

ARIZONA AVIATION ECONOMIC IMPACT STUDY

Study Overview and Results

Arizona Airports Association Fall Conference October 28, 2021

Agenda and Introductions



Study Components



Overview



Methodology



Study Results



Business Reliance



Future of Arizona Aviation



Study Deliverables



Tools for Airports

Study Components



67 publicly-owned, public-use airports



Principal Military Installations

6 U.S. military installations4 Arizona Air and Army National Guard units



6 manufacturing categories

Total Economic Impacts

Purpose

To quantify the value and substantial contributions of the state aviation system to local, county, and statewide economies.



The 2021 Arizona AEIS calculated the economic impacts generated by the Arizona airport system, aerospace manufacturing and research industries, and principal military installations and identified the key mobility, safety, security, and other quality-of-life benefits derived from airports and other aviationrelated activities.

Benefits

- Economic Contributions
- Qualitative/Social Benefits



Commercial Service Airports



General Aviation Airport





Aviation-related Education



Principal Military Installations



Aerospace Manufacturing and Research



Primary Study Process



Study Elements



Study Airports





Aerospace Manufacturing and Research







Aircraft, Engine, and Auxiliary Parts and Equipment Manufacturing





Guided Missile, Space Vehicle, Propulsion Unit, and Auxiliary Parts and Equipment Manufacturing







Principal Military Installations

- 2 Air Force Bases
- 1 Marine Corps Air Station (MCAS)
- 1 Army Fort and Airfield
- 1 Army Proving Ground
- **1** Naval Observatory
- 2 Arizona Air National Guard Wings
- 2 Arizona Army National Guard Installations



Source: The Maguire Company, 2017

Reporting Levels

Airport impacts reported at <u>AIRPORT</u>, <u>COUNTY</u>, and <u>STATEWIDE</u> levels



Levels of Economic Impacts



Impacts of Principal Military Operations reported at the <u>STATEWIDE</u> level



Aerospace Manufacturing and Research impacts reported at the <u>STATEWIDE</u> level



Impacts of six key aviation activities reported at the <u>STATEWIDE</u> level

Methodology

ADOT 2021 ARIZONA AVIATION ECONOMIC IMPACT STUDY

Why conduct an Economic Impact Analysis (EIA)?

The 2021 Arizona AEIS describes and quantifies the economic contributions that Arizona's 67 publicly-owned, public-use airports plus the aerospace and defense industries make to the 15 counties and entire state of Arizona. This information can be used to educate and inform key stakeholders on the vital role aviation plays in the Arizona economy.

Value of sales stimulated by on-airport activity, capital improvement expenditures, and visitor spending Economic Activity



Number of workers required to support a given level of economic activity

Amount of money businesses pay in corporate taxes and employees pay in personal taxes





Amount of wages and compensation paid to workers

The Three Levels of Economic Impact

Direct Impacts

Economic activity, jobs, and earnings directly resulting from on-airport activity, visitor spending, etc.

Indirect Impacts Economic activity, jobs, and earnings in the supply chains that support airports and the aviation industry Multiplier

Impacts

Induced Impacts

Economic activity, jobs, and earnings resulting from the direct and indirect employees' spending wages in the local economy

Total Impacts

Combined economic impact of **Direct** + **Indirect** + **Induced** impacts on the Arizona economy

Methodology: 2021 Arizona AEIS Approach



Methodology: Streams of Impact

On-Airport Activities

Airport Administration

Staff responsible for management and operations of airport

Business Tenants

Businesses with employees working on airport property

Capital Improvements

4-year average (2016-2019) of local, state, & federal investment into airport development

Visitor Spending

Money spent by out-of-state visitors arriving in Arizona via **Commercial Service (CS)** or **General Aviation (GA)** airports:

Commercial Service

Offers service to 134 domestic and 24 international destinations

General Aviation

Supports variety of recreational, commercial, and non-military government activities

Methodology: Data Collection and Validation



Presentation of Arizona Airports Results

ADOT 2021 ARIZONA AVIATION ECONOMIC IMPACT STUDY

Economic Impacts of Arizona Airports: 2019

2021 ARIZONA AVIATION ECONOMIC IMPACT STUDY

Streams of Impact: On-airport Activities vs. Visitor Spending

On-Airport Activities			Visitor Spending		
Jobs	221,529		Jobs	164,528	
Earnings	\$13.6 billion		Earnings	\$6.7 billion	
Economic Activity	\$41.0 billion		Economic Activity	\$\$18.4 billion	

Streams of Impact: Commercial Service vs. General Aviation Airports

Off-airport Aviationrelated Industries

ADOT 2021 ARIZONA AVIATION ECONOMIC IMPACT STUDY

Economic Impacts of Aerospace Manufacturing

Economic Impacts of Principal Military Installations¹

Davis-Monthan Air Force Base (AFB), Fort Huachuca, and Luke AFB each contribute more than \$2.5B in total economic activity to the Arizona economy every year.

