concentration of related employment in the area?



Are wages high (indicating high demand)?

Direct, Indirect & Induced Impacts



Existing Conditions in General Aviation

COVID-19 Impacts in Aviation-related Industries

As of September 1, 2020:

Commercial airlines have been the most significantly impacted by COVID-19.

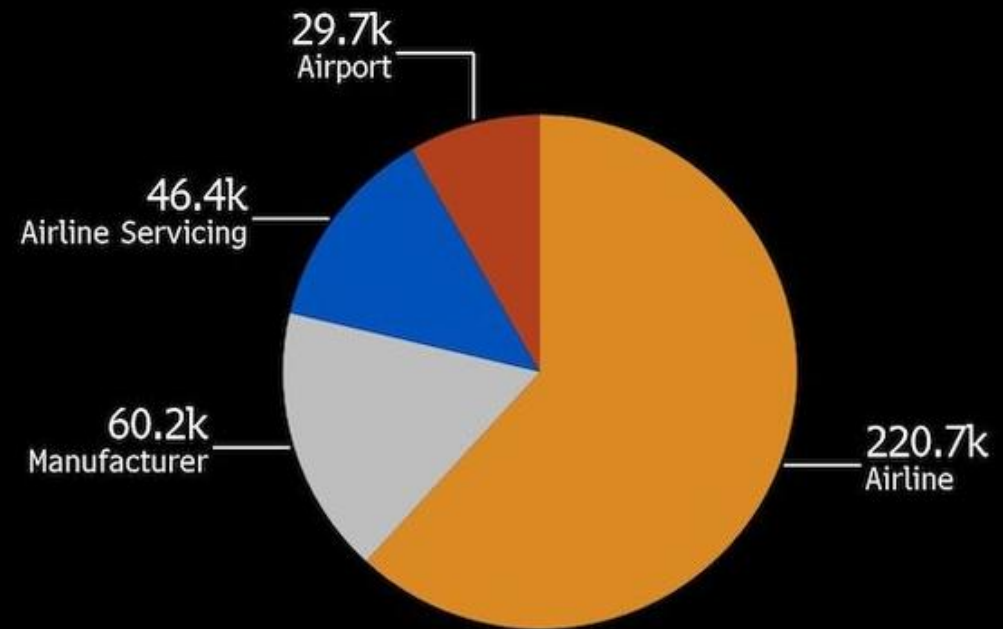
- They account for over 60% of all jobs lost in the aviation industry.

Aerospace Manufacturers account for about ~17% of all aviation-related jobs lost.

Airports, though not immune, have been the most insulated from the fall in demand.

- Airports are the best situated to pivot to new demands in aviation, most importantly the shift to private flights over commercial.

Airlines Have Taken By Far The Biggest Jobs Hit
Cuts at airports to date have been minor by comparison



