

The logo features the letters 'AAM' in a large, white, serif font against a light blue background. A white, stylized aircraft wing or swoosh curves across the letters from the bottom left to the top right. Below the 'AAM' letters, the word 'EUROPE' is written in a smaller, white, sans-serif font.

**ADVANCED AIR
MOBILITY DISCUSSION
PAPER 3**

**Winning over
Society - Achieving
Acceptance for
AAM**

**AIRPORTS COUNCIL
INTERNATIONAL**

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As early as summer 2024 the first electrically propelled Vertical Take Off and Landing aircraft (eVTOLs) are expected to begin populating the skies over cities and regional areas alike. For this to happen on a regular, sustainable and commercially viable basis, several pieces of a large puzzle still need to come together. These include ample testing and pre-commercial operations in real life environments, expediting development for the missing parts in the regulatory Advanced Air Mobility (AAM) framework in the urban and airport environment, raising public awareness of the fast technological development and safety of this new technology, demonstrating social, environmental and mobility benefits that will accrue advantages to everyone.

However, outside a small group of AAM professionals and practitioners the world of air taxis and drone delivery services has a futuristic tinge – something that may happen one day rather than something that is happening now. This is a major hurdle that this paper seeks to address, by identifying actions required to raise awareness amongst the general public and galvanise support by regulators and political decision-makers in the European institutions, as well as at the appropriate national and regional administrations.

Obtaining the buy-in of the general public and authorities is an essential step for the fledgling AAM industry on the road to widespread, sustained and viable operations, which will concretise the benefits it can bring to society as a whole.

How to foster societal acceptance?

A detailed [study](#) published by EASA in May 2021 revealed that an overwhelming majority of respondents (83%) are positively inclined towards AAM and 71% open to trying such services. While the survey did not distinguish between drone and air taxi operations, more work needs to be done on specific attitudes towards people-carrying eVTOL operations. Key considerations include:

- Noise and visual pollution, (especially when considering potential high levels of traffic);
- Green flying;
- Safety for passengers and people and property on the ground;
- Security;
- Accessibility (affordability) of air taxi operations to the general public;
- Perceived societal benefits such as more efficient public services (medical emergencies, police, firefighting...), improved mobility and connectivity including poorly connected regions, easing of traffic bottlenecks, economic/employment generation;
- Good integration of Vertiport infrastructure into the urban environment.

In the absence of real-life exposure, surveys are an effective tool to gather general views and attitudes of the travelling public to this emerging form of mobility. However, by definition, survey feedback is a mere snapshot of an abstract perceptions that might change with personal exposure. The opposition to windfarms or photovoltaic installations in ones' own neighbourhood are a good example of NIMBYism, where the public may generally accept certain policy options as long as one is not personally affected by them. The same can

be expected in the case of AAM unless a concerted awareness campaign by industry and policy makers is undertaken. This fledgling technology should be presented as a driver for technological innovation, a contributor to sustainable mobility aimed at all segments of society and an opportunity to deliver solutions faster, more flexibly and more cheaply.

As with many new inventions and technological advances, public scepticism and concern about safety tends to be highest in the early stages. Highlighting the enormous efforts made by manufacturers and regulators to ensure that eVTOLs exceed the high safety levels of traditional aircraft (10^{-9} which would mean one catastrophic failure for every billion flight hours) has to be at the heart of any awareness campaign.

ACI EUROPE therefore recommends the following approach to drive societal acceptance of Advanced Air Mobility:

1) An active debate at local, national and European level, not restricted to aviation professionals, on the benefits and implications of AAM on:

- a. Employment creation;
- b. City planning and intermodality;
- c. Innovation and competitiveness of the city or region;
- d. Revival of under- or unused infrastructure that will enhance connectivity to remote or underserved locations.

2) Bring AAM to the people:

- a. Development of a structured information and awareness campaign aimed at non-experts at the local and regional government level that can be extended to the media and general public;
- b. More demonstrators should be promoted at local levels to let people see, feel and hear what AAM services are really like and understand which societal benefits they can bring;
- c. Equip local administrations with the necessary know-how and expertise to allow them to support demonstrators or early implementation;
- d. Actively involve media in the debates and present industry viewpoints at conferences to raise awareness;
- e. Highlighting the safety of the new transport mode through high certification requirements and regulated operational procedures.

3) Encourage wider industry collaboration and information sharing:

- a. Data and information regarding operational performance, noise mitigation, integration of eVTOL services into the airport environment;
- b. Sharing feedback from demonstrator projects for mutual learning and further development of an efficient regulatory framework to facilitate AAM;
- c. Development of working operational and business models to get the industry airborne.

