

An aerial photograph of an airport is shown, with a large blue rectangular overlay on the left side. The overlay contains the title and subtitle in white text. The background image shows the airport's runways, taxiways, and surrounding infrastructure, including a large parking lot and various airport buildings.

Effective Communication and Utilization of Airport Economic Impact Studies

Findings from ACRP Synthesis 125

Today's Learning Objectives

- 1. Understand the role and objectives of airport economic impact studies**
- 2. Determine effective communication and implementation strategies**
- 3. Evaluate outcomes and best practices from case studies**

American Association of Airport Executives (AAAE)

1.0 Continuing Education Units (CEUs) are available to Accredited Airport Executives (A.A.E.)

Report your CEUs:
www.aaae.org/ceu

American Institute of Certified Planners (AICP)

1.5 Certification Maintenance Credits

You must attend the entire webinar to be eligible for credits

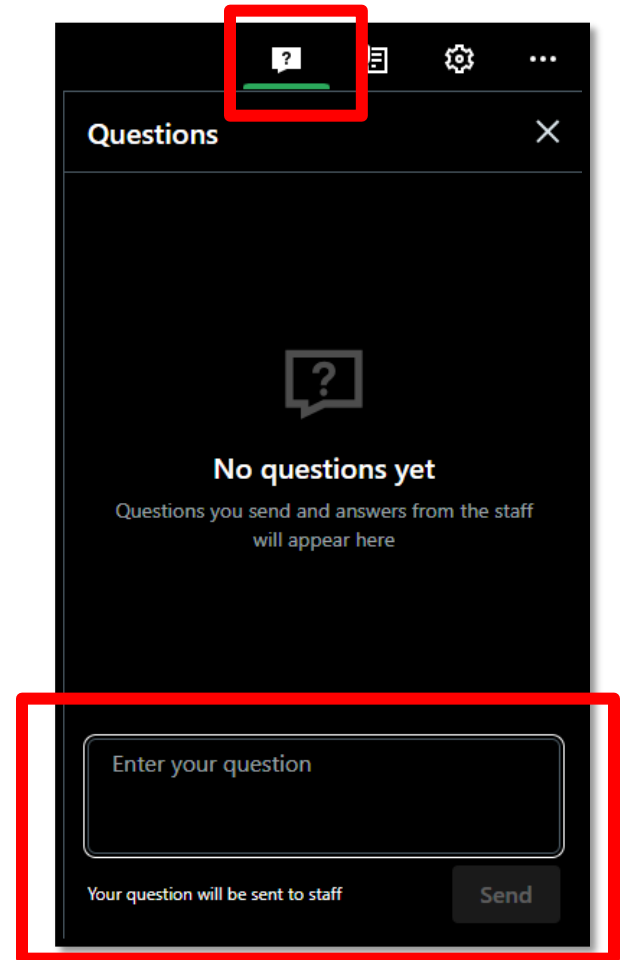
Log into the American Planning Association website to claim your credits

Questions and Answers

Please type your questions into
your webinar control panel

We will read your questions out
loud, and answer as many as
time allows

#TRBwebinar



Regan Schnug, AICP

Senior Project Manager, Kimley-Horn

- 17 years of experience as an aviation planning consultant.
- Leads the development of aviation planning studies specializing in aviation economic impact studies, state aviation system plans, and airport land use compatibility
- Contributed to several statewide planning projects, including statewide airport economic impact studies for Colorado, Pennsylvania, Indiana, and West Virginia
- Served as Principal Investigator and a contributing author to several national guidance documents ACRP and the FAA



Speaker Introductions



Georgia Twyerould, AICP
Contributing Author
Kimley-Horn



Daniel Findley, PhD, PE
Contributing Author
ITRE



Todd Green
Program Manager
CDOT Aeronautics



Webinar Agenda



1. Introductions



2. Project Purpose & Timeline



3. Project Process



4. Research & Synthesis



5. Case Examples

ACRP Synthesis 125 Panel

Panel Members

Dr. Yi Gao, Associate Professor, Purdue University

Rylan Juran, Aviation Planning Director, Minnesota DOT

Barbara Elwood Schalmo, Associate Director, C&S Companies

Bobby Walston, Director, North Carolina DOT Division of Aviation

Elie Zogheib, Airport Chief Engineer, Cleveland Airport Systems

Liaison Representative

Liyong Gu, Vice President, Airports Council International

CRP Staff

Jordan Christensen, Senior Program Officer, TRB

Demisha Williams, Senior Program Assistant, TRB

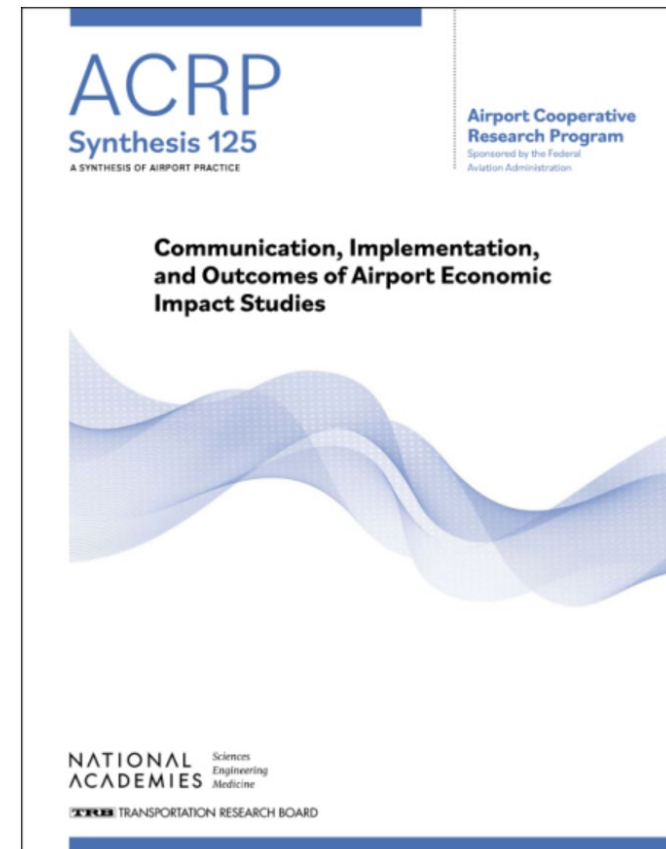
Project Purpose & Timeline



Project Purpose is to provide information on:

- How airport economic impact studies have been communicated to stakeholders
- How the studies have been implemented to achieve objectives
- What the results effects were to the agencies and airports involved

Timeline: March 2022 – January 2023



Project Process



→ Surveys

- National Association State Aviation Officials (NASAO)
- American Association of Airport Executives (AAAE)
- American Council International (ACI)

→ Literature review (86 AEISs + industry resources/ publications)

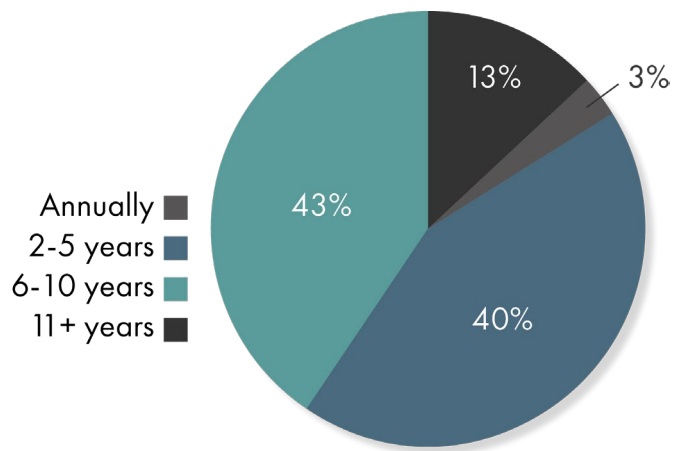
→ 6 case examples (states, regions, airports)

