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Changi Airport Group collaborates with Aurrigo to trial new autonomous baggage handling vehicle

Changi Airport Group (CAG) and Aurrigo International plc (Aurrigo) are collaborating to test the latest version of its electric-powered autonomous vehicle, Auto-DollyTug[®], at Changi Airport.

Auto-DollyTug[®], which has new ground handling capabilities and is more manoeuvrable, will be put through different scenarios to assess its efficiency and speed when it comes to aircraft turnaround times.

Combining the utility of a baggage tractor and the unit load device (ULD) carrying capability of an airport dolly, the latest Auto-DollyTug[®] can rotate in its own length and, using the groundbreaking sideways drive system, move directly sideways and slide into tight spaces, enabling the swift delivery of a single ULD even when other GSE equipment is in place at the aircraft.

In an industry first, the new Auto-DollyTug[®] also features Aurrigo's auto-loading and release management system that adds bi-directional robotic arms to the body to allow the vehicle to autonomously load and unload the ULD from itself.

Professor David Keene, Chief Executive Officer at Aurrigo, explained, "Auto-DollyTug[®] is the result of clean sheet of paper thinking, as we didn't just want a modified conventional tractor that could tow some dollies to an area near the aircraft without a driver. Our technology can not only carry a ULD on its body, which maximises carrying capacity without increasing the length of the train, it can also autonomously transfer that ULD directly on to a JCPL or High Loader."

He continued, "This level of capability has been made possible by designing a vehicle to be electric and autonomous from day one. We have never built a diesel-powered airport vehicle so we don't have to work around the compromises of a legacy GSE vehicle product. This 3rd generation of the Auto-DollyTug[®] has been designed to incorporate the experience we have gained from the extensive airside testing already carried out with our 2nd generation vehicle at Changi Airport.

The earlier versions of Auto-DollyTug[®] have been on trial at Singapore Changi Airport since February 2022 (see details in Annex). This testing phase gave Aurrigo the opportunity to deploy its vehicles in a live airside environment and to push the limits of its technology in a hot and humid climate, where extreme rain events are a frequent feature of airside operations.

Ms Poh Li San, Senior Vice President, Terminal 5 Specialised Systems at Changi Airport Group, added her support, "Changi Airport is exploring the use of different vehicles across the airport, especially to automate airside operations."

"The latest Auto-DollyTug[®] has made its airside debut at our airport and we look forward to studying how it handles the challenges of a dynamic airport

environment.”

For high resolution image, please download from [here](#). Please credit the image to Changi Airport Group.

About Changi Airport Group

Changi Airport Group (Singapore) Pte Ltd (CAG) (www.changiairportgroup.com) was formed on 16 June 2009 and the corporatisation of Singapore Changi Airport (IATA: SIN, ICAO: WSSS) followed on 1 July 2009. As the company managing Changi Airport, CAG undertakes key functions focusing on airport operations and management, air hub development, commercial activities and airport emergency services. It also manages the Changi East development project, which includes the building of a new Terminal 5 for Changi Airport. CAG also operates Seletar Airport (IATA: XSP, ICAO: WSSL) and through its subsidiary Changi Airports International, invests in and manages airports around the world.

As one of Asia’s most connected international aviation hubs, Changi Airport links Singapore to some 150 cities globally, with close to 100 airlines operating more than 6,400 flights weekly. Jewel Changi Airport, a multi-dimensional lifestyle destination, opened in April 2019, bringing Changi Airport’s shopping and dining offering to over 600 F&B and retail outlets. The world’s most awarded airport, Changi has won over 670 accolades for its consistent and excellent airport staff service, passenger experience and safety standards.

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