

# Economic Impact Subcommittee

Texas AAM Committee

Meeting #3, April 17, 2024

# Agenda

- Opening remarks
- Full committee meeting recap
- Discuss workforce development needs and recommendations
- Other recommendations?
- AAM definitions
- Closing remarks

# Full Committee Meeting Recap

- Context for legislative recommendations
  - Texas airports and FAA preemptions
  - Electric infrastructure and management in Texas
  - Texas and local economic development information
  - Workforce Development
  - Summary of FL, VA, and OH's AAM leadership advantages
- 21 AAM needs

# Funding total estimate

- Funding subcommittee proposed funding amounts for each recommendation
- 5 out of 21 recommendations were not given a funding amount
- Total amount is \$150,160,000
- Amount the state pays is \$71,360,000

# Workforce Development Needs and Recommendations

# Workforce Development Needs

14. Diverse, highly skilled workforce (near-term)

15. AAM knowledge and skills pipeline (long-term)

9. Economic impact study for Texas (similar to the Wisk study done in California)

TBD. Statewide AAM plan

# Recommendation 14

**Need:** Diverse, highly skilled workforce

**Recommendation:** Support education and workforce development for AAM by providing funds and resources for state universities, community colleges, and vocational schools to develop and offer programs and courses related to AAM.

**Who:** workforce solutions, TWC, THECB, TSTC

**Funding source:** federal (DOD), state, general

**How much:** \$10M annually (for a set period of time)

# Recommendation 15

**Need:** AAM knowledge and skills pipeline

**Recommendation:** Direct the TEA to integrate AAM into K-12 curriculum (e.g., NASA toolkit) and coordinate with TWC on developing AAM apprenticeship programs at high schools.

**Who:** TEA, TWC

**Funding source:** state

**How much:** \$2M



# TWC Apprenticeship Programs

- Awards funds to employers to secure Department of Labor apprenticeship registration and help with costs relating to curricula development, instruction or training for apprentices, training supplies, etc. **(Private entities apply for funding directly)**
- Critical Skills Apprenticeships
  - \$4,000,000 available in funding
  - Maximum Award: \$500,000
  - Funding Length: 18 months

# Workforce Innovation & Opportunity Act Program

- **Services**
  - [WorkInTexas](#)
  - [Job Training - Texas Workforce Commission](#)
  - [Find Education - Texas Workforce Commission](#)
- The U.S. Department of Labor's Employment & Training Administration (DOLETA) funds WIOA through grants.
- **WIOA authorizes the following core programs under the workforce development system:**
  - Title I - Workforce development programs, including:
    - Adult and Dislocated Worker Program
    - WIOA Youth Program
  - Title II - Adult Education and Literacy programs
  - Title III - Wagner-Peyser Employment Service
  - Title IV - Vocational Rehabilitation state grant programs

# Texas Industry Partnership Program

**A match grant program** that supports training for high demand jobs.

## **Current target industries:**

- Advanced Manufacturing
- **Aerospace, Aviation and Defense**
- Energy
- Information Technology

## **Allowable Activities**

- Participant recruitment
- Skills assessment
- Job search
- Job referral
- Equipment
- Training /Mentoring ([specified list of “training related costs” is on TWC website](#))
- Support services

# Recommendation 9

**Need:** Quantify the economic impact of AAM in Texas

**Recommendation:** Fund a preliminary economic impact study to determine the cost benefit analysis for two takeoff and landing locations for AAM.

	Original Rec.	Alternate Rec.	New Rec.
Who	Tx economic development, OOG, AAM program manger	Industry	
Funding Source	general funds, rider, TxDOT state funds, industry, local/regional investors	Industry	Industry and local partners
Funding Amount	\$300,000-500,000	\$50,000-100,000	25% local match. \$500,000
Timeline	Summer/Fall 2026	complete no later than February 2025	

# Recommendation TBD

**Need:** statewide plan

**Recommendation:** TxDOT Develop a “Flight Plan” and Implementation Plan for Texas AAM in conjunction with industry

**Who:** industry, state

**Funding source:** industry

**How much:** ?

**Timeline:** complete no later than September 2024

# Other Texas AAM Needs and Recommendations

# Legislative framework

1. Official definition of AAM in state statute (VTOLS, drones, etc.)
2. Flexible regulatory scheme for AAM efforts
3. List of ways that AAM will not be used and encouragement of liberal use when applicable (e.g., use on state land)
- ~~4. State standards for infrastructure consistency~~
5. Continuation of AAM Advisory Committee

# AAM Understanding and Influence

5. AAM representation on the 9-member TxDOT Aviation Advisory Committee
6. A position at TxDOT or OOG to serve as a central point of contact and AAM ambassador to increase adoption and awareness of AAM
7. Public awareness about the benefits and potential of AAM
8. AAM research and development in Texas
9. Economic impact study for Texas (similar to the Wisk study done in California)



# Safe Operations

10. Legislation governing information sharing among agencies using AAM during disasters (HB2340-89R)
11. Funding for safety training for first responder personnel
12. Mitigation of cybersecurity risks
13. Air traffic management and airspace deconfliction (e.g., UTM)\*

# Infrastructure

16. AAM infrastructure at existing airports

17. New vertiports

18. Electrical capacity at Texas airports

19. Funding to support ancillary infrastructure (e.g., micro wind sensors)

20. Gap analysis for AAM integration into existing airport infrastructure

21. New designated revenue streams to pay for and maintain AAM infrastructure

# Crafting Actionable Recommendations

- I want the state to  [do what specifically] ?
- What State entity(s) do you want to do that?
- Where does the money come from (funding mechanism) and how much money will it take ballpark?

