

NTU unveils locally made aircraft prototype, eyes commercial use

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The electric vertical take-off and landing prototype by NTU on display at the Singapore Airshow on Feb 3. It took more than three years to develop and was tested at the Kranji racecourse to see if it could hover. ST PHOTO: LIM YAOHUI

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Nanyang Technological University (NTU) is hoping to put a locally designed and made aircraft that can transport people and cargo in the skies, after unveiling a prototype on Feb 3.

With an 8m wingspan and eight lift rotors that allow it to fly in confined spaces, the electric vertical take-off and landing (eVTOL) prototype is on display at the Singapore Airshow 2026, which runs from Feb 3 to 8.

Such aircraft can potentially be used as air taxis, to transport cargo or for emergency medical services, although they remain in the testing phase and have not been rolled out for commercial use.

In a statement, NTU said the prototype combines the “aerodynamic efficiency of a conventional aeroplane with the hovering capability of a helicopter”.

The aircraft took more than three years to develop, and in October 2025 was tested at the Kranji racecourse to see if it could hover. It will be taken to Germany to test its flight capabilities, with a smaller version of the prototype already successfully achieving flight.

While its uses beyond being a research tool have yet to be determined, NTU vice-president (innovation and entrepreneurship) Louis Phee said the hope is for the prototype to eventually become a

commercial endeavour that can operate locally and abroad.

NTU added that it will continue working with industry partners to see how the technology can be taken further, with the aim of developing a prototype that can carry people and cargo.

The eventual goal is for the aircraft to be able to carry five people, and for it to be scaled up to have a 14m wingspan, said Professor James Wang from the university’s School of Mechanical and Aerospace Engineering, who led the research programme.

Various organisations collaborated on the project, including Eaton Aerospace, autopilot manufacturer Embention, research agency A*STAR and Republic Polytechnic.

Prof Wang previously worked at aviation firms Sikorsky Aircraft and AgustaWestland, and while at the latter, he designed and invented the world’s first experimental

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eVTOL.

Of his latest project, he said: “This is a real opportunity for Singapore to establish itself as a key technology innovator, to claim the lead in the eVTOL space in Southeast Asia, and to show the world the depth of our academic and industry expertise.”

While eVTOLs are being tested by different firms, none is available commercially, with Prof Wang expecting things to take off around 2035 at the earliest.

“If you don’t start right now, (it’ll be) too late. The train will be gone, you’ll be missing the boat. This is why it’s important that Singapore starts now, before it’s too late.”

Prof Wang added that the prototype will function as a platform for further research to be done, with the lessons gleaned meant to support Singapore’s longer-term ambitions in aerospace innovation and advanced air mobility.

The current iteration of the aircraft is already capable of carrying up to 200kg, and he said some companies are already interested, seeing the potential for it to carry and deliver cargo.

When asked how soon it would be before the prototype will be available commercially, Prof Wang said: “Typically in the aerospace industry, it takes at least 10 years from the starting concept to delivering the first product. It’s still a long journey.”

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