ARIZONA

STATE AVIATION SYSTEM PLAN UPDATE

2018 EXECUTIVE SUMMARY | **ADOT**

Aviation in Arizona

Allowing the State to Soar

Plan Process

Through a series of nine interrelated tasks, the State Aviation System Plan (SASP) Update evaluated the current state of the system, defined future needs, and developed prioritized recommendations to ensure Arizona's airports continue to safely and effectively meet the evolving needs of the public today and well into the future.
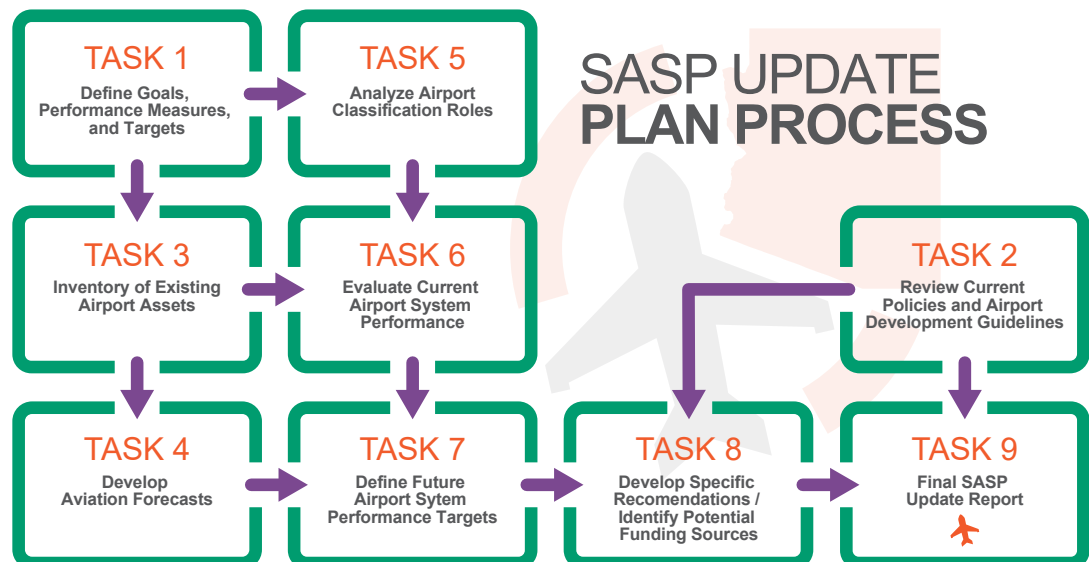
The plan has been guided by a Project Advisory Committee (PAC) comprised of representatives from Arizona airports; Arizona Department of Transportation (ADOT); the Federal Aviation Administration (FAA); aviation enthusiasts; businesses; military members; Tribal communities; and local- and regional-level planning organizations. The PAC was designed to encompass a diversity of stakeholders from around the state to provide meaningful, Arizona-specific direction and input. Three public outreach workshops were also held during creation of the SASP Update to obtain feedback and provide opportunities for participation.

From dirigibles to transcontinental races, early flights through the Grand Canyon, and Charles Lindbergh's historic visit, aviation in Arizona offers rich tales of adventure, courage, and humankind's ceaseless desire to reach new heights. The first aircraft landed in the Arizona territory in October 1911—approximately four months before statehood in February 1912. With pilots long drawn by clear skies and endless sunshine, aviation has become an integral part of Arizona's history, ongoing economic growth, and culture of exploration and innovation.

Today, aviation in the state is anchored by 67 publicly-owned, public-use airports that compose the Arizona aviation system. These airports allow Arizona to be one of the largest providers of flight instruction in the United States (U.S.); foster statewide safety, security, and resiliency; and provide a foundation of the tourism industry—Arizona's most important economic engine. Further, Arizona airports serve pivotal roles in the nation's military and support more than 1,200 aerospace and defense companies operating in the state.

Recognizing the vital role of the aviation system to the state's continued growth and prosperity, ADOT Aeronautics Group commissioned the 2018 SASP Update. This integrated planning effort comprehensively assessed the existing airport system's ability to meet current and future aviation demands through 2036. As a final outcome of the SASP Update, policy and development recommendations were identified for the continual improvement of the Arizona aviation system. The SASP was last updated in 2008.

The complete 2018 State Aviation System Plan Technical Report, including further details on the plan's analyses and outcomes, is available online at **azdot.gov/planning/transportation-programs/SASPUpdate**.

SASP UPDATE PLAN PROCESS

TASK 1 Define Goals, Performance Measures, and Targets

TASK 5 Analyze Airport Classification Roles

TASK 3 Inventory of Existing Airport Assets

TASK 6 Evaluate Current Airport System Performance

TASK 2 Review Current Policies and Airport Development Guidelines

TASK 4 Develop Aviation Forecasts

TASK 7 Define Future Airport Sytem Performance Targets

TASK 8 Develop Specific Recomendations / Identify Potential Funding Sources

TASK 9 Final SASP Update Report

System Vision and Goals

The SASP Update serves as the long-term strategic plan for Arizona's aviation system. Accordingly, the ADOT Aeronautics Group and PAC worked together to develop a vision statement that expresses the need for airports to be forward-thinking, responsive, and reflective of Arizona's diverse constituencies. Rooted in this vision, system goals were then developed to provide the framework for evaluating the overall efficacy of the system, pinpointing areas of achievement, and identifying opportunities for improvement.

GOALS

VISION

To provide the framework that will allow Arizona's aviation system to meet the needs of citizens, visitors, and businesses by supporting economic competitiveness, connectivity, and accessibility with a commitment to safety, sound resource management, and partnerships.

This vision statement is designed to serve as a compass for the ADOT Aeronautics Group by helping to determine if actions and policies will support long-term aspirations for the system's future.

SAFETY AND **SECURITY**

Arizona should maintain a safe and secure airport system as measured by compliance with applicable safety and security standards while supporting health and safety-related services and activities.