*Strengthen recommendations by documenting private industry contributions (e.g., matching funds, in-kind contributions)*

# Recommendations Discussion

Categorize funding source (state, federal, private)

Estimate level of \$ magnitude or priority

# Recommendation 1

**Need:** Official definition of AAM in state statute (VTOLS, drones, etc.)

**Recommendation:** Adopt FAA definition

**Who:** Texas Legislature

**Funding source:** N/A

**How much:** \$0

# FAA AAM Definition

(1) ADVANCED AIR MOBILITY; AAM.—The terms “advanced air mobility” and “AAM” mean a transportation system that transports people and property by air between two points in the United States using aircraft with advanced technologies, including electric aircraft or electric vertical take-off and landing aircraft, in both controlled and uncontrolled airspace.

# Recommendation 2

**Need:** Flexible regulatory scheme for AAM efforts

**Recommendation:**

**Who:** Tx Legislature

**Funding source:**

**How much:** \$0

# Recommendation 3

**Need:** List of ways that AAM will not be used and encouragement of liberal use when applicable (e.g., use on state land)

**Recommendation:**

**Who:**

**Funding source:**

**How much:** \$0



# Use of Unmanned Aircraft

[GOVERNMENT CODE CHAPTER 423. USE OF UNMANNED AIRCRAFT \(texas.gov\)](#)

# The UAS program will *not* be used to:

- Conduct random surveillance activities
- Target a person based solely on individual characteristics, such as race, color, ethnicity, national origin, sex, sexual orientation, age, gender, religion, or disability
- Harass, intimidate, or discriminate against any individual or group
- Conduct personal business or any other unauthorized use
- Support any facial or license plate recognition technology
- Carry or deploy any types of weapons
- Monitor traffic for the purpose of issuing traffic citations
- Intercept and collect Wi-Fi data

# Recommendation 4

**Need:** ~~State standards for infrastructure consistency~~

**Recommendation:**

**Who:**

**Funding source:**

**How much:**

# Recommendation 4

**Need:** Continuation of AAM Advisory Committee

**Recommendation:**

**Who:** TxDOT

**Funding source:** TxDOT state funding or general funds

**How much:** \$120,000 bi-annual

# Recommendation 5

**Need:** AAM input on TxDOT aviation policy

**Recommendation:** Add AAM representation to the existing 9-member TxDOT Aviation Advisory Committee.

**Who:**

**Funding source:** TxDOT

**How much:** \$0

# Recommendation 6a (short-term)

**Need:** A position at TxDOT or OOG to serve as a program manager to increase adoption and awareness of AAM (through demonstration day coordination, conference presentations, etc.)

**Recommendation:**

**Who:** TxDOT or OOG

**Funding source:** State aviation funds, general, or rider

**How much:** Salary determined by formula

# Recommendation 6b (Long-term)

**Need:** An office at TxDOT or OOG to increase adoption and awareness of AAM (through demonstration day coordination, conference presentations, etc.)

**Recommendation:**

**Who:** TxDOT or OOG

**Funding source:** State aviation funds, general, or rider

**How much:** \$2M (Program Manager 5 salary range, additional travel funds)

**Number of people:** 3-4

# Recommendation 7

**Need:** Public awareness about the benefits and potential of AAM

**Recommendation:** Provide funds to create communication materials targeted to the public, decision makers, and recreational drone users that can be implemented as appropriate.

**Who:** Texas Economic Development, TxDOT, Program Manager

**Funding source:** general fund, rider, industry funds (advertising campaign), federal funds

**How much:** \$500,000 annually each from state and industry



# Recommendation 7a

**Need:** Public awareness about the benefits and potential of AAM

**Recommendation:** Host ASM IWG workshop

**Who:**

**Funding source:**

**How much:**

# Recommendation 8

**Need:** AAM research and development in Texas

**Recommendation:** Support research and development for AAM technologies, products, and services in Texas by providing funds and resources for state universities (e.g., developing unmanned traffic management systems)

