CITY OF ORLANDO

URBAN AIR MOBILITY OVERVIEW

ORLANDO'S URBAN AIR MOBILITY AND TRANSPORTATION VISION

Urban Air Mobility has the potential to reshape the transportation landscape across the globe. Orlando's vision is not just to be one of the first cities with eVTOL flights, but to be the first city to properly engage the community and set up operations and permitting of Urban Air Mobility in a way that optimizes an eVTOL network for residents and visitors.

Orlando's Transportation Challenges

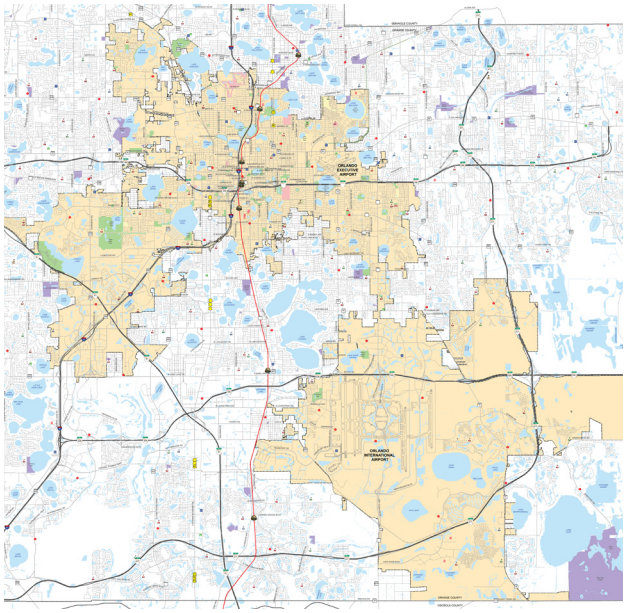
Orland is a polycentric region. We have dozens of nodes and commutes are bi-directional between nodes. To illustrate this, consider that when other regions add "express" lanes to their highway they will often opt to have the switch directions with rush-hour traffic. After an analysis of Central Florida and Orlando's main highway, Interstate 4, it was determined that there would be little-to-no benefit in doing this as the traffic going both directions tended to be equal. After the completion of a large project to reconfigure Interstate 4, we will have two sets of managed lanes on Interstate 4 to serve both directions

Because of Orlando's unique challenges, most current transit systems are inadequate to solve our region's transportation problems. Our commuter train, SunRail, which mirrors the route of Interstate 4, has demonstrated the demand for additional transit options but it takes time and additional development around the stations to reach the full benefit of the system.

As we look across Central Florida, the population continues to grow. Due to the lack of physical and legal boundaries in the region, it is possible for development to continue to spread to both coasts. This increased development could have a negative impact on our environment and our residents if not done responsibly. One of the major challenges is the sprawl, which can increase commutes and environmental impact.

Why Urban Air Mobility

We believe that Urban Air Mobility has the potential to solve some of our most pressing transportation challenges. Urban Air Mobility allows us to unlock a new opportunity in transportation to connect



disparate nodes without having to invest in additional infrastructure between the nodes. While it does require an investment in takeoff and landing facilities, that investment can be used to spur economic growth and can generate revenue to offset the initial costs. Often cities have financed rail or streetcar transit solutions through paying off bonds with the increase in taxes they generate due to the stations being in a specific area. That similar increase in economic activity could be provided by Urban Air Mobility.

In addition, if Urban Air Mobility becomes one of the primary modes of transportation, this could cause future sprawl across the region to be centered around activity centers which would consolidate transit centers with jobs, retail and entertainment. This could unlock opportunities for public transit throughout the region.

In comparison to highways, Urban Air Mobility provides a superior transportation option at scale. Urban Air Mobility has flexible routes, is environmentally friendly, drives economic growth, doesn't divide communities physically, requires less public infrastructure and can be less obtrusive for neighborhoods.

