

# City of Phoenix **Advanced Air Mobility FRAMEWORK**

December 2025



# Advanced Air Mobility Framework

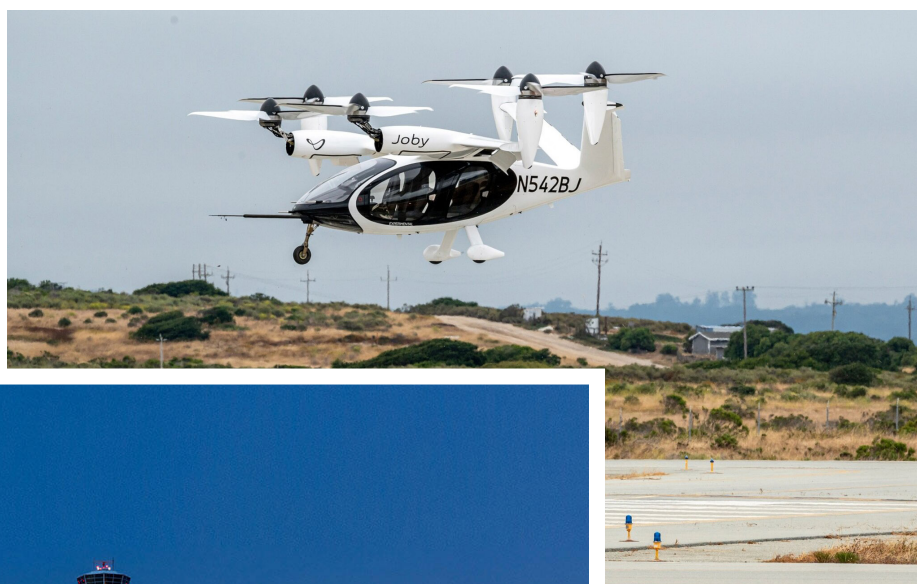
## Introduction

The city of Phoenix Aviation Department (AVN) is actively planning for how to accommodate the next generation of aviation activity. AVN undertook a study to establish a framework for accommodating Advanced Air Mobility (AAM) activity at Phoenix Sky Harbor International Airport (PHX), Phoenix Deer Valley Airport (DVT) and Phoenix Goodyear Airport (GYR). The study and resulting report analyzed potential infrastructure, organizational and policy

needs and requirements.

The goal of the study is to help AVN develop the most effective strategies to better position itself for partnerships as an early adopter of Advanced Air Mobility. The issues identified are critical for planning - for both transportation and economic development in the region. It is important to point out that the report is conceptual in nature, and timeframes, expected technologies and other key findings are subject to change.

*Image Source: David Paul Morris/  
Bloomberg via Getty Images  
(Axios)*



*Image Source: <https://www.munich-airport.com/international/aam-s-evolutionin-2024insights-andanticipationfrom-oem-leaders>*



# What is Advanced Air Mobility (AAM)?

AAM will be the next generation air transportation system, with innovative solutions to address the challenges of roadway congestion in urban areas. The new technology also will bring a boost to sustainability and

efficiency for moving both people and goods. The AAM ecosystem includes a variety of emerging technologies, with different methods of taking off, various fuel/energy systems and different levels of automation.

## VEHICLES

- sUAS
- eSTOL
- Drone
- eCTOL
- eVTOL

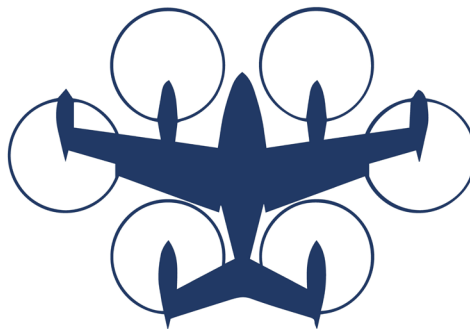
## CONCEPT

- Uncrewed Aircraft System (UAS)
- Urban Air Mobility (UAM)
- Regional Air Mobility

## PROPULSION

- Electric
- Hydrogen
- Hybrid

## AAM Ecosystem



## INFRASTRUCTURE

- Vertiport Charging Network
- FATO/TLOF

## AIRSPACE

- Provider of Services to UAM
- UAM Corridors
- Beyond Visual Line of Sight (BVLOS)

