



Texas Transportation Commission Urban Air Mobility Advisory Committee

June 14, 2022



June 20, 2022

Presentation Outline

- Texas A&M Transportation Institute Team
- Background/Charge
- How We Got Here and Where We Go from Here
- Working Group Recommendations
- Path Forward
- Questions

TTI Team

- Jeff Borowiec, Ph.D.
- Brianne Glover, J.D.
- Jacki Kuzio, Ph.D.
- Bill Prieto, MPA
- Kirbie Ferrell, MPA

Background/Charge

Scope

...assess current state law and potential changes

...facilitate the development of urban air mobility operations and infrastructure

Interpretation

A broad scope to identify and define our State's path to adopt a new mode of transportation: Urban Air Mobility (UAM)

SB 763

5 SECTION 1. Subchapter A, Chapter 21, Transportation Code,
6 is amended by adding Section 21.004 to read as follows:
7 Sec. 21.004. URBAN AIR MOBILITY ADVISORY COMMITTEE. (a)
8 The commission shall appoint an advisory committee to assess
9 current state law and any potential changes to state law that are
10 needed to facilitate the development of urban air mobility
11 operations and infrastructure in this state.

How We Got Here

Chair:

**Dr. Ahsan Choudhuri,
The University of Texas at
El Paso**

Vice Chair:

Mr. Chad Sparks, Bell Flight

Four Working Groups

Lead facilitators selected for each
Working group

3 full committee meetings

16 Working Group Meetings

All open to the public

How We Got Here

Technology (Dr. Maruthi Akella, University of Texas, Austin)

- Aircraft
- Autonomy, Guidance and Navigation
- Communication
- Interoperability

Airspace and Infrastructure (Mr. Nathan Trail, Supernal (Hyundai))

- UAM Operating Environment
- Aerodromes, Small and Regional Airports, and Major Airports
- Fleet Management and Maintenance

Safety and Security (Mr. Ben Ivers, The Boeing Company)

- Operational Management
- Certifications
- Transportation Safety and Security

Commerce and Community Integration (Mr. Michael Hill, Volatus Aerospace)

- Acceptance
- Regional Infrastructure
- Multimodal Transportation Integration
- Local Regulatory Environment
- Liability

How We Got Here

First Meeting: December 2021



Draft Literature Review/Background Report: December 2021



Second Meeting: January 2022



Working Group Meetings

All Working Groups Held Four Meetings: March – June

Developed Draft Recommendations

Where We Go From Here?

- **Third Meeting: June 14, 2022 in Austin**
 - Present recommendations
 - Approve recommendations
 - Will accept comments until June 21, 2022
- **Full draft report with recommendations sent to committee June 30, 2022**
- **Fourth Meeting: July 7, 2022**
 - Committee gives final approval to recommendations and report including comments
- **Final report due to TxDOT: July 15, 2022**
- **Address TxDOT comments**
- **Final report due to legislature: September 1, 2022**

Draft Recommendations

SAFETY AND SECURITY

BEN IVERS, AMANDA NELSON, FRED UNDERWOOD,
JIM PERSCHBACH, KEVIN RISTER, JASON DAY



Safety and Security Recommendations

Legislative

1. In collaboration with the appropriate federal entities, the state will work to encourage the development of minimum standards/safety management systems for vertiport operations including passenger **and goods** movements and ground infrastructure.
2. Extend the work of the Urban Air Mobility Advisory Committee beyond the sunset date of January 1, 2023 to continue working in key areas of this emerging and quickly evolving industry in order to remain responsive to the needs of our state and ensure Texas' role as a leader in this industry.*

Safety and Security Recommendations

Foundational Infrastructure Needs

3. Recommend Texas law does not conflict with federal law.

4. Encourage the legislature remain an active participant in Urban Air Mobility/Advanced Air Mobility as the industry and technology will outpace current regulations and enable the appropriate state agency to lead and manage the regulatory concerns.

5. Direct the Texas Department of Transportation to review existing state aviation standards and guidelines, airport facility planning, and compatibility guidance to ensure they apply to Urban Air Mobility/Advanced Air Mobility.*

6. Support the development of ~~standardizations performance-based standards~~ at the federal level and within industry as technology develops/changes so safety is prioritized as the technology matures.

