

An Aviation Cluster for Zephyrhills
Harry Walsh and Sarah Vitale - TBRPC
Zephyrhills Economic Summit | October 14, 2020



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

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- 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”



About the 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.

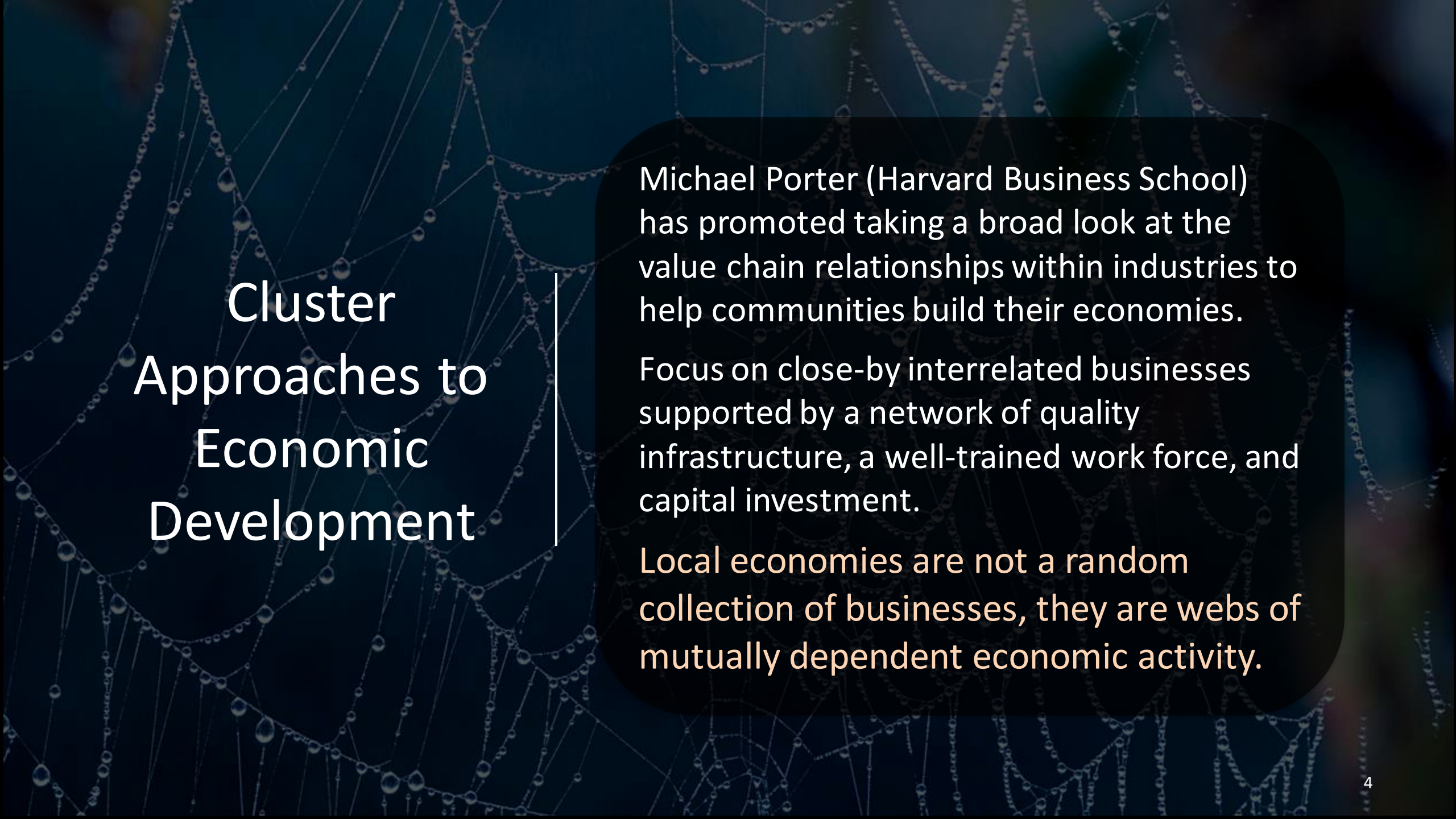


Image Sources: The Laker/Lutz News & fltplan.com

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.

- Cluster Approaches to Economic Development
- What is an Industry Cluster?
- Building an Aviation Cluster
- Economic Impact Analysis
- General Aviation: Trends and Conditions
- Visualization of Industry Cluster in Zephyrhills, FL
- Discussion



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).



