

Community Planning Strategies for Urban Air Mobility

UC Davis Aviation Noise & Emissions Symposium

Agenda

1. Urban Air Mobility in the Community
2. FAA's Initial Concept of Operations for UAM
3. Community Planning Strategies

Urban Air Mobility in the Community

What is the ideal UAM ecosystem for your community?

Positive aspects to encourage

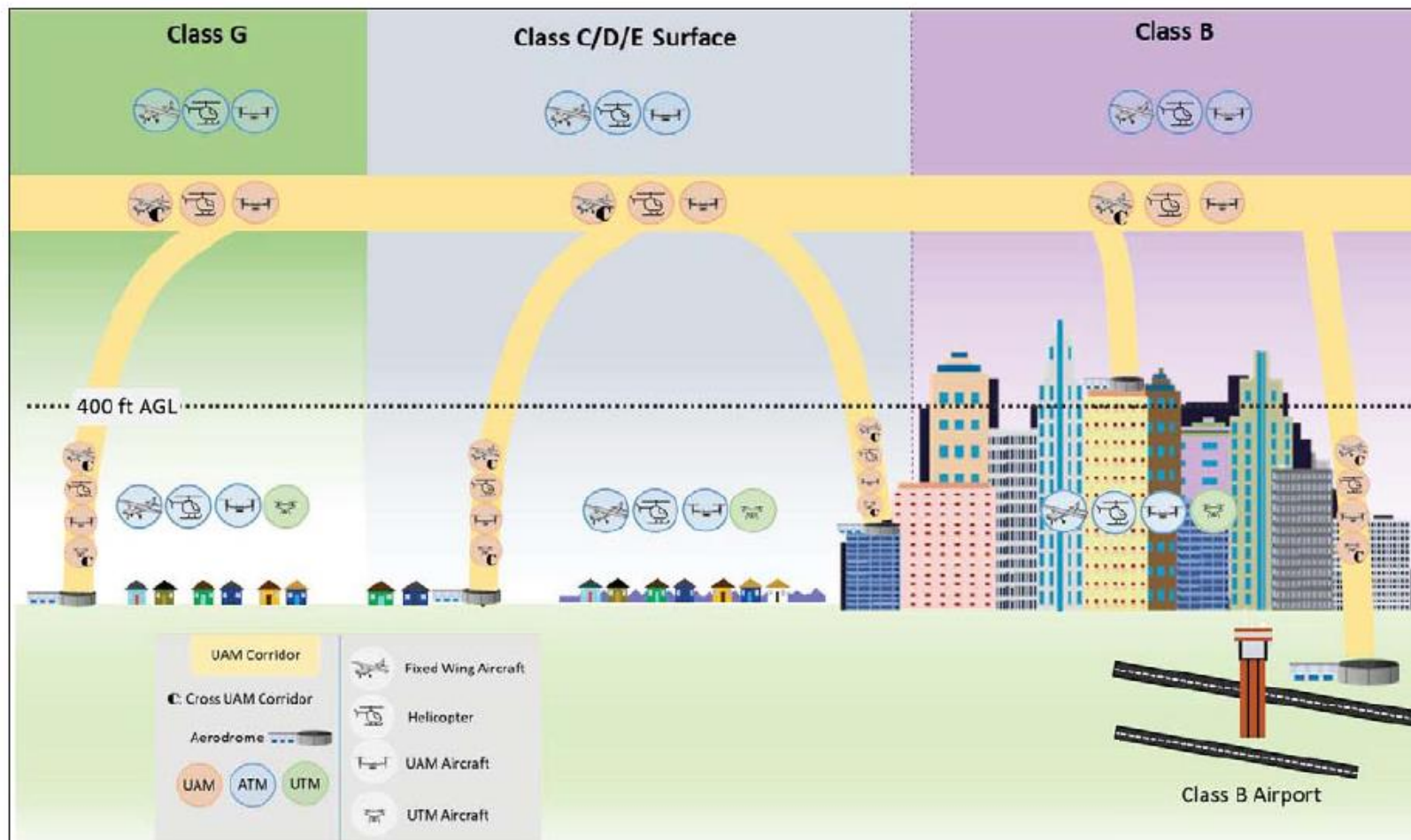
- Quick and convenient trips
 - vs. congestion
 - vs. slower modes
 - vs. barriers (terrain, water, etc.)
- Emergency response
- Low carbon footprint
- Lower noise than helicopters
- Fun, exciting, novel