FISCAL **RESPONSIBILITY**

Arizona should implement cost-effective investment strategies to meet current and projected demand while remaining adequately accessible to Arizona's citizens, visitors, and businesses.
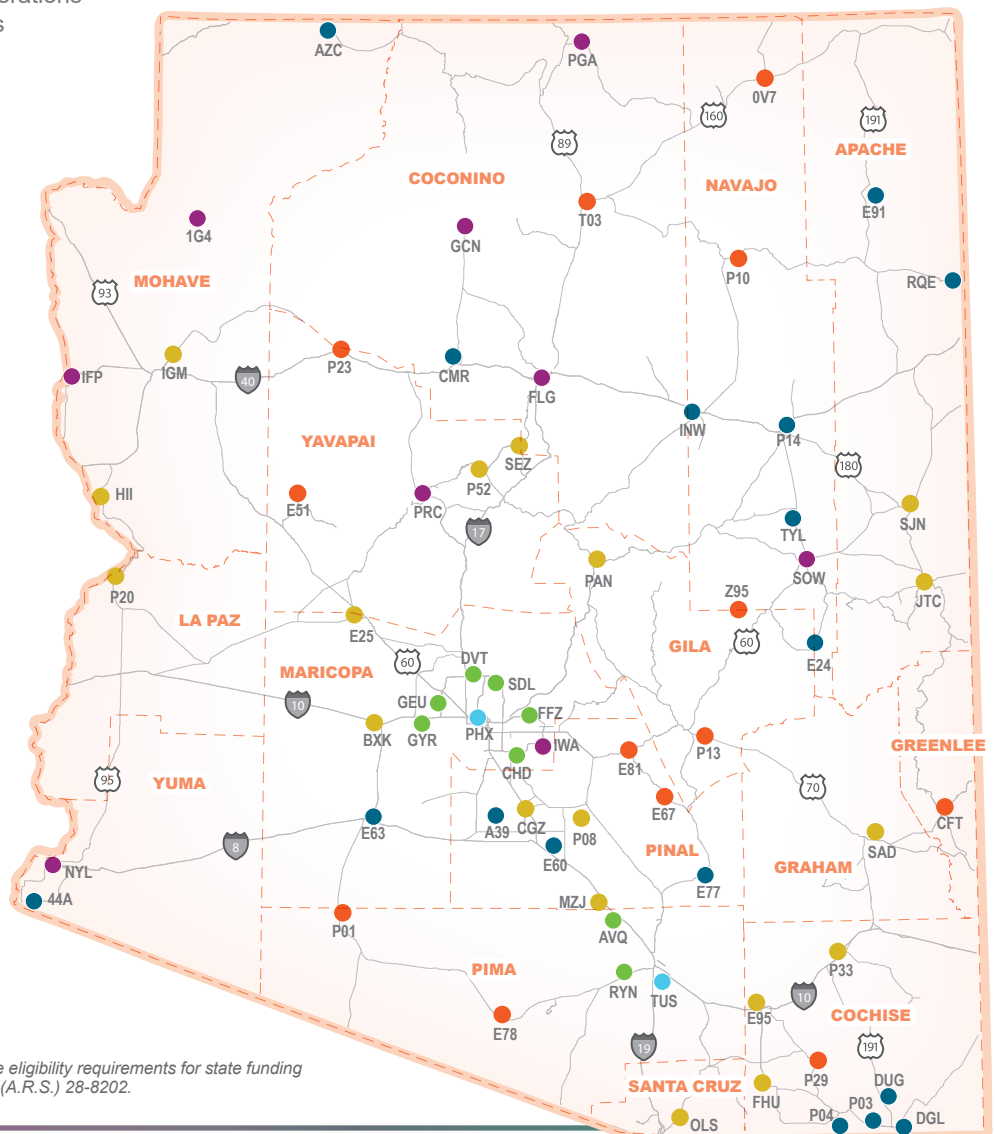
ECONOMIC **SUPPORT**

Arizona should advance a system of airports that promote Arizona's growth and development.

The 2018 SASP Update provides important insight into how Arizona's airports can remain highly advanced, safe, and responsive to the public's needs today and throughout the 20-year planning horizon.

Arizona Airport System
and Airport Classifications

Arizona's airport system encompasses 67 public-use airports owned by a political subdivision of the state or a Tribal government.* Yet, while all airports support the take-off and landing of aircraft, facilities differ based on how they function within their communities and regions; the type of facilities and services available for pilots, aircraft, and passengers; and the volume and type of aviation activity typically experienced.

Understanding these types of differences is a foundation of the system planning process. Airports that function similarly are grouped together into classifications for further analysis and, ultimately, future policy decisions.

As shown on the map below, airports in Arizona were assigned one of six airport classifications using the following evaluation criteria:

- Type and availability of scheduled commercial airline service
- FAA-designated Reliever status
- Number of instrument approach procedure (IAP) operations and total operations

- Total number of based aircraft
- Total number of based jet aircraft
- Availability of aircraft fuel (Jet A and/or AvGas)

AIRPORT CLASSIFICATIONS

- ● CS-International
- ● CS-National
- ● Reliever
- ● GA-Community
- ● GA-Rural
- ● GA-Basic

CS = Commercial Service
GA = General Aviation

Note: This definition aligns with the eligibility requirements for state funding defined in Arizona Revised Statute (A.R.S.) 28-8202.

Arizona's classification structure is designed to establish a network of facilities that supports the state's transportation, economic, mobility, and access needs.