Source: Five Aero

Bloomberg

Flying into the winds? — U.S. Industry Trends in Aviation



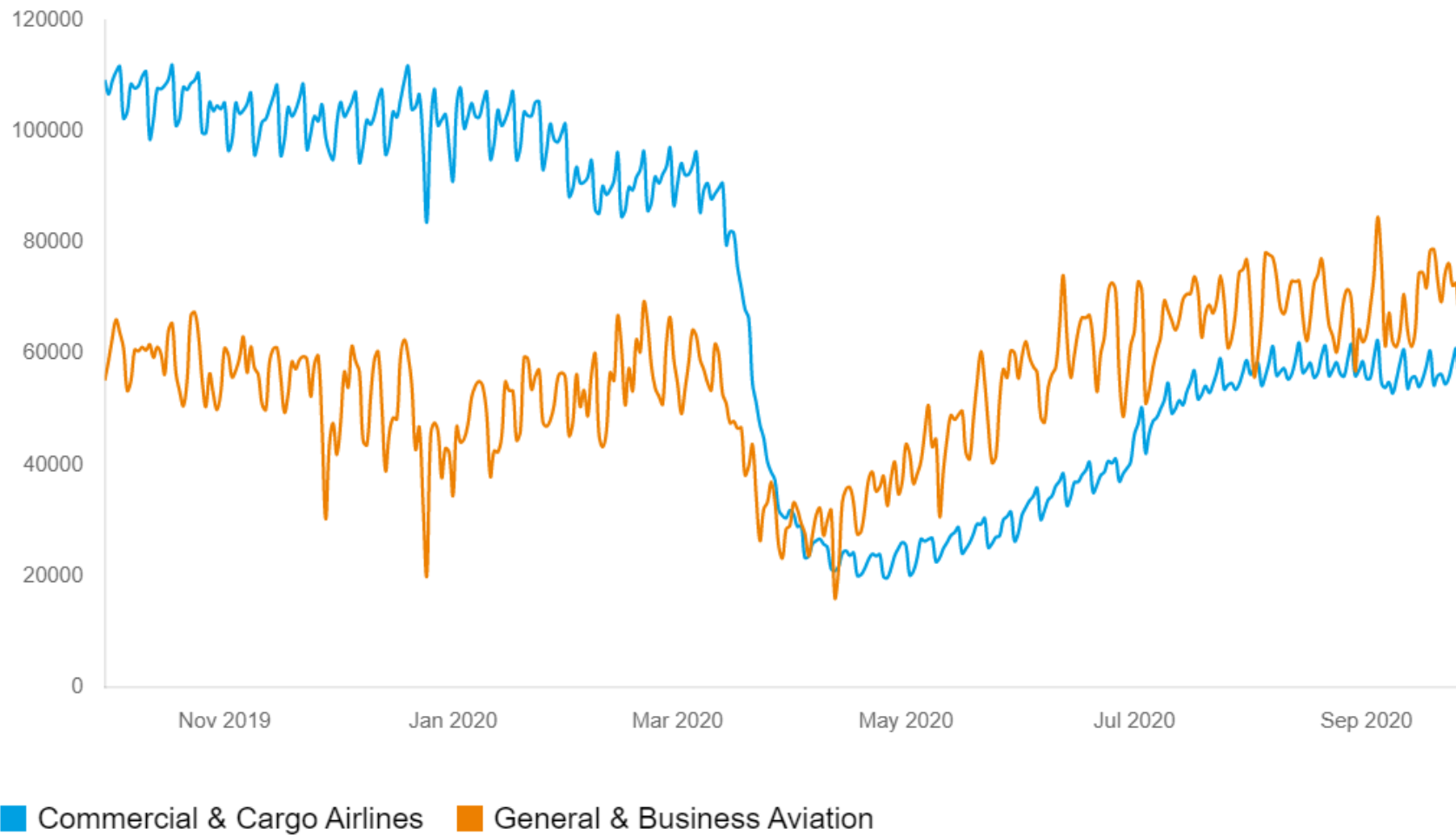
General Aviation

- GA flights for business & personal travel have fully recovered, and surpassed pre-COVID-19 levels.
- The short-term for airports is supporting private aircraft ownership, chartered flights, and private piloting of smaller aircraft.

Aircraft Manufacturing

- Existing aircraft and parts orders have been cancelled.
 - Large aerospace manufacturers have made significant job cuts due to low demand.
 - There is an aircraft glut that will dampen manufacturing demand when aircraft recovers.
- Even with the increase in GA, capacity does not yet need to expand.
 - Smaller, private aircraft manufacturer are also cutting jobs.
 - While new high net-worth customers are getting into the market, it is mostly resale, i.e. no need for new construction.