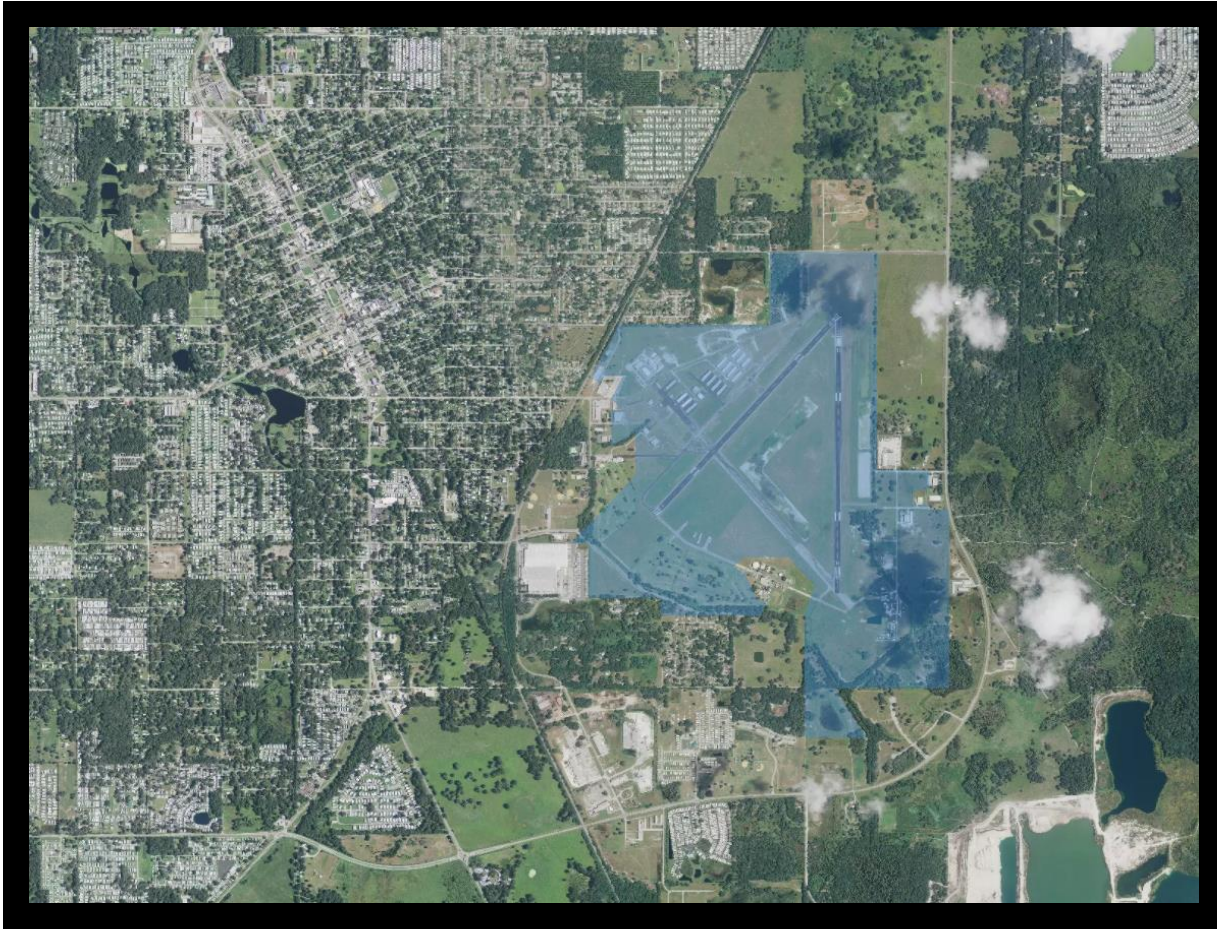
Is there a concentration of related employment in the area?



Are wages high (indicating high demand)?

