Public Good and Safety Use-Cases Subcommittee

Texas AAM Committee

Meeting #3, April 18, 2024

Agenda

- Opening remarks
- Full committee meeting recap
- Review safe operations recommendations
- Emergency response use case
- 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

Safe Operations Recommendations

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, TEEX, TCOLE

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

How much: $2M annually

Recommendation 12

Need: Mitigation of cybersecurity risks

Recommendation: Develop a statewide certification process to ensure good cybersecurity practices are adhered to for autonomous AAM technologies

Who: DIR, NIST, CISA

Funding source: general, federal, industry

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, DPS

Funding source: general, federal, state, industry

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

Recommendation 1*

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

Recommendation: Include drones and UAS in Texas AAM definition

Who: Texas Legislature

Funding source: N/A

How much: $0

Recommendation TBD

Need:

Recommendation: Mechanism for capturing and analyzing data on airspace integration and from drone detection companies to enhance air safety

Who: Texas Comptroller, TxDOT?

Funding source: state

How much:

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

AAM User Case: Emergency Response

- Rapid deployment and flexibility

- Integration into the airspace

- Infrastructure development

- Sustainability

- Regulatory compliance and safety

- Public acceptance and trust

- Communication systems

- Training and simulation

Next Meeting Dates

Public Good and Safety Use-Cases Meeting 4: **May 16**, 10:00-12:00

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

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)

Workforce Development

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

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

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

Recommendations Discussion

Categorize funding source (state, federal, private)

Estimate level of $ magnitude or priority

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.

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

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 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 8

Need: AAM research and development in Texas

Recommendation: Support research and development for AAM technologies, products, and services in Texas by creating a program for state universities (e.g., developing unmanned traffic management systems) which could be used as matching funds for federal grants and a minimum percentage of community or industry match.

Who: TxDOT

Funding source: general

How much: $40M bi-annually

Recommendation TBD

Need: statewide plan

Recommendation: TxDOT develop a statewide Implementation Plan for Texas AAM in conjunction with industry, similar to Florida's AAM Roadmap

Who: industry, state

Funding source: industry

How much: ?

Timeline: complete no later than September 2024

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

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

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