

# 1 | Planning for Advanced Air Mobility

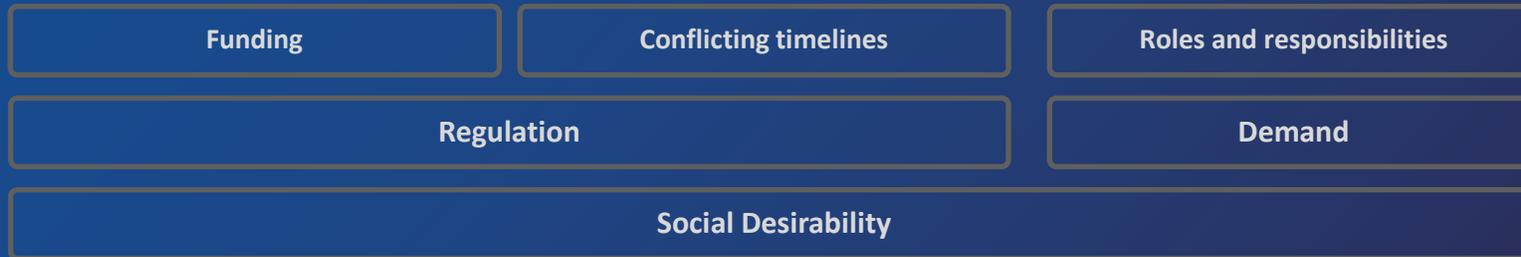
Adrienne Lindgren

Global Partnerships and Business Development

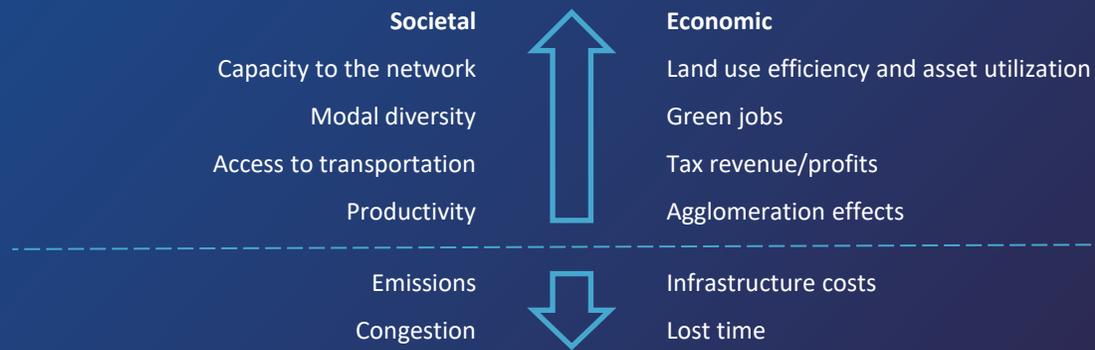
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# Confronting the challenges and concerns of multiple stakeholders in enabling the AAM market.

## What do stakeholders worry about with AAM?



## What do they potentially stand to gain?



# Effectively Engaging Local Communities

## Socialization + Localization

- Focus efforts to build awareness, trust, and confidence across stakeholders
- Define locations, use cases based on highest value to communities
- Identify the value-add role of AAM within the existing and projected multi-modal transportation ecosystem

