

Civil aviation authorities (CAAs) around the world are applying extensive resources to the newest members of the aviation industry: AAM and vertiports. But in order to integrate both of these new entrants into the aviation ecosystem, some key issues must be discussed.

The first question you must ask is: what problem are you trying to solve? Often times, city planners ask, how can we incorporate AAM and vertiports into our city? But they fail to ask how integrating AAM and vertiports can solve a problem, fulfill a need, or provide benefit to the area it is deployed in. If it cannot solve these problems, both AAM and vertiports tend to fail. There have been countless public hearings, where people have rejected the use of AAM, or refused to build vertiports in their respective areas, if it does not provide benefit to the local community and the society as a whole. Locations that come to mind include Paris during the 2024 Olympics, where Parisian locals refused to allow an AAM flight or use of vertiports during the event.¹ This was supposed to be the premier AAM flight of the world, bringing about much national interest, and a model for the world to adopt. Instead, it became an example for why societal acceptance is key in flying and implementing new technologies.² Two other examples are Santa Monica Airport, California, and Utah state within the U.S. In Santa Monica, the local government decided to close a famous general aviation airport used for filming major movies, rather converting it into park space as well as expensive housing.³ The citizens of Santa Monica felt that the airport was an avenue for the rich, and locals did not benefit from this.⁴ During a hearing in Utah a few years ago, AAM was met with heavy criticism for also promoting a new avenue for the rich to enjoy, with no benefit to the middle class, or connections with other modes of transportation. Such public hearings are becoming a common theme across many parts of the world.

Besides societal acceptance, AAM and vertiport development must fulfill a need. It is not enough to bring in emerging aviation merely as a science project, hoping it works in the future, and wait twenty years before it brings any added value to the society. If you expect to use the model of, “build it and they will come”, this is often times bound for failure. But if you develop based on a need for the community, and connect with other modes of transportation, you will find that society will accept AAM, funding will readily be available, and integration with other modes of transportation will become a reality. When incorporating AAM and building vertiports that fulfill a need, you can build infrastructure that will earn the funding you are requesting, and you will develop an economic model

¹ [French protests at DGAC offices against eVTOL plans for Paris Olympics](#)

² [Flying taxis at Paris Olympics criticized by councilors](#)

³ [A 107-year-old California airport to close. Here's what comes next.](#)

⁴ [City confirms Santa Monica Airport to permanently close on December 31, 2028](#)

that sustains local businesses for years. For example, if you are building a vertiport that is made for cargo flights, you may want to build a vertiport closer to industrial centers, near shipping corridors, close to major airports, and connect to other forms of transportation.

Currently, standards are available in Europe, US, Australia, and other places for the development of vertiports. But what should a vertiport really look like? An airport is designed for an aircraft to land on a strip of asphalt or concrete on a good day and a bad day. The design fully takes into consideration the weight of the aircraft, the wingspan, braking capabilities, bad weather, and a variety of other parameters. If the aircraft lands at a velocity that is too fast, and cannot brake before the end of the runway ends, there is a runoff area which is actually a softer form of asphalt, allowing the aircraft to slow down through increased friction between the tires and the asphalt, bringing the aircraft to a full stop. In order to develop such safeguards for airports, CAAs have done years of testing with aircraft to find out how they operate on a good day and a bad day. The parameters developed by CAAs today for vertiports are based merely on a guess of how AAM operate. The FAA has been successful in attaining limited data from AAM manufacturers to land at a developmental vertiport, such as weight, wingspan, and takeoff distance. Although these parameters are essential, other factors need to be determined for the development of realistic vertiport standards. In essence, these standards are just an educated guess. In 2024, ICAOs Vertical Flight Infrastructure Working Group (VFIWG) dedicated to developing vertiport guidance at an international level, asked AAM companies to provide similar parameters as was requested by the FAA. The information they received was virtually nothing at all. In this case, inferences and educated guesses become the means of developing these parameters. However, most AAM aircraft take on the characteristics of both aircraft and helicopters. This means that takeoff and landing failures can mimic those of aircraft, helicopters, or a combination of the two. Do current vertiport designs accommodate such failures? The answer is no. To solve this problem, CAAs must develop dedicated corridors of operation, and build vertiports based on intense performance-based testing. Such information can be attained by signing non-disclosure agreements between CAA and OEMs. This will encourage companies to be forthcoming with their data without fear of punitive consequences, protect proprietary data, and generate vertiport standards that are truly indicative of operating characteristics exhibited by AAM. Such test sites and operational areas are being developed worldwide. China has created corridors of testing in a few cities. The FAA has developed the eVTOL Implementation Pilot Program (eIPP), designed to pair OEMs with testing corridors in various cities around the US as well.

These are technical parameters that need to be understood, analyzed, and acted upon in order to provide safe, sustainable, and scalable AAM operations in the near future.