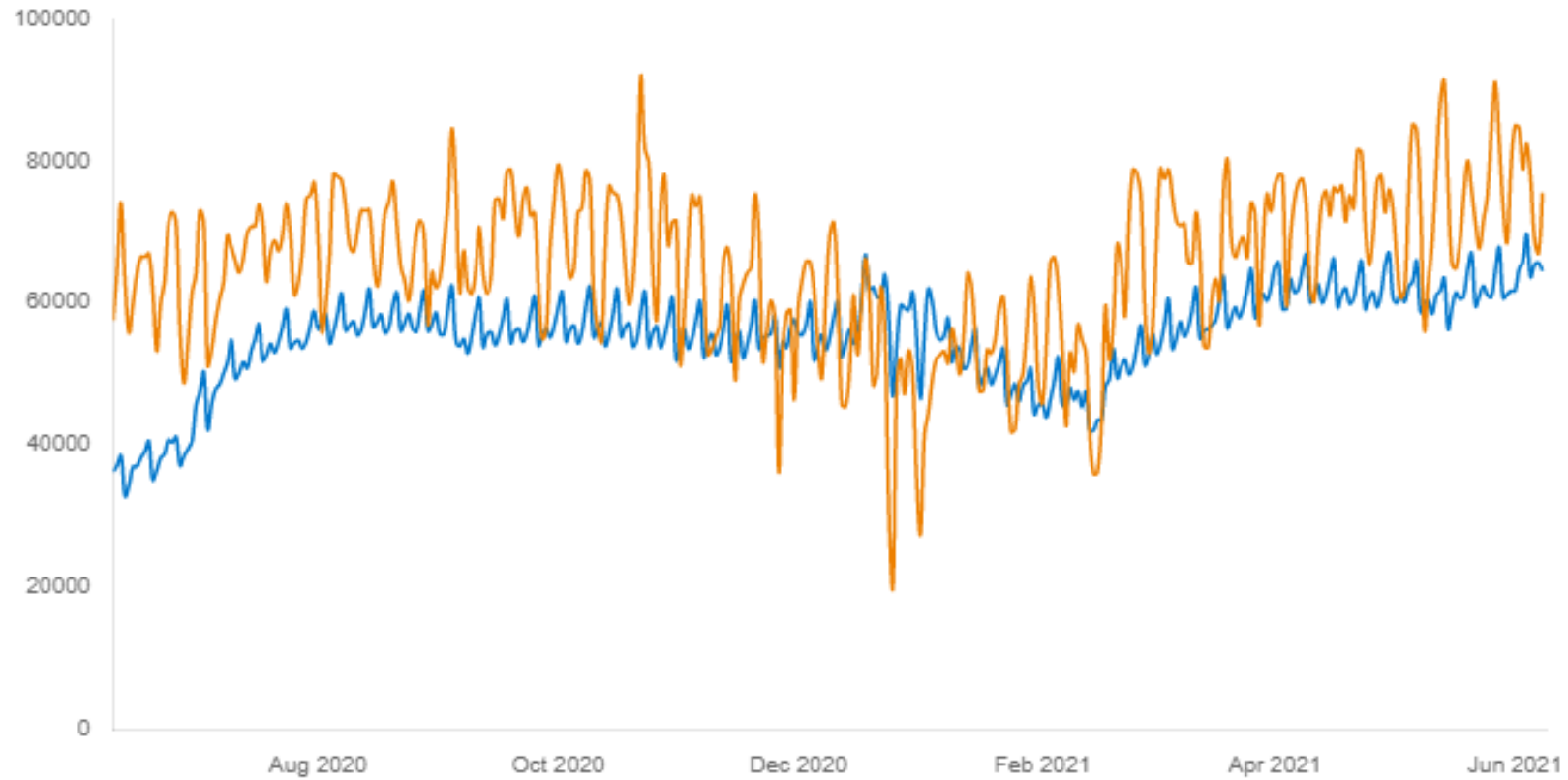
GLOBAL ARRIVALS PER DAY OVER THE LAST [1 YEAR](#) ▾



Last updated at 02:48AM EDT

Source: FlightAware

GLOBAL ARRIVALS PER DAY OVER THE LAST [1 YEAR](#) ▾

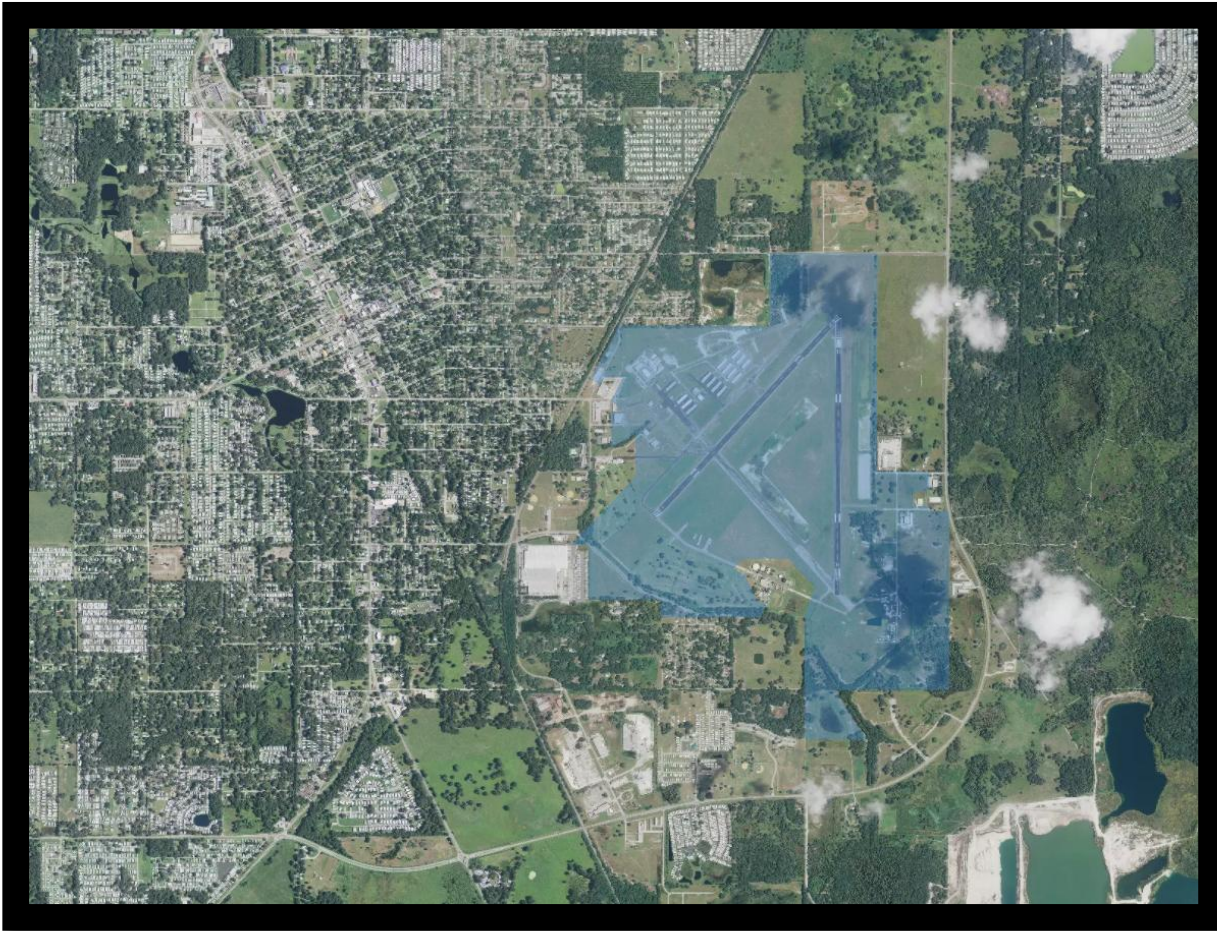


■ Commercial & Cargo Airlines ■ General & Business Aviation

Last updated at 03:09AM EDT Source: FlightAware

Zephyrhills Municipal Airport