Case Study 1: Urban-Air Port Demonstrator in Coventry, UK, April 2022

UK Drone- and Vertiport developers and ACI EUROPE member Urban-Air Port showcased the world's first fully functional vertiport in Coventry, UK. "Air One" was open to the public for a three week period clocking up over 15,000 visitors including global businesses, government officials, press, schools and academia, and the general public. Over 100 drone flights were carried out demonstrating to decision-makers and the public the viability of airborne transport in urban environments.

Facts and Figures:

- Approx. 250 jobs were created including design and engineering, fabrication and manufacturing, construction, city planning and the education sector (industry working groups, university programmes and school involvements), RFFS, intermodal transport, retailing and F&B concepts and green energy;
- Highly effective public engagement through the 15,000 visitors from local councils, industry, regulatory bodies, school children and members of the public;
- The event was leveraged to invite feedback from surveys and personal discussions to better understand public and regulatory expectations and concerns;
- City Planning & Local Authorities obtained first hand know-how and exposure through the demonstrator, connecting and encouraging collaboration between local energy providers (National Grid), Urban Planning Departments, property developers and Airspace Regulatory Bodies, Transport & Accessibility Consultants and others;
- Urban-Air Port and Coventry City Council produced a mock Planning Application for the AirOne Vertiport to better understand and identify the key points of a vertiport planning application. This has successfully been shared with Planning Departments across Europe.

Urban-Air Port (UAP) has closely liaised with the CAA since 2020 to obtain approval for 150 cargo drone flights in Coventry's City Centre and has developed a strong collaboration that includes UAP feedback on CAA's UAM/AAM publications. For example, UAP have furthered CAA's CAP 2578 eVTOL downwash/outwash to produce a comprehensive analysis incl. eVTOL downwash modelling and its hazardous impact on ground infrastructure.

More recently, UAP have conducted a series of workshops with 30 participants of the FAA's Next Gen team to share UAP's findings on technical matters such as the challenges and mitigation methods for eVTOL downwash/outwash, mitigation of noise pollution and other environmental impacts including green energy sources.

Case Study 2: UrbanV and Societal Acceptance in Rome, Italy

UrbanV has the goal to launch in Rome, together with Volocopter, a commercial air taxi service by the end of 2024, which will coincide with the start of the 2025 Jubilee, an important event for the Catholic Church. So, Rome will be one of the very first cities worldwide to have commercial operations with manned eVTOL and for the 2025 Jubilee, UrbanV expects to welcome at its vertiports more than 50.000 visitors and 2.000 travellers.

UrbanV, together with Aeroporti di Roma, has worked a lot on the societal acceptance topic since its inception; in fact, a mock-up of one of the eVTOLs, currently being developed and certified (the Volocopter Velocity 2-1), was displayed for two weeks in October 2021 at the entrance of Rome-Fiumicino Airport "Leonardo da Vinci" and at the city centre (Piazza San Silvestro). In the same period, UrbanV performed a survey for the visitors and the stakeholders invited to the event such as airport stakeholders, local community stakeholders, municipalities, institutional entities, universities, students and Order of Engineers and other Associations. The location in the city centre was near to the Italian Parliament in order to invite also Members of Parliament and the international press. The event received great and positive interest and success.

UrbanV also created an ad-hoc environment where it is possible to test all ground and flight operations with the possible presence of the public. This space is the Pianabella Sandbox, which extends over an area of 33 hectares south of Rome-Fiumicino Airport "Leonardo da Vinci". Inside this area UrbanV and Aeroporti di Roma built the first Italian test vertiport designed according to the Prototype Technical Design Specifications for Vertiports published by EASA on March 2022.

This vertiport hosted the first Italian eVTOL flight in October 2022, which was performed by Volocopter, with the experimental 2X model. It was the first occasion in Italy to bring the public closer to this new form of mobility, showing an eVTOL live and how silent it is.

In the last 2 years different flight tests with drones were conducted in the sandbox to demonstrate that it is possible to have UAS operations simultaneously and independently from airport activities, which is nowadays not possible according to the regulations.

During 2024 numerous tests are underway for both ground and flight systems. This will allow for the possible opening of the Sandbox to an external audience, in order to be able to convey this new concept of AAM.

Besides, with the aim of bringing the public closer to this new type of transport and understanding its enormous potential, vertiports in general will need an external "third party visitor" component.

UrbanV has promoted studies on the topic, also participating in national and international working groups and conferences to discuss it widely and proactively.



The goal is to allow the public to learn about AAM live, being able to touch it with their hands and for this reason, the first commercial UrbanV vertiports will try as much as possible to "open the doors" to third party visitors such as curious hi-tech enthusiasts, students and teenagers – the future users of AAM.