The AAM Rewind

Joby eVTOL has Flown an Entire Loop of Earth

Joby Aviation achieved a major milestone as its eVTOL has successfully flown 27,000 miles, representing a greater distance than an entire loop around the Earth. Entering 2023, the eVTOL manufacturer revealed its electric aircraft had flown over 10,800 miles the previous year.

Our take:

When it comes to introducing a new aircraft with new technology, in this case electric powerplants and distributed propulsion, there is no substitute for extensive flight testing. Joby Aviation is the company in AAM that has flown the most. We believe this is an unmatched and unreachable competitive advantage that should come into play during the FAA certification for-credit flight testing.

Seoul to Conduct Air Taxi Test Flights in 2024

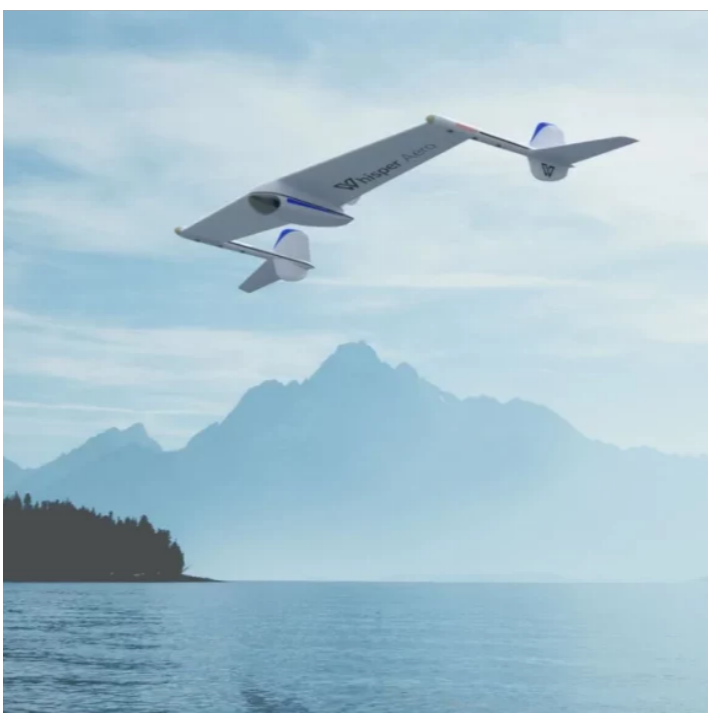
The Seoul city government will conduct eVTOL flight tests in the South Korean capital in 2024 as part of a bigger project to introduce new modes of transportation by 2025. The flight tests will be broken down into two stages to determine the feasibility and overall safety of integrating electric aircraft into the local airspace.

Our take:

South Korea is positioning itself as one of the first entry markets for AAM. Along with neighbor Japan, Korea has built and entire ecosystem of teams, as part of the K-UAM Grand Challenge, to de-risk and trial the new urban air mobility services. One missing ingredient in the challenge is home-grown OEMs – Plana is the only one, while Supernal is a Hyundai division but a US-based company.

Whisper Welcomes Propulsion System Integration with OEMs

Ian Villa, the co-founder and COO of Whisper Aero, told Global Sky Media the company is “happy to entertain discussions with OEMs” regarding the integration of the company’s quiet propulsion system. He said the propulsion system being built can be used in eVTOLs, eCTOLs, and drones.



Our take:

Whisper Aero’s strategy is a breath of fresh air in the AAM market, where many companies have followed the supply chain strategy of varying degrees of vertical integration. Their pure-powerplant supplier strategy differentiates them from most of the other startups in the industry. We have seen online blurred outlines of their upcoming Whisper Jet: is this a marketing tool, a glimpse of what can be accomplished with their powerplant when integrated into a new design from day one?

Joby Building “Certifiable” Flight Electronics In-house

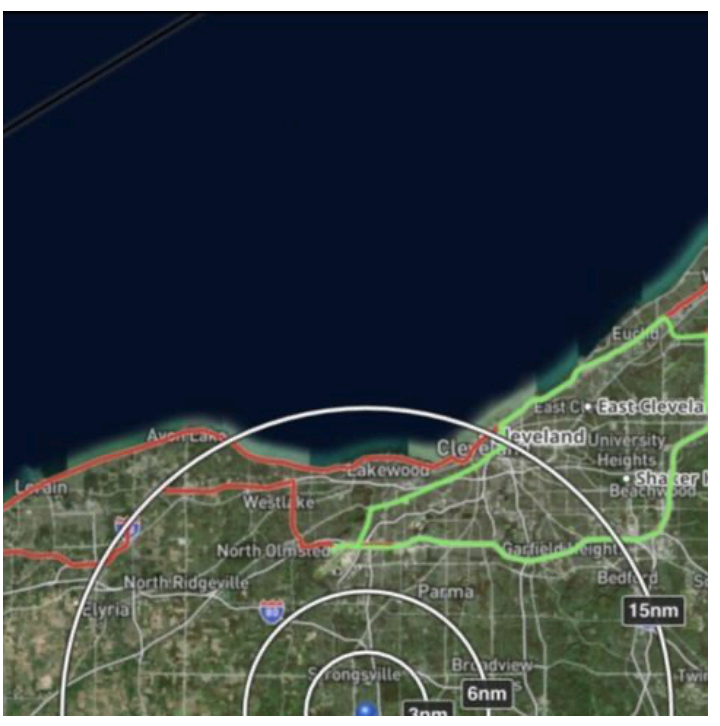
Joby Aviation said that it is building “best-in-class, certifiable” flight electronics in-house for use in its eVTOLs. The Santa Cruz-based company added that the devices are “lighter and simpler” than other flight electronics currently available.

Our take:

While we praised above Joby Aviation’s approach to flight testing, we think their vertical integration, all the way to avionics components available in the market by multiple suppliers, is one of their biggest certification risks. Vertical integration means all the certification testing and documentation needs to be completed by Joby, an added burden to such a complex certification path.

NASA Uses Pilatus PC-12 for eVTOL Tests

NASA will use a Pilatus PC-12 aircraft to test the communications technology that eVTOLs will utilize upon entering into service. The PC-12 has been equipped with monitors to determine the signal strength of cell towers at different altitudes and various environments, including urban, suburban, and rural areas.



Our take:

NASA is a key player in de-risking the EIS of the new AAM market, in all of its use cases. NASA efforts to help the industry have been somewhat hampered by the lack of availability of eVTOL platforms to perform their tests. Their effort to test 5G signal strength, that does not need an eVTOL, is very important as UAM vehicles will widely use 5G networks for their communication due to their low flight altitude and we have very little data of how the networks behave when we are 1,000 to 3,000 ft off the ground.