ASSOCIATED CITY	AIRPORT NAME	FAA ID	AIRPORT CLASSIFICATION
Ajo	Eric Marcus Municipal	P01	GA-Basic
Bagdad	Bagdad	E51	GA-Basic
Benson	Benson Municipal	E95	GA-Community
Bisbee	Bisbee Municipal	P04	GA-Rural
Buckeye	Buckeye Municipal	BXK	GA-Community
Bullhead City	Laughlin/Bullhead City International	IFP	CS-National
Casa Grande	Casa Grande Municipal	CGZ	GA-Community
Chandler	Chandler Municipal	CHD	Reliever
Chinle	Chinle Municipal	E91	GA-Rural
Cibecue	Cibecue	Z95	GA-Basic
Clifton	Greenlee County	CFT	GA-Basic
Colorado City	Colorado City Municipal	AZC	GA-Rural
Coolidge	Coolidge Municipal	P08	GA-Community
Cottonwood	Cottonwood Municipal	P52	GA-Community
Douglas	Bisbee-Douglas International	DUG	GA-Rural
Douglas	Cochise College	P03	GA-Rural
Douglas	Douglas Municipal	DGL	GA-Rural
Eloy	Eloy Municipal	E60	GA-Rural
Flagstaff	Flagstaff	FLG	CS-National
Gila Bend	Gila Bend Municipal	E63	GA-Rural
Glendale	Glendale Municipal	GEU	Reliever
Globe	San Carlos Apache	P13	GA-Basic
Goodyear	Phoenix Goodyear	GYR	Reliever
Grand Canyon	Grand Canyon National Park	GCN	CS-National
Holbrook	Holbrook Municipal	P14	GA-Rural
Kayenta	Kayenta	0V7	GA-Basic
Kearny	Kearny	E67	GA-Basic
Kingman	Kingman	IGM	GA-Community
Lake Havasu City	Lake Havasu City	HII	GA-Community
Marana	Marana Regional	AVQ	Reliever
Marana	Pinal Airpark	MZJ	GA-Community
Maricopa	Ak-Chin Regional	A39	GA-Rural
Mesa	Falcon Field	FFZ	Reliever
Nogales	Nogales	OLS	GA-Community
Page	Page Municipal	PGA	CS-National

ASSOCIATED CITY	AIRPORT NAME	FAA ID	AIRPORT CLASSIFICATION
Parker	Avi Suquilla	P20	GA-Community
Payson	Payson	PAN	GA-Community
Peach Springs	Grand Canyon West	1G4	CS-National
Phoenix	Phoenix Deer Valley	DVT	Reliever
Phoenix	Phoenix Sky Harbor International	PHX	CS-International
Phoenix	Phoenix-Mesa Gateway	IWA	CS-National
Polacca	Polacca	P10	GA-Basic
Prescott	Ernest A. Love Field	PRC	CS-National
Safford	Safford Regional	SAD	GA-Community
San Luis	Rolle Airfield	44A	GA-Rural
San Manuel	San Manuel	E77	GA-Rural
Scottsdale	Scottsdale	SDL	Reliever
Sedona	Sedona	SEZ	GA-Community
Seligman	Seligman	P23	GA-Basic
Sells	Sells	E78	GA-Basic
Show Low	Show Low Regional	SOW	CS-National
Sierra Vista	Sierra Vista Municipal-Libby Army Airfield	FHU	GA-Community
Springerville	Springerville Municipal	JTC	GA-Community
St. Johns	St. Johns Industrial Air Park	SJN	GA-Community
Superior	Superior	E81	GA-Basic
Taylor	Taylor	TYL	GA-Rural
Tombstone	Tombstone Municipal	P29	GA-Basic
Tuba City	Tuba City	T03	GA-Basic
Tucson	Ryan Field	RYN	Reliever
Tucson	Tucson International	TUS	CS-International
Whiteriver	Whiteriver	E24	GA-Rural
Wickenburg	Wickenburg Municipal	E25	GA-Community
Willcox	Cochise County	P33	GA-Community
Williams	H.A. Clark Memorial Field	CMR	GA-Rural
Window Rock	Window Rock	RQE	GA-Rural
Winslow	Winslow-Lindbergh Regional	INW	GA-Rural
Yuma	Yuma International	NYL	CS-National

CS = Commercial Service   GA = General Aviation

Aviation Trends

Inherent to its role as a network connecting people and goods to destinations across the globe, aviation is affected by changes within the industry itself, as well as broader trends independent of the airport system. Considering how such trends may affect aviation in Arizona through the 20-year planning horizon is a critical task of the SASP Update.
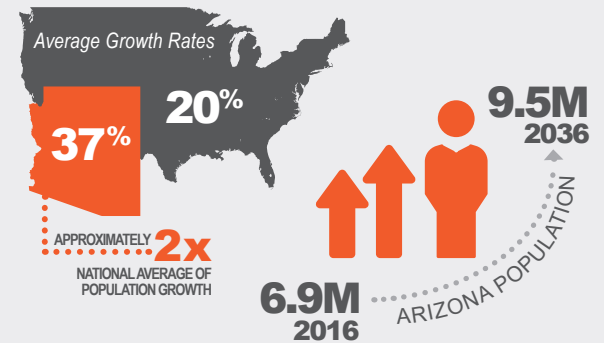
These trends arise at four levels:

1. **Global geopolitical and economic variables** like volatile oil prices and the international pilot shortage provide ongoing pressures that can catalyze industry growth, contraction, and change. With one of the highest rates of pilot training in the country, the growing pilot shortage may have a particularly significant impact on Arizona aviation.

2. **Federal concerns** impact how people and goods move into, out of, and within the U.S. Examples of these issues include aviation-specific regulations issued by the FAA, immigration, and transportation security.

3. **State socioeconomic trends** such as population, employment, income levels, and tourism rates often provide the best indication of an airport's activity over time.

4. **Local issues** like roadway improvements or zoning changes in the vicinity of an airport may affect how and when an airport operates.
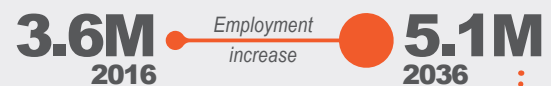
Additionally, technological changes are revolutionizing aircraft, airports, and the National Airspace System (NAS). These changes include lighter, larger, and more fuel-efficient aircraft; the growing presence of Unmanned Aerial Systems (UAS); and NextGen, a multi-pronged FAA initiative to make air travel safer and more efficient.

