



# GDOT Statewide Airport Economic Impact Study

Overview of Study Findings and Methodology

2020

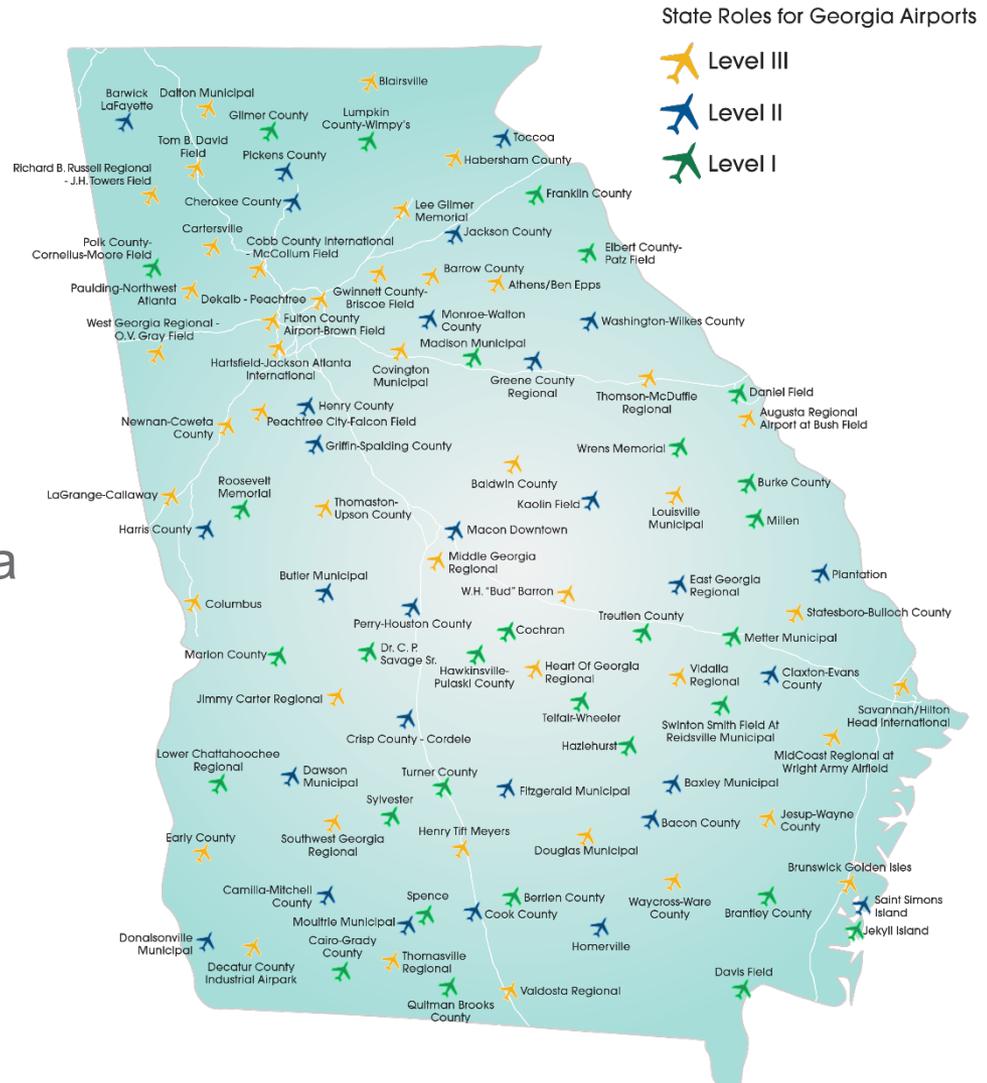


# Study Overview

## Impacts Identified

- 7 commercial study airports
- 95 general aviation study airports
- Hartsfield-Jackson Atlanta International – City of Atlanta (2017)

*All impacts reported reflect pre-COVID conditions*



# Understanding How Economic Impacts Are Estimated

I can't believe  
the airport  
supports this  
much benefit!

The airport really  
supports \$2.5  
million in annual  
economic activity?

There aren't  
20 people  
working at  
the airport!