7. Encourage state-level cooperation with local governments to ensure appropriate preparation, training, and safety practices associated with vertiport operations including law enforcement, fire service, and emergency medical services associated with traditional aviation and Advanced Air Mobility aircraft operations.*

Draft Recommendations

COMMERCE AND COMMUNITY INTEGRATION

MICHAEL HILL, DAVID FIELD, KIMBERLY WILLIAMS,
BILL GOODWIN, CHRIS ASH, JEFF BILYEU,
CAMERON WALKER, KEVIN RUSSELL



Commerce and Community Integration Recommendations

Legislative

1. Direct **all law enforcement and first responder agencies to adopt** education and training recommendations as identified in *Unmanned Aircraft: Responding to and Recovering from Disasters (State of Texas, November 2020)*, a report borne out of House Bill 2340 (86R, 2019) establishing a Small Unmanned Aircraft Study Group for a Statewide Response team.
2. Extend the operation and activities of the Urban Air Mobility Advisory Committee to continue addressing the current and future issues associated with these emerging technologies in this quickly evolving industry to maintain Texas' economic competitiveness and create economic development opportunities.*

Commerce and Community Integration Recommendations

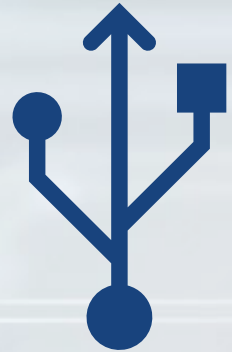
Foundational Infrastructure Needs

3. Create a statewide primary point of contact to direct Urban Air Mobility/Advanced Air Mobility workforce development efforts, lead public awareness and education efforts, and collaborate with local, regional, state, and federal entities to encourage more input and participation.
5. Direct the state to provide **resources and assistance** ~~guidance and alignment~~ on the use of Urban Air Mobility/Advanced Air Mobility technology infrastructure for **both cities, local and regional government, and transportation planning organizations, and other entities as well as** industry to better identify what the different levels of government can do to integrate industry innovation and community vision and help promote Urban Air Mobility/Advanced Air Mobility technology.
6. Direct the appropriate state agencies to jointly collaborate with local school districts, higher education institutions, and any interested private and/or public stakeholders on educational opportunities related to Urban Air Mobility/Advanced Air Mobility technologies.

Draft Recommendations

TECHNOLOGY

MARUTHI AKELLA, BRENT KLAVON, BRENT SKORUP,
CHAD SPARKS, KEN PETERMAN



Technology Recommendations

Legislative

1. Encourage the development of an Urban Air Mobility/Advanced Air Mobility Sandbox by:
 - a. Directing the preparation of a feasibility study to understand the market, differentiating factors from similar existing facilities, potential market/players, funding sources, revenue opportunities, locations, necessary digital and physical infrastructure, and potential use cases; and
 - b. Pursuing the development of a facility that will provide opportunity for testing and commercialization that will attract business and move the industry and state forward.*
 - c. State will take the initiative to work with industry to determine additional standards in terms of communications, technology, and environmental awareness systems to encourage consistency and harmony at all levels of government and stakeholders.
2. Consider the initial funding for a UAM/AAM Sandbox Feasibility Study and ultimately its development along with an incentive program to attract industry with the ultimate objective of using user fees to fund the on-going operations and maintenance of the Sandbox.*

Foundational Infrastructure Needs

3. Encourage state agencies to adopt a technology-neutral/open architecture approach to the Urban Air Mobility/Advanced Air Mobility industry to allow easier adoption of new technologies and deployment into new regions.
4. Identify areas where technology will drive standardizations.

Draft Recommendations

AIRSPACE AND INFRASTRUCTURE

NATHAN TRAIL, GUS KHANKARLI, JOHN ACKERMAN,
JASON JONMICHAEL, JOSH CRAWFORD, JEFF DECOUX,
NICK DEVEREUX, NIRAV VED



Airspace and Infrastructure Recommendations

Legislative

1. Provide consistency across Texas Law by creating statutory uniformity and standard definitions pertaining to unmanned aircraft operations and Urban Air Mobility/Advanced Air Mobility.

Foundational Infrastructure Needs

2. Develop an Urban Air Mobility/Advanced Air Mobility -centric research facility to test and evaluate technology, provide data collection opportunities, and coordinate with federal entities to share information and help guide data-driven public policy. The Legislature is encouraged to consider the benefits of state funding for the successful development and operation of this facility.*
3. Develop a Statewide plan, or integration within the Texas Airport System Plan, that addresses the potential locations for and classifications of vertiports and other associated infrastructure to help define the future operational environment of Urban Air Mobility/Advanced Air Mobility.
4. Direct the state to work with municipalities to provide technical assistance to local governments in adapting and integrating Urban Air Mobility/Advanced Air Mobility in their communities.*

Additional Recommendations

1. Encourage local governments to coordinate with state agencies when considering enacting ordinances or regulations related to Urban Air Mobility/Advanced Air Mobility operations.
2. Assist local governments on public-private partnership considerations in the development of vertiports to foster equitable economic development and workforce opportunity, and a healthy and competitive market.

Path Forward

- **Third Meeting: June 14, 2022 in Austin**
 - Present recommendations
 - Approve recommendations
 - Will accept comments until June 21, 2022
- **Full draft report with recommendations sent to committee June 30, 2022**
- **Fourth Meeting: July 7, 2022**
 - Committee gives final approval to recommendations and report including comments
- **Final report due to TxDOT: July 15, 2022**
- **Address TxDOT comments**
- **Final report due to legislature: September 1, 2022**



Questions?



June 20, 2022