Why Orlando for Urban Air Mobility-Market Analysis

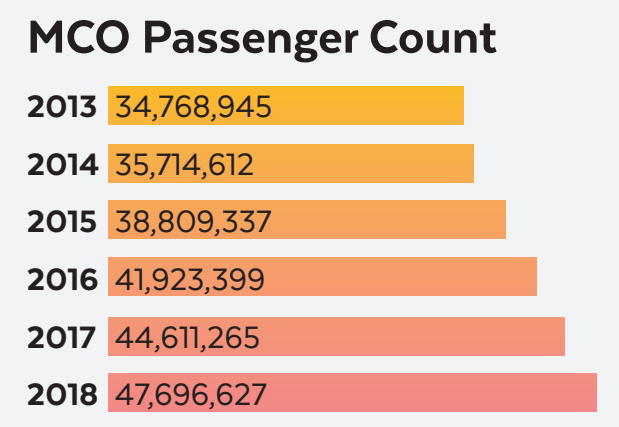
Orlando is a future ready city and is more prepared for Urban Air Mobility than any city in the US. Our transportation challenges mirror those of most mid-sized cities but Orlando brings a history of partnerships and innovation along with the necessary infrastructure and 75 million visitors to our region.

Orlando as a region relies on automobiles as the main mode of transportation. This is evidenced by the state recently investing $2.3 Billion in a project to widen and reconstruct Interstate 4, Orlando's major highway. As a region we have been focused on shifting to public transit. This effort dates back to being the first city to launch a bus rapid transit line and more recently a $800 million investment in a new 61.5-mile regional commuter rail line called SunRail.

Orlando's plans for transportation have up until now focused on the short-term needs. This includes finding dedicated funding for transportation, expanding the SunRail route to connect to the airport, enhancing bus rapid transit or street car connections in the downtown and expanding last mile connections such as ride and car sharing and dockless bike and scooter share.

Broader connections to other regions have been considered and are in the works. Brightline, a private venture providing rail service to Miami and south Florida, is expected to connect to the Orlando International Airport starting in 2021. An unsolicited proposal was submitted to the Florida Department of Transportation which would extend the passenger service from Orlando to Tampa. The Department may receive submittals from other interested parties. A decision on that proposal will be made before the end of this calendar year.

The new passenger rail system will connect at the new Orlando International Airport Intermodal Terminal Facility. The 500,000-square-foot facility consists of an automated people mover and a dual-platform, 4-track passenger rail system, to accommodate future rail projects. In addition, the terminal will provide increased capacity at the North Terminal to 45 million passengers annually while also providing the first stage of a new South Airport Complex.



POTENTIAL PILOTS AND COMMERCIALIZATION IN ORLANDO

The City of Orlando thinks it is realistic to provide real-life eVTOL operations on or before 2025 assuming FAA approval. As we see it, there are four main areas to focus on from our perspective:

eVTOL State/Local Regulations – We have experience issuing permits for vertiports and could utilize those existing regulations for initial facilities. FDOT also has a permitting process for any new vertiport in the state.

eVTOL Infrastructure – The existing vertiports and/or city-owned garages combined, airport property and large landowners/developers who are engaged in eVTOL provides ample infrastructure for the initial routes. The increased development activity across the region will allow for multiple future opportunities. As the owner of the local utility company, the city has a great working relationship to ensure adequate electric resources are available.

eVTOL Flight Regulation – This is the area where, as a city, we cannot assist greatly, as all airspace is regulated by the FAA. The airport has a good working relationship with the FAA and has indicated that there is a path for both testing and commercialization utilizing existing airport flight areas.

Community Acceptance – Our Urban Air Mobility takeoff and landing facility regulation is going to be greatly determined by community acceptance. We plan to utilize our existing community outreach processes in addition to partnering with Urban Air Mobility providers to ensure that the community is aware of the project, understands the advantages of Urban Air Mobility and becomes comfortable

with eVTOL vehicles taking off, landing and flying overhead. As part of the process, we will use existing measurement tools to understand community acceptance as well and ethnographic feedback from residents. While no change ever has 100% support, it will be important to ensure that we are not negatively impacting our residents. This is not something we think will be an issue with Urban Air Mobility.

PHASED APPROACH

Phase 1: Helicopter Pilot

Focus: Test community acceptance, infrastructure and FBO sharing, flight paths and potentially automated air traffic control technology (running in the background). Data and feedback to set local and regional policies.

Phase 2: Special Air Space Testing

Focus: Gain approval for special air space east of the airport and potentially connect to space coast

Phase 3: eVTOL Pilot

Focus: Test community acceptance, infrastructure and FBO sharing, flight paths and potentially automated air traffic control technology (running in the background). Data and feedback to set local and regional policies.

Phase 4: eVTOL Policy and Commercialization

Focus: Goal 2025

ROUTE & LOCATIONS

The City of Orlando believes that initial commercialization routes may be regional. This is because depending on the type of aircraft being used, the cost per trip of eVTOL will most likely decrease as the distance increases. For regional eVTOL, our best vertiport will be at Lake Nona. For intra-city routes, the best initial route will be between the Orlando International Airport and Downtown.

