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The US FAA will deploy a new Nasa-developed technology at 27 US hub airports, which can calculate gate pushback routes to help each aircraft roll directly to the runway and take off. The testing of the new software capability has now been completed. The new Nasa technology is said to help minimise taxi time and fuel burn, which would result in reducing carbon emission and support the US Government's goal to build a sustainable aviation system. FAA Administrator Steve Dickson said: "This new capability as part of a flight merging system has a double benefit, it reduces aircraft emissions and ensures air travellers experience more on-time departures."
Developed by Nasa, the software was tested for around four years and will now be part of the FAA Terminal Flight Data Manager (TFDM) programme. During tests at Charlotte Douglas International Airport (CLT), NC, the programme resulted in reduced taxi times, which saved more than 275,000 gal of fuel annually and cut down greenhouse gas (GHG) emissions by eight tonnes of carbon emissions on a daily basis. Additionally, the software helped in reducing delays by 916 hours. Upon the completion of the roll-out, FAA estimates that the new technology would help save more than seven million gal of fuel and remove more than 75,000 t of carbon emissions annually.

Worldwide Flight Services (WFS) has signed a long-term agreement to move its core cargo management system in the Europe, Middle East, Africa, and Asia (EMEAA) regions to CHAMP's Cargospot Software-as-a-Service (SaaS) solution as part of its digital roadmap to standardise systems across the WFS group. CHAMP is already a longstanding and established partner of WFS, the world's largest cargo handling organization with 22,300 employees serving more than 270 airlines at 170 major airports in 20 countries. The implementation of CHAMP's SaaS environment, and adoption of its Cargospot Mobile application using modern iOS or Android smartphone or tablet devices, will deliver transformational benefits in terms of eliminating manual processes and paperwork and give WFS cargo handling teams and customers faster access to real-time data.
WFS will seamlessly switch over its EMEAA cargo management system to CHAMP's Cargospot SaaS in October before commencing a phased introduction of Cargospot Mobile as its teams complete the highly intuitive training provided via CHAMP's online learning platform, CHAMP Academy. The mobile application will initially go live at WFS cargo stations in the Netherlands, Denmark, Ireland, France, Belgium, Spain, Sweden and Italy, and be followed by its operations in South Africa, Thailand and the UK in the second phase. Using Cargospot Mobile, WFS and its warehouse teams will benefit from: simplified data capture through touch, swipe and drag-and-drop actions; larger screens on tablets to help remove paper from the operation; reliable connectivity thanks to seamless switching between Wi-Fi and 3G/4G/5G connectivity; automated validation of user actions to provide immediate feedback and prevent errors; and electronic checklists to enable warehouse staff and managers to conform to industry and local requirements. The new technology will also give WFS and its airline customers easy-to-access visibility of what's happening throughout the cargo handling process, with up-to-date status information on export and import freight shipments, measured against key milestones agreed in respective customer Service Level Agreements (SLAs).

Zurich Airport (ZRH) in Switzerland is reported to be the first airport to be equipped with Google's Live View feature in Google Maps, allowing passengers and visitors to navigate terminal areas using the camera function. Using the camera and directions shown on the camera image, passengers and visitors can navigate to their chosen destination at the airport including finding a gate, check-in desk, or restaurants. Google Maps Live View uses augmented reality (AR) to help users to find their way even more easily. This shared goal led Flughafen Zürich AG and Google Switzerland to launch a project back in mid-2018 to improve intuitive navigation 'from curb to gate'. Recordings made of the interior of the airport, as well as exterior areas of The Circle, are now being used in the Indoor Live View function of Google Maps. Using Google Maps Live View, the recordings are compared in the background with the user's camera images to show the correct route in augmented reality view.
Live View uses AR cues and is powered by a technology called global localisation that uses artificial intelligence (AI) to scan tens of billions of Street View recordings to understand your orientation. Due to new advancements that help determine the precise altitude and placement of objects inside a building, Live View can now also be used inside buildings such as airports. Live View can help users find the nearest lift, escalators, the right gate, the platform, baggage claim, check-in or the ticket counter, ATMs, and shops. Arrows and accompanying directions point them the right way.