→ Draft report & panel review

→ Final report



Frequency of Updates



Sources of Impact

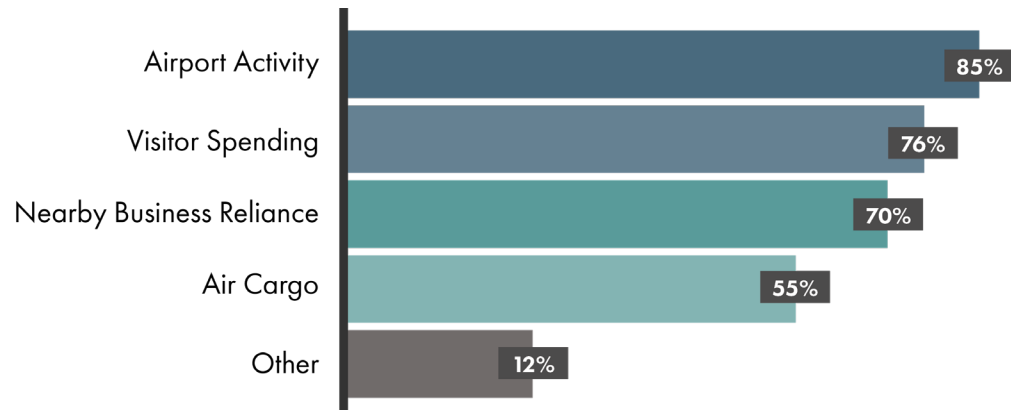


Figure 3-2. Results of Survey Question Regarding Frequency of Economic Impact Studies
Source: ACRP S03-18 Survey, 2022.

Figure 3-5. Results of the Survey Question Regarding the Sources of Impact Included in the Study
Source: ACRP S03-18 Survey, 2022.



Economic Impact Study Objectives for Airports

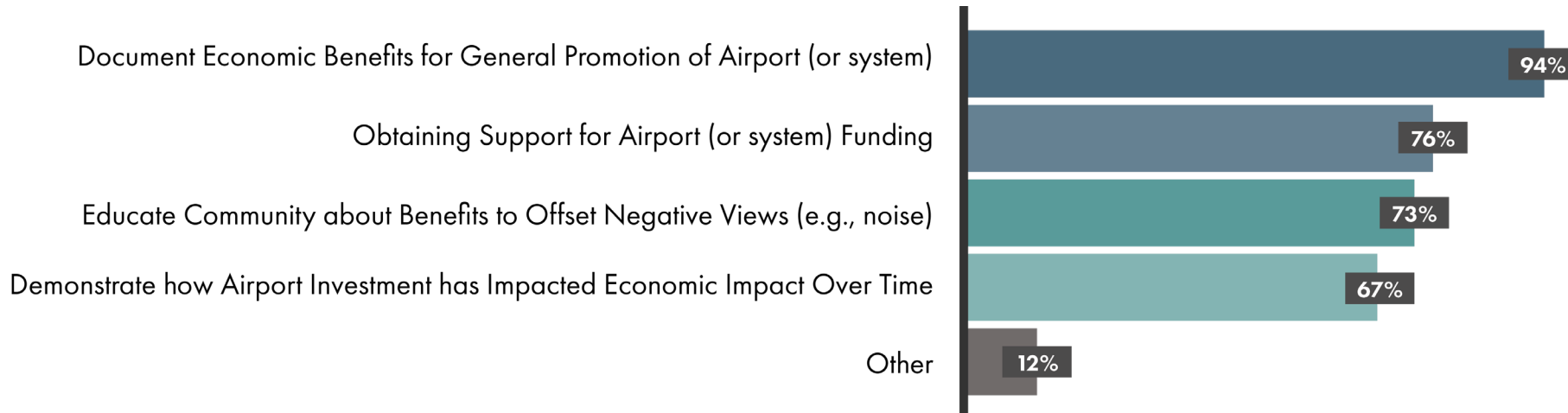


Figure 3-4. Results of Survey Question Regarding the Objective for Conducting an AEIS
Source: ACRP S03-18 Survey, 2022.



Intended Audience

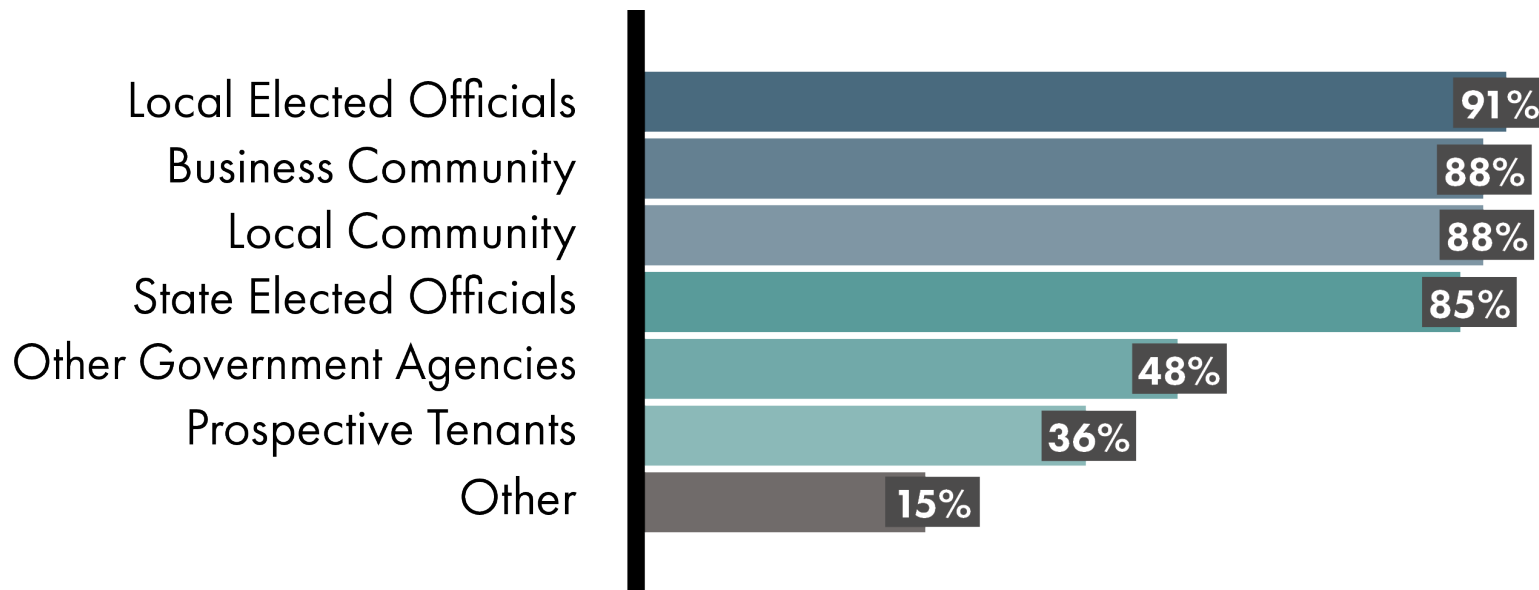


Figure 3-6. Results of the Survey Question Regarding the Intended Audience of the AEIS]

Source: ACRP S03-18 Survey, 2022.