# What Categories of Economic Impact Are Measured ?



**AIRPORT MANAGEMENT**



**GENERAL AVIATION VISITOR SPENDING**



**AIRPORT BUSINESS TENANTS**



**COMMERCIAL VISITOR SPENDING**



**AVERAGE ANNUAL CAPITAL INVESTMENT**

# What Measures Are Used To Express Economic Impacts?



ANNUAL  
EMPLOYMENT



ANNUAL  
PAYROLL



ANNUAL  
SPENDING



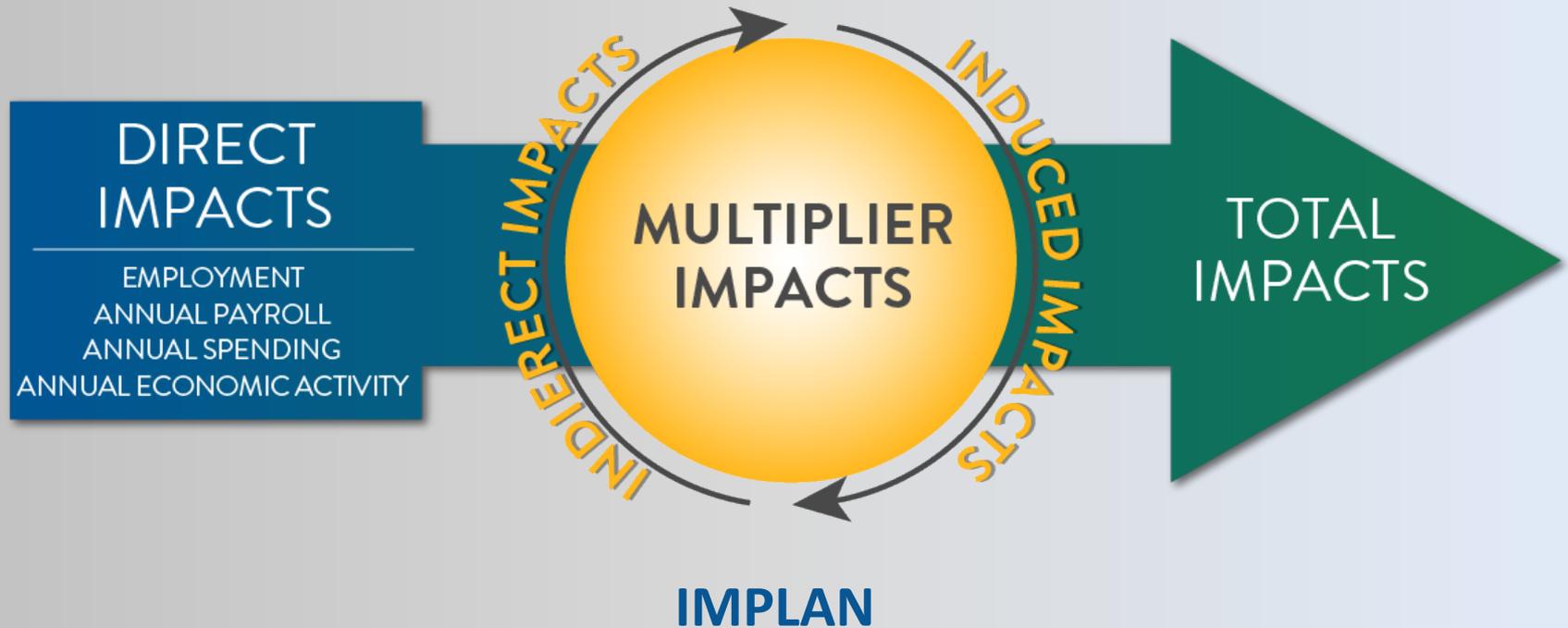
ANNUAL ECONOMIC  
ACTIVITY

# What is “Annual Economic Activity” in the GDOT Study?



Annual Payroll + Annual Spending = TOTAL ANNUAL ECONOMIC ACTIVITY

# What Process Was Followed in This Study to Measure Economic Impact?



# Everything Starts with Direct Impacts

# Identifying Direct Impacts



## AIRPORT MANAGEMENT



# What Should I Know About Airport Management Direct Impacts?

- Direct employment, payroll, and spending in this category supplied by each study airport
- Many airports have **off-airport** direct employment, examples include human resources, legal/financial services, and grants management
- Each airport has direct spending for insurance, utilities, supplies, and other to support its day-to-day operation
- Direct spending does not include payroll or capital investment; these expenditures are accounted for elsewhere in the analysis



# How Were **Direct** Airport Management Impacts Identified?

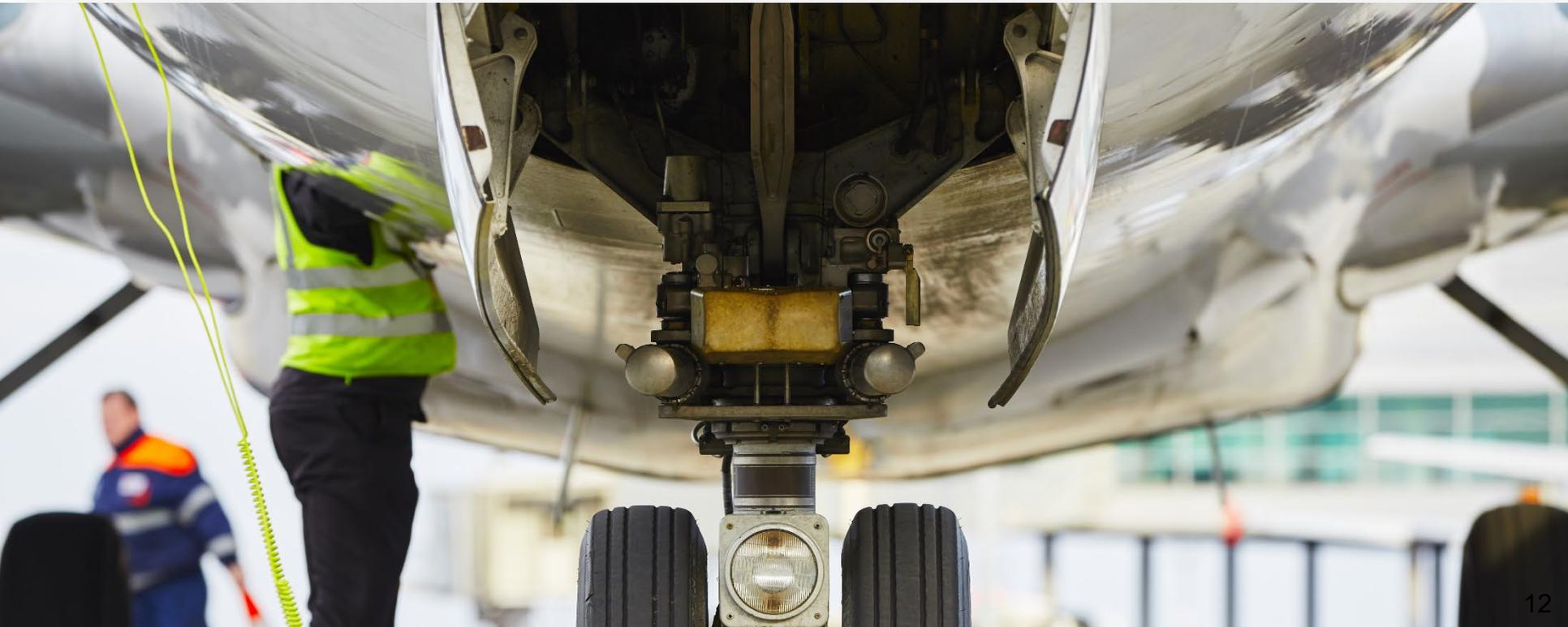
- 2.5 on-airport employees + 1.5 off-airport employees = 4 full-time employees
- Direct payroll of \$140,000 is combined payroll for all employees (both on-and off-airport and both full-time and part-time employees)
- \$60,000 is the direct spending to purchase supplies/other to operate the airport
- \$140,000 payroll + \$60,000 spending = \$200,000 direct economic activity