> **Assuming Arizona does not experience another significant recession, projected population and economic levels should create positive ripple effects in both commercial service and general aviation activity over time.**
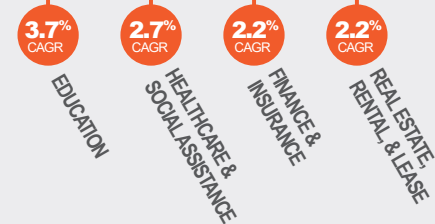
ARIZONA'S SOCIOECONOMIC TRENDS (2016–2036)

Average Growth Rates

37%

20%

APPROXIMATELY **2x**
NATIONAL AVERAGE OF POPULATION GROWTH

9.5M 2036

6.9M 2016

ARIZONA POPULATION

Increasing median age in Arizona

37.3 2016 → **38.6** 2036

3.6M 2016 — Employment increase — **5.1M** 2036

Jobs with anticipated highest employment growth

3.7% CAGR — EDUCATION

2.7% CAGR — HEALTHCARE & SOCIAL ASSISTANCE

2.2% CAGR — FINANCE & INSURANCE

2.2% CAGR — REAL ESTATE, RENTAL & LEASE

CAGR: Compound Annual Growth Rate

Gross Regional Product (GRP) increase

$280B 2016 — $ — **$480B** 2036

$200B Total growth

Household income more than $45K

53% **69%**

2016 2036
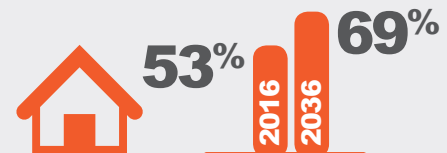
Tourism is Arizona's **#1** export industry

37.5M Visitors in 2016

$1.9B Spent on air travel

Future Aviation Demands

Projecting future levels of aviation activity helps the ADOT Aeronautics Group and airports align decisions regarding policies, funding, and associated airport improvement projects with anticipated demands through 2036. In Arizona, commercial service activity levels are anticipated to mirror trends witnessed across the U.S., while general aviation activities are expected to outpace those experienced at the national scale.

Indicators of Aviation Activity

Projections of demand were developed for these main components:

ENPLANEMENTS: Commercial passengers boarding an aircraft

OPERATIONS: Take-offs and landings conducted by all aircraft types

BASED AIRCRAFT: Operational and air-worthy general aviation aircraft typically housed at an airport for the majority of the year[1]

BASELINE: 🟧 2016
FORECASTS: 🟩 2026   🟨 2036
CAGR: *Compound Annual Growth Rate*

COMMERCIAL SERVICE

Scheduled air service at Arizona's 11 commercial service airports accounts for a significant portion of all aviation operations in Arizona.
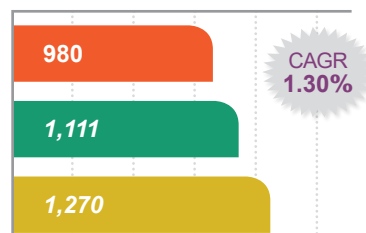
Enplanements

🟧 23,688,599	CAGR **1.97%**
🟩 29,032,371	
🟨 35,023,816	
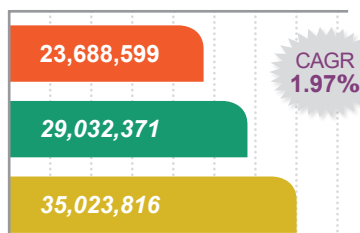
Air Carrier and Air Taxi / Commuter Operations

🟧 830,011	CAGR **1.28%**
🟩 938,531	
🟨 1,017,479	
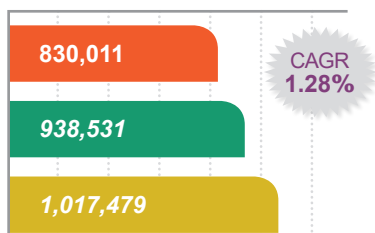
General Aviation Based Aircraft at a Commercial Service Airport

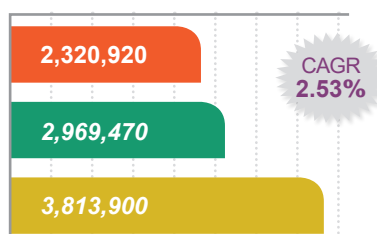|	
🟧 980	CAGR **1.30%**
🟩 1,111	
🟨 1,270	

GENERAL AVIATION

Encompassing all aviation activity except military, commercial service, and air cargo operations, general aviation accounts for the largest percentage of aviation operational activity in the state.

Based Aircraft

🟧 4,754	CAGR **1.59%**
🟩 5,594	
🟨 6,526	

Total Operations

🟧 2,320,920	CAGR **2.53%**
🟩 2,969,470	
🟨 3,813,900	
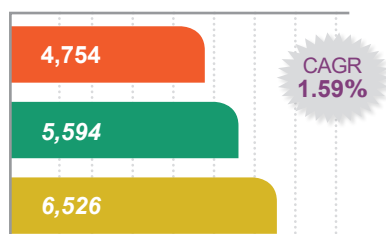
1 Projections of based aircraft at commercial service and general aviation airports were based on data obtained during on-site airport visits conducted during the 2018 SASP Update. The FAA also maintains the National Based Aircraft Inventory at basedaircraft.com. This repository records and validates based aircraft counts for all non-primary airports included in the National Plan of Integrated Airport Systems (NPIAS). A comparison of the SASP Update and FAA Inventory aircraft counts revealed significant discrepancies between the two sources. While the FAA Inventory should be the most current record of based aircraft in Arizona, some data were outdated, as many facilities do not annually update their aircraft counts. Further, the FAA Inventory excludes primary airports in the NPIAS, which encompasses Arizona's nine largest commercial service airports.

