

**Aerospace & Defence**

## Chinese flying taxi sector claims global lead thanks to regulatory support

Shanghai's AutoFlight wins approval for unmanned aircraft in nascent market forecast to be worth \$1.5tn a year by 2040



AutoFlight's Prosperity flying taxi can carry up to five people. The vehicles take off vertically like a helicopter then transition into fixed-wing mode to travel at high speed © AutoFlight

**Edward White** in Kunshan 9 HOURS AGO

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A Shanghai flying taxi company says that China's "low altitude" industry is edging ahead of western rivals, thanks to more supportive regulators, technological breakthroughs and cut-throat competition in the Chinese logistics sector.

The total [market created by electric vertical take-off and landing](#), or eVTOL, aircraft is forecast to be worth \$1.5tn a year by 2040 in a base-case assessment by Morgan Stanley analysts, with potential customers across airlines, logistics, emergency services, agriculture, tourism and security operations.

China's AutoFlight Group won airworthiness certification from the Civil Aviation Administration of China in late March for the design and parts for its unmanned CarryAll aircraft — a global first for an eVTOL weighing more than 1 tonne being cleared by regulators.

Kellen Xie, AutoFlight vice-president, said that while the company is also seeking similar approvals in Europe, the CAAC has been "quite supportive" of the new

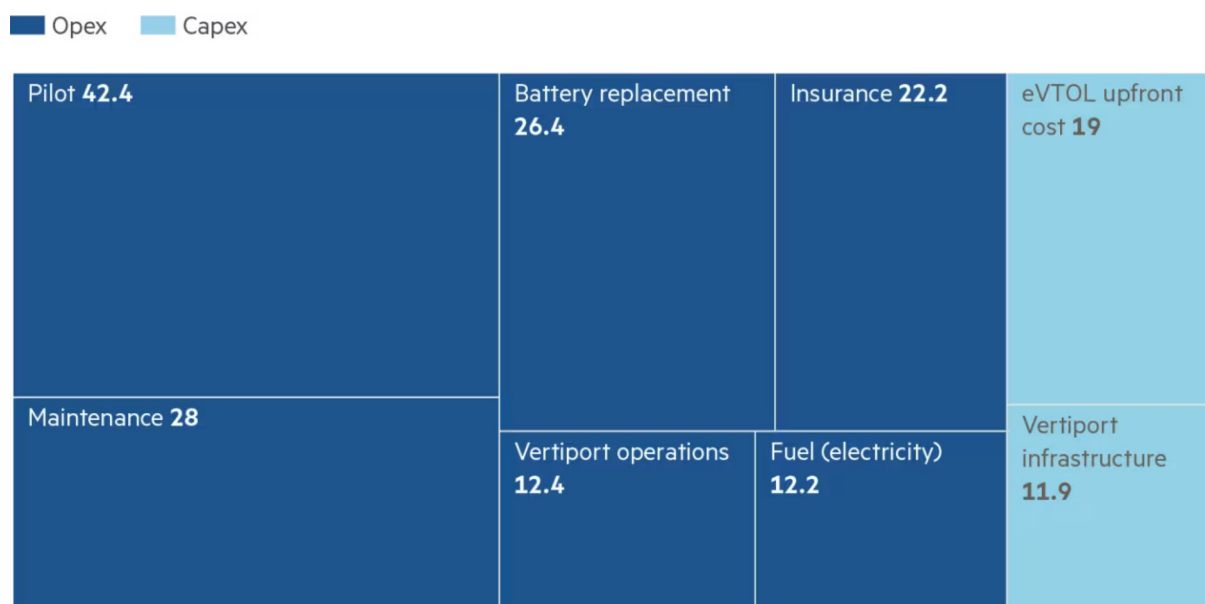
similar approvals in Europe, the CAA has been quite supportive of the new industry. “They work longer hours . . . they are determined to actually speed up the process of bringing this new technology into reality,” he said.

EVTOL aircraft take off vertically, like helicopters, but then transition into fixed-wing mode for travelling at higher speeds, offering faster and more efficient transport than ground-based options. Analysts point to a labyrinth of [regulatory and safety hurdles](#), but supporters say the technology could fundamentally reshape how humans travel and freight is moved, in a level of disruption akin to the introduction of mass-market cars and commercial airlines.

Most eVTOL aircraft are still in the testing stages and vary widely in terms of how fast and high they can fly and how much weight they can carry. Morgan Stanley analysts have previously noted a key challenge for aircraft operators looms in navigating tightly controlled air space restrictions, especially in and around urban areas.