2021 ARIZONA AVIATION ECONOMIC IMPACT STUDY

¹ Source: Economic Impact of Arizona's Principal Military Operations 2017, The Maguire Company 2017

Total Economic Impacts

ADOT 2021 ARIZONA AVIATION ECONOMIC IMPACT STUDY

Total Economic Impacts of Arizona Airports by Type, Aerospace Manufacturing, and Principal Military Installations, 2019

Sources: (1, 2) IHS Markit 2021, IMPLAN 2019. (3) *Economic Impact of Arizona's Principal Military Operations* 2017, *The Maguire Company 2017*

Total Economic Impacts by Industry, 2019

The **\$121.4B** in total economic activity stimulated by Arizona airports and off-airport aviation-related industries supported nearly **576 thousand jobs** and over **\$34.2B** in earnings across many industries in Arizona—meaning that *investment in aviation is an investment in Arizona's future.*

ADOT 2021 ARIZONA AVIATION ECONOMIC IMPACT STUDY

Comparison with Previous Studies

Sources: IHS Markit 2021, Elliott D. Pollack & Company 2012, Simat Helliesen & Eichner, Inc. (now part of ICF International) 2002

Future of Arizona Aviation

ADOT 2021 ARIZONA AVIATION ECONOMIC IMPACT STUDY

Future of Arizona Aviation: Macro Trends

Major Trends

- Strong growth in population and households. State's population expected to rise 1.1% annually (2x the U.S. rate) until 2040
- Boosted by domestic and international in-migration: strong demand in (health care) services and new housing
- > Employment in Professional & Business Services (*strong air reliance*) expected to grow 2.1% annually over next decade.

Strengths

Strong population growth driven by affordable housing and warm climate

Proximity to international markets makes AZ a strategic choice for expanding firms

Weaknesses

Manufacturing sector reliant on military & aerospace work

Lack of economic diversification driving labor market gains

Changes to AZ climate threaten population and economic growth

Forecast of Key Aviation Activities

					00	
Year / CAGR	Commercial Service Airports	General Aviation Airports	Aviation- related Education	Military Installations	Aerospace Manufacturing	Tourism
2019	\$20.5B	\$1.6B	\$316.2M	\$5.9B	\$37.2B	\$8.1B
2040	\$46.4B	\$3.6B	\$1.4B	\$10.9B	\$76.4B	\$17.8B
CAGR	4.0%	4.0%	7.3%	3.0%	3.5%	3.8%

CAGR = Compound Annual Growth Rate. Sources: IHS Markit 2021, IMPLAN 2019, The Maguire Company 2017

Future of Arizona Aviation: State Aviation Fund

2021 Arizona AEIS

- Quantified economic impacts of 6 key aviation activities
- Forecasted future contributions based on state and national trends
- Assessed future revenues into the State Aviation Fund

State Aviation Fund could grow by nearly 50%—from \$23.2M in 2019 to over \$35.1M by 2040.

Sources: IHS Markit 2021, IMPLAN 2019, ADOT Financial Management Services 2020

Since FY1998, close to \$115 Million has been swept out of the State Aviation Fund

- Compromised safety, efficiency, and responsiveness of Arizona airports
- Increased costs of programs when they are ultimately undertaken
- Lower statewide economic impacts from airport operations and visitor spending

Study Deliverables

ADOT 2021 ARIZONA AVIATION ECONOMIC IMPACT STUDY

Study Deliverables

- Technical Report
- Executive Summary
- County-specific Brochures
- Airport-specific Brochures

TECHNICAL REPORT

For study deliverables including the full technical report and methodology, visit <u>azdot.gov/planning/airport-</u> <u>development/links-and-resources-airport-development</u>

Thank You!

The success of the 2021 Arizona AEIS was only possible through the dedication, support, and participation of many individuals and organizations across the state.

We couldn't have done it without you!

Bob Flanagan Consulting Director Bob.Flanagan@ihsmarkit.com

Catherine Woodwell Aviation Planner Catherine.Woodwell@kimley-horn.com

Kimley »Horn