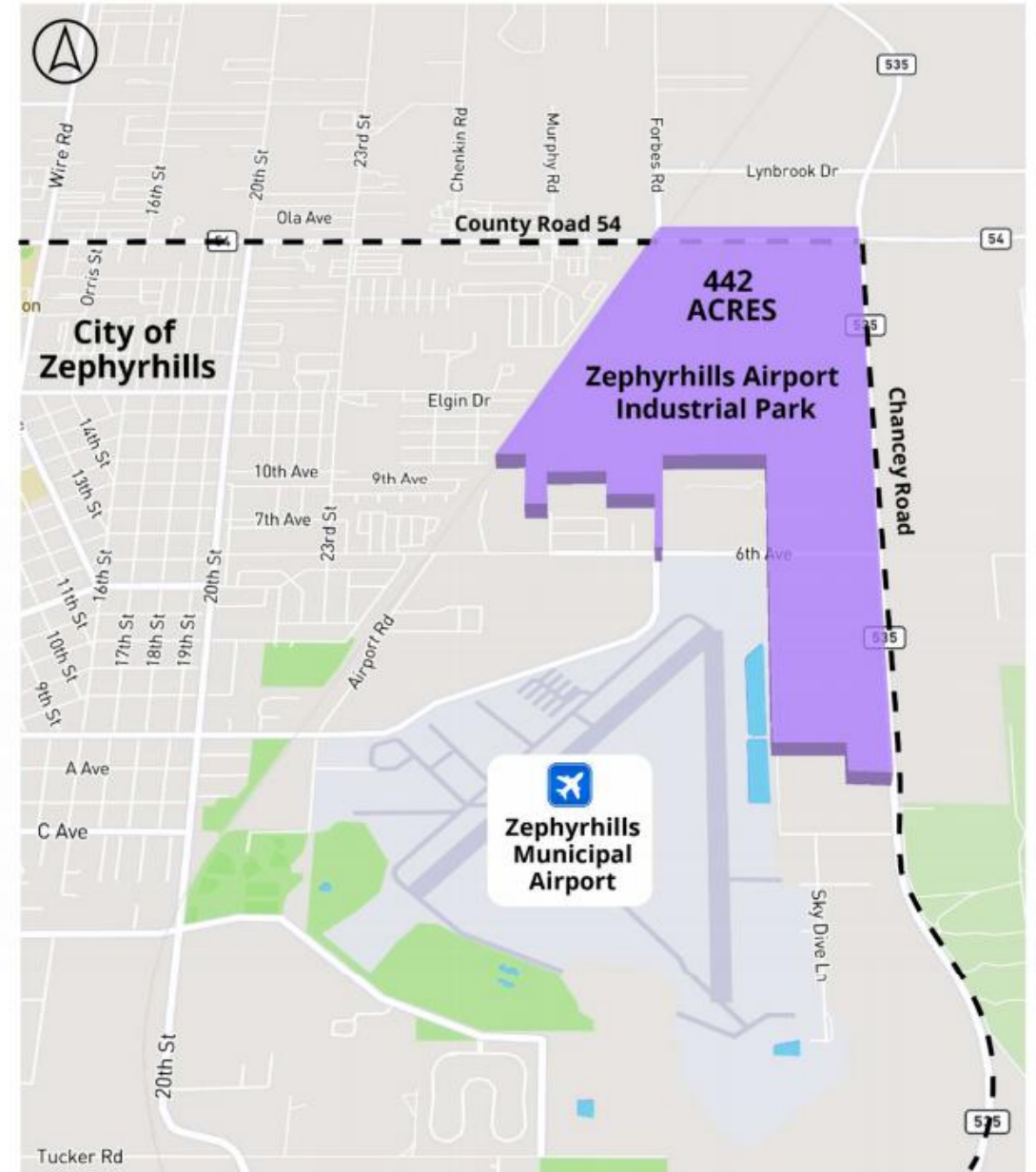
Pasco County, Florida



- Zephyrhills Municipal Airport & Zephyrhills Airport Industrial Park

- 860 acres with two runways
- 45,000 to 50,000 operations annually
- Revenue sources primarily fuel sales and ground leases
- Recipient of many FAA and FDOT grants over the past few years

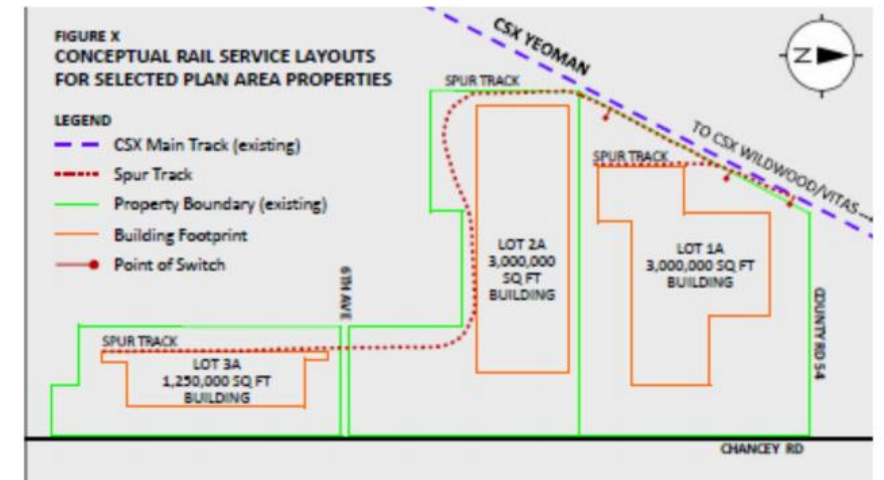
Figure 1.1 Zephyrhills Municipal Airport and Airport Industrial Park



Zephyrhills as a Cluster Center

- Airport
 - Having an existing airport is of course a necessary step in developing an aviation cluster
 - Zephyrhills is in good shape to start
- Industrial Zone
 - Current zone has a lot of land to develop
 - Over 7 million sq. ft of potential space