Orlando International Airport – The main airport provides not just access to the millions of passengers, there is also more than 1,000 acres of vacant land on airport property that could be used for initial research and development. The adjacent southwest property owner is engaged in both connecting their Lake Nona Town Center to the airport and proactively creating an environment for eVTOL to succeed. Tavistock Development Company, developers of Lake Nona, have plans in place to allow Lake Nona to become a aerotropolis of which eVTOL is a key component. Lake Nona is a planned community, in Orlando with a single developer. The estimated 2020 population of Lake Nona is 75,000 – 100,000. Tavistock has a long history of working with the city and other partners to pilot and commercialize new ideas and technology.

Downtown Orlando – Located just under 10 miles from the airport, downtown Orlando provides a great first connection point from the airport. The city owns ten garages in the downtown area, including GEICO garage, which already has a vertiport on the top level. The location is also next to an area slated to be the “Sports and Entertainment District” which could be an ideal location for an experience center. Downtown also provides an opportunity for eVTOL providers to attract customers that are looking to take eVTOL as an experience/attraction to a destination that provides premium experiences for them while they wait for a return flight. Additionally, most of the garages would be prime opportunities for reuse as a vertiport.

Other eVTOL opportunities with the city (these options may require additional public or private partners approval):

Florida Hospital/Advent Health

- Supply Chain Reliability
  - Moving medical devices/ supplies (low demand, high-cost equipment that isn't being used at one campus could be getting used at another)
  - i.e. Implantables, blood, platelets, devices, medications (i.e. snake bite anti-venom, sensitive cancer pharmaceuticals)
  - Radioactive materials
  - Medicine for naegleria fowleri – extremely time sensitive and manufactured locally
  - Transportation of critical organs for transplant
- Transporting patients from acute to non-acute settings instead of ambulances

Orange County Convention Center

- Convention traveler visiting for a convention and staying at a nearby hotel.
- 9 miles direct – 13 miles driving from airport
- 16-28 minute drive from the airport
- Convention Center hosts 230 events with about 1.4 million attendees each year
- Second largest convention center in the United States with continued expansion plans
- Four Hotels Connected via Pedestrian Bridge
- In the tourism corridor (I-Drive)
- Few residential areas in between
- I-Drive has additional last mile options (e.g. I-Drive Trolley)

Attractions

- Universal
  - 17 miles driving – 10 miles direct from airport
  - 16 – 45 minute drive from the airport
- Disney
  - 22 miles driving - 16 miles direct from airport
  - 24-45 minute drive from airport
- Large land owners
- Lots of visitors
- Care greatly about the experience
- Both attractions have ample last-mile solutions in place (buses, monorail, boats, gondolas)

University of Central Florida Campus Connection

- 13 miles driving – 12 miles direct
- 20 – 45 minute drive
- Downtown UCF Campus with 7,700 students
- A new 60-acre site being developed into an urban higher education setting with residential, commercial and education uses.
- Additional buildings being planned with more students
- Walking distance to LYNX central Station (Bus station and Commuter Rail Station)
- Connectivity to LYMMO (Free BRT)
- Electronic Arts Headquarters

