

Press Release

Airbus' Skyways drone trials world's first shore-to-ship deliveries #Airbus #WeMakeItFly #Skyways @AirbusHeli

Singapore, 15 March 2019 – Airbus has begun shore-to-ship trials in Singapore with its Skyways parcel delivery drone. This marks the first time drone technology has been deployed in real port conditions, to deliver a variety of small, time-critical maritime essentials to working vessels at anchorage.

The maiden shore-to-ship delivery flight was made to the Swire Pacific Offshore's Anchor Handling Tug Supply vessel 'M/V Pacific Centurion', 1.5km from the shoreline of Singapore's Marina South Pier, carrying 1.5kg of 3D printed consumables. Landing safely on the ship deck and depositing its cargo to the shipmaster, the Skyways unmanned air vehicle swiftly returned to its base, with the entire flight taking within ten minutes.

The trials are being undertaken in conjunction with partner Wilhelmsen Ships Services, one of the world's leading maritime logistics and port services company. During the trials, Airbus' Skyways drone will lift off from the pier with a payload capability of up to 4kg, and navigate autonomously along pre-determined 'aerial corridors' to vessels as far as 3km from the coast.

Airbus' Skyways lead, Leo Jeoh shared his excitement at the milestone flight: "We are thrilled to launch the first trial of its kind in the maritime world. Today's accomplishment is a culmination of months of intense preparation by our dedicated team, and the strong collaboration with our partner, as we pursue a new terrain in the maritime industry."

"We are also happy to be taking a step forward for Airbus' urban air mobility endeavour, as we continue to explore and seek better understanding of what it takes to fly safe and reliable autonomous flying vehicles safely," he added.

"The now proven, seamless operation of drone deliveries from shore to ship, in one of the world's busiest ports proves the hard work, investment and faith we, and indeed our partners, placed in the Agency by Air project over the past two years was not misplaced," said Marius Johansen, Vice President Commercial, Ships Agency at Wilhelmsen Ships Services.

"Delivery of essential spares, medical supplies and cash to master via launch boat, is an established part of our portfolio of husbandry services, which we provide day in and day out, in ports all over the world. Modern technology such as the unmanned aircraft systems, are just a new tool, albeit a very cool one, with which we can push our industry ever forward and improve how we serve our customers," he added.

The use of unmanned aircraft systems in the maritime industry paves the way for possible enlargement of existing ship agency services' portfolio, speeding up deliveries by up to six times, lowering delivery costs by up to 90%, reducing carbon footprint, and significantly mitigating risks of accidents associated with launch-boat deliveries.

Airbus and Wilhelmsen Ships Services signed an agreement in June 2018 to drive the development of an end-to-end unmanned aircraft system for safe shore-to-ship deliveries. The collaboration



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marries Airbus' extensive expertise in aeronautical vertical lift solutions and Wilhelmsen's wealth of experience in ship agency services. A landing platform and control centre were set up at the Marina South Pier in November 2018, through the facilitation of the Maritime and Port Authority of Singapore. The maritime agency also designated anchorages for vessels to anchor off the pier for the trials, while the Civil Aviation Authority of Singapore worked with Airbus and Wilhelmsen to ensure safety of the trials.

Skyways is an experimental project aimed at establishing seamless multi-modal transportation networks in smart cities. Through Skyways, Airbus aims to develop an unmanned airborne infrastructure solution and address the sustainability and efficiency of unmanned aircraft in large urban and maritime environments.

Having demonstrated the ability to deliver parcels safely and reliably to vessels anchored off the coast of Singapore, Skyways will soon be commencing another trial phase delivering air parcels autonomously in an urban environment, at the National University of Singapore.

About Airbus

Airbus is a global leader in aeronautics, space and related services. In 2018 it generated revenues of €64 and employed a workforce of around 134,000. Airbus offers the most comprehensive range of passenger airliners. Airbus is also a European leader providing tanker, combat, transport and mission aircraft, as well as one of the world's leading space companies. In helicopters, Airbus provides the most efficient civil and military rotorcraft solutions worldwide.

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