Research & Synthesis



Dissemination Methods

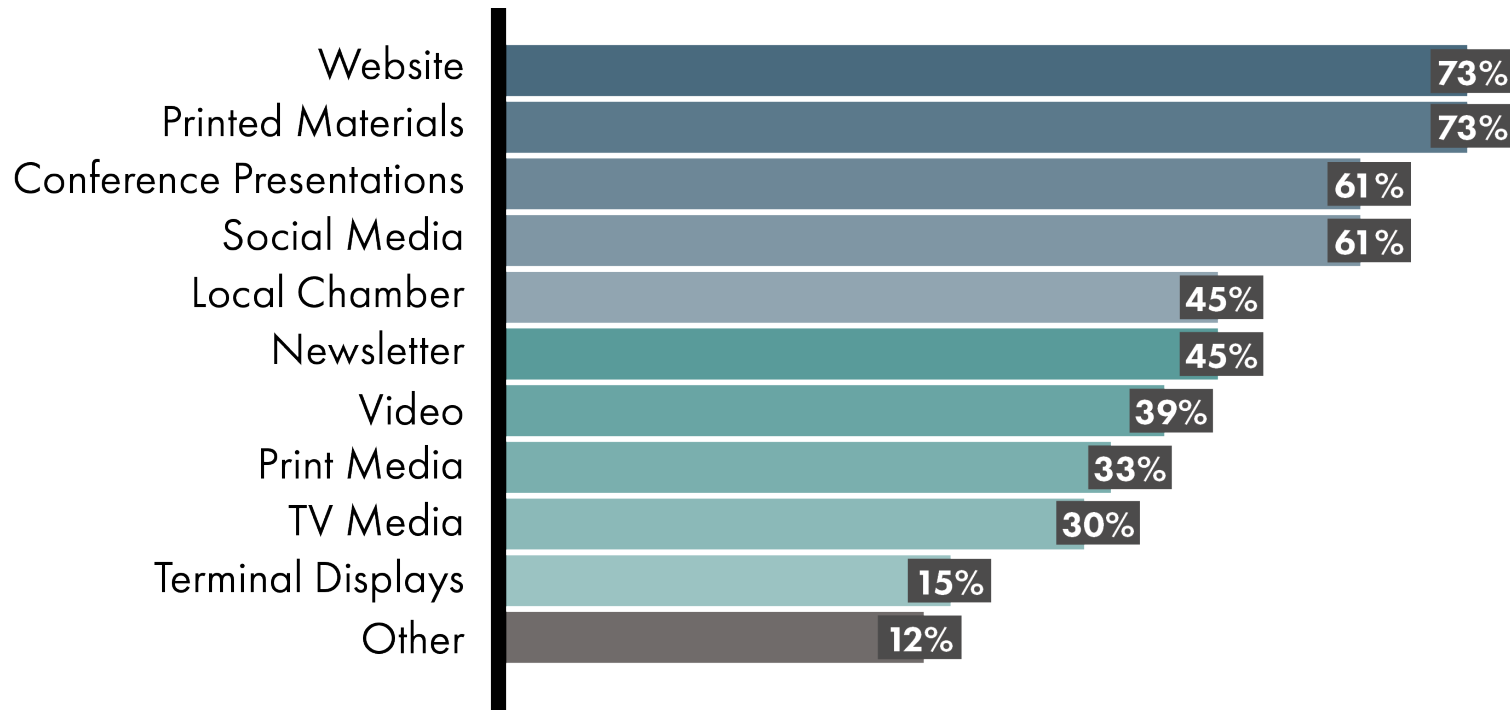


Figure 3-7. Results of the Survey Question Regarding Methods for Sharing AEIS Results
Source: ACRP S03-18 Survey, 2022.

Case Examples



Airport-Specific
St. Pete-Clearwater
International Airport



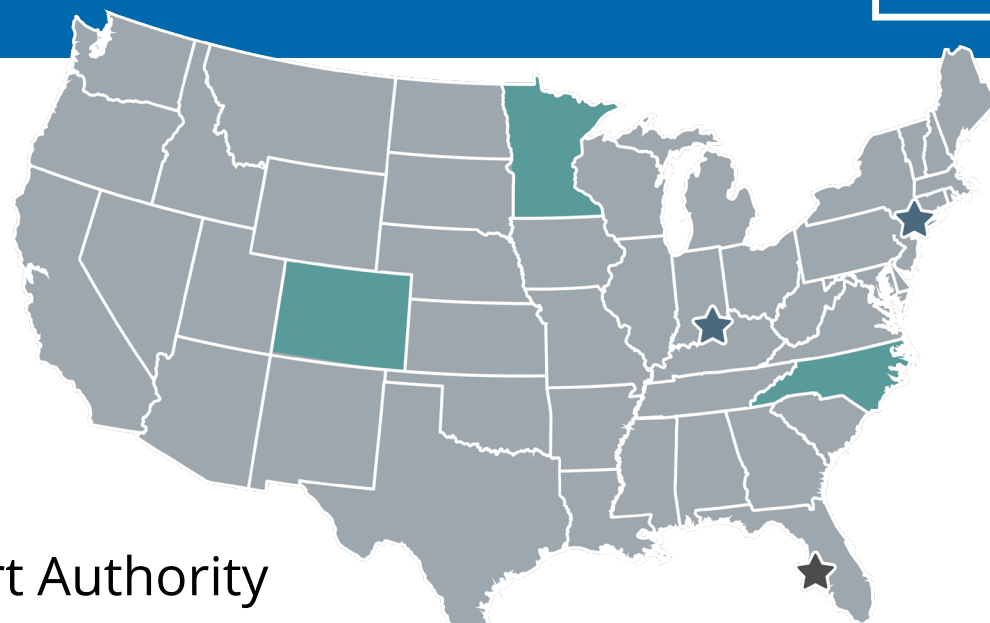
Regional

Louisville Regional Airport Authority
Port Authority of New York and New Jersey



State

North Carolina Department of Transportation
Minnesota Department of Transportation
Colorado Department of Transportation



Airport Study (1)
Regional Studies (2)
State Studies (3)

Case Example: St. Pete-Clearwater International Airport (PIE)



→ PIE Runway Dependent Activity

ST. PETE-CLEARWATER INTERNATIONAL AIRPORT
PIE

fly2pie.com
[@fly2pie](https://twitter.com/fly2pie)
facebook.com/fly2pie

MEDIA RELEASE

January 23, 2018
Contact: Michele Routh, Public Relations Director,
mrouth@fly2pie.com, 727-453-7879

St. Pete-Clearwater International (PIE) Economic Impact Report 2017

PIE Takes the Cake

When it comes to economic impact, PIE's success is the community's success

\$1.044 B

PIE's economic impact from runway dependent activity*



7,000+

Direct, indirect and induced jobs

1,369

Direct Airport FTE Jobs

\$226 M

Spending of Inbound Visitors

2019

record tourism year
Tourist Development Tax Collection over \$64 million, 9% increase over 2018

*Source: 2017 Economic Impact Report

St. Pete-Clearwater International Airport's (PIE) estimated economic impact from runway activity is estimated at \$1.044 billion. The direct, indirect, and induced* impact estimated 7,020 full-time equivalent (FTE) jobs.

cent economic driver for the region with air travel essential to Florida's and Pinellas tourism industry. As the ninth busiest of Florida's 20 commercial airports plus general aviation and military operations, PIE is key in sustaining and growing economic activity in the region. PIE contracted with Voltaire Aviation Consulting to develop a comprehensive Airport Activity and Economic Impact Study. The focus of the study was on "runway dependent" commercial air service and general aviation impacts. Additionally, the study estimated the economic impact of each new route added.

include:

- 81% of the annual output is the result of PIE airline service, 19% General Aviation
- 3 direct airport FTE jobs with labor income of \$81.275 million, a per FTE equivalent of \$5.5 million
- if these 3 direct airport FTE jobs with labor income of \$81.275 million, a per FTE equivalent of \$5.5 million were considered a single employer, it would be the 19th largest in the county, estimated 525,867 (2016) inbound visitors used PIE as their gateway and spent \$226 million during their visit.
- Spending created direct, indirect, and induced jobs totaling 3,848 FTE, generating \$333 million in labor income and \$363.1 million in economic output.
- domestic route's estimated economic impact is 86.4 FTE jobs and \$12.95 million in economic output.
- international route's estimated annual economic impact is estimated at 47.3-181.4 FTE and \$4.51-17.17 million economic impact (based on international origin).
- airline aviation operations in 2016 were 71% of PIE's 113,150 operations with ten runway dependent non-airline businesses operating at PIE, generating 629.5 FTE direct jobs.
- total economic impact of non-airline (General and Military Aviation) is estimated at 1,417.1 jobs and total economic output of \$196.14 million.

The impact report presented excludes the airport's economic impact from non-runway activity such as real estate development and leasing. Notable exclusions include the Passaic Park and other non-aeronautical leases and permits.

Direct impact – the measure of jobs and spending at the airport; Indirect impact – Economic activity at the airport, but resulting from airport jobs and spending; Induced impact – Economic activity of people and businesses benefiting from the indirect impacts.