Sources: 2017 Airport Inventory and Data Survey, FAA Terminal Area Forecast (TAF) issued January 2017, Woods & Poole Economics, Inc. 2017, Arizona Department of Tourism/Tourism Economics 2017, U.S. Census Bureau 2017.
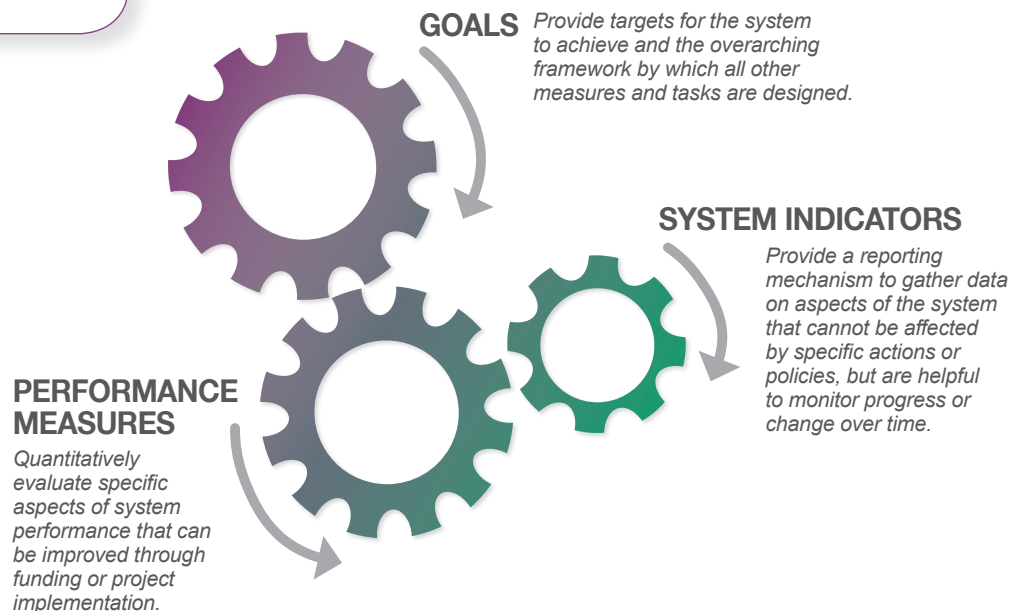
System Performance Assessment

Performance measures and system indicators are the mechanisms for identifying specific areas of achievement, prioritizing opportunities for improvement, and quantifying the system's ability to achieve the goals of the SASP Update.

Providing a statewide system of airports that optimally supports the needs of residents, visitors, and businesses—both today and well into the future—first requires a careful evaluation of the system's current performance. To conduct such an assessment, the three SASP Update goals were translated into a series of actionable and informational metrics known as performance measures and system indicators, respectively. These metrics provide the framework for measuring the system's ability to achieve existing and future demands.

The following pages provide detailed information for an example measure from each goal category, as well as historical results and performance targets from the 2008 SASP, to highlight how the system has changed over time.

GOALS *Provide targets for the system to achieve and the overarching framework by which all other measures and tasks are designed.*

SYSTEM INDICATORS

Provide a reporting mechanism to gather data on aspects of the system that cannot be affected by specific actions or policies, but are helpful to monitor progress or change over time.

PERFORMANCE MEASURES

Quantitatively evaluate specific aspects of system performance that can be improved through funding or project implementation.

FUTURE PERFORMANCE TARGETS

Once the current system was evaluated, future targets were developed for each performance measure. These targets define the percent of airports by classification that should achieve each measure to maximize the system's safety, security, efficiency, and ability to meet the needs of all users.

Some measures, particularly those concerning safety and security, should be met by all airports regardless of classification. Others, such as the percent of airports supporting medical operations and accommodating jet aircraft, can be achieved by a reasonable sub-set of airports without impacting overall system performance. The future performance assessment served as a key input to the summary of needs and costs developed as one of the final outcomes of the SASP Update.

The future performance targets for the Arizona aviation system are summarized in the table on the facing page. The system-wide targets reflect a summation of the targets established for each airport classification.

PERFORMANCE MEASURE / SYSTEM INDICATOR	CURRENT PERFORMANCE[1]	FUTURE PERFORMANCE TARGETS
SAFETY AND SECURITY		
PERFORMANCE MEASURE		
Airports capable of supporting medical operations	40%	**67%**
Airports with surrounding municipalities that have adopted controls/zoning to make land use in the airport environs compatible with airport operation and development	76%	**100%**
Airports with surrounding municipalities that have adopted airport disclosure maps	30%	**100%**
Airports controlling all primary runway end Runway Protection Zones (RPZs)	37%	**100%**
Airports with compliant Runway Safety Areas (RSAs) on their primary runway that meet the standards for their current Airport Reference Code (ARC)	85%	**100%**
Airports with clear approaches to their primary runway ends	28%	**100%**
Airports with an adopted Wildlife Hazard Assessment (WHA) or Wildlife Hazard Management Plan (WHMP)	28%	**36%**
SYSTEM INDICATOR		
Airports that have active vegetation management plans to clear obstructions from their approaches	22%	
Airports that have a written emergency response plan	61%	**N/A**
Airports that support aerial firefighting operations	75%	
FISCAL RESPONSIBILITY		
PERFORMANCE MEASURE		
Percent of population within 30 minutes of an all-weather runway	93%	**93%**
Airports with a current (within 10 years) master plan	78%	**100%**
Airports with a primary runway Pavement Condition Index (PCI) of 70 or greater	64%	**97%**
Airports with a primary taxiway PCI of 70 or greater	55%	**97%**
Airports with an apron PCI of 55 or greater	64%	**97%**
SYSTEM INDICATOR		
Percent of statewide population within a 30-minute drive time of each airport, by role classification[2]	93%	
Percent of population within 30 minutes of a NPIAS airport	93%	
Percent of communities in the state with a population greater than 1,000 within a 30-minute drive time of a general aviation airport	79%	**N/A**
Percent of population within 30 minutes of a system airport meeting business user needs	82%	
Number of airports with utilities (electricity, telephone, water, sewer, and gas)	*94% (electricity), 69% (telephone), 87% (water), 78% (sewer), 57% (gas)*	
ECONOMIC SUPPORT		
PERFORMANCE MEASURE		
Airports offering 24 hours a day, seven days a week (24/7) fuel	63%	**76%**
Airports that are recognized in local/regional growth plans	61%	**100%**
Airports that are recognized in regional transportation plans	40%	**100%**
Airports with the facilities to support jet aircraft	51%	**70%**
SYSTEM INDICATOR		
System airports supporting flight training	69%	
Dollars of direct and indirect economic impact in the state from aviation	*$12.1 billion (direct), $19.8 billion (indirect)[3]*	**N/A**

Notes: [1]Results reflect the most current data available at the time of collection in mid-2017 (typically for calendar year 2016, although source years slightly vary by measure). [2] For purposes of brevity, results presented here reflect the percent of population within 30 minutes of any system airport. [3]As reported by the 2012 Economic Impact of Aviation in Arizona study prepared by the Elliott D. Pollack & Company on behalf of ADOT.