ANNUAL AIRPORT MANAGEMENT IMPACTS	
<b>DIRECT EMPLOYMENT</b>	4
<b>DIRECT PAYROLL</b>	\$140,000
<b>DIRECT SPENDING</b>	\$60,000
<b>DIRECT ECONOMIC ACTIVITY</b>	\$200,000

# Identifying Direct Impacts



## AIRPORT BUSINESS TENANTS



# What Should I Know About Direct Impacts for Business Tenants?

- Not all study airports have business tenants
- If an FBO is tasked with running an airport, their impacts are counted in the tenant category, not the airport management category
- All business tenants were surveyed/interviewed to provide **direct** employment, payroll, and spending



# How Were **Direct** Annual Business Tenant Impacts Identified?

- Three tenants have a total of 8 full-time direct employees
- The combined annual direct payroll for the three tenants is \$304,000
- Annually, on a combined basis, the three tenants have \$200,000 in direct spending to operate their individual businesses
- Direct economic activity for the three business tenants is \$504,000, the sum of payroll and spending for all business tenants

DIRECT EMPLOYMENT		DIRECT PAYROLL		DIRECT SPENDING		DIRECT ECONOMIC ACTIVITY	
8		\$304,000		\$200,000		\$504,000	

	DIRECT EMPLOYMENT	DIRECT PAYROLL	DIRECT SPENDING	DIRECT ECONOMIC ACTIVITY
Tenant #1	2	\$70,000	\$51,000	\$121,000
Tenant #2	1	\$40,000	\$32,000	\$72,000
Tenant #3	5	\$194,000	\$117,000	\$311,000
<b>Total</b>	<b>8</b>	<b>\$304,000</b>	<b>\$200,000</b>	<b>\$504,000</b>

# Identifying Direct Impacts



## AVERAGE ANNUAL CAPITAL INVESTMENT



# What Do I Need to Know About Direct Average Annual Capital Investments?

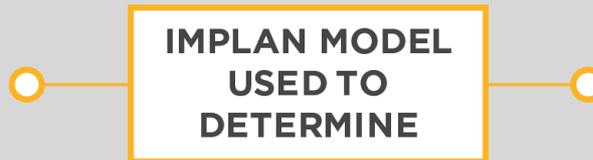
- Five years of capital investment history collected (2015-2019)
- Funding sources include GDOT, FAA, business tenants, and local airport/sponsor contributions
- Business tenant/3<sup>rd</sup> party capital investments included, if applicable
- Impacts only realized during planning, design, permitting, and construction phases
- Impacts are “snapshot” in time
- Impacts in this category have the highest propensity to change over five-year increments

# How Are Direct Impacts from Average Annual Capital Investment Category Identified?

## IMPLAN Used To Estimate Direct Impacts



**AVERAGE ANNUAL  
CAPITAL INVESTMENT**



**DIRECT EMPLOYMENT  
& DIRECT PAYROLL**

# How Were Direct Annual Impacts from Average Annual Capital Investment Identified?

- Average annual capital investment or direct economic activity (over five years) estimated at \$610,000
- IMPLAN model used to convert average annual capital investment (direct economic activity) to direct employment and direct payroll
- IMPLAN ratio = Every \$1 million in direct economic activity supports 10 jobs; \$610,000 in direct economic activity = 6 full-time employees\*
- Bureau of Economic Analysis shows \$55,000 in payroll per job supported:  $\$55,000 \times 6 = \$330,000$  in direct payroll\*
- Direct economic activity - payroll = \$280,000 direct spending (this is the amount spent on materials to implement the projects; non-payroll amount)

ANNUAL CAPITAL INVESTMENT	
IMPACTS	
<b>DIRECT EMPLOYMENT</b>	6
<b>DIRECT PAYROLL</b>	\$330,000
<b>DIRECT SPENDING</b>	\$280,000
<b>DIRECT ECONOMIC ACTIVITY</b>	\$610,000

\*Example not actual study conversion ratio

# Identifying Direct Impacts



## GENERAL AVIATION VISITOR EXPENDITURES



# What Do I Need to Know About General Aviation Visitor Estimates?

- Not all “itinerant” operations are visiting/transient aircraft
- Some itinerant operations are associated with aircraft based at the airport
- Many general aviation visitors come only for the day and have limited expenditures
- Average spending per visitor trip per airport identified through 700 general aviation visitor surveys



# How Are Annual General Aviation Visitors Estimated?

- Estimated **visiting** WEEKLY aircraft arrivals = 10
- Fleet mix of visiting weekly arriving aircraft: 2 jets (20%); 3 twins (30%); 5 singles (50%)
- Visitors per plane type: jets = 5; twins = 3; singles = 2
- 10 visiting aircraft arrivals per week x 52 weeks = 520 annual visiting general aviation aircraft arrivals
- Visiting aircraft fleet mix and typical visitors per plane used to estimate annual visitors
  - 20% x 520 = 104 jet arrivals x 5 visitors per plane = **520 visitors on jets**
  - 30% x 520 = 156 twin arrivals x 3 visitors per plane = **468 visitors on twin-engine aircraft**
  - 50% x 520 = 260 single arrivals x 2 visitors per plane = **520 visitors on single-engine aircraft**
- 520 + 468 + 520 = 1,508 annual general aviation visitors

