

Urban Air Mobility

Questions

Commercial & General Aviation

- Will airports need to adapt or redesign for autonomous vehicles (UAM, UAS, and driverless autos)?
- How will unmanned aircraft systems traffic management (UTM) be integrated into the national airspace to become “Universal Traffic Management”?
- Will FAA aviation forecasting need to be completely reevaluated?

Economic Viability

- Considering the cost of paying capital and operating expenses, how could an air taxi operator make the operation profitable for itself and affordable for passengers of all social and economic backgrounds?
- How will economic benefits impact Communities of Concern (low-income neighborhoods living below the poverty level)?

Education & Training Programs

- What public information can/should be developed and shared? How?
- What education/training programs need to be designed for UAM operators and technicians?

Health & Safety Risks

- What level of safety risk (collision, propeller hazard...) and nuisance (noise, air turbulence...) will be acceptable to the public?
- How can UAM prepare for and respond to cyber-attack, hacking, spoofing, weaponization, criminal operations, etc.?
- How will the public and industry respond to an inevitable UAM fatality? Note: About 40,000 Americans die in car accidents annually.

Land Planning & Development

- How would UAM ultimately alter the way cities plan and implement land use compatibility, zoning codes, and development codes?
- Will on-demand UAM (air taxis) shift land use and Euclidean zoning relationships?
- Will online commerce, fulfillment centers, and air delivery replace traditional commercial development?
- Will land use be significantly impacted through restructured/redefined parking areas, vertiport locations, and UAM corridors?
- What are the cities’ public goals for UAM? Future of UAM vs. AVs? Piloted vs. Automated UAM?

Local Airspace & UAM Corridors

- What would be the likelihood of local and regional government agencies creating local airspace zoning regulations to allow UAM aircraft only within the region?
- Could agencies create UAM-separated corridors, or would there be considerations for UAM integration within the existing shared airspace with commercial and general aviation aircraft? Operations over people, streets, etc? Air cargo being carried commercially and over state lines?

Local Government Regulation

- **Local Government:** What regulatory, zoning, collaborative actions would cities have to take to achieve the implementation of air taxis? What should local and regional governments consider to

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allow for landing sites for these aircraft in a dense, urban environment?

- **State Government:** Department of Transportation? Department of Aviation?
- **Federal Government:** Pilots / Automation? Airspace / Air Traffic Management? Aircraft / Air Worthiness?

NIMBYism

- “Not in my Backyard” (NIMBY) oppositions tend to slow down or stop the progress of infrastructure projects such as landing sites for UAM as it is an understandable reaction to upheaval in a community caused by changes big and small. To help address the concerns of people in a community about to undergo change, how could planners and city officials help ease the mind of these community members who are concerned about the value of their properties, preservation of older neighborhoods, changes in the sense of community, and influx of new residents/visitors coming to the area?

Smart Mobility Alternatives

- Autonomous cars, high-speed rails and many new or improved existing modes of transportation may pose a potential challenge to the adoption/demand of urban air taxis. How will UAM draw the support of it over other modes that could move more people and goods quicker and at a cheaper price point?
- How will UAM become multi-modal / intermodal?
- How will UAM be part of the Internet of (moving) Things? Intelligent Transportation Systems? Smart Cities?

Sustainable Development & Climate Change Adaptation/Mitigation

- How can UAM contribute to reducing greenhouse gas emissions (carbon footprint)?
- How can UAM be integrated into an Intelligent Transportation System to increase efficiency (intermodality)?
- How can electric aviation be more sustainable than traditional fueled aviation?

Urban Resiliency

- How can UAM assist in disaster preparedness and response?
- How, and can autonomous vehicles be adapted for emergency response?
- How can vertiports serve as evacuation facilities and emergency supplies staging sites?

Walkability and Sprawl

- If these air taxis are to be privately operated, how can cities create more walkable cities if air taxis promote a network of private, high-rise launchpads?
- Could more effortless air travel lead to increased urban sprawl as people stop prioritizing the convenience of proximity to city centers?

What additional research is needed and what social, environmental, and economic externalities (unintended consequences) should be considered?

**These questions have been compiled from numerous UAM conferences and symposiums.*