

# Ready for take-off?



**A**s we look towards 2023, aviation regulators, investors and industry firms are making marked progress towards a new sector of aviation: advanced air mobility (AAM). This progress stems from a variety of factors, including reducing urban congestion, capitalising on innovation, and the environmental benefits of reduced carbon emissions. In the near term, many manufacturers are focusing their developments on electric vertical-takeoff-and-landing aircraft (eVTOL)

for passenger or cargo carriage. A myriad of manufacturers are seeking to enter the eVTOL market, with significant investment already occurring. For example, market leaders like Joby Aviation reported 2022 Q4 financial statistics of USD1.1 billion in cash, cash equivalents, restricted cash, and investments in marketable securities. German eVTOL manufacturer Lilium reported USD119 million from existing and new investors following its IPO in November 2022. These are just two examples of significant investment trends we are seeing in the VTOL sector. Below, we discuss two key markets (Mid-East and Southeast Asia) and provide investment insight on the eVTOL industry.

## MARKET READINESS

In our quest to advise on profitable investment opportunities, we note that certain nations are demonstrating key components of market readiness for eVTOL operations. True market readiness will depend in part on the ingenuity of industry and governmental approval of eVTOL aircraft and flight. This task is certainly no small feat—regulators have stated that approval of an aircraft design alone often

takes several years. Nevertheless, eVTOL manufacturers and governments have advanced towards the approval of eVTOL aircraft and its supporting infrastructure.

## MIDDLE EAST

Key developments have occurred in recent years across the Middle-East, including in Ras Al Khaimah (RAK), Dubai, Abu Dhabi and Saudi Arabia. In March 2023, vertiport developer VPorts announced a partnership with RAK to build and operate a vertiport at its international airport. This partnership has the support of the emirate's aviation regulatory authority, the Department of Civil Aviation, Ras Al Khaimah. According to VPorts, its initial growth strategy in the region will be dedicated to the transportation of time sensitive cargo and medical patients. This announcement comes on the heels of another vertiport announcement by Skyports, which indicated in February 2023 that the state head of government in Dubai had approved Skyports vertiport design for locations in and around Dubai. VPorts have also indicated that by 2030 they intent to extend its vertiport networks to all major industrial areas in the UAE and currently such vertiports will be open for all eVTOL manufacturers.

Also in Dubai, the development of an AAM “incubator” was announced in December 2022. This incubator will be dedicated to flight-testing airspace and the development of new technologies. Dedicated airspace for testing is an important element of aircraft design and approval, and can also be used to test AAM supporting services, like Unmanned Traffic Management. This proposal, also by VPorts, has the support of the regulatory authority of the United Arab Emirates, the General Civil Aviation Authority (GCAA).

In Saudi Arabia, eVTOL developer Lilium announced in 2022 a Memorandum of Understanding with the nation's flag air carrier, Saudia. The project would generally involve the development and operation of

Simon Spells, Manoj Purush and Julia Norsetter of Reed Smith shine a light on the eVOTL investment opportunities taking into account advances in the Middle East and Southeast Asia regions.

an eVTOL network across Saudi Arabia. The cooperation would include Saudia's purchase of 100 jets from Lilium. Importantly, the airline also set forth its intent to assist with Lilium's regulatory approval process in Saudi Arabia.

### SINGAPORE AND SOUTHEAST ASIA

Several eVTOL manufacturers have set their near-term sights on countries in Southeast Asia, and Singapore in particular, as particularly ripe for swift regulatory development enabling eVTOL operations. Indeed, the Singapore civil aviation authority's current National Aviation Safety Plan includes a goal to develop a regulatory framework for eVTOL aircraft and vertiport operations by 2023. Urban issues like congestion and road pollution likely contribute to the Asia-Pacific region's keen interest in enabling eVTOL use.

eVTOL manufacturers are taking note of the opportunities in Southeast Asia. For example, Volocopter, a German-based eVTOL manufacturer and operator entered into agreements with the Singapore government in 2022 to establish an advanced air mobility development park. Following a recent visit to Singapore, the manufacturer reiterated its intent to become the world's first urban air mobility (UAM) provider in 2024, at the Olympic Games in Paris.

Singapore's agreement with Volocopter for a development park will provide the government with feasibility information relating about a planned facility for eVTOL maintenance, repair and overhaul activities in Singapore. This initiative coincides with Volocopter's intent to build six vertiports in Singapore by 2030. In addition to the agreement with Volocopter, the Singapore government has demonstrated its commitment to eVTOLs, including by hosting a crewed public test flight over the country's Marina Bay in 2019. Other countries in Southeast Asia such as China, Japan, and South Korea have all engage with eVTOL manufacturers seeking to provide services and infrastructure for AAM and eVTOL operations.

### AVIATION INVESTMENT: eVTOL AND ADVANCED AIR MOBILITY

In order for the advancement discussed above to become a reality, there will need to be a series of investment in eVTOL manufacturers, technology and supporting infrastructure. Over the past several years,

we have seen investors in eVTOL seeking to form joint ventures with industry players who are proposing to bring new technological advancements to the eVTOL sector. As with any joint venture, investors will need to clearly delineate the parameters of partnerships entered into, such as establishing the long-term objective of the joint venture, ownership of IP and data developed, ratchets, an exit strategy, and control of the enterprise. Other important considerations include choosing the most tax-efficient structure for developing the joint venture as well as determining future funding needs and obligations. Investment in a business that is looking to undertake development of new technology brings different considerations for investors who will find that traditional forms of control in such joint ventures may have limited practical effectiveness when the *'chef has different considerations for how he/she wishes to run the restaurant'*.

One aspect of eVTOL investment that is distinct from passenger and freight is the manufacture and operation of the aircraft itself is still in a very nascent stage. At least initially, nations will have unique aircraft certification requirements for eVTOL aircraft, even though they may aspire to work towards harmonisation for the sake of industry development. Accordingly, asset investors and owners will need to monitor an eVTOL's certification progress—that is, in which nation(s) an aircraft is certified to fly. If an aircraft is certified by EASA for operations in the European Union, that aircraft will not necessarily be operable in the UAE without an additional certification from the UAS aviation regulator, the GCAA. Simply put, ensuring portability of an asset should be a key consideration for investment as it would have a direct impact on potential growth of the business. 🛩️

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