# How Do Estimates of General Aviation Visitors Become Direct General Aviation Visitor Expenditures?

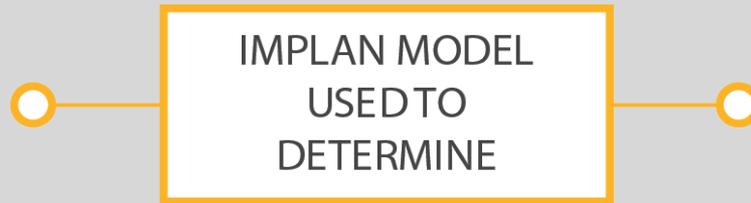
- 1,508 total visitors; 50% stay only for the day and 50% spend one night or more
- 1,508 annual visitors X 50% day trips = 754 x \$40 per day visitor trip = \$30,160 annual direct spending
- 754 visitors (50%) spend at least one night
- 754 overnight visitors spend an average of \$230 per trip = \$173,420 annual direct spending
- $\$30,160 + \$173,420 = \$203,580$  in direct annual general aviation visitor spending

# How Are Direct Impacts From General Aviation Visitors Estimated?

## IMPLAN Used To Estimate Direct Impacts



ANNUAL VISITOR  
SPENDING



DIRECT EMPLOYMENT  
& DIRECT PAYROLL

# How Are Direct Impacts from Annual General Aviation Visitor Expenditures Established?

- Direct visitor expenditures (annual economic activity) estimated at \$203,580
- IMPLAN model used to convert direct economic activity to direct employment
- IMPLAN ratio = Every \$1 million in direct economic activity supports 14 direct jobs\*
- \$203,580 in direct economic activity = 3 full-time employees\*
- Bureau of Economic Analysis shows \$28,000 in payroll per job supported;  $\$28,000 \times 3 = \$84,000$  direct payroll\*
- Direct economic activity - payroll = \$119,580 in direct spending

ANNUAL GENERAL AVIATION VISITOR SPENDING IMPACTS	
<b>DIRECT EMPLOYMENT</b>	
	3
<b>DIRECT PAYROLL</b>	
	\$84,000
<b>DIRECT SPENDING</b>	
	\$119,580
<b>DIRECT ECONOMIC ACTIVITY</b>	
	\$203,580

\*Example not actual study conversion ratio

# Identifying Direct Impacts



## COMMERCIAL VISITOR EXPENDITURES



# What Should I Know About Commercial Visitor Expenditures?

- Commercial passenger enplanements consist of residents and visitors
- Percent resident vs. visitor obtained from USDOT O&D data
- All commercial airports helped distribute surveys to departing visitors
- Surveys helped determine airport specific average length of stay and average expenditures per trip