Case Example: Port Authority of New York and New Jersey (PANYNJ)



- ➔ John F. Kennedy Int'l (JFK)
- ➔ Newark Liberty Int'l (EWR)
- ➔ LaGuardia (LGA)
- ➔ NY Stewart Int'l (SWF)
- ➔ Teterboro (TEB)

PORT AUTHORITY NY NJ

2021 Airport Traffic Report

John F. Kennedy International Airport
Newark Liberty International Airport
LaGuardia Airport
New York Stewart International Airport
Teterboro Airport

Economic Impact for the NY/NJ Region	EWR	JFK	LGA	SWF	Total
Passenger Operating Impact					
Labor Compensation	\$ 5,069	\$ 6,643	\$ 2,073	\$ 13	\$12,799
Total Final Sales	\$17,133	\$19,074	\$ 7,007	\$ 44	\$43,257
Full-Time Jobs Supported	53,530	59,595	21,891	138	135,154
Visitor Economic Impact					
Labor Compensation	\$ 3,845	\$ 4,076	\$ 2,065	\$ 11	\$ 9,998
Total Final Sales	\$ 7,210	\$ 7,642	\$ 3,872	\$ 21	\$18,746
Full-Time Jobs Supported	46,947	49,757	25,213	138	122,055
Cargo Impact					
Labor Compensation	\$ 1,364	\$ 5,341	\$ 4.9	\$ 21	\$ 6,731
Total Final Sales	\$ 3,847	\$15,062	\$ 14	\$ 60	\$18,983
Full-Time Jobs Supported	21,457	84,004	77	332	105,870
Capital Spending Impact					
Labor Compensation	\$ 508	\$ 100	\$ 208	\$ 0.1	\$ 816
Total Final Sales	\$ 1,120	\$ 220	\$ 457	\$ 0.2	\$ 1,798
Full-Time Jobs Supported	6,396	1,253	2,611	1	10,261
Total Economic Impact					
Labor Compensation	\$10,787	\$15,160	\$ 4,351	\$ 46	\$30,343
Total Final Sales	\$29,311	\$41,997	\$11,350	\$125	\$82,783
Full-Time Jobs Supported	128,329	194,609	49,792	608	373,340

AIRPORT INFRASTRUCTURE

4

RUNWAYS

6

TERMINALS

125

GATES

ECONOMIC IMPACT

Annual Economic Activity

\$42

BILLION

195,000

JOBS

Annual Wages

\$15.1

BILLION

NATIONAL ACADEMIES *Sciences
Engineering
Medicine*

TRB TRANSPORTATION RESEARCH BOARD

ACRP AIRPORT COOPERATIVE RESEARCH PROGRAM

Case Example: Louisville Regional Airport Authority (LRAA)



- Louisville Muhammad Ali Int'l (SDF)
- Bowman Field (LOU)

nearly
83,000
JOBS

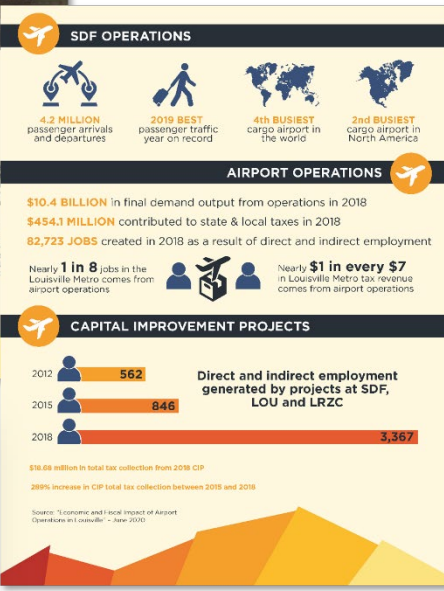
LOUISVILLE MUHAMMAD ALI INTERNATIONAL AIRPORT
Airport Operations are Driving Business and Strengthening the Regional Economy



ECONOMIC IMPACT Fueling the Regional Economy

The Louisville Muhammad Ali International Airport (SDF) and Bowman Field (LOU) are essential transportation hubs whose nonstop operations not only move people and products across the world but also significantly advance and bolster our local economy in numerous ways. Both operations comprise the largest source of employment in the Louisville Metro area, a design that continually translates into increased local and state tax revenues, additional jobs, and an ever-increasing final demand output year after year.

The Louisville Renaissance Zone Corporation (LRZC), a sister organization to the Louisville Regional Airport Authority (LRAA), plays a crucial role in stimulating our local economy as well. The LRZC oversees operations taking place at the Renaissance South Business Park, a 680-acre complex housing a number of large corporations, such as Ford Motor Company, United Parcel Service (UPS), and W.W. Grainger Co. Through the activity of these large corporations, the LRZC, like SDF and LOU, provides our community with additional sources of employment and further fuels our local economy.



LOUISVILLE MUHAMMAD ALI INTERNATIONAL AIRPORT
LOU | 1939

Contact: Natalie Chauhan
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For Immediate Release

Louisville's Airports are Driving Business and Fueling the Regional Economy
Study shows vital role facilities play for jobs, tax revenue and economic impact

Louisville, KY (October 22, 2020) – The results of the most recent economic and local impact survey for the Louisville Muhammad Ali International Airport (SDF) and Bowman Field Airport (LOU) show that Louisville's airports continue to drive business and fuel the regional economy. While both airports are committed to connecting people and product across the country and around the world, the study results solidify that economic activity is expanding because of their combined operations and remain a vital contributor to the community.

The study revealed that both airports were responsible for:

- Nearly \$10.4 billion in total economic impact
- \$454.1 million was contributed to state and local taxes
- 82,723 direct and indirect jobs were because of airport operations

"These figures show our airports continue to thrive and be an essential asset to our local community and regional economy," said Dale Boden, Chair of the Louisville Regional Airport Authority Board, which operates and manages both airports. "Even as our industry evolves amid the challenges of the global pandemic, both of Louisville's airports are looking ahead to ensure that we are prepared for the future and continue to serve the community and region."

Both Louisville Muhammad Ali International and Bowman Field continue to be one of the largest private employment centers in the area. Nearly one in every eight jobs in Louisville Metro is due to direct or indirect operations at both airports. The two facilities are also responsible for generating nearly \$1.00 in every \$7.00 of tax revenue in Louisville Metro.

"We've always known that Louisville Muhammad Ali International Airport is a critical economic driver for the city, and this study really brings that home," said Louisville Mayor Greg Fischer. "Our city thanks the Louisville Regional Airport Authority staff for their work, including their great partnership with

-more-

NATIONAL ACADEMIES
Sciences
Engineering
Medicine

TRB TRANSPORTATION RESEARCH BOARD

ACRP
AIRPORT COOPERATIVE RESEARCH PROGRAM

Case Example: Minnesota



EXAMPLES OF HOW BEMIDJI REGIONAL AIRPORT SUPPORTS THE COMMUNITY

The airport supports many uses and users that help sustain vital services and business needs.

Aerial Inspections

The Department of Natural Resources (DNR) uses the airport for aerial inspections. The agency is responsible for monitoring wildlife, parks, forests, fishing, and water resources. Aviation is an essential tool that enables the DNR to carry out its activities and missions over an area of almost 8,750 square miles. Aerial inspections conducted from this airport help monitor and protect the state's environment.

Educational Support

Concordia Language Villages is a language and cultural immersion program located just north of Bemidji, Minnesota. The facility hosts approximately 10,000 people each year for immersion programs to youth, families and adults in more than 11 languages, as well as training in world responsibility. The airport supports this institution and the local economy by providing convenient access for Bemidji State University students. Universities rely on airports to accommodate students and parents. The airport brings university-related visitors to the area, as well as supporting the travel industry. The airport contributes to the success of higher education in the Bemidji area.