SAFETY AND SECURITY

Percent of airports with surrounding municipalities that have adopted controls/ zoning, including "disclosure areas," to make land use in the airport environs compatible with airport operation and development.

Protecting the land use and airspace around an airport is critical to an airport's long-term viability. Aircraft noise, as well as issues such as future airport expansion potential, the safety of people and property, and environmental impacts, influence the types of development and activities considered compatible with airport operation and development.

This performance measure evaluated two components of land use protection:

- Airports with surrounding municipalities that have adopted controls/zoning that consider impacts to local airports and/or reduce incompatible land uses and activities in an airport's immediate environs.

- Airports with airport disclosure maps filed with the Arizona Department of Real Estate (ADRE) in accordance with A.R.S. 28-8486.

Performance Assessment
and Future Targets

Controls / Zoning
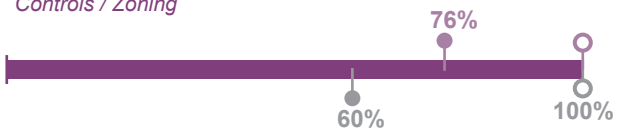
76%

60%   100%

Airport Disclosure Maps

30%

35%   100%

2018 SASP UPDATE[2]
● *Performance*   ○ *Performance Target*

2008 SASP[1]
● *Performance*   ○ *Performance Target*

Notes: [1]In 2008, the state system included 83 airports. [2]In 2017, the system includes 67 airports.

Sources: Wilbur Smith and Associates 2008, Kimley-Horn 2017

Key Actions for Improvement

✔ Airports without appropriate land use control/zoning should engage with their local municipal planning department, zoning commission, and/or city council (as appropriate) to discuss the importance of land use protections for safety and noise issues. Numerous resources exist to assist in this process.

✔ The ADOT Aeronautics Group will continue to educate airports on the purpose, process, and statutory obligations associated with airport disclosure maps.

✔ All airports are strongly encouraged to develop airport influence areas in accordance with A.R.S. 28-8485 to formally establish the territorial boundaries of the area that may be impacted by its operations.

FISCAL RESPONSIBILITY

*Airports with a primary runway Pavement Condition Index (PCI) of 70 or greater.*

Pavement condition is critical to the safe and efficient operation of aircraft, and its upkeep is one of the most significant capital investments an airport makes. The PCI is a rating system used to assess airport pavements so that maintenance and repair can be planned and implemented at the appropriate time during its lifecycle. PCI is expressed on a scale from 0 (failed pavement) to 100 (new pavement in perfect condition). Runway pavement should maintain a PCI of 70 or greater for optimal performance and safety.[1]

To assist in this process, ADOT has established the Airport Pavement Management System (APMS) Program to regularly inventory the PCIs of all airside pavement at Arizona's system airports. Using this data, airport improvement projects are prioritized based on actual need at the statewide level.

PRIMARY RUNWAY PCI RATINGS AT ARIZONA'S SYSTEM AIRPORTS

- 🟢 Good (≥70)
- 🟡 Fair (56-69)
- 🔴 Poor (≤55)
- 🔵 Unpaved
- 🔵 Unknown

Performance Assessment
and Future Targets

Airports with a primary runway PCI of 70 or greater.

64%

97%

54%

100%
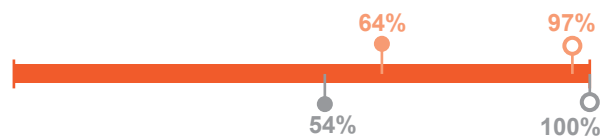
2018 SASP UPDATE[2]
- ◉ *Performance*   ○ *Performance Target*

2008 SASP[3]
- ● *Performance*   ○ *Performance Target*
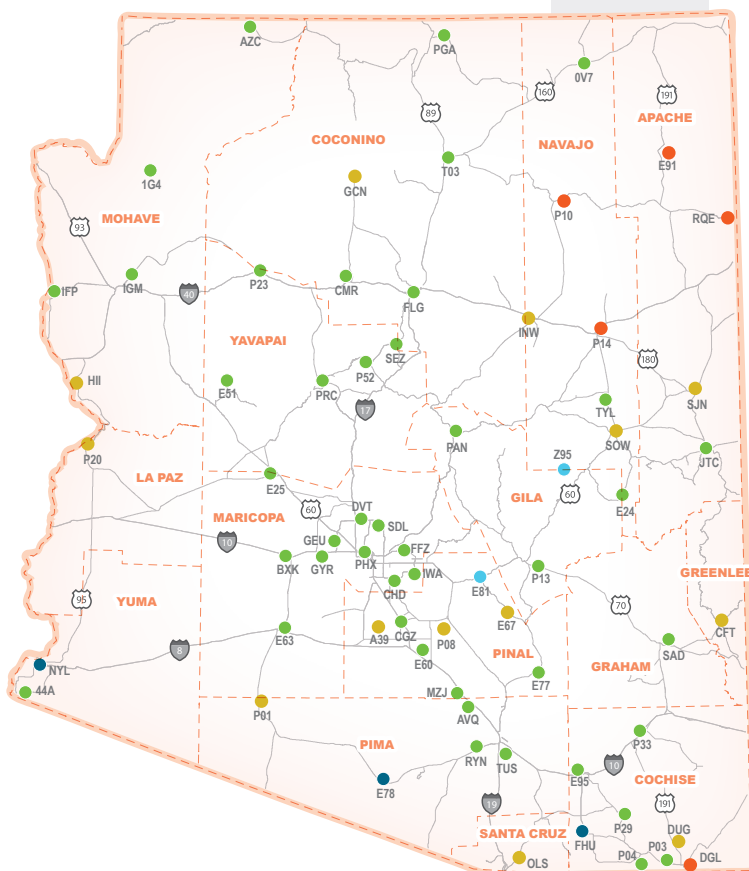
Notes: [1]While this performance measure only assessed the PCI of an airport's primary runway, all runways and taxiways should maintain a PCI of 70 or greater. Aprons can safely maintain a PCI of 55 or greater due to the lower performance requirements of these areas. The 2018 SASP Update Technical Report provides further details regarding the PCI ratings of primary runways, primary taxiways, and aprons at system airports. [2]In 2017, the state system includes 67 airports. Primary runway PCI values were unavailable for five airports, two of which are unpaved. Unpaved airports have been removed from the future performance target to reduce the system-wide target to 97 percent. [3]In 2008, the state system included 83 airports. Primary runway PCI data were unavailable for 32 airports (39 percent of system) due to private or Tribal ownership, as well as unpaved facilities. However, the analysis included all 83 airports.

