

Advanced Air Mobility Symposium Making eVTOL a Reality

SUMMARY



Introduction

125

ATTENDEES

45+

COMPANIES

In early June, Avolon hosted its inaugural Avolon-e Advanced Air Mobility (AAM) Symposium – *'Making eVTOL a Reality'*. Avolon-e was launched in 2021 to become a pioneer in developing the eVTOL sector which we believe is the first step in the long journey of decarbonising air travel.

Over the years, Avolon has grown to become the second largest aircraft leasing company worldwide, connecting 142 customers to our 832 aircraft platform. It is our ambition to connect the latest technology with aviation leaders that inspired this AAM symposium, bringing together a diverse group of industry stakeholders to discuss the commercialisation of AAM globally.

The symposium was attended by 125 people from leading airlines, regulators and eVTOL ecosystem developers. The diverse range of attendees reflects an acknowledgment that AAM, and the adoption of eVTOL travel, is fast becoming a reality.

The AAM industry faces challenges like any emerging technology. Some of the most successful aviation businesses today started up in the most uncertain times. Like aircraft taking off, Avolon has always embraced headwinds as a motivation to partner, solve and innovate. Bringing eVTOL to reality in 2025 is the type of challenge we are familiar with, and this symposium and networking reception offered an opportunity for attendees to highlight challenges, identify partnerships, and exchange solutions.

The symposium enabled participants to hear, first-hand, a discussion on the eVTOL regulatory backdrop from some of the leading aviation regulators. This important and insightful discussion detailed the progress they are making in developing frameworks for both eVTOL aircraft certification and operational infrastructure.

This paper summarizes the key takeaways from each of the sessions. Sincere thanks to all attendees who made this event a reality. We look forward to hosting you again next year.

Onwards and upwards!



Marc Tembleque
Head of Avolon-e



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Avolon-e Keynote



Dómhnaíl Slattery
Chief Executive Officer, Avolon

Dómhnaíl Slattery outlined Avolon's higher purpose to take a leading role in the decarbonisation of the global aerospace industry. One of Avolon's sustainability commitments is to own 75% of new technology aircraft across its portfolio by 2025. This includes eVTOLs, which will reshape the ultra-short-haul travel market.

Dómhnaíl cited Avolon's strategic partnership with Vertical Aerospace, which has positioned Avolon at the forefront of the eVTOL landscape – particularly as the market begins to grasp the enormous opportunity for the deployment of Vertical's VX4 aircraft across the globe. Dómhnaíl highlighted how Avolon's global footprint and deep industry relationships have created further collaboration and partnership opportunities.

This is reflected by Avolon's placement of its entire VX4 orderbook with leading international airlines. For these airlines, Dómhnaíl detailed that their sustainability ambitions and respective broad and diverse operating networks made them ideal strategic partners for Avolon. The strong demand for Avolon's VX4 orderbook confirmed Avolon-e's initial assessment of the AAM sector that demand for zero operating emissions eVTOL air travel would outstrip supply.

Central to delivering on the AAM vision will be Avolon remaining true to its TRIBE value of transparency, pursuing an open-source approach to eVTOL commercialisation, collaborating closely with industry-leading partners and stakeholders to ensure the safe and swift introduction of eVTOLs.



Avolon's higher purpose is to take a leadership role in decarbonising aviation.



Pictured: VX4 eVTOL model in Avolon's HQ reception.

Vertical Aerospace Keynote



Eduardo Dominguez-Puerta
Chief Commercial Officer, Vertical Aerospace

Eduardo Dominguez-Puerta emphasized that the development of eVTOL aircraft has been progressing for over a decade despite only catching the public's attention recently. This industry has been growing quietly over time, and only now are large incumbent aerospace players entering the space.

While Eduardo welcomes these new entrants, he argued that the advantage remained with existing eVTOL developers – like Vertical – who have already made significant and tangible progress on their eVTOL journey. In terms of Vertical specifically, Eduardo detailed that they are ready to partner with a broad range of industry stakeholders. Vertical's pure play OEM approach – which contrasts with many of its peers who will seek to operate their eVTOLs themselves – requires high quality partners who share the same vision. Partners need to be committed to building long-term relationships to support the creation of an entirely new industry and form of transport.

Eduardo strongly encouraged attendees to take a pragmatic approach to eVTOL commercialisation, starting small with concrete use cases. He implored attendees that there is still significant progress to be made across the industry.



Now is the time to stand up and partner across the entire aviation industry to make the electric flying dreams a reality.



PANEL 1:

Airlines, Best Placed to Pioneer eVTOL Operations



Capt. Sergio Quito

Chairman of the Safety Management Systems Committee and eVTOL Project Leader



Masato Kunezaki

Director of Air Mobility Business Creation



Capt. Liong Tien Ling

Chief Safety Officer and eVTOL Project Leader

Moderated by *Jim Morrison, Head of Portfolio Management at Avolon.*

The three panellists are all eVTOL project leaders at their respective airlines, and they provided tangible insights into the progress they have made with Avolon-e and Vertical in the past year to design eVTOL networks, identify infrastructure requirements and define operator business models to ensure viability of eVTOL operations.

All panellists echoed that eVTOLs will deliver a new business opportunity and support progress against their sustainability commitments – a growing focus for not only the companies themselves but that of their investors. Beyond the opportunity to progress sustainability objectives, the AAM market represents a potential new source of revenue by “tapping the unexploited real estate” in the low-altitude airspace and the disruption of the helicopter market through a safer, quieter, and more affordable product for all passengers. The panellists also highlighted that the ultra-short-haul travel market could now be unlocked for airlines, allowing them to get closer to customers through end-to-end single-ticket journeys.



eVTOL will deliver for airlines a new business opportunity and support progress against their sustainability commitments.