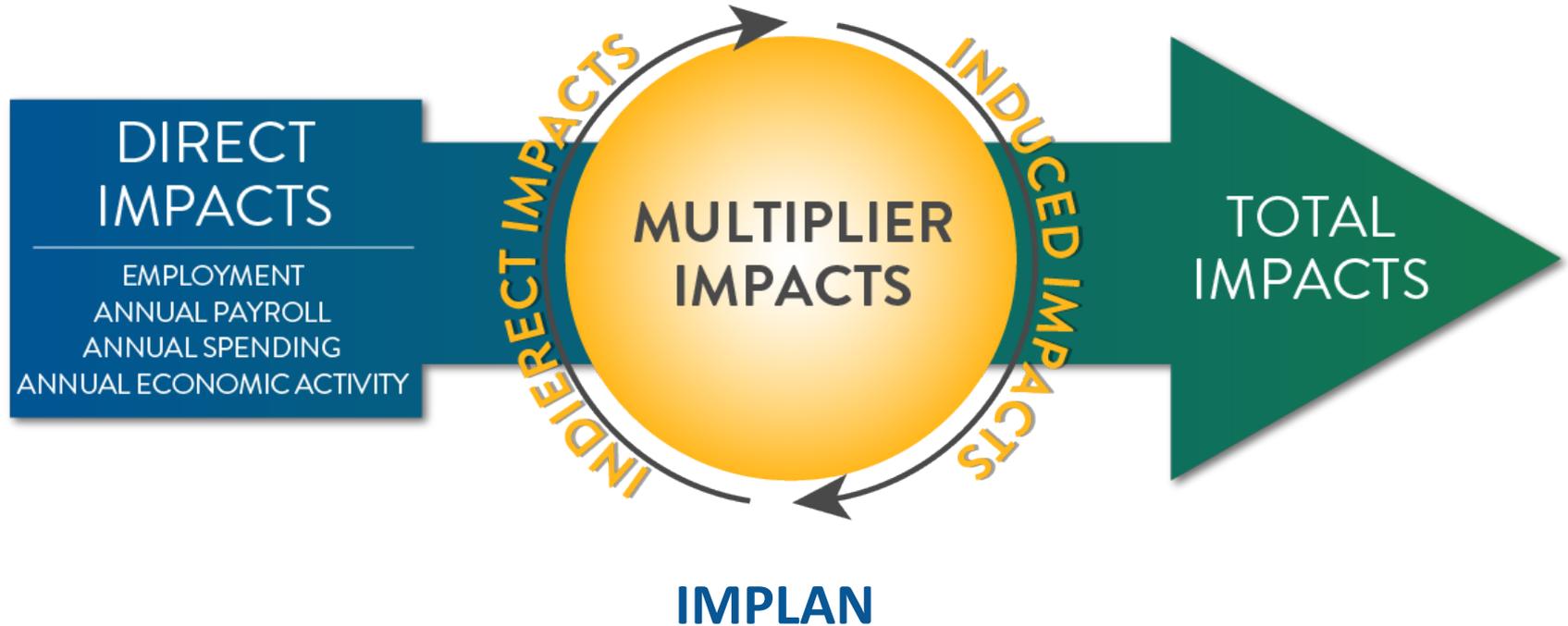


# How Are Direct Impacts from Annual Commercial Visitor Expenditures Established?

- 100,000 enplanements x 40% visitors = **40,000 annual commercial visitors**
- USDOT data on visitor vs. resident enplanements is used to establish annual visitors by airport
- 40,000 visitors x \$500 spending per visitor trip = **\$20,000,000 direct commercial visitor economic activity**
- IMPLAN model used to convert direct economic activity to direct employment and direct payroll
- IMPLAN ratio = every \$1 million in direct economic activity supports 14 jobs; \$20 million in direct economic activity = **280 full-time direct employees** (\*example not actual study conversion ratio)
- IMPLAN shows \$28,000\* in payroll per job supported; \$28,000 x 240 = **\$7,840,000 direct payroll** (\*example not actual study conversion ratio)
- Direct economic activity - payroll = **\$12.2 M in direct spending**

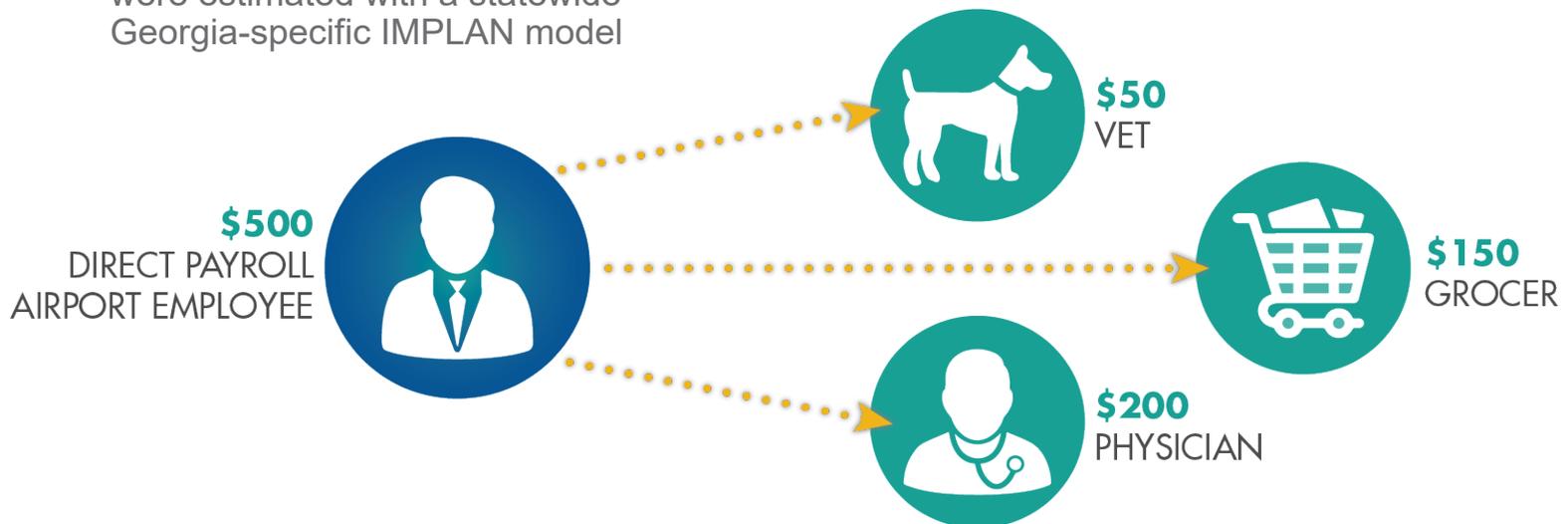
ANNUAL COMMERCIAL VISITOR SPENDING IMPACTS	
<b>DIRECT EMPLOYMENT</b>	280
<b>DIRECT PAYROLL</b>	\$7.8 M
<b>DIRECT SPENDING</b>	\$12.2 M
<b>DIRECT ECONOMIC ACTIVITY</b>	\$20 M

# After Direct Impacts Are Identified - What Comes Next?



# What Are Indirect & Induced or “Multiplier Impacts”?

- When any direct impact enters the economy, additional indirect/ induced impacts are created
- Re-circulated impacts associated with all direct impacts are often referred to as “multiplier” impacts
- All indirect/induced impacts in the study were estimated with a statewide Georgia-specific IMPLAN model
- There were dozens of multipliers considered in the analysis to estimate indirect/induced impacts
- Total annual economic impacts = direct impacts + indirect/induced impacts



