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AUTOMOTIVE

Why luxury carmakers are looking to the skies

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Porsche and Boeing are exploring the future of flying cars. Image credit: Porsche

By SARAH JONES

Luxury automakers are going beyond ground transportation in an effort to better meet future customer demand for urban air mobility in an elevated fashion.



Aston Martin and Porsche have both launched partnerships centered on the creation of consumer-manned or concept aircraft, extending their sports car driving experience to flying. As automakers adjust to changing mobility needs, air travel is poised to be the next frontier for competition among high-end marques.

"I think automakers see air mobility as the next frontier for transportation, in general luxury brands and non-luxury brands alike," said Michael Blades, vice president for aerospace and defense at Frost & Sullivan, San Antonio, TX.

"There are many vehicle manufacturers that are interested in understanding how their products, systems or technologies can be used in urban air mobility platforms," he said. "These products can range from electric motors and drive trains to high-end interiors."

Up in the air

Projections from Frost & Sullivan anticipate that there will be 430,000 air taxis in operation globally by 2040. The researcher predicts that these urban air mobility (UAM) services will likely begin in 2022, and then rise at a compound annual growth rate of 45.9 percent over the next two decades.

Some of the expected early adopters of UAM include the Middle East, Singapore, New Zealand, Mexico and Brazil.

"Urban roads are increasingly becoming congested and the quest is on to de-clutter them and at the same time to come up with innovative modes of urban transport such as Hyperloop, Flying Cars and Maglev Trains," said Joe Praveen Vijayakumar, senior industry analyst, automotive and transportation at Frost & Sullivan.

"In a scenario where regulations evolve to integrate air taxis into the domestic airspace and issues pertaining to safety and security are addressed, people could shift to hailing air taxis than be stuck in traffic in a cab or their own car," he said. "This could impact automotive sales in the long run.

"Automakers would have realized this and entering the urban air mobility market could be a strategy to hedge the potential decline in automotive sales in the future."

Affluent consumers tend to be early adopters of new technology and innovations, since their budgets enable them to get in on trends ahead of others (see story).

"It's definitely the next phase in mobility for the ultra-wealthy, since these forms of transportation won't be cost effective for mainstream, middle-class users for many years," said David Undercoffler, editor in chief of Autolist, San Francisco. "As such, I wouldn't be surprised to hear future announcements of similar collaborations or partnerships with Blade and Uber Copter and other automotive brands."

Getting ahead of the trend, Porsche is working with Boeing to look into the possibilities for premium air vehicles. The partners are also developing an electric concept vehicle that will take off and land vertically.

Porsche's move was partly fueled by its own research.

Findings from Porsche Consulting forecast that the urban air mobility market will become competitive after 2025. It is expected that these urban air vehicles will be more efficient than current conventional vehicles (see story).

Similarly to Porsche, Aston Martin is working with Airbus Corporate Helicopters to elevate urban travel.

The resulting helicopter, the ACH130 Aston Martin Edition, was revealed at Courchevel in the Swiss Alps on Jan. 3. The aircraft is designed for owners who want to be their own pilots, similarly to how Aston Martin cars focus on the experience behind the wheel.



The ACH130 Aston Martin Edition. Image credit: Aston Martin Lagonda and Airbus Corporate Helicopters

Luxury touches in the cabin include leather upholstery, while the Aston Martin branding is featured both inside and outside of the helicopter. Deliveries of the aircraft will begin this quarter (see story).

"I think luxury automakers will follow the money, which is currently being poured into UAM and likely to slow down as the hype subsides," Mr. Blades said.

"However, I think to be successful automakers will need to provide mechanical systems, sensors and safety features rather than luxury items. This is what the UAM market will need more so than plush leather interiors," he said. "And by partnering with aviation companies, they can be more informed and flexible when it comes to getting their offering certified for use in commercial aircraft since their partner will be familiar with the rather unique process."

Before its helicopter move, Aston Martin took to the skies with a new concept for personal air mobility.

Dubbed the Volante Vision Concept, the luxury aircraft has vertical take-off and landing (VTOL) capabilities. The Volante Vision Concept was produced with the help of Cranfield Aerospace Solutions, Cranfield University and aircraft engine maker Rolls-Royce Holdings PLC (see story).

Volante Vision Concept - Aston Martin's exploration into personal air mobility. Discover more at https://t.co/UJ1MQWldzQ#AstonMartinVisionConcept pic.twitter.com/DxVBjsglvX

Aston Martin (@astonmartin) July 16, 2018

The idea of having air taxis is not foreign, with charter companies such as Blade and Uber Copter offering prebooked service in markets such as New York and Miami. One of the specialties of these firms is taking passengers to and from airports, enabling travelers to skip traffic.

For instance, Uber flew travelers between JFK International Airport and Manhattan during the holidays. The ride sharing company is working to scale urban air mobility in partnership with Elevate Network, with the goal of developing shared air transportation between suburbs and cities by 2023.

Uber Elevate intends to create urban air mobility at scale

"Many believe the hype about UAM. I am skeptical," Mr. Blades said. "There are many obstacles with both technology maturation and regulatory limitations. Certifying an autonomous aircraft as airworthy will be a huge challenge, especially after what we've seen with the 737 Max fiasco.

"There are many players, too many, vying for what will likely be a market that matures vary slowly," he said. "While UAM will likely start with multi-rotors that are piloted because of the regulatory issues and use hybrid propulsion because battery power will not have enough energy density to fly two pax more than several minutes for quite some time like Bell's Nexus, it will be many years until we see widespread use of 'air taxis' that you summon by a ride share app like Lyft and Uber use today. That's also assuming the costs can be brought down enough to motivate people to use air taxis. There will need to be a significant change in public perception as well.

"In addition, these air taxis will likely flourish first in countries like China and the Middle East [since] there is more government control of industry and policy. As for luxury carmakers, there may be a market at the beginning as it is likely that multi-passenger air taxis will be restricted to the rich due to the cost of operation and the fact they will basically be executive helo replacements and this may allow for some higher-end interiors in platforms. However, as the market matures which again, will likely take decades rather than years the focus will be on convenience and short trips, not luxury."

Off roading

Prior to the rise of luxury automaker-designed planes, high-end marques went off the road with branded yachts and other watercraft.

Toyota Corp.'s Lexus took to the water with the debut of its first yacht, as the brand built its luxury pedigree while expanding to a new category.

The Lexus LY 650 yacht emphasizes the craftsmanship central to the brand's philosophy, as well as design and connectivity. As the automotive industry continues to adapt for a new era, automakers including Lexus are shifting towards becoming lifestyle brands (see story).

Aston Martin similarly took its lifestyle strategy underwater through a collaboration with Triton Submarines.

The partners are teaming up on an initiative they have dubbed "Project Neptune," which will bring a limited-edition submersible to market. Aston Martin has recently been aligning its brand with players in other categories to express that its company is about more than cars (see story).

"[Creating aircraft] is a savvy and relatively cost-effective marketing move by high-end automakers looking to grab some headlines and burnish their ultra-luxury credentials," Mr. Undercoffler said. "By aligning with a brand like Airbus for a collaboration on a project like a helicopter, Aston is hoping to differentiate itself as a lifestyle brand that isn't limited to automobiles.

"This move towards the skies is not unlike Aston's move to the seas back in 2017 when the brand launched a series of yachts or sports boats," he said. "These kinds of collaborations require little time or money on Aston's part since its main contribution is the Aston Martin name itself, relative to creating and building a new sports car or SUV."