Austrian Airlines has begun trialling Airail, a baggage drop-off system that enables passengers to check in luggage on the train to Vienna Airport. To check in this way, passengers need the app, a mobile bag tag printer and their luggage. They scan their boarding passes on their smartphones and then use the mobile bag tag printer to print out their bag tag. This means that when they arrive at Vienna Airport, passengers using the Airail baggage programme can proceed directly go to their gate. The checked-in luggage will go directly to the destination airport to await collection. To install the Airail baggage drop programme, the airline partnered with the Austrian Federal Railways (ÖBB) and German IT provider, Materna Intelligent Passenger Solutions (IPS). The test phase started on August 23 and is due to finish on October 31.

Singapore Changi Airport (SIN) has put in place technology to keep the Covid pandemic at bay. The airport has deployed sanitisation technologies to enhance the indoor air quality in its terminal buildings. Clean indoor air is vital for infection control to mitigate the spread of viruses via airborne particles and droplets. Since the onset of Covid, the air-conditioning system filters across the passenger terminals have been upgraded from MERV-7-rated models to MERV-14-rated ones. These higher-grade filters can effectively remove about 85% of the particles of 0.3 to 1.0 micrometres in size in the air, smaller than the size of a Covid particle in a respiratory droplet. To ensure the MERV-14 rated filters continue to operate at effective efficiency, they are replaced every one to two months, depending on the condition of use. In addition, fresh air intake for the air-conditioning systems have also been maximised by fully opening the dampers to admit outdoor air.
As a further layer of protection, Changi Airport is installing Ultraviolet-C (UV-C) sanitisation equipment in Air-Handling Stations (AHS) and Air-Handling Units (AHU) progressively across all terminal air-conditioning systems. The UV-C kills any remnant virus traces in the mixture of fresh and returned air passing through the cooling coil, providing a second level of defence after the MERV-14 rated filters. The first round of such installations will be completed in October 2021 at selected AHSs and AHUs, which supply air to mission-critical control rooms and higher risk zones.

Bristol Airport (BRS) in the UK is trialling an electric airside bus as part of its sustainability plans to achieve net-zero emissions by 2030. Cobus Industries supplied the airport's electric bus which can carry up to 110 customers and will operate between Bristol Airport's terminal building and aircraft. The operating benefits of the bus will be studied and compared with the existing fleet. James Shearman, head of sustainability, Bristol Airport, commented: "We are committed to embedding sustainability principles into the way we work every day, the way we develop and the way we collaborate. We are delighted to be working with Cobus Industries in helping deliver our sustainability targets and

reducing airport emissions. This is only one project we are working on to achieve being a 'Net Zero Airport' operation by 2030."

iGA Istanbul Airport (IST) in Turkey has added ADB SAFEGATE's Safedock T1 advanced visual docking guidance systems (A-VDGS) and SafeControl Apron Management (SAM) system to support automated docking of aircraft in all weather conditions. With this integrated solution the airport can share accurate real-time flight and turn information to achieve safer, smoother, and more efficient turnaround and apron operations. The company has supplied 151 Safedock T1 A-VDGS as part of a turnkey contract which included design, supply, installation, and a two-year agreement for 24/7 maintenance supported by a local team. Safedock T1 A-VDGS is equipped with a digital laser and patented 3D scanning technology which provides unmatched accuracy and availability needed to automate the aircraft docking process. The technology accommodates all aircraft types, tight parking spaces and even the most complex gate layouts while providing the quickest and safest way to park aircraft.

