

The AAM Rewind

Eve: Pre-determined Routes, Vertiports are Essential

Andre Stein, Co-CEO of Eve Air Mobility, stressed the importance of having pre-defined flight routes and vertiport infrastructure in place before the company can kickstart its day-to-day operations. Eve, a subsidiary of Embraer, is currently developing an eVTOL that can carry four passengers and a pilot.

Our take:

One of the unsung issues of the AAM ecosystem is the infrastructure side. eVTOLs, even operating from existing facilities, will need at the very least some modifications to the infrastructure. Airspace integration is another area that has not received the needed attention. Eve Air Mobility emphasis on these two items is important as it would allow them to start and scale its UAM services faster than its competitors.



REGENT Unveils Full-scale Seaglider, Eyes Facility Expansion

REGENT showcased a full-scale mock-up of its Viceroy seaglider prototype that is scheduled to undergo flight testing in 2024. With USD\$8 billion in commercial orders lined up for the maritime vehicle, the U.S. start-up announced plans to establish up to 600,000 square feet of manufacturing and testing facilities.

Our take:

REGENT is developing a very unique AAM vehicle, one that is classified by the US regulators as a boat. Certification with the US Coast Guard will significantly reduce the overall program risk. Targeted military and regional customers are eager to receive the product and do not face any customer adoption issues. We think the company needs around \$200 million of additional funds to certify and start producing the first batch of aircraft on its upcoming LRIP line.

Whisper Aero CEO: Silence is Golden for eVTOLs

Mark Moore, the CEO of Whisper Aero, said eVTOLs must operate silently in order to become adopted and accepted by communities worldwide. Whisper aims to introduce the quietest electric propulsion system so that eVTOLs can abide by Moore's ethos on the industry's route to success.

Our take:

Noise is a barrier to widespread adoption of AAM services and a propulsion design parameter that has gained a new level of attention in aerospace. While all OEMs have been working on the quietest solution, what will the noise level be when the number of flights grows significantly? Whisper Aero is testing its super-quiet electric ducted fan solution, starting from DOD drones. AAM applications are right around the corner for the company, but it will need a scaled propulsion system that will need more engineering development.



China's CATL Unveils Electric Aircraft Battery

Chinese battery giant CATL unveiled its condensed battery that has higher energy density to power electric aircraft. It has an energy density of 500-Watt hours per kilogram (Wh/kg), which is a significant improvement over current lithium-ion batteries with an energy density of around 200-300 Wh/kg.

Our take:

CATL is the largest lithium-ion battery manufacturer in the world, providing 32.5% of the total worldwide production capacity. It was only a matter of time before it would enter the aerospace battery market. The company is already working with aerospace partners. Such a high energy density – double what is currently available – would be a step change for the performance of AAM vehicles, especially weight super-sensitive eVTOLs.

Wisk: Industry Consensus Crucial for eVTOL Certification

Tom Gunnarson, Wisk Aero's Lead of Regulatory Affairs, stressed the need to establish an industry consensus for eVTOL certification. Gunnarson commended the FAA and EASA for implementing regulations that enable industry participation in creating compliance guidelines all eVTOL companies seeking certification can abide by.

Our take:

Cooperation at this point in the development of the AAM industry is fundamental. Cooperation can lead to a reduction in costs as well as a reduction in the certification risk for all the entrants. All the companies will benefit from a clear understanding of the regulatory environment, on both sides of the Atlantic. However, the issue of the different cert paths between the two largest regulators still remains an issue.