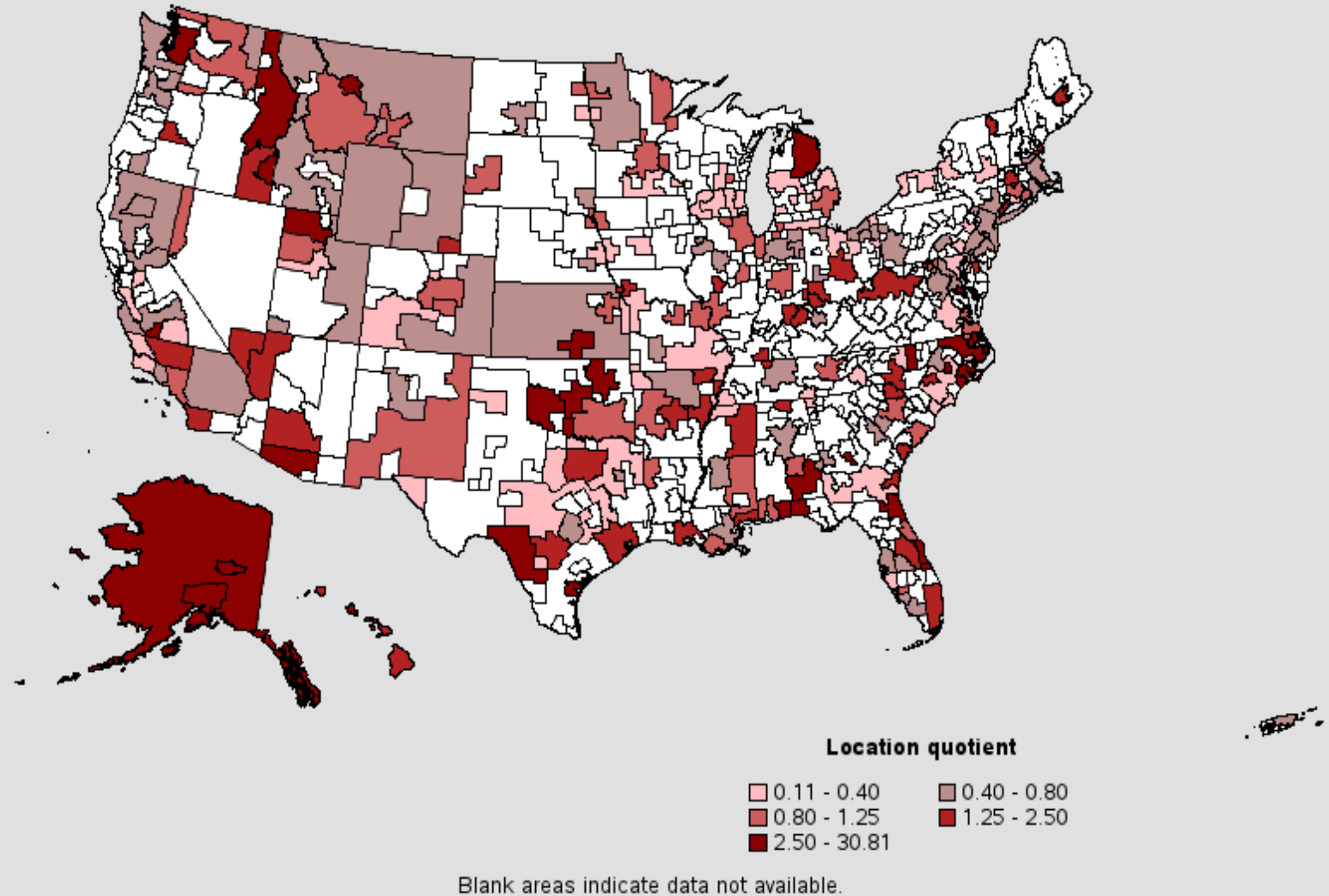
Zephyrhills Municipal Airport

Pasco County, Florida



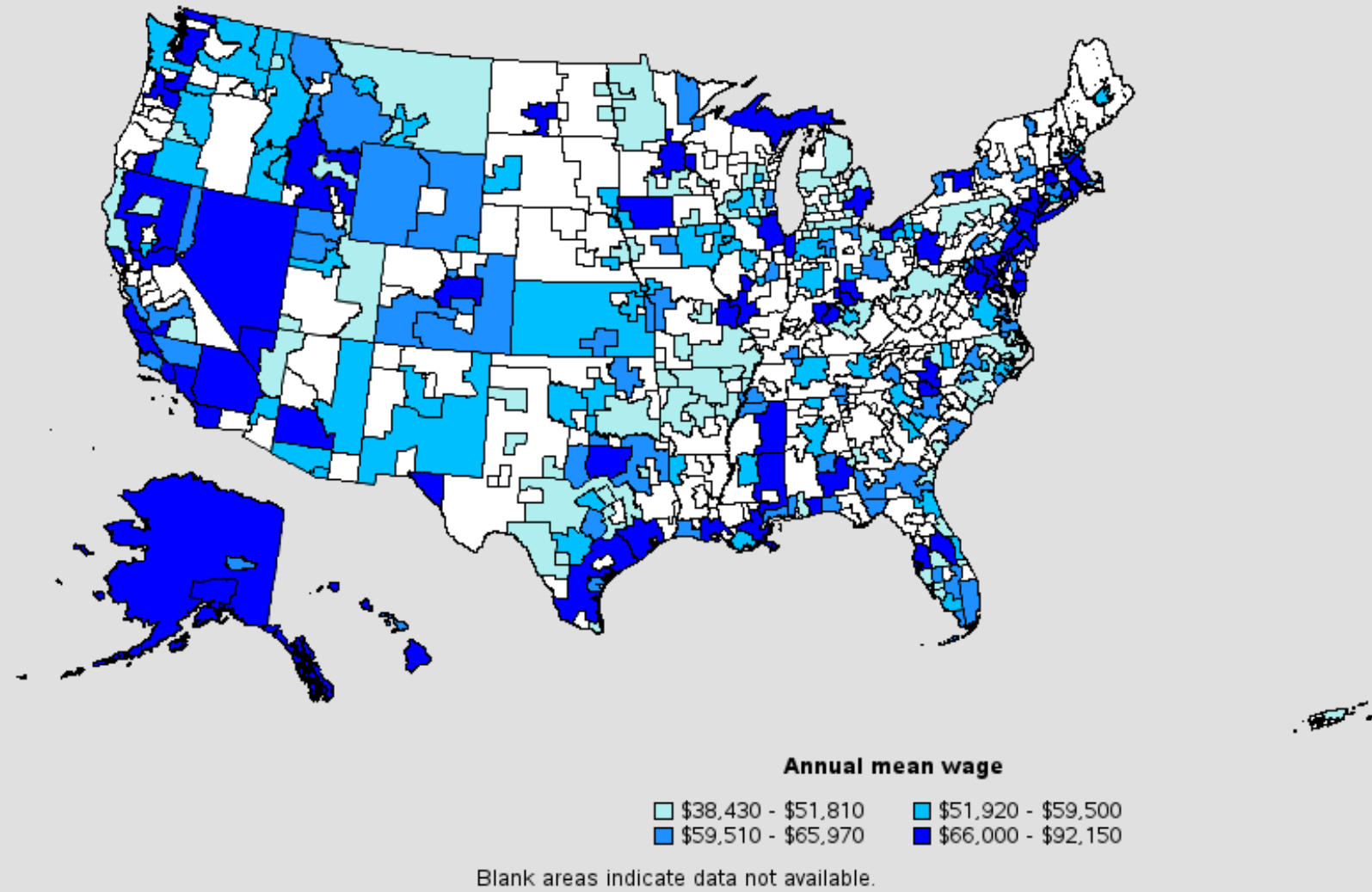
Tampa Bay
region does not
have a significant
concentration