## Public Engagement

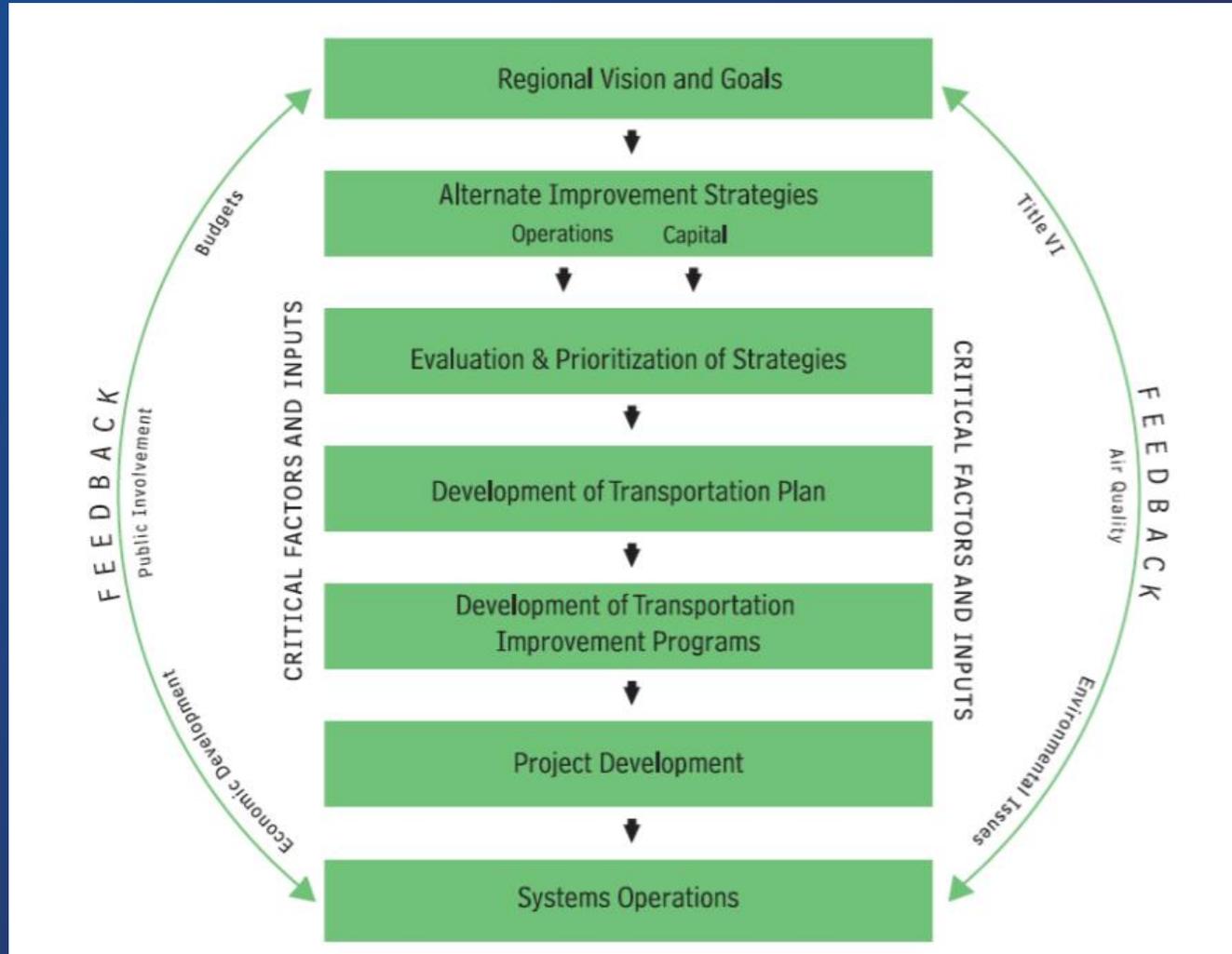
- Build community and planners' adoption methods through community engagement programs that emphasize inclusivity and economic opportunity
- Co-develop physical and digital experience centers to facilitate immersion
- Develop and engage in a roadmap that supports workforce development, operational considerations, identification and fulfillment of existing information gaps, and clear objectives/outcomes

## Policy + Environment

- Define and develop studies to validate and characterize operational impacts, including noise, emissions, safety and accessibility, incentives and fee structuring
- Drive policy and regulations to support scaling of operations, environments, and access