## DATA

- 5G Comm
- Command and Control
- Detect and Avoid

## TAKEOFFS AND LANDINGS

AAM use three primary systems for taking off and landing:

- **Conventional Takeoff and Landing (CTOL):**  
Similar to how aircraft take off and land at a commercial airport.
- **Short Takeoff and Landing (STOL):**  
This is the kind of technology on aircraft with shorter runways, such as those at General Aviation (GA) airports.
- **Vertical Takeoff and Landing (VTOL):**  
Aircraft that do not need a conventional runway, including helicopters, and also technology being developed for quieter and more agile takeoffs and landings. VTOL aircraft require the smallest infrastructure

footprint, with the activation of infrastructure called vertiports. Vertiports are facilities designed for VTOL takeoffs and landings.

## ENERGY SOURCES FOR AAM

- Research is evaluating various fuels that AAMs could utilize, including electricity, hybrid, hydrogen and what is called Sustainable Aviation Fuels (SAF).
- SAF is a newer biofuel designed to be more environmentally friendly than conventional jet fuels, and can be produced from sustainable resources. Airlines like United and Delta have announced their commitment to using SAF.

# What is Advanced Air Mobility (AAM)? *CONTINUED*

## AIRCRAFT AUTONOMY

- AAM will have pilots on board in the initial testing and operations stages.
- Manufacturers are planning to transition to automated and possibly autonomous flight operations in the future.
- Automation could also include remotely piloted operations, already widely used in the military, and then evolve to an autonomous system as technology advances.

## Stakeholders

The study team engaged with a variety of stakeholders, to receive input from regulators, governments, airlines and tenants, including:

- **Federal and state agencies:** Federal Aviation Administration (FAA), Arizona Department of Transportation (ADOT)
- **Local agencies:** City of Phoenix Aviation, Fire and Police department staff and staff from Flagstaff Pulliam Airport
- **Airlines:** Passenger airlines and those operated by major shipping companies
- **Aviation Department tenants:** Including United Aviate Academy, Cutter Aviation, Lux Air Jet Centers and Worldwide Flight Service
- **Electricity provider:** Arizona Public Service



United Airlines and Archer Announce First Commercial Electric Air Taxi Route in Chicago  
Image Source: <https://investors.archer.com/news/news-details/2023/United-Airlines-and-Archer-Announce-First-Commercial-Electric-Air-Taxi-Route-in-Chicago/default.aspx>



# Advanced Air Mobility Adoption

The study analyzed potential AAM use cases at AVN's three airports and categorized them by near term (3-5 years), medium term (5-10 years) and long term (10-20 years). The table below outlines

these possible uses and timeframes when they could activate, with activities like flight training and cargo/freight as the most likely to be implemented most quickly.

## Potential AAM Use Cases

Use Case	Description	Estimated Range	Example Routes	Applicable Airport(s)
Flight Training	Creation of facilities to train the next generation of pilots and operators for diverse types of AAM vehicles (potential connection to the United Aviate Academy (UAA) at GYR and other flight training schools).	Less than 100 miles	Vicinities of GYR and DVT	DVT, GYR
Cargo/Freight	Utilization of eCTOL and eVTOL aircraft to conduct middle mile cargo transportation	Less than 300 miles	PHX to PRC PHX to NYL	PHX, DVT,
Recreation	Adoption of alternative-fuel recreational flying	Less than 100 miles	DVT/GYR traffic pattern	DVT, GYR
Maintenance, Repair, Overhaul (MRO)	Creation of facilities to maintain, repair, and overhaul these new aircraft technologies and to train the next generation mechanic workforce	Less than 100 miles	Vicinity of GYR	GYR
Corporate Aviation	Augmented existing Corporate Business fleet with new aircraft technologies including eCTOL and eVTOL	Less than 750 miles	PHX to LAS DVT to TUS	PHX, DVT, GYR
Airport Shuttle	Passenger transportation to and from PHX and DVT/GYR airports to transfer to another flight	Less than 50 miles	DVT to PHX, GYR to PHX, DVT to GYR (and vice versa)	PHX, DVT, GYR
Emergency Services	First responders (Police and Fire), patient transport, accident response, and airport security/surveillance	Less than 50 miles	Vicinities of GYR and DVT	DVT, GYR
Regional Air Mobility	Implementation of advanced eCTOL aircraft to replace regional aircraft operations between PHX and smaller cities	Less than 250 miles	PHX to NYL, PHX to FLG	PHX
Near Term (3-5 years) <span style="display: inline-block; width: 15px; height: 15px; background-color: #90EE90; border: 1px solid black; margin: 0 5px;"></span> Medium Term (5-10 years) <span style="display: inline-block; width: 15px; height: 15px; background-color: #6495ED; border: 1px solid black; margin: 0 5px;"></span> Long Term (10-20 years) <span style="display: inline-block; width: 15px; height: 15px; background-color: #D3D3D3; border: 1px solid black; margin: 0 5px;"></span>				