Sources: ADOT 2008, ADOT APMS Report 2017

Key Action for Improvement

✔ The ADOT Aeronautics Group's ongoing focus on pavement maintenance through the APMS Program and its Pavement Preservation Program have significantly improved the condition of airport pavement in Arizona since the 2008 SASP. By continuously monitoring pavements and prioritizing maintenance projects based on actual need, this program provides an efficient and effective process to support aviation in Arizona. It is recommended that the ADOT Aeronautics Group continue the programs to maintain pavement quality over time.

ECONOMIC SUPPORT

Percent of airports with 24/7 fuel.

Access to 24/7 fuel permits aircraft to fly at non-peak hours, adds a layer of safety for pilots in emergency situations, and allows aircraft to consistently re-fuel when transporting people, goods, and services during times of disaster. 24/7 fuel also attracts aircraft operators who need quick access to on-demand fuel. This performance measure evaluated those airports offering either 24/7 AvGas or Jet A. Fuel could be provided through a self-serve, automated card reader, or fixed-based operator (FBO) service available around the clock.

Performance Assessment
and Future Targets

Availability of 24/7 fuel
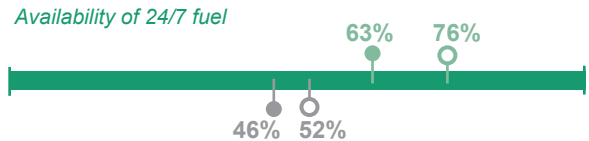
63%   76%

46% 52%

2018 SASP UPDATE[2]
● *Performance*   ○ *Performance Target*

2008 SASP[1]
● *Performance*   ○ *Performance Target*

Notes: [1]In 2008, the state system included 83 airports. [2]In 2017, the system included 67 airports.

Sources: Wilbur Smith and Associates 2008, Kimley-Horn 2017

Key Actions for Improvement

✔ Due to limited sources of revenue for the construction of new fuel farms, many Arizona airports may need to depend on a new or existing FBO to provide 24/7 fuel. Airport sponsors could incorporate a requirement for 24/7 fuel into lease terms.

✔ The ADOT Aeronautics Group should consider working with Arizona legislators and the State Transportation Board to address the policy hurdles that limit funding opportunities for revenue-producing projects.

✔ Reflecting the 2008 SASP performance target, it is suggested that airports consider installing both 24/7 Jet A and AvGas to optimally serve the needs of all airport users as determined to be viable based on anticipated usage.
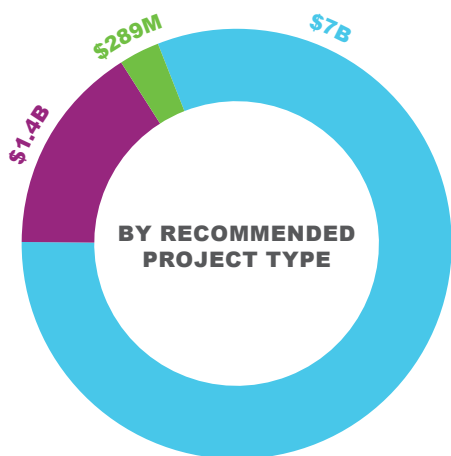
Summary of Needs

The interrelated analyses of the SASP Update were each aimed at identifying the actions needed to provide Arizona with an aviation system that supports economic competitiveness, connectivity, and accessibility for its many users through the next two decades—in other words, an aviation system that embodies the vision established at the inception of the plan. In addition to those project needs identified during the SASP Update, airport-specific master plans, capital improvement plans (CIPs), and Airport Layout Plans (ALPs) with narrative reports were also reviewed to identify additional project needs (referred to as "non-SASP projects"). Together, the findings of the SASP and airport-specific planning documents provide a holistic perspective into the needs of Arizona's airport system.

Nearly $8.7 billion is needed through 2037 to respond to the future demands that are anticipated to be placed on the Arizona aviation system. $3.4 billion is estimated to simply maintain existing infrastructure. An additional $5.3 billion was identified to increase capacity should demands increase over time. The majority of project needs are at Arizona's two largest airports (i.e., Commercial Service-International), representing approximately 60 percent of total estimated needs.
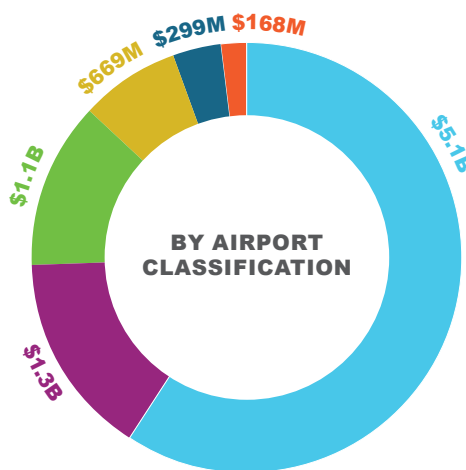
DIVISION OF COSTS