# Approaching Advanced Air Mobility as Part of the Transportation Planning Process



# Integrating AAM into the Mobility Ecosystem

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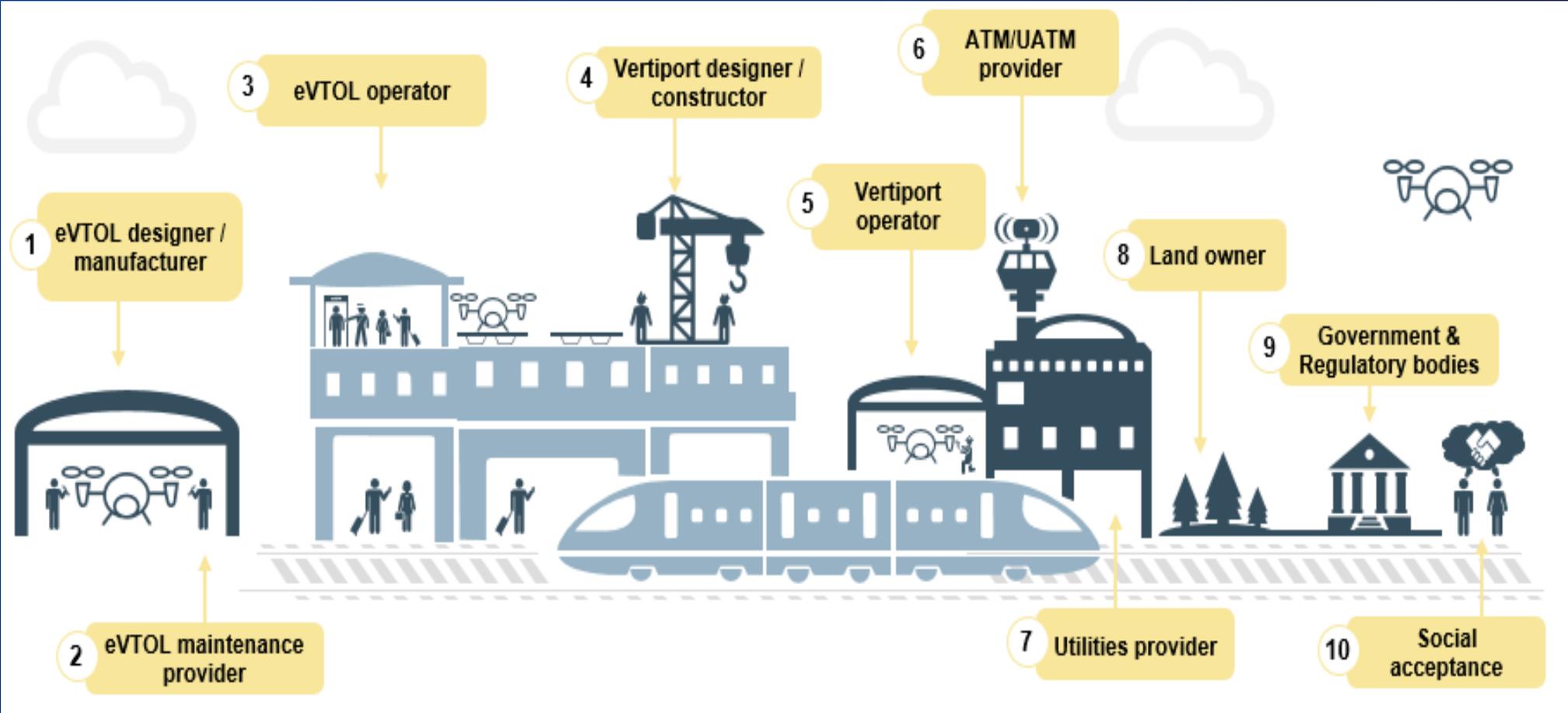


Photo Credit: VicTrack



# Roles and Responsibilities - Industry

## › OEM

- Develop Aircraft To Design Specifications Required For Aircraft Certification To Optimize Servicing The Market Demand
- Identify Operating And Maintenance Procedures
- Support After Market Functions

## › Passenger Service Operator

- Conduct Aircraft and Flight Operations
- Operators to Develop and Enforce Standard Operating Procedures for Aircraft, Personnel
- Maintain Minimum Record Related to Above Activities

## › Vertiport Operator

- Entity Providing Vertiport Facilities for Purpose of Takeoff and Landing of AAM Vehicles
- Designed to Type, Size, Weight Classifications of Aircraft to that Utilize Vertiport
- Provide a Transfer Point for Passengers Between Ground Facilities and Potential Transfer Services

## › UTM Provider

- Entity that Manages AAM Traffic and Airspace Between Different Takeoff and Landing Points Within Regional AAM System



# Roles and Responsibilities – Governance (Federal / State)

## › **FAA**

- Certifications
- Operational Rules and Regulations
- Coordinate Aircraft Operating in Controlled and Uncontrolled Airspace
- Regulatory Framework for Airspace Management
- Airspace Authorizations
- Federal Infrastructure Grants and Assurances Compliance

## › **State Aeronautics**

- Educational Frameworks and Resources for Community Engagement
- Facilitation Across Local and State Agencies
- Zoning, Transportation Plan, General Plan Compatibility
- Execute Federally Delegated Authorities (Surveys, Grant Administration, Etc)
- Registration of Aircraft, Operators, Vertiports/Facilities (and Associated Fees)



# Roles and Responsibilities – Governance (Regional / Local)

## › Regional Planning Organizations, County COGs, and Other Multi-jurisdictional Agencies

- Inform Implementation of AAM Infrastructure
- Sponsor Studies to Identify Routes, Locations, Make Recs to be Incorporated into Local General Plans
- Facilitate Intermodal Connectivity Across Transportation and Development Plans and Programs
- Connect Local Government, Communities, and AAM Industry operators

## › Municipal Government

- Establishing and Enforcing Land Use, Zoning, Building Codes
- Possibility to Override ALUC Decisions