Recreation

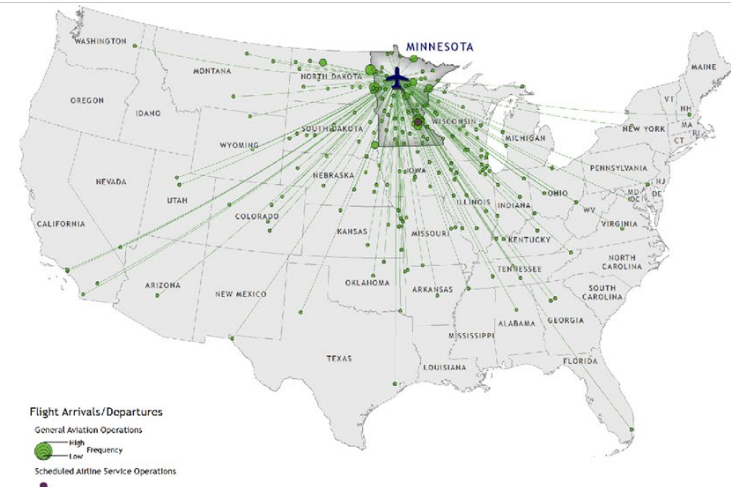
Bemidji has numerous outdoor recreational activities, including hunting and fishing. There are more than 500 miles of cross-country ski trails near Bemidji, as well as over 400 fishing lakes within 25 miles, making it a popular destination for outdoor enthusiasts. Each year, Minnesota hosts an estimated 477,000 hunting trips, which supports an estimated 12,400 jobs and \$417 million in economic activity. The American Sportfishing Association estimates 260,000 visitors come to Minnesota each year for fishing-related activities. By supporting hunters and anglers who fly into the area, the airport helps sustain the recreational industry and the businesses engaged in recreational activities.



BEMIDJI REGIONAL AIRPORT SUPPORTS NON-STOP DAILY CONNECTIVITY TO MANY DESTINATIONS THROUGHOUT THE LOWER 48 STATES.

A flight from this airport can take you almost anywhere. This connectivity is particularly important for the many businesses that rely on Minnesota's airports to deliver and receive products, reach their customers, and remain competitive.

Flight data from the FAA shown on this map displays just some of the destinations flown to and from this airport.



MINNESOTA AIRPORTS SUPPORTING OUR ECONOMY & COMMUNITIES



Case Example: North Carolina



Legislative Mandate

(c) *Economic Impact Study and Distribution Formula.* – The Department of Transportation **shall conduct a biennial economic impact study** that examines the annual economic impact of each commercial service airport in North Carolina. The Department shall **disburse AIP funds appropriated in a year to each eligible airport in proportion to the total economic impact of the airport**, adjusted as provided in this subsection:

(1) *For an eligible airport with one of the three largest economic impacts, the airport's distribution amount shall be reduced by a percentage equal to the lesser of twenty percent (20%) or five percent (5%) multiplied by each full ten percent (10%) of economic impact calculated for that airport. The aggregate amount of the reduction to the eligible airports with the three largest economic impacts is the amount to be redistributed to the remaining eligible airports as provided in subdivision (2) of this subsection.*

(2) *For an eligible airport that does not have one of the three largest economic impacts, the airport's distribution amount shall be increased based upon the following formula:*

- a. *Twenty-five percent (25%) of the redistribution amount shall be distributed equally.*
- b. *Seventy-five percent (75%) of the redistribution amount shall be based upon the airport's share of passenger boardings compared to the total number of passenger boardings used for all airports receiving a distribution pursuant to this subdivision*

Case Example: North Carolina



NORTH CAROLINA THE STATE OF AVIATION

What Aviation Means To Our Economy



January 2023

Workforce programs develop talent pipeline

N.C. AVIATION EDUCATION FAST FACTS

- ▶ 20,500 STEM post-secondary graduates annually
- ▶ 4 universities with bachelor's degrees or above in aviation-related fields
- ▶ 7 community colleges and 1 private training offering associate degrees, diplomas and certificates
- ▶ 28 postsecondary institutions offering aviation-related programs

Cargo traffic reaches new heights



AIR CARGO COMPANIES OPERATING IN NORTH CAROLINA

Passenger service rebounds

Passenger service at North Carolina's commercial airports rebounded in 2022 to 36.8 million - 80% of the state's total traffic count in pre-pandemic 2019 - as pandemic-weary to sure travelers and remote workers seek to get back to work in search of sun-drenched southern and Caribbean destinations.

Athlete Regional Airport was the state's third busiest in 2022, due to its early rebound. The airport leveraged its assets by stepping up business development efforts with airlines to show air service among leisure travelers and needed to lift their and four-year partners to spread the message that "people want to visit Asheville."

Passenger traffic at Asheville - Silt Airport in Jacksonville started a strong recovery in 2022 due in part to military personnel who no longer had to fly.

Charlotte Douglas International Airport's southeast American Airlines hub hosted two basic domestic through-traffic, becoming the fifth busiest in need in the world for air traffic and the most recovered of any U.S. major airline hub compared to 2019.

Sevenson Hill has now joined North Carolina, connecting travelers with 43 U.S. states and territories and 25 foreign countries.

"While many U.S. markets contracted, our airport saw airlines expand routes and welcomed one new airline in 2021."

Low Bialonis, President and CEO, Asheville Regional Airport



N.C. AIRLINES FAST FACTS

- ▶ 17 Commercial Airlines
- ▶ 184 Airline Destinations
- ▶ 56.9 million Passengers (2021)
- ▶ 15,009 Airline Jobs (2021)
- ▶ \$78,700 Average Salaries (2021)



Passenger traffic rebounded to 4.4 million at Asheville Regional Airport during 2022, driven by inbound tourist traffic and outbound leisure travel by region.

Airport enterprises create jobs and tax revenues



North Carolina: The State of Aviation

For 120 years, North Carolina has led the way in aviation. In 2021, the first-half state led the way out of the pandemic, carrying more cargo than ever before, covering new markets to passenger service, including airports, facilities, hosting the world's fifth busiest airports and welcoming new airlines and aerospace companies that now call North Carolina home.

These are among findings from the NCDOT Division of Aviation's biennial economic impact study of the state's public airport system and the assets North Carolina offers aviation-supported companies.

Our analysis found North Carolina's 72 public airports annually contribute more than \$72 billion in economic impact - 1% of the state's gross domestic product, its total output of goods and services. The airports also support 330,000 jobs that generate \$23 billion in personal income and \$3.7 billion in state and local tax revenues.

North Carolina's aviation system continues driving the economy by connecting people, companies and communities to markets and destinations worldwide.



\$72 BILLION
ECONOMIC
IMPACT

330,000
JOBS

\$23 BILLION
IN PERSONAL
INCOME

\$3.7 BILLION
IN TAX
REVENUE

Case Study: North Carolina



DIVISION OF AVIATION
 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

NORTH CAROLINA

THE STATE OF AVIATION

Play (k) 0:02 / 8:09

North Carolina The State of Aviation - 2023

Case Study: North Carolina



Tracking the Reach of the Study

2023 State of Aviation Outreach Dashboard (View Only) : smartsheet Report Abuse Help

North Carolina: The State of Aviation 2023 Outreach Campaign Dashboard

SPREAD THE WORD: \$72B Billion Annual Impact

Follow the **link below** to track your outreach results:

1. Enter **each presentation** you make on your impacts.
2. Enter **each published story** (newspaper, TV, newsletter, etc.) that publicizes your impacts.