Negative concerns to mitigate

- Safety
- Noise
- Invasion of privacy
- Visual clutter / sky clutter
- Exclusive to wealthy users
- May enable suburban sprawl

FAA's Concept of Operations for UAM

Initial proposal on what FAA will / will not manage



FAA's Concept of Operations v1.0, June 2020

FAA had previously defined UAS Traffic Management (UTM) for drones operating below 400ft AGL.

Newly defined in this UAM ConOps: "UAM Corridors", shown in yellow on the diagram, where a non-FAA entity will provide air traffic management and separation services. This entity will be known as the "Provider of Services to UAM" or "PSU"

Figure 1-2: UAM, UTM, and ATM Operating Environments

Community Planning Strategies

Back to Basics

No need to reinvent the wheel. Airport / Land Use Compatibility frameworks exist, and can be expanded to cover AAM/UAM.

- 1. Federal** – FAA: airport masterplanning and subsequent environmental reviews under NEPA. New UAM activity at an airport can be evaluated similar to other new activity, e.g. new general aviation runway.
- 2. State** – CalTrans Aeronautics: California Airport Land Use Planning Handbook. Note not all state DOTs have robust and active aviation divisions; your state may vary.
- 3. Local** – many variations, layers of influence, and responsibility.

Community Planning Strategies

FAA Airspace Review – new vertiport not at existing airport

FAA generally attempts to stay out of local politics, while fulfilling role as our nation's air navigation service provider (ANSP), aviation safety regulator, and promoter / funder of major public aviation projects.

As ANSP responsible for all air traffic control (ATC) in the US, FAA must be notified, and approve of, any new “landing area” including airports, heliports, seaplane bases, balloonports, and vertiports.

- Proponents of new landing areas must file FAA Form 7480-1 “Notice for Construction, Alteration and Deactivation of Airports”
- As with new airports, FAA airspace approval for a new vertiport will be contingent on clear airspace, as well as confirmation of community environmental approvals.

Pause... Key Questions to Consider

1. Who sponsors and builds vertiports?
2. Who owns vertiports?
3. Who operates vertiports?
4. Who is permitted to utilize vertiports?

The answers to these will be different in different regions, times.

Ownership and permitted users (public vs. private) will determine many aspects of vertiport siting, operations, costs, community relations, etc.

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State

The California Airport Land Use Planning Handbook provides comprehensive guidance for airport land use compatibility, in three major areas:

1. **Safety**
2. **Airspace**
3. **Noise**

The latest version of the Handbook, 2011, does not address vertiports, but does address heliports, stating “**A public-use heliport would be considered a public airport, and would require an ALUCP [Airport Land Use Compatibility Plan]**”. Historically most heliports and helipads have been either private-use, or part of an airport, so most jurisdictions are not accustomed to evaluating heliports (or vertiports) on their own.



Community Planning Strategies

Local

Local communities can influence various factors related UAM operations, through two main arenas:

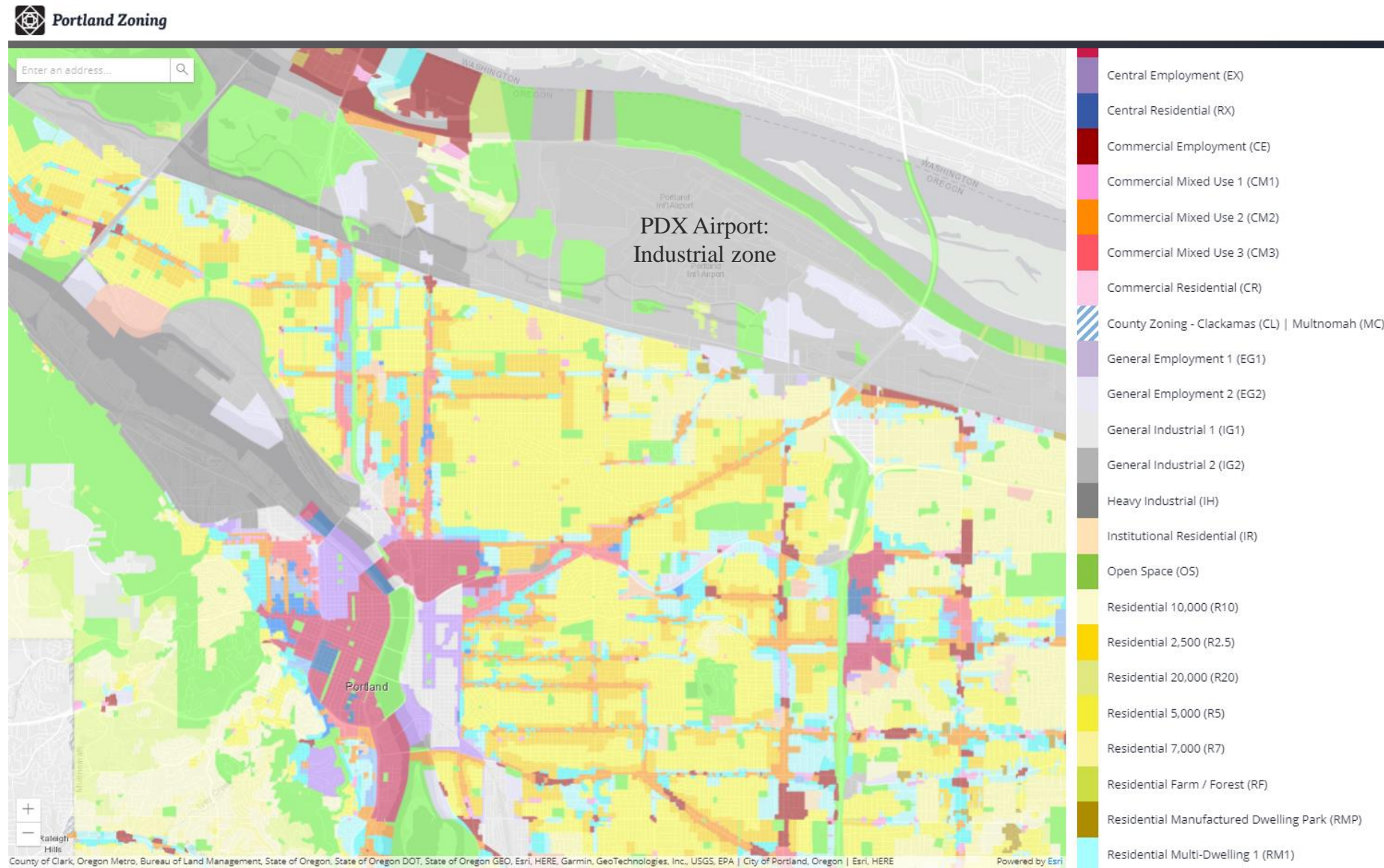
1. Zoning, which may be regulated by county and/or individual municipalities
2. Operational permits & regulations

Community Planning Strategies

Zoning

Communities can use zoning to restrict vertiport development to certain land use classifications; for example limit vertiports to commercial or industrial zones.

May require new or revised definitions of land use types.



Community Planning Strategies

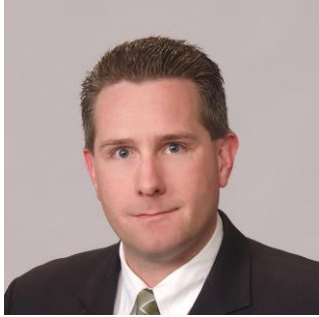
Operating Permits & Regulations

Municipalities can regulate much of the operational characteristics of UAM through locally-managed operating permits and regulations, much like taxicabs.

Operating permits and regulations can be established for...

- Vertiports (akin to airports)
- UAM service providers (akin to airlines)
- UAM ride brokers (akin to TNCs)

... managing such elements as vertiport siting, noise restrictions, operating hour restrictions (i.e. curfews), operational volume restrictions, minimum service levels, and the like.



Contact

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Thank You

Questions & Answers

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