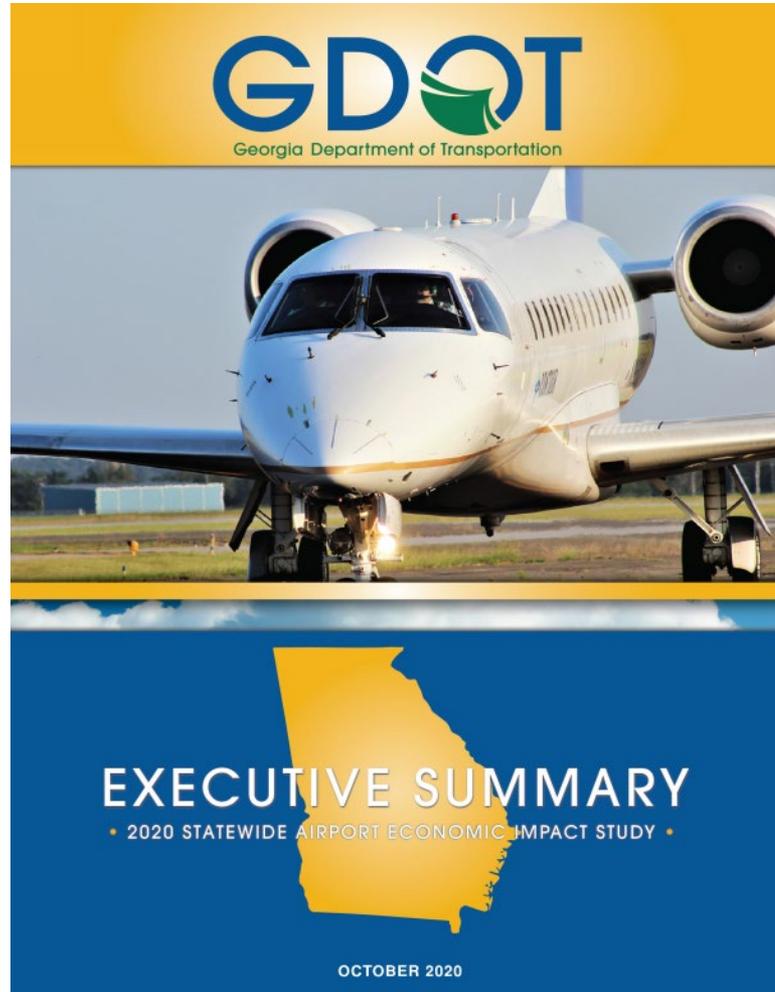
# What is an Example of How Total Annual Economic Impacts Are Estimated?

- 4 direct jobs and 3.5 additional jobs supported in the indirect/induced categories. Total employment in this example is 7.5 rounded to 8 full-time employees
- The direct payroll for the 4 full-time direct employees is \$140,000, with \$113,400 in additional indirect/induced payroll. Total payroll is estimated at \$253,400
- Total direct spending is \$60,000, with an additional \$45,000 in indirect/induced spending. Total spending is estimated at \$105,000
- Payroll + spending = economic activity. Direct plus indirect/induced annual economic activity equals \$358,400 in total economic activity for this example
- Multipliers shown here are examples only; the total impact divided by the direct impact yields the “implied” multiplier
- Many different multipliers are used to estimate indirect/induced impacts
- “Implied” multipliers shown here reflect all of the multipliers combined

	EMPLOYMENT	PAYROLL	SPENDING	ECONOMIC ACTIVITY
DIRECT	4	\$140,000	\$60,000	\$200,000
INDIRECT/INDUCED	3.5	\$113,400	\$45,000	\$158,400
TOTAL	8	\$253,400	\$105,000	\$358,400
<b>MULTIPLIER IMPACT</b>	<b>1.87</b>	<b>1.81</b>	<b>1.75</b>	<b>1.79</b>

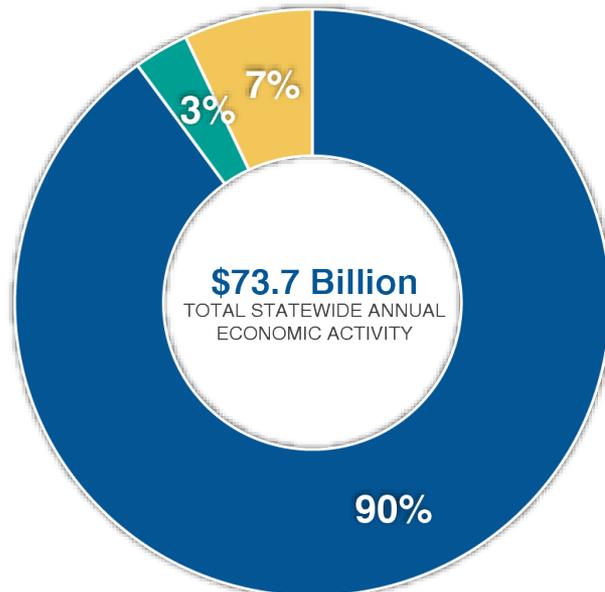
*The process to estimate indirect/induced impacts for all categories and all measurements is essentially the same.*

# Study Findings



# Statewide Impacts Have Increased

- \$62.6 billion in 2011 to \$73.7 billion in 2020 (18% increase)
- Over 450,500 jobs
- Over \$20 billion in payroll
- Almost \$74 billion in total annual economic activity