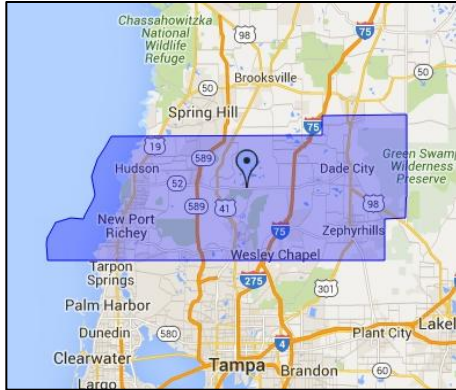
Figure 1.2 Conceptual Rail Service Layouts for Selected Plan Area Properties



Source: Zephyrhills Industrial Corridor Plan

Comparing Economic Impacts (\$10 Million in Light Aircraft Sales)

Pasco County



Impact	Employment	Output
1 - Direct	15.44	\$10,000,000
2 - Indirect	4.23	\$702,522
3 - Induced	1.85	\$246,594
Total	21.52	\$10,949,116

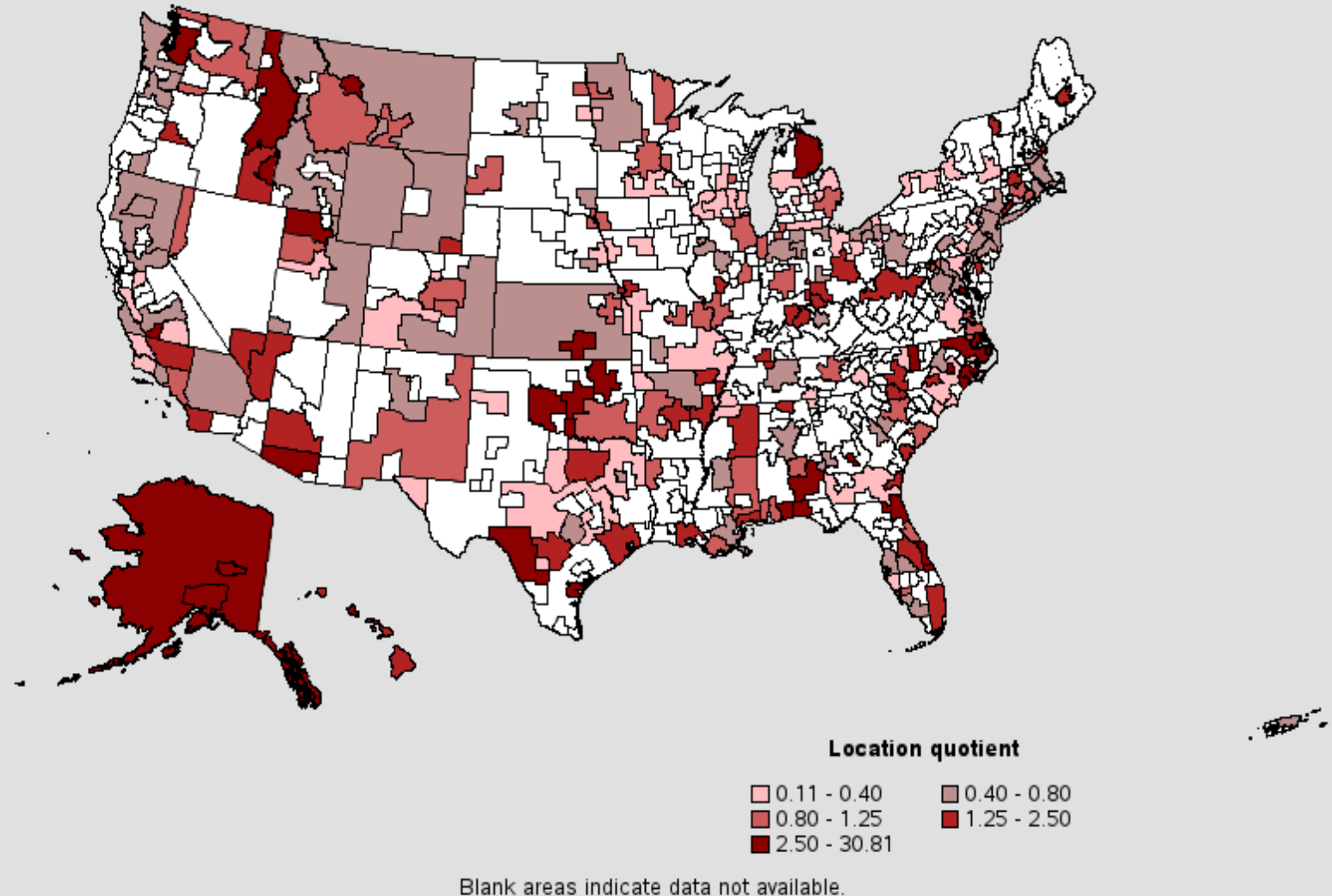
Orlando Metro Area



Impact	Employment	Output
1 - Direct	14.77	\$10,000,000
2 - Indirect	8.23	\$1,606,631
3 - Induced	9.12	\$1,366,259
Total	32.12	\$12,972,890