## › Council of Governments (Other)

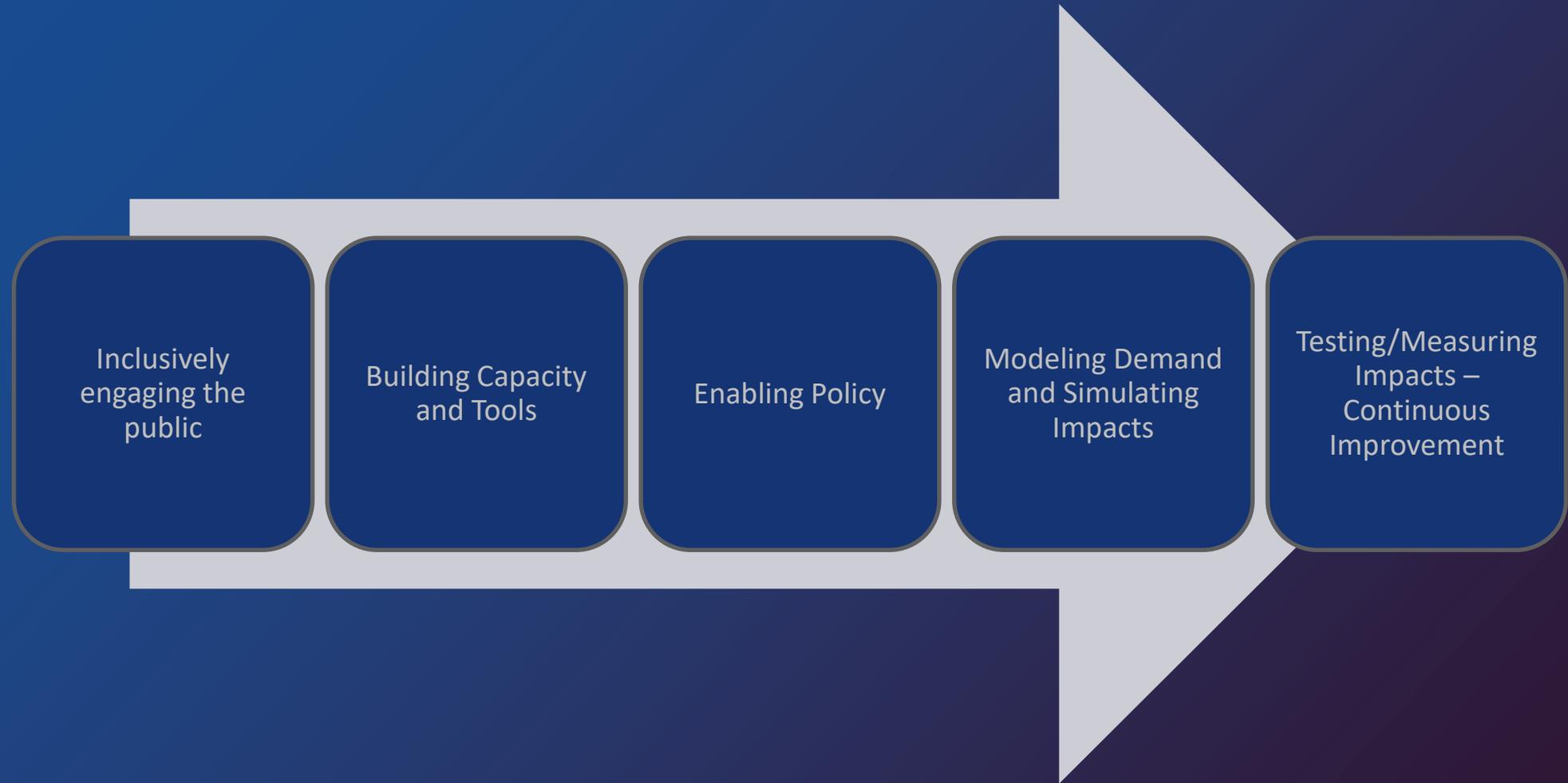
- Inform Compatibility of Airports with Surrounding Communities with Airport Land Use Commission
- Identify and Develop New Processes to Facilitate AAM Development within a Community Toward Optimized Community Benefits
- Liaise Across Stakeholders to Facilitate Effective Implementation

## › Other MPOs and Regional Transportation Agencies

- System Maximization to Bring Assets Together to Optimize Economic, Environmental and Quality of Life
- Possibility to Override ALUC Decisions



# Regional Integration: What does success look like?



# Practical Steps

- › Identifying funding streams that could support regional collaboration
- › Socializing and visualizing AAM through bespoke public engagement strategies
- › Developing region and city-specific applications for highest-best used, in alignment with existing and future plans and objectives
- › Supporting the development of technical processes and policies
- › Developing resources and best practices for implementation
- › Building capacity across unique stakeholders



Thank you!  
Questions?