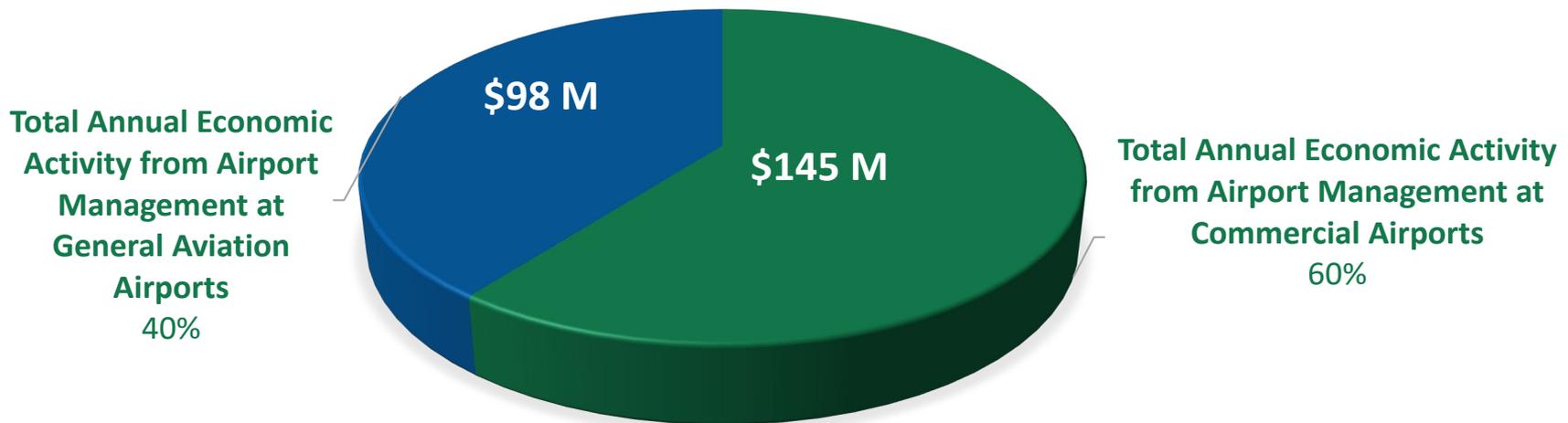
- Hartsfield-Jackson Atlanta International Airport
- General Aviation Study Airports
- Commercial Study Airports

*All impacts reported reflect pre-COVID conditions*

# Economic Impacts from Airport Management

	Direct	Indirect/ Induced	Total
<b>Employment</b>	655	867	1,522
<b>Payroll</b>	\$32,607,100	\$24,708,700	\$57,315,800
<b>Spending</b>	\$74,864,200	\$110,662,500	\$185,526,700
<b>Annual Economic Activity</b>	\$107,471,300	\$135,371,200	\$242,842,500

*Does not include ATL*

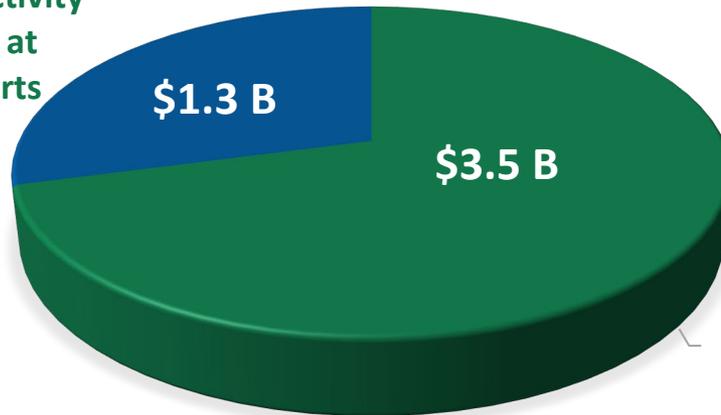


# Economic Impacts from Airport Business Tenants

	Direct	Indirect/ Induced	Total
<b>Employment</b>	19,661	27,992	47,653
<b>Payroll</b>	\$1,638,021,700	\$1,314,568,800	\$2,952,590,500
<b>Spending</b>	\$1,136,026,800	\$725,588,700	\$1,861,615,500
<b>Annual Economic Activity</b>	\$2,774,048,500	\$2,040,157,500	\$4,814,206,000

*Does not include ATL*

**Total Annual Economic Activity  
from Business Tenants at  
General Aviation Airports**  
29%

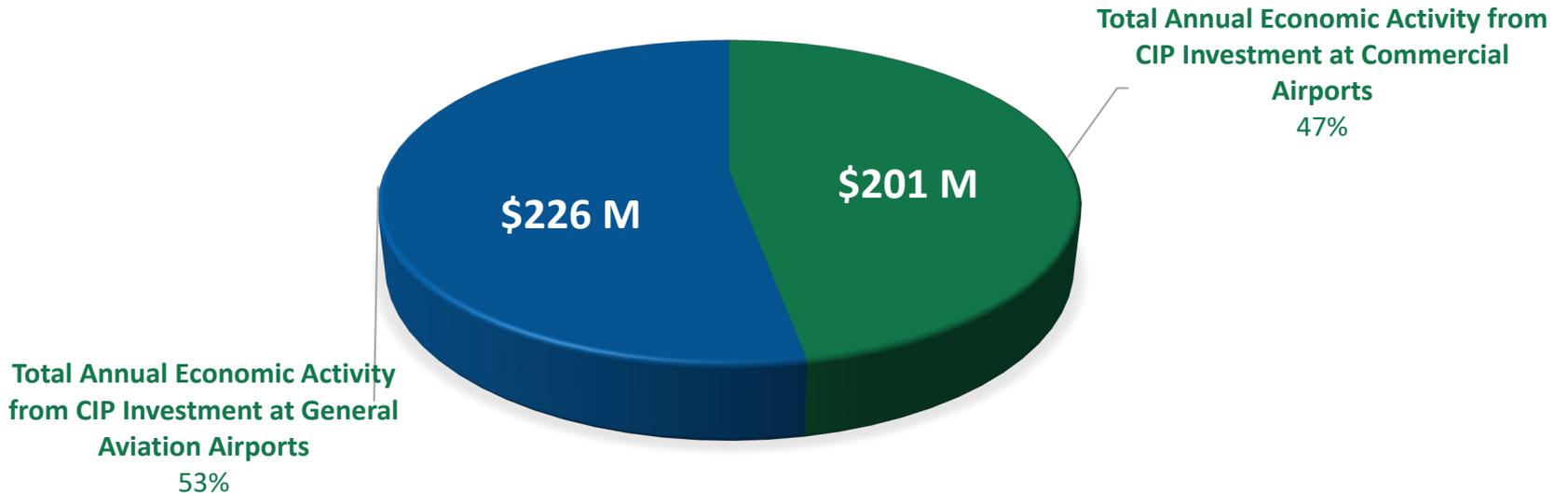


**Total Annual Economic Activity  
from Business Tenants at  
Commercial Airports**  
71%

# Economic Impacts from Average Annual Capital Investment

	Direct	Indirect/ Induced	Total
<b>Employment</b>	1,025	1,692	2,717
<b>Payroll</b>	\$39,282,400	\$44,524,600	\$83,807,000
<b>Spending</b>	\$177,697,800	\$165,400,100	\$343,097,900
<b>Annual Economic Activity</b>	\$216,980,200	\$209,924,700	\$426,904,900