$8.7B

$3.4B MAINTENANCE

$5.3B INCREASE IN CAPACITY
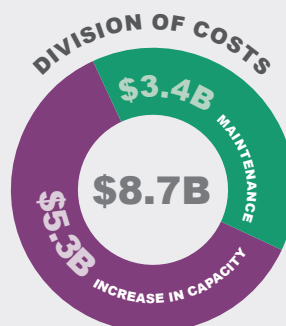
SUMMARY OF SASP UPDATE NEEDS

$8,664,457,217 OVER **20 YEARS**

BY RECOMMENDED PROJECT TYPE

- $7B
- $1.4B
- $289M

- Non-SASP Projects
- Performance Measure Targets
- Facility & Service Objectives

BY AIRPORT CLASSIFICATION

- $5.1B
- $1.3B
- $1.1B
- $669M
- $299M
- $168M

- CS-International
- CS-National
- Reliever
- GA-Community
- GA-Rural
- GA-Basic

As a trusted steward of public funds, ADOT can use this information to encourage the implementation of projects that most significantly improve aviation at the statewide level, given the reality of limited funding resources and growing investment needs across Arizona.

Recommended Plan and Policies

Plan Implementation

While these strategies are not designed to dictate specific plans or projects at individual airports, the ADOT Aeronautics Group strongly encourages airports to consider these findings when updating their master plans or ALPs. Because SASP recommendations are designed to guide airport development at the systemwide level, plan implementation requires the active engagement of airports across the state. SASP recommendations may also be taken into consideration during funding decisions for local airport projects.

The implementation of policy recommendations will require partnerships not only between ADOT and the airport sponsors, but public agencies including (but not limited to) the Arizona Department of Real Estate (ADRE), Arizona State Land Department, and local municipalities.

OVER THE NEXT 20 YEARS, ARIZONA'S AVIATION INDUSTRIES ARE POISED TO THRIVE. Projected statewide population growth is nearly twice the national average, and the Gross Regional Product (GRP) is expected to grow by nearly 60 percent. Recently revised FAA regulations provide general aviation pilots with expanded opportunities to fly, and an international pilot shortage is drawing more students to the state's flight schools than ever before. Each of these and other factors will positively impact demand for aviation services across Arizona.

As the final outcome of the SASP, a list of strategies have been developed to ensure the ADOT Aeronautics Group and system airports are prepared to meet the pressures of tomorrow while continually meeting the needs of today.

Recommendations were collaboratively developed between ADOT, the FAA's Phoenix Airports District Office (ADO), and stakeholders.

Key Actions for Implementation

- Continuously monitor data points obtained during the SASP to assess progress over time

- Conduct special studies addressing airports in Cochise County and airport demand/capacity to assess existing or potential airport/airspace congestion issues in specific regions

- Complete UAS Safety and Integration, Obstruction Mitigation Program, and Runway Incursion Mitigation (RIM) studies to optimize airport safety and ensure compliance with current FAA design standards

- Align State Transportation Board (STB) policies with the findings and recommendations of the 2018 SASP Update, including those regarding funding processes, planning, and resource allocation/project prioritization

- Modify Five-Year Airport Capital Improvement Program (ACIP) processes to support proactive grant planning associated with the State Aviation Fund

PERFORMANCE MEASURE RECOMMENDATIONS

These recommendations align with the performance measures developed within the three SASP Update goal categories. In addition to serving as general framework for system improvement, performance measures and associated system indicators provide one means by which the ADOT Aeronautics Group can track changes in the aviation system over time.

	RESPONSIBILITY OF:	
	AIRPORTS	ADOT AERONAUTICS GROUP
SAFETY AND SECURITY		
Improve support capabilities related to medical operations	✔	✔
Work with local communities to ensure appropriate local zoning for the protection of Arizona's airports	✔	✔
Conduct Comprehensive Land Use/RPZ Study		✔
Ensure airport disclosure maps are developed and disseminated to appropriate audiences	✔	✔
Carefully consider RSA compliance in the local airport master planning process to identify and mitigate/correct RSA deficiencies		✔
Increase consideration of approach clearing in the local airport master planning process	✔	
Prioritize funding for clearing airport approaches		✔
Conduct Statewide General Aviation Wildlife Hazard Analysis		✔
FISCAL RESPONSIBILITY		
Monitor statewide population growth and density trends and compare with the state's identified all-weather runways		✔
Monitor enhancements at airports that allow them to provide all-weather capabilities		✔
Assess airports that do not have a single all-weather runway and identify opportunities to increase statewide coverage		✔
Continue to fund master plans and work with all airport sponsors to encourage the updating of airport master plans on a continuous cycle	✔	✔
Continue to fund and prioritize primary runway pavement maintenance projects		✔
Prioritize taxiway pavement maintenance immediately behind primary runway pavement maintenance		✔
Continue to fund a statewide airfield pavement inspection program to identify pavement maintenance and preservation needs and develop a prioritized project roadmap		✔
ECONOMIC SUPPORT		
Monitor opportunities for increasing statewide fuel availability as demand requires		✔
Consider dedicating a portion of the state's airport funding to the installation of self-service card readers at airport fueling facilities that do not already have that capability		✔
Work with local airport sponsors and local planning partners to increase statewide consideration of airports in local growth plans	✔	✔
Work with regional agencies to increase statewide consideration of airports in regional growth plans	✔	✔
Monitor opportunities and the associated demand for increased statewide jet service capabilities	✔	✔

**Arizona Department of Transportation
Aeronautics Group**

Don Kriz | Acting Aeronautics Group Manager
1801 West Jefferson Street, MD 426M
Phoenix, AZ 85007

602.712.8333
azdot.gov/planning/airportdevelopment

Prepared by:
Kimley-Horn

1001 West Southern Avenue, Suite 131
Mesa, AZ 85210

kimley-horn.com

ADOT

Kimley»Horn