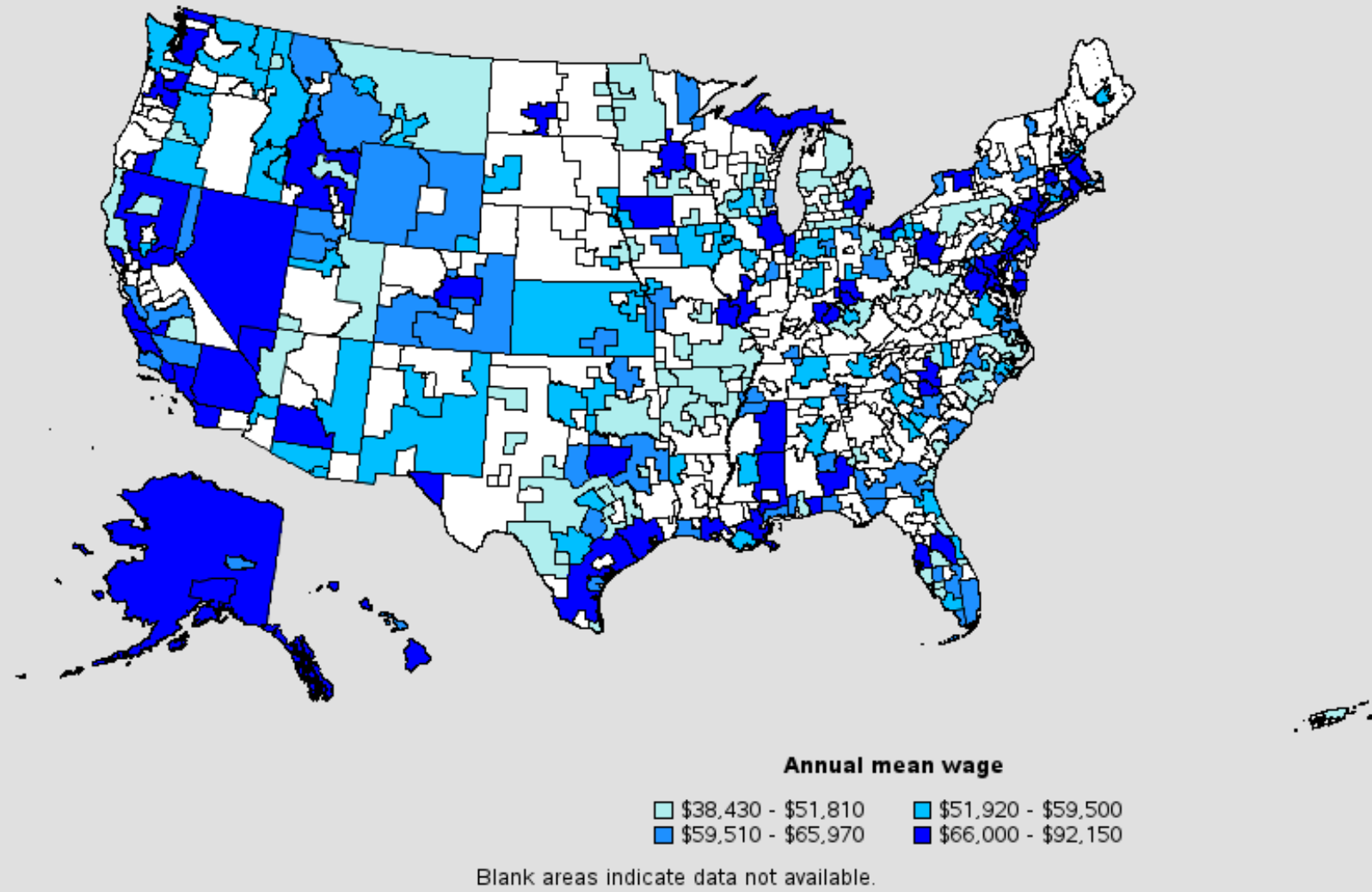
Tampa Bay
region does not
have a significant
concentration
of aircraft
mechanics and
technicians.