of aircraft
mechanics and
technicians.

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



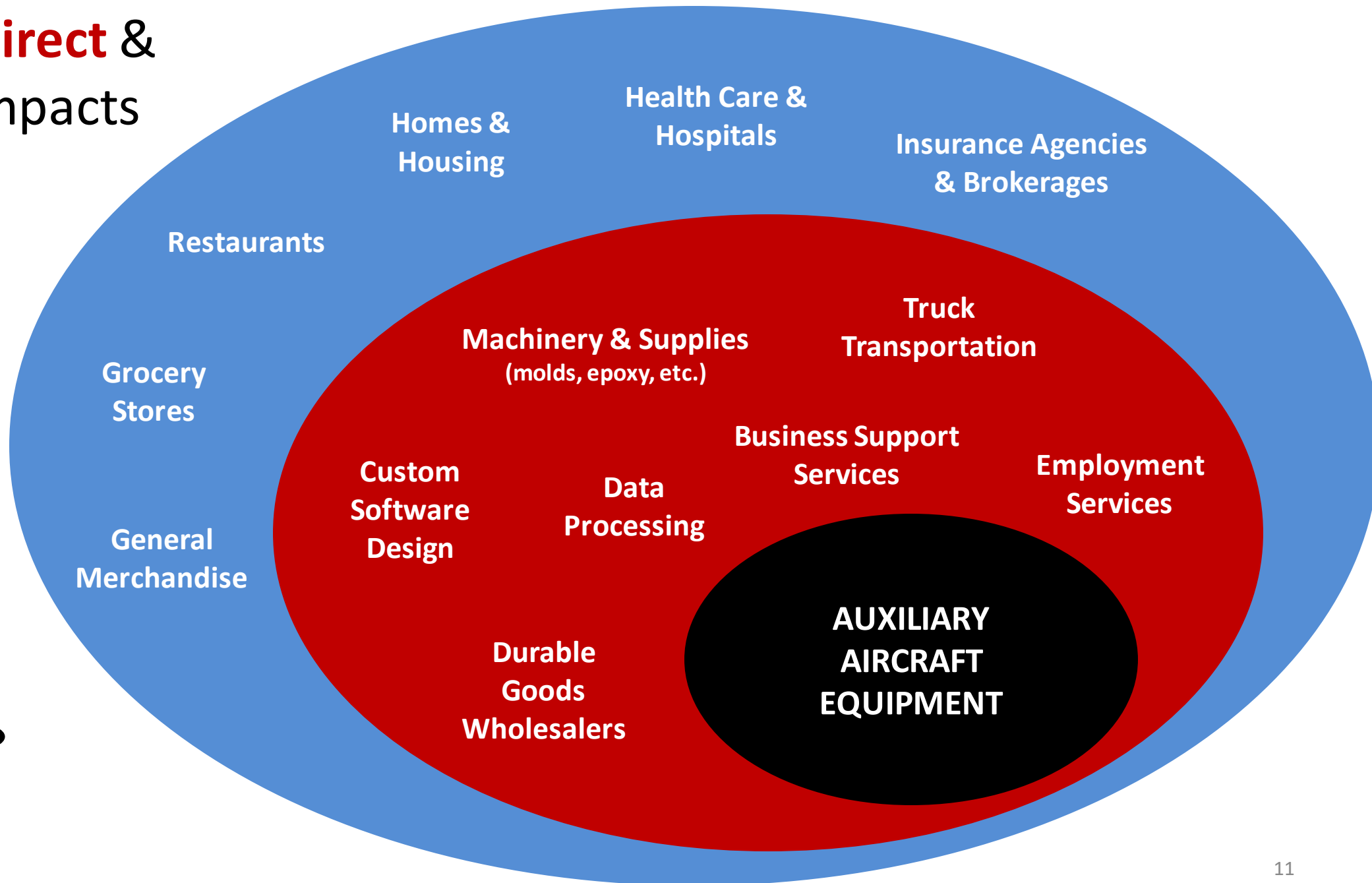
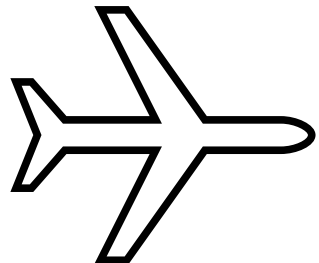
Analyzing Local Conditions