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# Back-up Slides



# Roles and Responsibilities - Industry

- › **OEM** - Develop aircraft to design specifications required for aircraft certification to optimize servicing the market demand. Identify operating and maintenance procedures. Support after market functions such as parts, servicing, etc.
- › **Passenger Service Operator**—conduct aircraft flight operations. Commercial flight operators must develop and enforce standard operating procedures for the aircraft, personnel, and maintain minimum records related to these activities. Various required services such as charging, passenger loading, aircraft cleaning and servicing, pilot, and other operator-specific facilities and functions will be provided by the passenger operator or outsourced to third parties by them.
- › **Vertiport Operator**—the entity providing vertiport facilities for the purpose of taking off and landing dedicated AAM aircraft within the designed type, size, and weight classifications of the aircraft to utilize the vertiport; provide a transfer point for passengers between aircraft and ground facilities and potential transfer services. Vertiport operators will generally provide the ground facilities such as takeoff and landing pads, aircraft parking and circulation area, lighting and marking, passenger holding areas and related amenities, and other support services potentially outsourced to third party providers.
- › **UTM Provider** - the entity that manages the AAM traffic and airspace between the different takeoff and landing points within the regional AAM system.



# Roles and Responsibilities – Governance (Federal / State)

- › **FAA** - Oversee the aircraft, pilot, and other system certifications that comprise the AAM ecosystem. Develop appropriate operational rules and regulations needed to maintain safety, efficiency, and accessibility. Develop framework for coordinating aircraft operating within the designated controlled and uncontrolled airspace types. FAA is expected to develop the regulatory framework which may be managed by a designated UTM provider for a given area. FAA is also expected to foster the development of the US AAM industry through the application of special authorizations and through federal grants to support infrastructure development. All operators would be required to comply with the assurances associated with the specific grant programs.
- › **State Government**— Expected to be similar to the state roles within existing aviation systems. States often provide an educational framework and resources to support community engagement and to facilitate discussion amongst various local and state agencies. States would also be expected to provide local guidance or mandated requirements to establish and maintain the new aviation infrastructure within state specific to zoning, transportation planning, and general plan development associated with compatibility and noise. State governments may oversee federally delegated responsibilities such as conducting surveys and inspections and administering development grants. Most states would be expected to develop minimum standards for the public facing facilities such as vertiports and their operations. States would also be expected to register aircraft, operators, vertiports and other facilities and charge registration fees and taxes similar to automotive and aviation fees and taxes. Some of these funds could be redistributed back to support development or otherwise promote AAM for competitive purposes between the states and to balance economic access within the state.



# Roles and Responsibilities – Governance (Regional / Local)

- › **Regional Planning Organizations, County COGs, and Other Multi-jurisdictional Agencies**— These agencies will have the best government understanding of how and where it may be best and most practical to implement new AAM infrastructure development that would extend economic opportunity. These agencies could sponsor studies intended to identify routes, vertiport locations, and make recommendations to be incorporated into local general plans. These agencies would also be most able to facilitate intermodal connectivity amongst various transportation and development plans and programs. The agencies would act as a bridge connecting local government, individual communities, and related AAM business operators.
- › **Council of Governments**— In California, one or more Counties will often function as the Airport Land Use Commission (ALUC). That role often focuses on compatibility of airports with their surrounding communities. While some within the state often consider ALUC's to be anti-development by creating expensive and unfunded study and approval mandates, it may be possible to develop a new process to facilitate AAM development within communities intended to highlight the benefits of AAM and to strategize how to implement portions of the system to test and potentially germinate the market prior to imposing restrictions that could result in discontinuance and abandonment.
- › **Municipal Government**—Generally responsibility for establishing and enforcing land use, zoning, and building codes. Currently, municipal governments may be able to override ALUC decisions.
- › **Other MPOs and Regional Transportation Agencies** -- The focus should primarily be on system maximization to bring the various assets together in such a way to realize the primary benefits that may influence public perception in a way to realize longer term economic, environmental, and quality of life gains. For example, potential reduced roadway network and airport expansions, reduced reliance on personal automobile due to connected mobility enhancements, reduce city/town space dedicated to parking and roads which can be repurposed to higher uses, and reduced transportation costs and individual ability to reallocate funds and household assets to higher purposes.