### A 50km flying taxi trip costs \$175

Cost breakdown (\$ per 50km trip)



Source: IDTechEx  
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AutoFlight, backed by German tech investor Team Global and US fund TDK as well as Chinese investors, has its headquarters and a factory in Kunshan, on Shanghai’s western edge, as well as a manufacturing and testing facility in Shandong, northern China.

In February, the company said its five-seater Prosperity — the passenger version of the CarryAll — recorded the longest flight for an aircraft of its type on a single battery, making a journey of 600km near the company’s Shandong base.

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The same month, AutoFlight claimed a world-first inter-city and cross-sea demonstration flight, when Prosperity flew 50km, with no crew, between the southern Chinese cities of Shenzhen and Zhuhai, across the Pearl River delta.

Xie said that the flights have been important steps in proving the technology and commercial viability of the aircraft.

The company is also touting local government plans for the so-called “low altitude economy” on key air routes in southern China, the world’s biggest and most important tech manufacturing hub.

The nascent flying taxi industry has attracted billions of dollars in investment over the past five years, with start-ups in the US, Europe and China, including Shenzhen-based Ehang, competing with established aviation groups such as Boeing and Airbus.

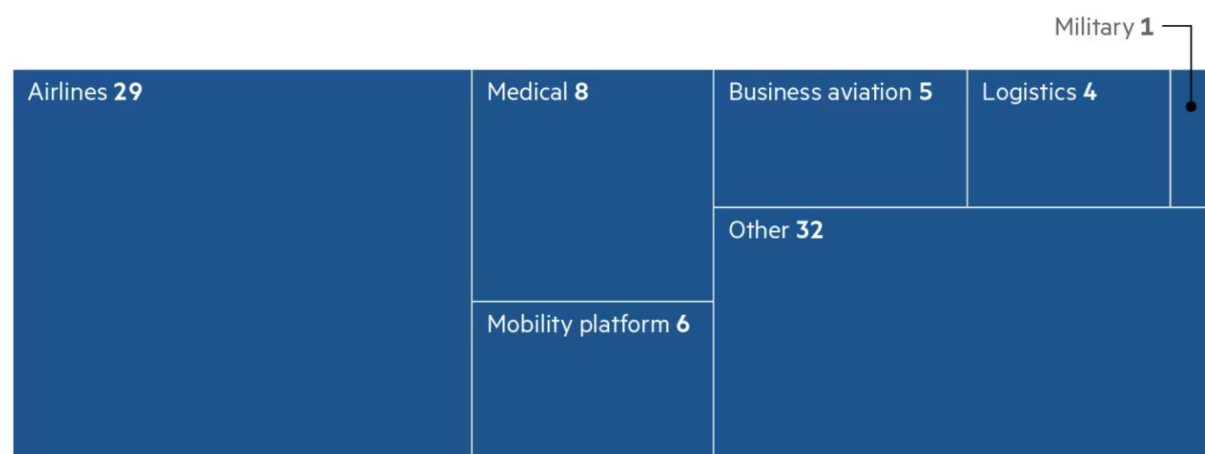
Shazan Siddiqi, tech analyst at UK research group IDTechEx, says the industry is attracting “significant commercial interest” with a backlog of about 10,000 aircraft orders totalling more than \$60bn.

Siddiqi predicts eVTOL aircraft will grow from a handful of test projects to sales of more than 10,000 units a year by 2040. Still, he warned that most flying taxi projects “will never make it past the design and prototyping phase” and cautioned that many companies will struggle in 2024 as funding requirements are likely to increase.

AutoFlight says it has more than 1,000 orders for its aircraft, though many of these include letters of intent and memoranda of understanding, which might not result in sales.

## Global flying taxi orders

eVTOL orders by operator type (%)



	Lessor 6	
Helicopter operator 9		

Source: IDTechEx

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In the short term, it is targeting sales among China's logistics operators, and claims to have dozens of partnerships and trial projects already under way, including with ZTO Express, one of the country's biggest express delivery companies.

"China's logistics companies are the most competitive, cut-throat in the world, everybody is trying to offer something a little bit different from the others to improve either the cost, efficiency or quality of service," Xie said.

China's flying taxi industry's development comes as the country's domestic electric vehicle technology is becoming globally dominant, and as fears rise in Europe and the US that low-cost, high-tech exports from China could displace domestic industries and pose risks to national security.

Xie sought to play down such concerns. He said that AutoFlight had "no direct support from state-owned funds or governments", nor was it involved in Beijing's military-civil fusion programme, expanded under President Xi Jinping to improve the integration of private-sector tech breakthroughs with the armed forces.

"We don't do military, police . . . right now there's only emergency services . . . usually the civil-military [programme] will not consider any company with foreign financing," he said.

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