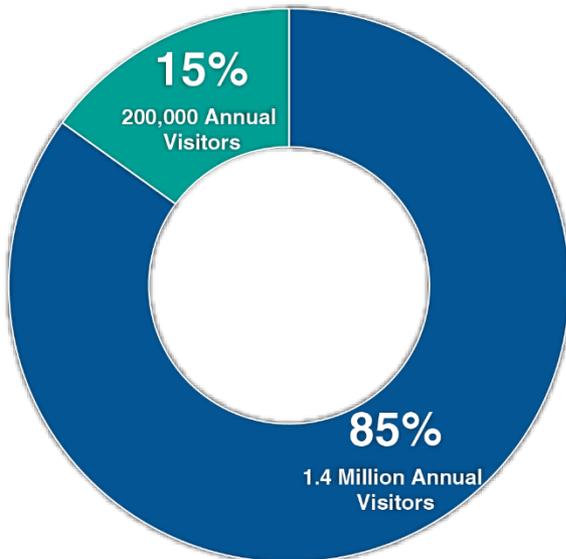
*Does not include ATL*



# Economic Impacts from General Aviation Visitor Expenditures

	Direct	Indirect/ Induced	Total
<b>Employment</b>	3,308	1,543	4,851
<b>Payroll</b>	\$76,659,800	\$54,629,600	\$131,289,400
<b>Spending</b>	\$104,702,600	\$98,809,600	\$203,512,200
<b>Annual Economic Activity</b>	\$181,362,400	\$153,439,200	\$334,801,600

*Does not include ATL*



- General Aviation Visitors at General Aviation Airports
- General Aviation Visitors at Commercial Service Airports

# Economic Impacts from Commercial Visitor Expenditures

- Over 7,500 visitor surveys completed
- Over 1.1 million commercial visitors arrive annually
- Expenditures per commercial visitor per trip \$310 - \$560

	<b>Direct</b>	<b>Indirect/ Induced</b>	<b>Total</b>
<b>Employment</b>	6,917	3,600	10,517
<b>Payroll</b>	\$160,078,700	\$121,690,500	\$281,769,200
<b>Spending</b>	\$444,816,000	\$401,036,000	\$845,852,000
<b>Annual Economic Activity</b>	\$604,894,700	\$522,726,500	\$1,127,621,200

*Does not include ATL*

# Total Annual Economic Impacts From Study Airports

- Annual financial “need” for 102 airports = \$411 million
- Annual average funds to apply the need = \$75 million
- Annual economic impact for 102 airports = \$6.9 **billion**

	Employment	Payroll	Spending	Economic Activity
Airport Management	1,522	\$557,315,800	\$185,526,700	\$242,842,500
Airport Business Tenants	47,653	\$2,952,590,500	\$1,861,615,500	\$4,814,206,000
Capital Investment	2,717	\$83,807,000	\$343,097,900	\$426,904,900
General Aviation Visitor Expenditures	4,851	\$131,289,400	\$203,512,200	\$334,801,600
Commercial Visitor Expenditures	10,517	\$281,769,200	\$845,852,000	\$1,127,621,200
<b>Total</b>	<b>67,260</b>	<b>\$3,506,771,900</b>	<b>\$3,439,604,300</b>	<b>\$6,946,376,200</b>

# What's next?

**Please Use *Your* Study Results!**

# What Should You Do With Your Study Results?

- Credibility of study results is enhanced when local airport reps have a general understanding of how their economic impacts were estimated
- The study concludes the public airports in Georgia have a positive economic impact on the state's economy, and that impact is significant
- Take the initiative to share those economic impacts at the local level. This helps to underscore how each airport supports the state's economy.



# What Reports and Resources Are Available to Help Communicate?

- Available at <http://www.dot.ga.gov/IS/AirportAid/EconomicImpactStudy>
- Individual Airport Reports (all study airports)
- Statewide Executive Summary
- Fact Sheets
- Technical Report
- Study Video



# Can I Determine Changes in My Airport's Economic Impact?

- Economic impact studies are snapshots in time.
- Studies reflect airport conditions at the time data collection was completed.
- All impacts for the GDOT study reflect conditions prior to March 2020 (pre-COVID)
- GDOT has an economic impact calculator that enables updates to baseline economic impacts for each airport reported in the state study
- If conditions at your airport have changed, contact GDOT to determine how these changes have impacted your economic impact.
- The calculator can also help airport understand how their economic impact "could" change based on various scenarios.

# What Are the Key Points to Remember?

1. Total impacts represent activity in several categories (as many as five)
2. Total impacts represent the direct impacts that were counted/measured in the study plus the indirect/induced (multiplier) impacts estimated with the state IMPLAN model
3. An economic impact calculator has been developed for GDOT that enables any airport to update its economic impact as may be required to by changing conditions at their airport. Alan Hood is the contact for the calculator. Phone 404.532.0082 Email [achood@dot.ga.gov](mailto:achood@dot.ga.gov)

# Study Questions?

## Michael Giambrone

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# Calculator Questions?

## Alan Hood

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