The panellists shared that collaboration is critical to making eVTOL a reality, an ever expanding workstream in the eVTOL development Joint Working Groups led by Avolon-e. Partners are needed across the value chain to create the necessary support structures to ensure eVTOLs enter service, and these Working Groups will keep expanding to tackle that. There is the requirement for the appropriate infrastructure for these aircraft to operate efficiently, for buy-in from regulators and from air traffic management, for pilot training and, most importantly, for broad public trust in the aircraft.

PANEL 2:

Ecosystem, The Creation of an eVTOL Ecosystem is Underway



Matheu Parr

Customer
Business Director
Rolls-Royce Electrical

ferrovial

Brad Miller

Managing Director
UK and EMEA
Ferrovial Vertiports

NATS

Andrew Sage

Director Safety
Transformation

Moderated by *Andrew Macmillan, Director of Infrastructure at Vertical Aerospace.*

Leading aviation companies around the world are significantly committed to AAM, and are working hard at developing the infrastructure and ecosystem elements needed to commercialise eVTOL.

Andrew Sage from NATS, the UK's leading provider of air traffic control services, controlling one of the densest airspaces in the world, noted that – for the first time – airspace is converging on an integrated and unified approach, with automation and digitisation as central features. He also highlighted that NATS is embracing AAM as one of many developments in the market that reinforce the need to modernise today's airspace structures and the way it's managed.

All panellists agreed that collaboration across industry stakeholders will be crucial for ensuring successful ecosystem development, with challenges of commercialisation being tightly interlinked with infrastructure requirements.

Panellists highlighted that eVTOL operators will play a central role in the design of vertiports, helping lend their expertise to vertiport developers and ensuring that the designs are optimally built. Additionally, Brad Miller from Ferrovia Vertiports argued that vertiport design must keep transit times low to maximise the core investment case and time-saving proposition of eVTOL travel.

What does the future of eVTOL ecosystems look like?

Matheu Parr of Rolls-Royce Electrical outlined that they are projecting for 7,000 eVTOL aircraft to be in service by 2030 worldwide. This underlines the importance of developing the broad AAM ecosystem from deliveries to infrastructure to air traffic control. Panellists encouraged those in attendance to engage with partners at a local level and start the groundwork as soon as possible. Focusing on concrete use cases accelerates learning, with meaningful commercial success at entry-into-service being an important milestone for building confidence in the sector and unlocking government and societal support in scale.



Collaboration across industry stakeholders will be crucial for ensuring successful ecosystem development.

PANEL 3:

Regulators, Crucial to Enable eVTOL



Roberto Honorato

Head of Airworthiness



Sascha Schott

Section Manager
– Drones



Lionel Tauszig

Senior eVTOL
Certification Manager and
Vertiports Expert

Moderated by *Enda Walsh, UAS Manager at the Irish Aviation Authority.*

Representatives from two of the leading civil aviation authorities where eVTOLs will be adopted – the European Aviation Safety Agency (EASA) and National Civil Aviation Agency of Brazil (ANAC) – engaged in a robust discussion focused on regulatory timelines and frameworks.

Both EASA and ANAC are taking leadership roles in the industry. The regulatory framework that will be deployed by EASA will go far beyond aircraft certification, and will include regulatory guidance for operating environment, including areas such as pilot licencing, vertiport design and continuing airworthiness. ANAC stated that regulatory compatibility across different markets would be important and beneficial but asserted that full harmonisation will not be necessary to enable a safe entry-into-service. ANAC's leading role in eVTOL certification and validation is driven by Brazil's future as both a prime market opportunity and a future eVTOL aircraft exporter.

EASA outlined that they were comfortable with their current progress and timelines to complete the EU regulatory framework they are developing for UAS and eVTOL operations, and that already in March 2022 EASA were releasing the world's first prototype technical specification guidance for vertiports in parallel to developing other regulatory material, to avoid entry into service roadblocks.

EASA highlighted a recent Societal Acceptance Survey that they conducted which revealed that European consumers feel safe in their current aviation environments and expect this will be the same for eVTOLs. Security, privacy, and wildlife protection are critical concerns. There is an opportunity to de-risk social acceptance by sharing with local governments early on the benefits eVTOL brings over existing modes of transport.



There is an opportunity to de-risk societal acceptance by sharing the benefits eVTOL brings over existing modes of transport with local governments early on.

VIP Guest Keynote



Tony Fernandes

Chief Executive Officer
of Capital A, Co-Founder of AirAsia



Tony Fernandes outlined that innovation has always been part of Capital A's business (formerly AirAsia Group), and that eVTOLs are both a natural progression and fit for the group, helping to bridge the gap between the commercial airline business and the ridesharing business 'airasia ride'.

eVTOLs will enable AirAsia to deliver a truly integrated end-to-end customer journey, while also further revolutionising air travel by providing AAM to a whole new range of passengers.



Capital A's partnerships with Avolon and Vertical are vital to delivering zero-emissions eVTOL travel to South East Asia... eVTOLs will enable AirAsia to deliver a truly integrated end-to-end customer journey, while also further revolutionising air travel.

Capital A's partnerships with Avolon and Vertical are vital to delivering zero-emissions eVTOL travel to South East Asia, helping position Capital A as the region's operator of choice for sustainable air travel. Tony Fernandes cited the long-standing relationship with Avolon, which has a proven track record of delivering for its customers, as an important factor when identifying who to partner with in the eVTOL and AAM spaces.

Lastly, Tony highlighted that, for eVTOLs to become commercially successful at scale in South East Asia, they will need to be a mass-market product and attractive for all travellers.



Pictured above:

Tony Fernandes presenting in Avolon's HQ auditorium.

AVOLON^e

Thanks to everyone who attended
our inaugural Avolon-e symposium



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