**Who:** TxDOT, A&M/TTI, university systems, AAM program manager

**Funding source:** general, federal (DoD, FAA, NASA (SBIR, STTR), NSF, NREL, USDOT, DOE, FEMA)

**How much:** \$20M bi-annually

# Recommendation 10

**Need:** Legislation governing information sharing among agencies using AAM during disasters (HB2340-89R)

**Recommendation:** update legislation with eVTOL

**Who:** legislature

**Funding source:** N/A

**How much:** \$0

# Information Sharing Working Group

- a) In this section, "work group" means the work group established under this section.
- b) The division shall establish a work group of state agencies involved in disaster management. The work group consists of members appointed by the chief of the division who represent:
  - 1) the comptroller's office;
  - 2) the Department of State Health Services;
  - 3) the Texas Department of Transportation;
  - 4) the General Land Office;
  - 5) the Health and Human Services Commission;
  - 6) institutions of higher education; and
  - 7) to the extent practicable, appropriate federal agencies.
- c) The work group shall develop recommendations for improving the manner in which electronic information is stored by and shared among state agencies and between state agencies and federal agencies to improve the capacity of the agencies to:
  - 1) respond to a disaster; and
  - 2) coordinate the agencies' responses to a disaster.
- d) Not later than November 1 of each even-numbered year, the work group shall submit the group's recommendations to the governor.

# Recommendation 11

**Need:** Funding for safety training for first responder personnel

**Recommendation:** Provide a funding mechanism to help with first responder training

**Who:** AAM office, Texas DPS, TDEM

**Funding source:** general, federal (DOJ, homeland security, FEMA)

**How much:** \$2M annually

# Recommendation 12

**Need:** Mitigation of cybersecurity risks

**Recommendation:**

**Who:** DIR

**Funding source:** general, federal

**How much:**

# Recommendation 13

**Need:** Air traffic management and airspace deconfliction (FAA preemption?)

**Recommendation:** Provide funding for research, testing, and integration of UTM technology.

**Who:** TxDOT, OOG, AAM office

**Funding source:** general, federal, state, industry

**How much:** \$40M bi-annually (can be matched federally)

# Recommendation 16

**Need:** AAM infrastructure at existing airports

**Recommendation:** Modify Chapter 21 of the Transportation Code to enable existing airports to function as vertiports and increase available funding if the vertiport meets public use/public good standard.

**Who:** legislature

**Funding source:** N/A

**How much:** \$0



# Recommendation 17

**Need:** Funding for new vertiport development

**Recommendation:** Create a state matching program for new public good/public use vertiport construction

**Who:** TxDOT, AAM office

**Funding source:** general, rider, federal

**How much:** \$100M (this would fund 5-10 vertiports)

# Florida bill to fund new vertiport construction

**As part of the Supply Chain Innovation Grant Program**

“The Department of Commerce and the Department of Transportation shall also consider applications for funding submitted by public and private entities seeking to develop and establish vertiports in this state. Each award made for vertiport development shall be matched dollar-for-dollar by nonstate funds. For purposes of this subsection, the term "vertiport" means a system or infrastructure with supporting services and equipment used for landing, ground handling, and takeoff of manned or unmanned vertical takeoff and landing (VTOL) aircraft.”

<https://www.flsenate.gov/Session/Bill/2024/1301/BillText/c3/PDF>

# Recommendation 18a

**Need:** Electrical capacity at Texas airports

**Recommendation:** Provide funding to improve electrical capacity at Texas airports for airborne and ground vehicles. (infrastructure)

**Who:** TxDOT, AAM office, ERCOT

**Funding source:** general, federal, rider, PPP

**How much:**

# Recommendation 18b

**Need:** Electrical capacity at Texas airports

**Recommendation:** Provide funding to improve electrical capacity at Texas airports for airborne and ground vehicles. (capacity studies)

**Who:** TxDOT, AAM office, ERCOT

**Funding source:** general, federal, rider, PPP

**How much:** \$100,000 per airport, 30 airports to start

# Recommendation 19

**Need:** Funding to support ancillary infrastructure (e.g., micro wind sensors)

**Recommendation:** Increase TxDOT aviation funds and allow funds to be used off-airport to construct infrastructure to enhance the aviation system.

**Who:** TxDOT, OOG, AAM office

**Funding source:** federal, state, general, rider

**How much:**

# Recommendation 20

**Need:** Gap analysis for AAM integration into existing airport infrastructure

**Recommendation:** Develop a statewide plan that addresses the potential locations for and classifications of vertiports and other associated infrastructure to help define the future operational environment UAM/AAM.

**Who:** TxDOT, AAM office

**Funding source:** federal, state, general, rider

**How much:** \$300,000

# Recommendation 21

**Need:** New designated revenue streams to pay for and maintain AAM infrastructure

**Recommendation:** Develop and recommend a list of revenue streams to educate the legislature on their options

**Who:** legislature

**Funding source:** N/A

**How much:** \$0

# Federal AAM Definition

AAM is a transportation system that moves people and property by air between two points in the United States (U.S.) using aircraft with advanced technologies, including electric aircraft, or electric vertical takeoff and landing (eVTOL) aircraft, in both controlled and uncontrolled airspace.

AAM Coordination and Leadership Act (P.L. 117-203, 136 Stat. 2227), October 17, 2022



# Next Meeting Dates

Economic Impact Meeting 4: **May 15**, 10:00-12:00

Full Committee Meeting: **April 30**, 9:00-12:00