Port Canaveral Cruise Terminal

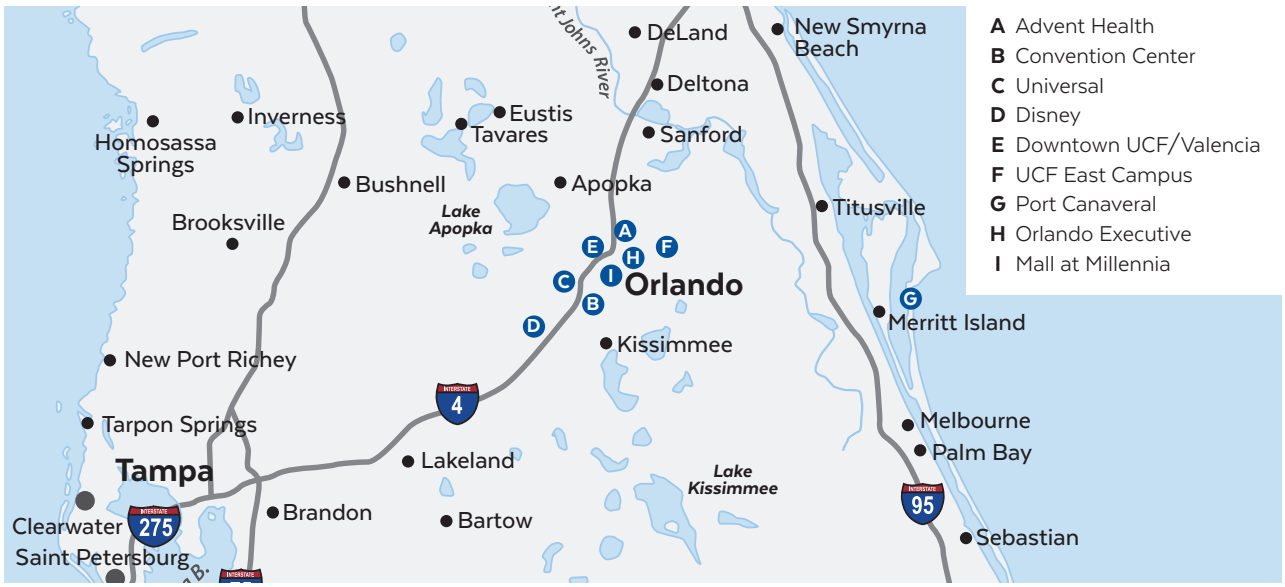
- 46 miles driving – 41 miles direct from airport
- 45-55 minutes
- Alternate options are $20 airport shuttles, cruise line bus, $110 taxi, $150+ charter
- Existing helicopter operations near the cruise port

Orlando Executive Airport

- Can be an easy option to connect from the main airport or downtown for initial pilot
- Managed by the same authority as the main airport.

Mall at Millenia

- Upscale mall 5 miles from downtown and 2.5 miles from the attractions area.
- Popular with locals and tourists.
- Could provide a good experience center opportunity as well.



PATH TO EVTOL REGULATIONS

We believe that local government will continue to be involved in the regulations regarding takeoff and landing facilities and permitting such facilities and potentially companies taking off and landing within the city. The FAA will continue to regulate the airspace but may allow local government to dictate specific flight paths for low flying aircraft.

We plan to develop the local regulations with an iterative approach by engaging various partners along the way as part of an Urban Air Mobility pilot. The existing regulations allow us to provide flexibility to bring eVTOL live as a pilot. If the existing vertiport/ helicopter framework isn't effective, we have other mechanisms to operate pilots within the City.

The goal of the pilot would be for the three partners involved to evaluate what regulations need to be implemented to ensure:

- Economic viability for the commercialization partner - predictability in permitting timelines, clear indications of where vertiports can be
- Economic viability for the public infrastructure – Determine if infrastructure should be publicly or privately managed and/or operated.
- Positive community Impact – Understand what regulations need to be in place to protect neighborhoods based on actual noise testing and community feedback

We have seen that new technology and transportation modes can have a regulatory framework created in one of the following ways:

1) Formal city pilot – Relaxed initial framework created to understand impact with full reporting between partners. Final framework set based on partners' mutual needs
2) Lobbying for regulation – For simple incremental policy changes, often policy teams inside a city can work with companies to understand their needs and create legislation that allows an operation that won't have a negative impact. For larger policy changes, this can result in regulation that is overly restrictive for innovation and/or does so based on a hypothesis of operations in a City
3) Companies operate on their own – Often times (as is the case with eVTOL) existing policy did not account for the new technology. This means companies can enter a market without adjusting the policy. The potential for negative feedback from policy makers and residents is high and can result in over regulation to stop why residents and policy makers might see as illegal activity.

We are prepared to work with Urban Air Mobility providers on the first option for eVTOL to set a policy framework that can work for all partners and be used by other cities in the future.

PRIVATE OR PUBLICLY MANAGED URBAN AIR MOBILITY NETWORK

There are a variety of outcomes for managing takeoff and landing and flight networks in the region. We know the private innovation and transportation will allow the network to be successful, but we also want to be mindful in oversaturation of takeoff and landing facilities, cooperation in the air and on the ground and ensuring that those investing in Urban Air Mobility facilities are able to see a return on their investment. One of the outcomes from a pilot for us will be an understanding and recommendation locally on how to proceed. Our airport partner, who has experience managing a competitive takeoff and landing network at their two airports, will play a key role in helping us to understand this. Currently, by city code, all new "airports" within the city are subject to the approval of the airport.