- Input-Output applications were used in WW II to help allied nations cope with competing domestic and military needs for goods and services
- After the War, Input-Output models were used to help destroyed nations rebuild their economies (Japan and Germany industrial reconstruction)
- Since the 1970s, Feds have worked on ways to evaluate alternative plans. IMPLAN was founded in 1985.



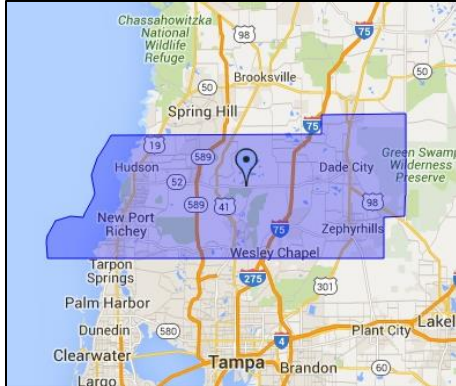
<i>DEPENSES PRODUCTIVES.</i>	<i>DEPENSES DU REVENU, l'impôt prélevé, se partagent aux Dépenses productives & aux Dépenses stériles.</i>	<i>DEPENSES STERILES.</i>
<i>Avances annuelles.</i>	<i>Revenu.</i>	<i>Avances annuelles.</i>
<i>fr</i> 600 productif.....	<i>fr</i> 600	<i>fr</i> 300
<i>Productions.</i>		<i>Ouvrages, &c.</i>
<i>fr</i> 300 reproductif net.....	<i>fr</i> 300	<i>fr</i> 300
<i>fr</i> 150 reproductif net.....	<i>fr</i> 150	<i>fr</i> 150
<i>fr</i> 75 reproductif net.....	<i>fr</i> 75	<i>fr</i> 75
<i>fr</i> 37.10 reproductif net.....	<i>fr</i> 37.10	<i>fr</i> 37.10
<i>fr</i> 18.15 reproductif net.....	<i>fr</i> 18.15	<i>fr</i> 18.15
<i>fr</i> 9.7.6 reproductif net.....	<i>fr</i> 9.7.6	<i>fr</i> 9.7.6
<i>fr</i> 4.13.9 reproductif net.....	<i>fr</i> 4.13.9	<i>fr</i> 4.13.9
<i>fr</i> 2.6.10 reproductif net.....	<i>fr</i> 2.6.10	<i>fr</i> 2.6.10
<i>fr</i> 1.3.5 reproductif net.....	<i>fr</i> 1.3.5	<i>fr</i> 1.3.5
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<i>fr</i> 0.1.5 reproductif net.....	<i>fr</i> 0.1.5	<i>fr</i> 0.1.5