Submit a presentation or published story >

Results to Date

Presentations: 35

Stakeholders Reached: 1911

Published Stories: 49

Quicklinks

Aviation Website with Brochure and Video >

Outreach Toolkit on State Aid Connect site >

Presentations

Organization	Date of Presentation	Est Size of Audience	Group Presented To
RUQ	07/11/23	60	Salisbury Rotary
Davidson County Airport	05/31/23	50	Thomasville NC Rotary Club
NCDOT Aviation	05/18/23	63	Apex Academy of Information Technology (AOIT)

Published Stories

Organization	Date Story Ran/Aired/Was Distributed	Who Published	URL to the Story Online
Albert J Ellis Airport	04/26/23	Jacksonville Daily News- local paper	https://www.jdnews.com/
Pitt Greenville Airport	02/23/23	The Daily Reflector	https://www.reflector.com/
Raleigh Executive Jetport	02/08/23	Sanford Herald	https://www.sanfordherald.com/


Case Study: North Carolina



Social Media Engagement


North Carolina Division of Aviation
July 11 · 🌐

Odell Williamson Municipal produces 65 jobs, \$2.5M in personal income, \$285,000 in state & local taxes and \$6.6M in economic output. [#StateofAviation](#)




North Carolina Division of Aviation
August 11 at 9:43 AM · 🌐

Wilkes County Airport produces 195 jobs, \$10.9M in personal income, \$2M in state & local taxes and \$30M in economic output. [#StateofAviation](#)



North Carolina Division of Aviation
July 7 · 🌐

Ocracoke Island Airport produces 20 jobs, \$1.4M personal income, \$191,000 in state & local taxes and \$4.6M in economic output. [#StateofAviation](#)



North Carolina Division of Aviation
June 23 · 🌐

Michael J. Smith Field produces 305 jobs, \$12.6M in personal income, \$1.9M in state & local taxes and \$37.8M in economic output. [#StateofAviation](#)

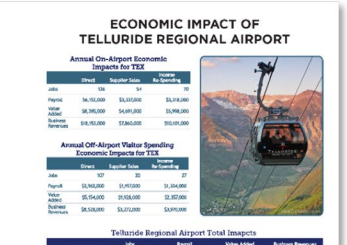
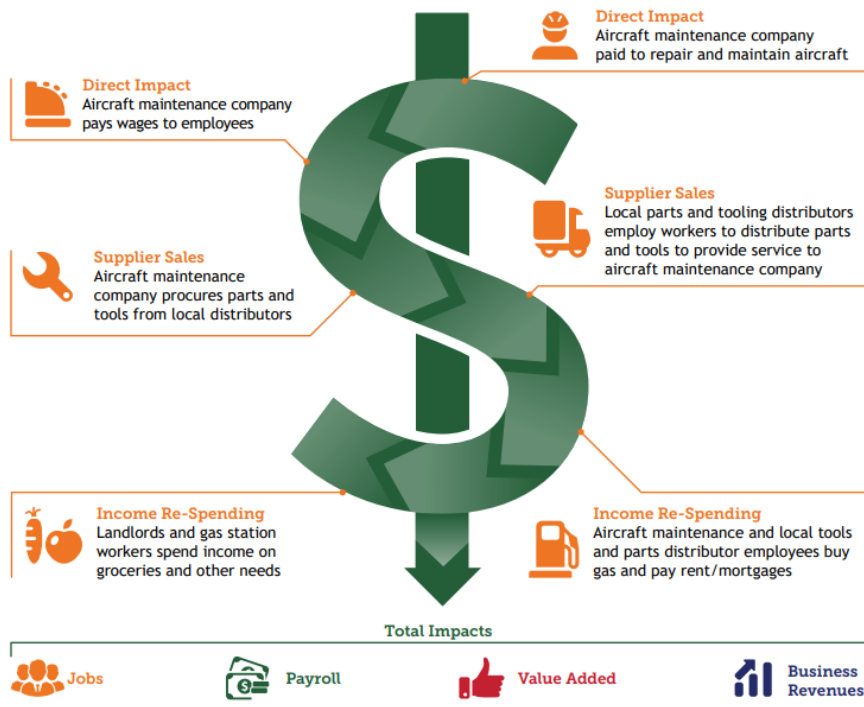


Case Study: Colorado

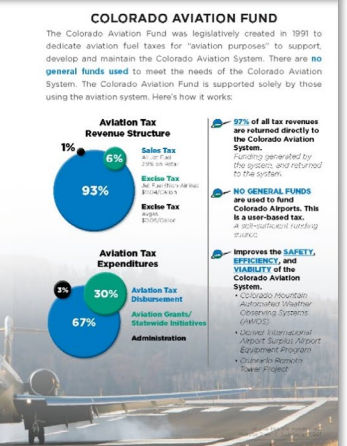
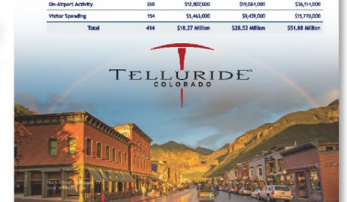


Infographics

Economic Impact Calculation Process



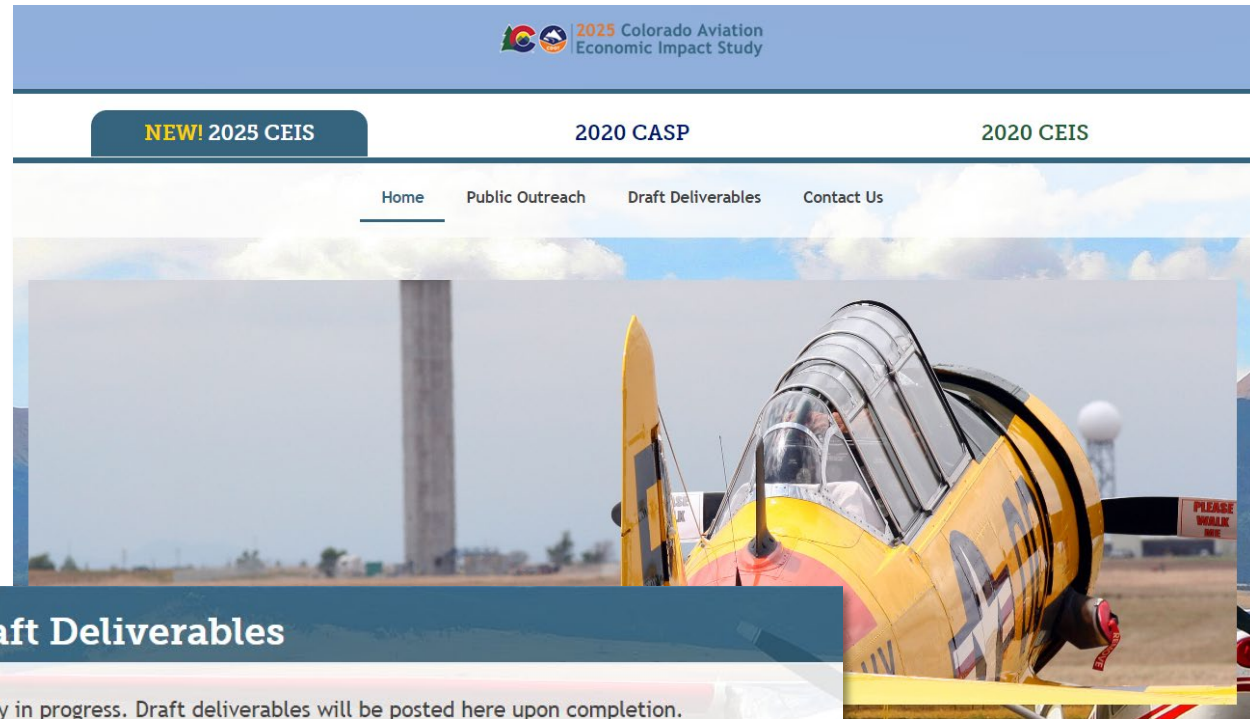
In addition to providing the citizens and visitors of Colorado with critical air transportation services, Colorado's airport system is also essential to supporting a diverse business base. Airports in Colorado support the employment of thousands of people and are responsible for providing the state with billions of dollars in overall annual economic output.