INFRASTRUCTURE

Initially we believe that existing vertiports could be retrofitted for eVTOL use. The existing vertiports would require permits for the physical changes (enhanced electrical needs and additional structural improvements) that are being made.

The city's development partners are also prepared and planning to build new vertiports for eVTOL. Under current city regulations, a new vertiport would require signoff from the airport, FAA and is managed by our planning department. This permit process usually takes approximately four months. If the vertiport is being added as part of a larger project (e.g. new high-rise or parking facility), the permit could be issued as part of that project's approval without extending the timeline for the project.

Once the planning approvals are granted, construction permits must be applied for and issued. Our commercial turnaround times for plan review are targeted at 10 days but could require multiple reviews. The biggest factor will be hiring contractors well versed in Florida building code.

To assist with the process, the city staff who would review the plans can meet with the project team prior to submittal and provide in-person feedback on the plans.

As an example, Johnson and Johnson recently built a $30 million facility in the city and by working with the city in advance of submittal, they were able to receive their permits in approximately 30 days.

CURRENT STATE/LOCAL REGULATIONS

Currently the FAA is the only regulatory body that we are aware of that has any regulations in place specific to eVTOL.

From a local level, the only regulations in place are those that impact existing vertiport rules. Existing vertiports are allowed in certain areas and require a conditional use permit. As part of the permitting process, our planning team looks at:

- Feasibility. That the proposed vertiport is operationally feasible.
- Safety. That the FAA considers the proposed vertiport to be safe for the conduct of the type and volume of aeronautical activity proposed to be conducted thereon.
- Location and Specification. That the location and the plans and specifications of the proposed vertiport conform to the requirements of Section 58.850 of City Code.
- Frequency. One landing and/or take-off in a twelve (12) month period shall not constitute a vertiport.
- Fire Prevention. That such plans and specifications conform to all other requirements of law relating to construction and fire prevention.
- Air Turbulence. That, if the proposed vertiport is to be elevated on a building or other structure, that air turbulence which may be created by rotorcraft landing and taking off, will not cause dust, sand, water or other material to fall on any property other than that controlled by the applicant.

- Need. That the applicant has a bona fide need for such vertiport and that the public welfare will not be adversely affected by the establishment and operation of the vertiport taking into account the following factors:
  - The applicant's need to establish the vertiport
  - The availability of other vertiports which the applicant could use in lieu of the proposed vertiport and their proximity to the site selected for such vertiport
  - The proximity of the vertiport to areas which could be used as emergency landing areas in the event of mechanical malfunction of rotorcraft using such vertiport
  - The proximity of the vertiport to fire stations
  - The proximity of the vertiport to tall buildings, other navigation hazards and existing uses which would present a public safety hazard in case of an aircraft crash
  - The proximity of the vertiport to residential areas, nursing homes, assisted living facilities and schools
  - The proximity of the vertiport to airports and to the flight patterns of aircraft using such airports
  - The benefits to be derived by the public from the establishment and operation of the vertiport, if any
  - The nuisance effect, if any, of the vertiport and its associated rotorcraft operations on vehicular traffic
  - The environmental impact of the vertiport, if any, including, but not limited to, noise pollution
  - The proximity of the vertiport to storage facilities for combustible or explosive materials or to other hazards.

More specifics can be found in city code Chapter 58 part 4P: library.municode.com/fl/orlando/codes/code_of_ordinances?nodeId=TITIICICO_CH58ZODIUS_PT4OTSPUSST_4PVE

Additional requirements related to types of veritports can be found in city code Chapter 8 Article V: library.municode.com/fl/orlando/codes/code_of_ordinances?nodeId=TITIICICO_CH8AV_ARTVAEAC

State of Florida Statute requires FDOT approval for new airports (including vertiports) in Florida. More information can be found in State Statute 330.30leg.state.fl.us/statutes/index.cfm?App_mode=Display_Statute&URL=0300-0399/0330/Sections/0330.30.html

Outside of land development the other local regulations that would impact vertiport development are the State of Florida Building Code which is concerned with keeping the public safe. Vertiports for Urban Air Mobility should be able to be constructed under the current state building code without any issues. The city's current noise ordinances are not specific to aviation.

These are the regulations we are currently aware of. Depending on scope and scale of the project other federal, state and local regulations may apply

MORE INFORMATION

The City of Orlando and our regional partners are looking for eVTOL partners for piloting and commercialization. For more information please contact Matthew.Broffman@orlando.gov.