Direct, Indirect & Induced Impacts



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

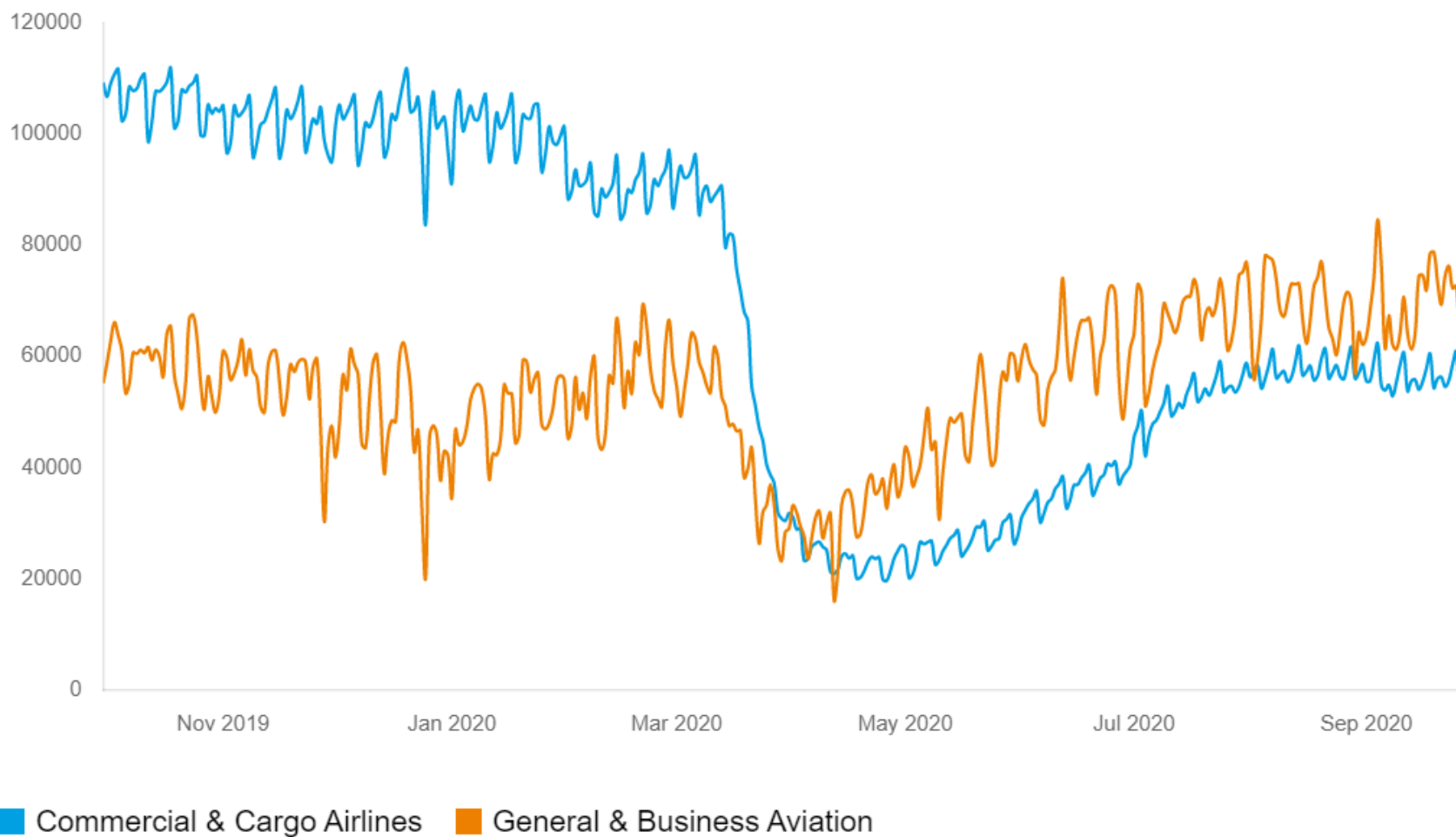


Impact	Employment	Output
1 - Direct	14.77	\$10,000,000
2 - Indirect	8.23	\$1,606,631
3 - Induced	9.12	\$1,366,259
Total	32.12	\$12,972,890

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

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



Last updated at 02:48AM EDT

Source: FlightAware

COVID-19 Impacts in Aviation-related Industries

As of September 1, 2020:

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

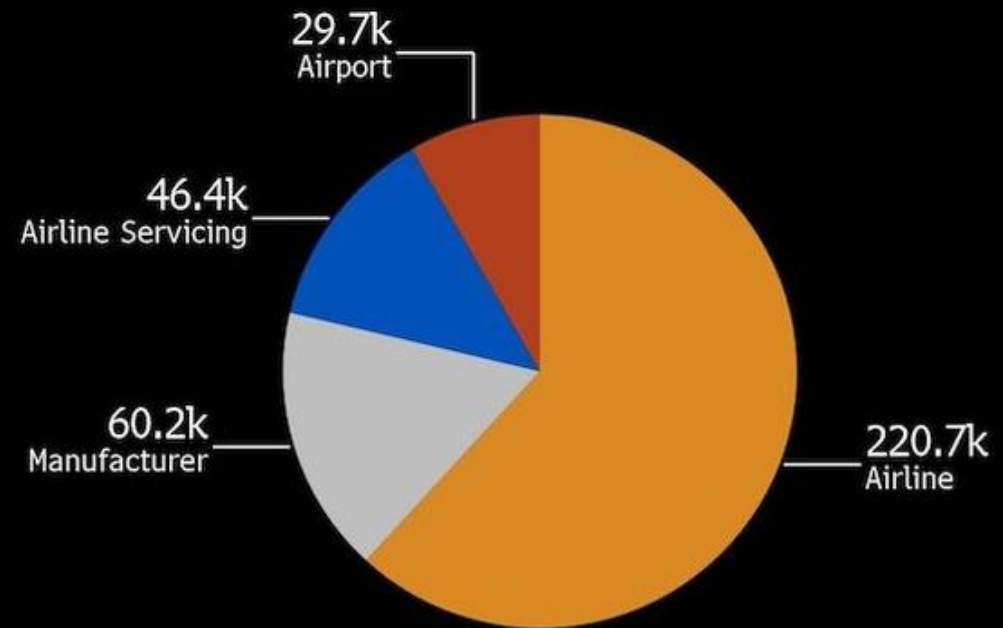
- They account for over 60% of all jobs lost in the aviation industry.