# Regulation

The study also reviewed regulatory policy governing AAM:

- **Federal:** The FAA has been at the forefront of collaboration with private industry and other government entities, such as the National Aeronautics and Space Administration and the United States Air Force. The FAA also has released design guidance for vertiports serving the new generation of AAM vehicles, and a 2023 AAM implementation plan called "Innovate28." That plan summarizes the FAA's work required to enable initial AAM operations in the near term.
- **State:** ADOT intends to defer to the FAA for guidance, and is looking at integrating AAM goals into its State Aviation System Plan. A number of other states are putting forward strategic plans to attract industry and workforce to their economies in the AAM sector. This includes California, Florida, North Carolina, Ohio, Oklahoma and Texas. In spring of 2025, the Arizona legislature approved [Senate Bill 1307](#), which: "Requires the Arizona Department of Transportation (ADOT), beginning July 1, 2026, to develop a statewide plan or update the statewide aviation plan to include vertiports and electric aircraft charging stations and the infrastructure needs of advanced air mobility (AAM)."
- **Local:** Research showed that there currently are no local ordinances in Maricopa County regulating AAM. City code exists in some places regarding recreational drone use, but there is minimal local regulatory guidance impacting potential AAM activity at PHX, DVT and GYR. For the future of AAM in the Phoenix area, it will be important to advocate to ensure legislation does not have a negative impact on prohibiting AAM activities across the region.



UPS Recently Announced a Collaboration with BETA Technologies to Test eVTOL Aircraft in the United Arab Emirates  
Image Source: <https://about.ups.com/ae/en/our-stories/innovation-driven/ups-and-beta-granted-license-to-test-electric-flight-deliveries.html>



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# Conclusions/Action

The 2024 study concludes that the city of Phoenix Aviation Department has the necessary real estate across its three airports to accommodate the potential adoption of AAM.

- Phoenix Sky Harbor International Airport can accommodate passenger service and cargo/freight, with some campus modifications.
- Phoenix Deer Valley Airport has identified an innovation park in its land use plan to serve developers interested in AAM uses.
- Phoenix Goodyear Airport's existing Maintenance, Repair and Overhaul (MRO) capability can expand its footprint to serve maintenance needs of AAM activities.

Like any new, innovative industry, there are challenges and key planning and coordination steps and policy changes necessary to reach these goals:

## PLANNING STEPS:

- The Phoenix Aviation Department is conducting a comprehensive utility master plan study for PHX, DVT and GYR airports to ensure the airports have the electrical infrastructure needed to support future AAM activity.
- Collaboration with state, regional and local economic development partners.
- Continue education of the public and regional leaders.
- Coordination with APS on a strategic electrical demand plan.
- Update of the Aviation Department's Airport Layout Plan and work on necessary federal review processes.

- Exploration of funding opportunities, such as public-private partnerships.
- Initiation of the design and permitting of facilities for vertical takeoffs and landings.

## POLICY STEPS:

- Continue engagement with federal, state and local regulatory agencies and officials to advocate for AVN's interest in AAM.
- Partner with the FAA to integrate AAM into the regional air transportation system.
- Collaborate with key stakeholders to protect airspace and maintain zoning and land use compatibility.
- Continue coordination with federal and local officials to understand potential public safety requirements for commercial AAM.
- Conduct continuous outreach and form partnerships with public and business communities to gain collaboration and support.

The Phoenix area is primed to be an early adopter and leader in the AAM ecosystem. With continued planning, coordination and support from city of Phoenix, regional and state leaders, these technologies can help boost economic development and move the regional transportation system forward.



# City of Phoenix