Case Study: Colorado



Project Website



Draft Deliverables

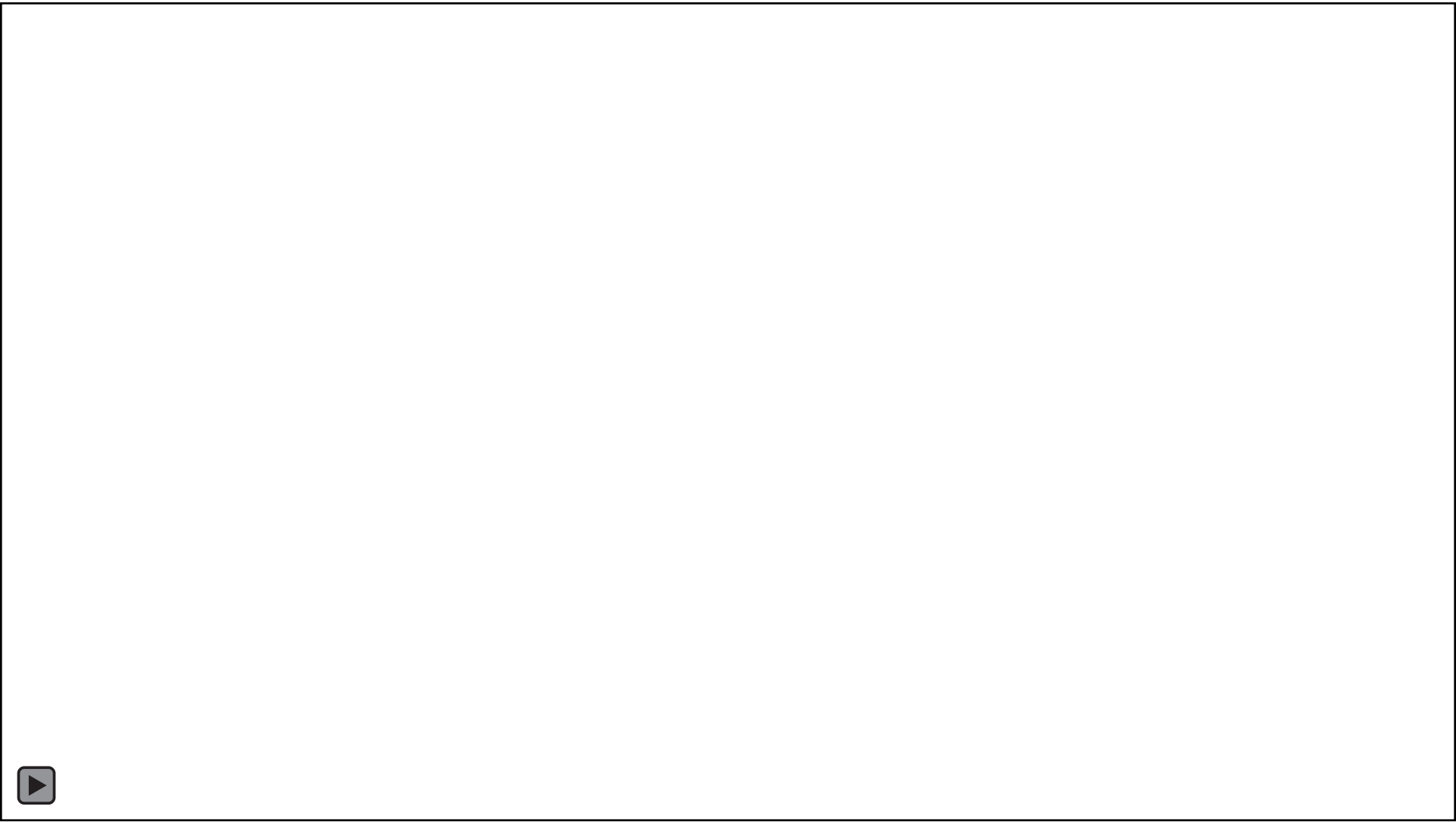
The 2025 Colorado Economic Impact Study (CEIS) is currently in progress. Draft deliverables will be posted here upon completion.

- Technical Report
- Statewide Executive Summary Brochure
- Statewide Fact Sheet
- Individual Airport Brochures
- Individual Airport PowerPoint Presentations
- [Animated Flight Maps](#)
- Airport Training Webinar

Case Study: Colorado



Animated Flight Maps



Case Study: Colorado



Real Life Stories

Real-Life Stories
Agriculture, Natural Resources, and Sustainability

Airports Helping Colorado's Sustainability

Airports are among the largest, consolidated tracts of land in Colorado, including Denver International Airport (DEN), which has the largest land area of any airport in the U.S. Many airports in the state have taken a holistic approach to ensure the airport safely and efficiently while carefully managing the use of land assets and natural resources. The CDOT Division of Aeronautics sponsors a special program for general aviation airports to prepare sustainability plans. Starting with three airports (Centennial Airport (APA), Canon City-Fremont County Airport (1W6), and Rifle-Garfield County Airport (RIL)), this program is expanding to others across the state.

The stories below highlight sustainable management of natural resources and the critical role aerial applicators play in the state's agriculture, particularly in the eastern plains of Colorado.

Agriculture and Aerial Applicators at Colorado Airports

In 2018, agricultural crops in Colorado generated \$7.5 billion in revenue from approximately 4.6 million acres of harvested land. The state's major crops include corn, wheat, alfalfa, potatoes, and oats. Colorado farmers also produce specialty crops such as melons, sweet corn, peaches, chilis, pumpkins, and many other fruits, vegetables, and flowers.

Aerial applicators perform many tasks in Colorado including seeding crops, planting cover crops, feeding and fertilizing disease control, public health spraying, forest seeding, fertilizing, and weed mitigation. By flying over fields, aerial applicators avoid the surface disruption a tractor equipped with sprayers might cause. In 2018, aerial applicators treat an estimated 1.29 million acres of crop land in Colorado, nearly 30 percent of the state's total harvested land.

Most of the active aerial applicators are based at eastern plains airports in Akron (AKO), Brush (7V5), Burlington (BT Eads) (BVT), Holly (K08), Holyoke (HEQ), La Junta (LJK), Springfield (BVT), Wray (WY5), and Yuma (YV6). Other areas include the San Luis Valley near Monte Vista (MVI) and on the western slope near Craig (CAG).

Agriculture at Denver International Airport

DEN has a 53-square mile footprint that sits on land that was originally the farms of several families. Today, the DEN maintains four agricultural leases with three families. The leases span across various parcels around the airfield a total acreage of 15,325 acres. All farming at DEN is dry land farming, meaning that no irrigation or wells are used. Farmers raise wheat, corn, millet, and sunflowers. At one time, DEN had a revenue-sharing arrangement with farmers, but in 2015-2016, DEN went to a flat rate system for agricultural leases, which made it easier for the plan for crops and revenues. The cost of weed control is shared by farming tenants and the airport, who pays the cost.

Photo Courtesy Colorado Agricultural Aviation Association

Photo Courtesy of Denver

Real-Life Stories
Aerial Firefighting - Aviation in Action

Center of Excellence for Advanced Technology Aerial Firefighting - Rifle-Garfield County Airport (RIL)

The Center of Excellence for Advanced Technology Aerial Firefighting (CoE) was authorized and funded in 2014 by the Colorado Legislature as a quasi-independent research center to evaluate existing and new technologies that support the state's aerial wildland fighting efforts. The CoE is located at RIL.

Today, the center's role includes testing and evaluating new technologies and tactics that firefighters can use when dealing with wildfires. Research projects demonstrate the wide range of contributions CoE is making to improve the state's capability for fighting wildfires. Projects include:

- Aerial application of water enhancers to evaluate whether these polymer-based products added to water improve fire-suppression characteristics
- Integration of unmanned aerial systems and unmanned ground systems into firefighting and public safety programs
- UAS detection, tracking, and identification of unauthorized drones at wildland fires and other public safety events
- Use of safe, effective, and efficient night aerial firefighting operations in Colorado
- Development of a Team Awareness Kit to provide map-based situational awareness to firefighters and other first responders when traditional Internet access is unavailable or unreliable (a related project is investigating data link capability to deliver digital fire information from a multi-mission aircraft to fire crew on the ground)
- Development of a Colorado fire prediction and decision system

The airport, higher education institutions, state and federal government agencies, and business partners around the state are strong supporters of CoE and its research contributions to effective firefighting in Colorado.



Photo Courtesy of The Center of Excellence for Advanced Technology Aerial Firefighting

Summary

Airports are an integral component of Colorado's firefighting capability and emergency response. They serve as critical logistics centers and bases for aerial wildland firefighting and other types of emergency response. When a natural disaster or emergency strikes, airports large and small are indispensable launching points for coordinated response and recovery.