Location quotient of aircraft mechanics and service technicians, by area, May 2019



Aviation-related wages in Tampa Bay region are higher than average when compared to aviation wages across the U.S.

Annual mean wage of aircraft mechanics and service technicians, by area, May 2019



Aircraft Manufacturing Workforce and Hourly Wages

Installation, Maintenance, and Repair Occupations		
49-3011	Aircraft Mechanics and Service Technicians	\$27.04
49-9041	Industrial Machinery Mechanics	\$22.42
49-9071	Maintenance and Repair Workers, General	\$17.46
Production Occupations		
51-1011	First-Line Supervisors of Production and Operating Workers	\$25.91
51-2011	Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	\$13.69
51-2041	Structural Metal Fabricators and Fitters	\$15.23
51-2098	Assemblers and Fabricators, All Other, Including Team Assemblers	\$15.24
51-4022	Forging Machine Setters, Operators, and Tenders, Metal and Plastic	\$26.01
51-4031	Cutting, Punching, and Press Machine Setters, Operators, and Tenders	\$14.49
51-4041	Machinists	\$19.55
51-4081	Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	\$15.15
51-4111	Tool and Die Makers	\$22.13
51-4121	Welders, Cutters, Solderers, and Brazers	\$17.93
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	\$16.44
51-9198	Helpers—Production Workers	\$11.93
51-9199	Production Workers, All Other	\$14.80

Two-Tier Land Use Strategy

- **Develop both the airport and the land immediately around it**
- Inside the Fence (“First Tier”)
 - Aircraft, supplies, airport management, maintenance & repair
 - Things that need runway access 24/7
- Outside the Fence (“Second Tier”)
 - Parts manufacturers, office support, etc.
 - Things that benefit from nearby access, but do not need 24/7 runway access

Inside the Fence Scenario

- Fixed-Base Operation (FBO) supporting 25 workers with \$8 million in annual sales (e.g. a membership club for GA)

Table 3.1: FBO Economic Impacts in Pasco County

	Jobs	Personal Income	Sales
Direct	25	\$3,046,070	\$8,127,234
Indirect	9	\$414,729	\$1,136,774
Induced	14	\$523,987	\$1,803,474
Total	47	\$3,984,786	\$11,067,482

Source: IMPLAN, 2020.

Outside the Fence Scenario

- Manufacturer investing \$45 million in 100,000 sq. ft warehouse with equipment & supplies

Table 3.2: Aircraft Parts Manufacturing Economic Impacts in Pasco County

	Jobs	Personal Income	Value Added
Direct	120	\$4,065,818	\$9,954,396
Indirect	33	\$1,620,046	\$2,656,420
Induced	14	\$558,786	\$1,098,911
Total	167	\$6,244,649	\$13,709,727

Source: IMPLAN, 2020

Importance of Clusters to Development Impacts

- Duval County (containing Jacksonville) has a comparably more developed aviation cluster, thus impacts go farther

Table 3.3: Pasco Versus Duval County Aircraft Manufacturing Impacts

	Pasco County			Duval County		
	Jobs	Personal Income	Value Added	Jobs	Personal Income	Value Added
Direct	120	\$4,065,818	\$9,954,396	120	\$10,573,645	\$12,879,342
Indirect	33	\$1,620,046	\$2,656,420	44	\$3,233,450	\$4,776,348
Induced	14	\$558,786	\$1,098,911	56	\$2,900,262	\$5,289,479
Total	167	\$6,244,649	\$13,709,727	219	\$16,707,356	\$22,945,169

Source: IMPLAN, 2020

Five Key Successful Development Factors

1. Focused on establishing a robust ecosystem, not quick job gains
2. Industry-driven, university-fueled, government funded*
3. Placing a collective 'big bet' on a unique opportunity*
4. Championed by passionate, dedicated leaders*
5. Anchored by a physical center

*TBRPC suggests these as the most important discussion points for Zephyrhills

Key Takeaways

- Zephyrhills has the start of an aviation cluster, with gaps in key supply/value chains
- Aircraft manufacturing is a noticeable gap in the area's value chain, as compared to other Aviation clusters such as Duval county
- Public and private convergence is needed for a cluster approach to development...
- ...and clusters pay dividends

Thank you!

Questions? harry@tbrpc.org