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

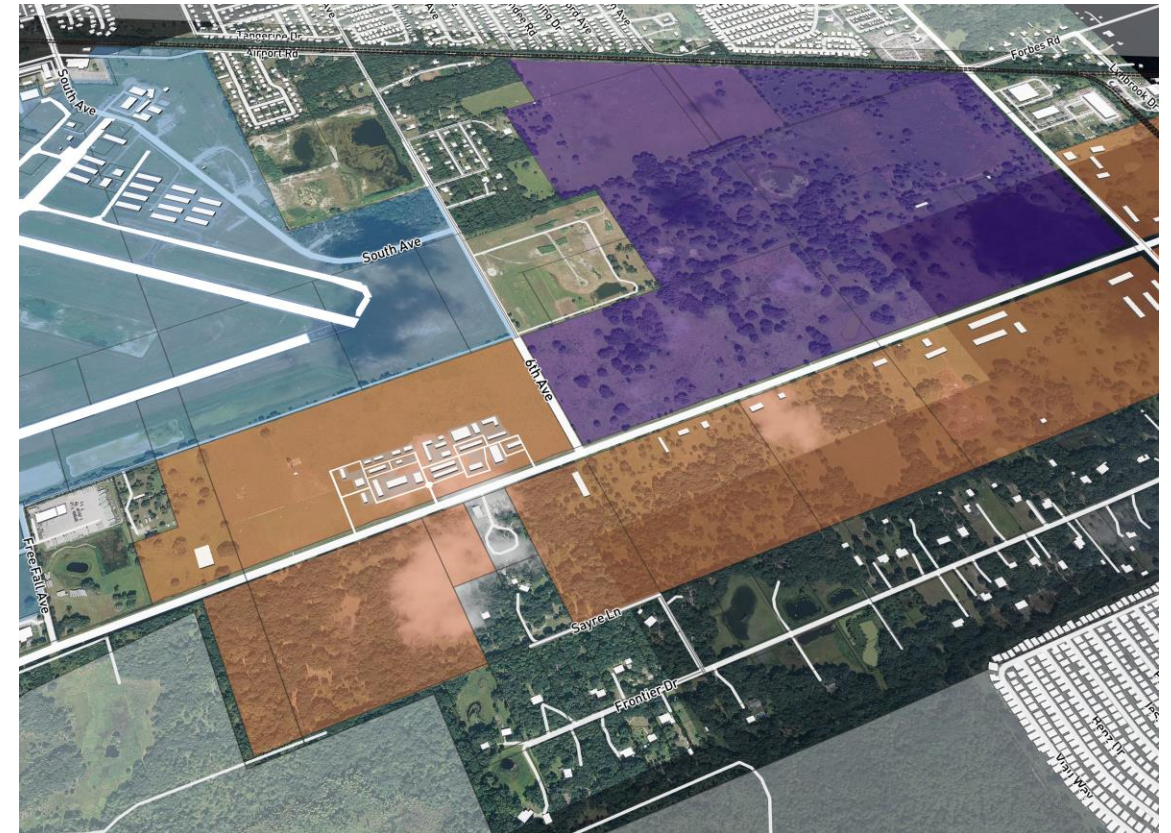
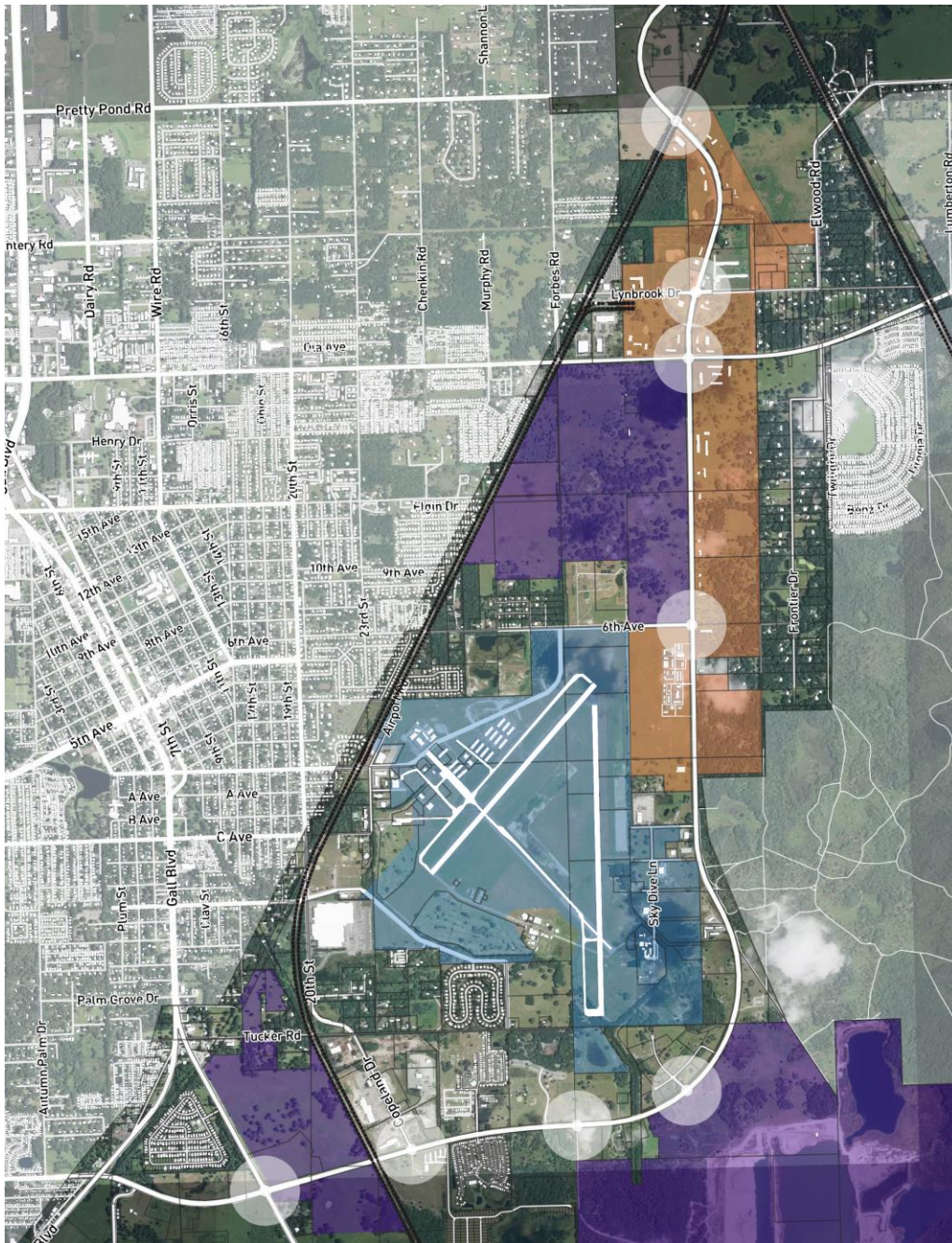
- Existing aircraft and parts orders have been cancelled.
 - Large aerospace manufacturers have made significant job cuts due to low demand.
 - More cuts are likely across Q4 2020 without a federal bailout.
 - There is an aircraft glut that will dampen manufacturing demand when aircraft recovers.
- Even 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.

Preliminary Findings

- Basic compatibility with opportunities to develop light aircraft manufacturing, based on metropolitan conditions
 - Most light aircraft sales are resale currently
 - While customer base is largely located in North America, future growth will come from Asia, can you be competitive in that market?
 - The broad base of skills needed for an aviation cluster suggests a gradual process of cultivating related industries.

<http://bit.ly/ZPH-aviation>

3D Model "Fly-by"



Thank you!

(Final Report by early December 2020)

Questions? randy@tbrpc.org