Real-Life Stories
Emergency Medical Response - Aviation in Action

Rural Partners in Medicine (RPM)

Today, 25 percent of Americans live in rural communities where most people rely on the local hospital as their principal source of medical care. According to the Rural Health Research Center, only 10 percent of physicians practice medicine in these areas, resulting in a chronic shortage of medical services.

RPM, based at BJC, has sought to address these shortages by sending specialty surgeons to rural hospitals in Colorado, Nebraska, Wyoming, Missouri, Kansas, Arizona, Nevada, and South Dakota.

When specialty physicians travel to rural hospitals, they are able to expand medical services that can be provided locally. This makes it possible to obtain elective surgeries in the community without having to travel to a major city. These services help to support the local economy and viability of small hospitals and medical clinics. RPM has partnered with 30 hospitals in the Mountain Region. In Colorado, they serve hospitals in Cortez, Holyoke, Hugo, Lamar, and Yuma on a weekly basis, using local airports to transport physicians in and out. Doctors are transported on regularly chartered aircraft out of BJC, APA, Colorado Air and Space Port (CFD), Northern Colorado Regional (FNK), and Yampa Valley Regional (YVA) airports. Different charter companies support RPM including Mountain Aviation, Mayo Aviation, Hawk, Raber Flight Services, and Choice Aviation. RPM charters approximately 55 flights per month and 145 hours of flight time per month. Colorado's general aviation airports are indispensable partners in RPM's ability to provide quality care to many rural communities.

Community Support of the Airport Matters - The Story of Del Norte's Airport

Del Norte is located in south central Colorado in a majestic area where the Rio Grande leaves the San Juan Mountains to the San Luis Valley. The area has a long and rich history of native, Mexican, and Euro-American settlements. The town remains a vibrant community that serves the regional population. Like many other small towns, it lost its primary hospital in 1993 after serving the region for over 85 years. It took over 10 years to rebuild and the Rio Grande Hospital as a primary care and emergency facility to serve the region's medical needs.

Challenges that remained for the town was transport for critically ill patients needing to go to larger hospitals in Alamosa or Pueblo. The runway at Astronaut Kent Rominger Field (RCV) was too short and narrow (3,775 feet) to handle a large and fast air ambulance aircraft. To address the need, the town planned for an airport that would include a longer and wider runway to accommodate an air ambulance aircraft. Funding was an issue as Del Norte did not qualify for federal funds, but the community persisted and worked with CDOT Division of Aeronautics to obtain state grants with a county match. In 2010, Rio Grande County opened a new 6,000-foot-long runway and a weather station. Subsequently, Eagle Air based an aircraft, a flight crew, and a medical crew at the airport and today the community has rapid medical response capabilities that have already saved lives.

Photos courtesy of CDOT Aeronautics



Photos courtesy of CDOT Aeronautics

The medical and emergency response capability in Colorado. They serve as critical logistics centers and bases for aerial search and recovery. When a natural disaster or emergency strikes, airports large and small are indispensable launching points for coordinated response and recovery. Airports in Colorado also make it possible for patients to be brought to larger hospitals or to bring physicians to rural hospitals where patients can receive care right in their community. During the COVID-19 pandemic, community airports can play a critical role in providing quality care to many rural hospitals and clinics in critical need of ventilators, masks, and other PPE.

Case Study: Colorado



Unique Airport Videos



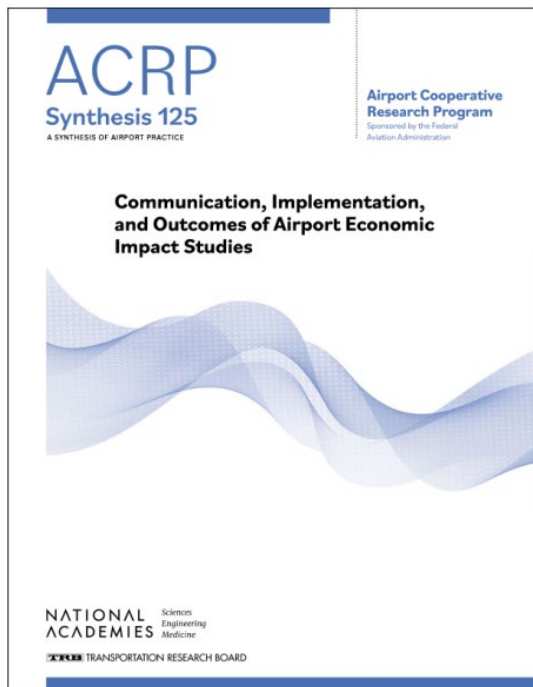
Case Study: Colorado



Summary of Findings

- AEISs are becoming more common place at airport, region, and state level.
- Communicated and implemented across a variety of media and venues
 - Traditional deliverables are still heavily used
 - Web-based products are on the rise
- Important to select dissemination method based on intended audience and message
 - Most valuable when developed to be public facing

FOR ADDITIONAL INFORMATION



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Report available here:

<https://nap.nationalacademies.org/catalog/27227/communication-implementation-and-outcomes-of-airport-economic-impact-studies>



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Today's Presenters



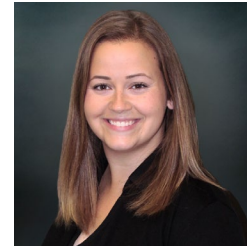
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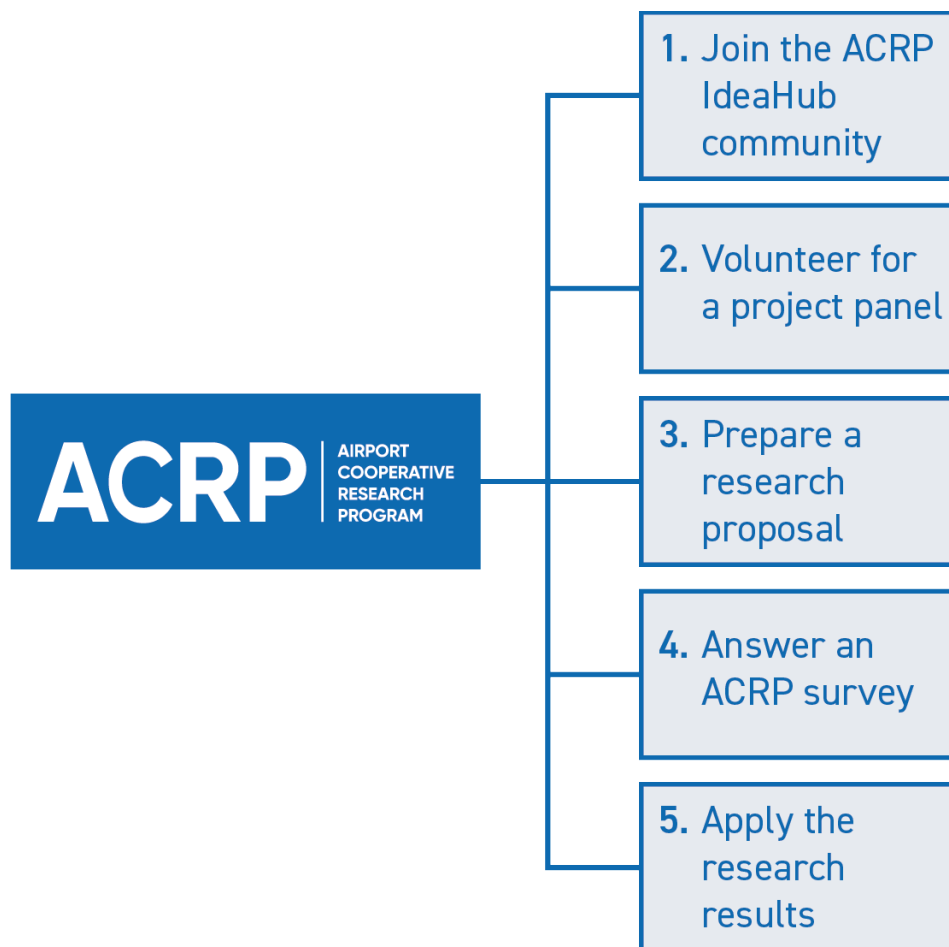
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