SafeControl Apron Management (SAM) is the integrator that connects the Safedock A-VDGS with other airport systems to enable sharing of critical flight and turn information with flight and ground crews via Safedock's built-in Ramp Information Display System (RIDS) capability. Sharing accurate block times and other real-time data increases the efficiency of the turnaround process and is a key step towards A-CDM. To deliver the highest level of safety and efficiency from runway to gate, Gap filler integration with the Advanced Surface Movement Guidance Control System (A-SMGCS) provides constant monitoring of aircraft movement in the gate area and will support just-in-time activation of the docking systems and a Follow-the-Greens (FtG) guidance solution. The intelligent FtG solution uses the green runway/taxiway centreline lights and apron lead-in lights to guide aircraft into the gate area where the A-VDGS takes over and guides the pilot to the correct stop position. Accurate parking and integration with the passenger boarding bridge (PBB) ensures the PBB can connect safely and seamlessly to the aircraft.

Meanwhile, ADB SAFEGATE has reported that it has acquired Protec Automation GmbH. Protec specialises in airfield lighting control systems, power technologies and services in the field of industrial automation. The deal was closed in Mannheim, Germany, on 30 September 2021. The move to acquire first started as the companies partnered with key customers, and it quickly became evident that aligning formally made sense for our customers.

South Korea-based Incheon International Airport Corporation (IIAC) has signed a contract with Smiths Detection to install its explosives detection system (EDS) HI-SCAN 10080 XCT for hold baggage screening at Incheon International Airport (ICN) Terminal 2. ICN aims to complete this deployment by 2024. The contract also entails an equipment service agreement. This system will be utilised as a part of the airport's Phase 4 Expansion Construction Project, which is expected to make Incheon the third-largest airport in the world. After the completion of the project, the airport will be able to manage more than 100 million passengers annually.

With full 3D volumetric computed tomography (CT) imaging and reconstruction, HI-SCAN 10080 XCT consists of a dual-view dual-energy X-ray line scanner. This is said to allow the system to deliver 'more accurate analysis' and a low false alarm rate. Additionally, HI-SCAN 10080 XCT provides a throughput of up to 1,800 baggage per hour.

The system is currently in use in airports including Heathrow Airport (LHR) in the UK and Frankfurt Airport (FRA) in Germany.

London Southend Airport (SEN) has installed two of Smiths Detection's new Hi-Scan 10080 XCT X-ray scanners. The new machines can produce high-resolution images in 3D. Each machine can process up to 1,800 bags per hour. Once placed on the conveyor at check-in, passenger luggage travels along 300m of conveyors and through security screening before being placed onto the aircraft. Robson was contracted to supply the conveyor system, and local businesses completed the installation. This announcement arrives alongside the airport's new trial lane within security, which allows passengers to leave liquids and laptops within bags taken onboard their flight.

Glyn Jones, CEO, London Southend Airport, said, "The new hold bag system will ensure efficiency when processing passengers bags onto flights while maximizing security via new x-ray screening technology."

Biometric provider Idemia has announced that it will deliver its identity verification technology, Mface, to Oakland International Airport (OAK), California. Mface will leverage facial recognition and 3D video tracking to identify a continuous flow of people walking through OAK's Terminal 1 in real time. This technology can be deployed as a standalone unit, desktop unit or as a ready-to-integrate OEM kit and will be used to validate travellers departing the US. The Mface technology is being implemented in response to the US's federal mandate for biometric identification of international travellers. US citizens can choose to opt out of the facial image capture and instead be processed by airline agents with a passport and boarding pass.

Other airports that have installed Idemia's tech include Newark Liberty International Airport (EWR) and Los Angeles International Airport (LAX). At EWR, Idemia has been contracted to manufacture a biometric self-boarding e-gate pilot programme in partnership with the Port Authority of New York and New Jersey. For LAX, Idemia is facilitating a facial recognition system to help US Customs and Border Protection (CBP) improve border control and increase air passengers' security. This technology is designed to be a one-stop safety solution for passengers, airlines, and airports alike. It has been deployed in LAX's new West Gates at Tom Bradley International Terminal with Idemia's partner, Easier.