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ATG Airports has begun work on an AGL bypass system at Heathrow that, when complete, will improve the airport's lighting contingency process. In the event of airfield ground lighting (AGL) system failure, with the current lighting control system at Heathrow Airport, the contingency process relies on manual attendance by the engineering team to each of the 14 substations to hand switch equipment. From mobilisation, it takes around two hours to configure the airfield into an operational state. This may lead to the airfield having to reduce movements to a minimum or potentially even close for a time.

In 2021 Heathrow Airport contracted Warrington-based ATG Airports to provide a design for an AGL bypass system that could deliver a faster, more efficient contingency process. This design has been approved by the airport and the implementation stage is currently under way. This is set to run for around two years from start to completion.

Given the complexity of the AGL control system, the introduction of an AGL bypass system facility to be used as an emergency backup, will, in theory, reduce the contingency time to less than a minute. A separate Programmable Logic Controller (PLC) will be provided at each substation to take control of the serial links and combined with a new UPS, the AGL control system will have a backup capable of controlling set patterns of runway and taxiway lighting from air traffic control.

On 11 January, Assaia announced that its Turnaround Control solution is being deployed at Halifax Stanfield International Airport, in Canada. The result will be the more efficient use of existing airport infrastructure, better on-time performance for airlines, as well as more sustainable use of resources and enhanced safety. Assaia's solution, a combination of Artificial Intelligence and computer vision, will monitor aircraft turnarounds and will also be deployed at the de-icing pad. De-icing can cause delays and even cancellations, particularly as aircraft queue for treatment. In Halifax, the temperature consistently drops below zero for around four months of the year. Thus, de-icing is a major part of the airport operations. It is also necessarily a slow process, meaning any efficiency increases can have a significant positive impact.

The Assaia technology compiles data from the gates and the de-icing pad, incorporating weather information and flight planning data. The result is that pilots receive push-back clearance only when there is adequate space for them to go to the de-icing pad without causing blockages.

Assaia's technology drives efficiencies both by highlighting areas for improvement and by monitoring real-time operations to identify any deviations from optimal performance, then sending alerts to the relevant desktops and as text messages.

Australian technology provider Elenium has been selected by Queenstown Airport to provide new bag drop and kiosk facilities for people travelling through the airport. Queenstown Airport is undertaking a terminal upgrade programme and wanted technology that is accessible, user-friendly, and easy to implement.

Elenium designs, develops, and manufactures self-service and automation technologies for the aviation sector that can reduce passenger congestion by up to 60 percent, delivering a faster and more seamless customer experience. The company's domain experience, portfolio of solutions, development methodologies and customer-centric approach have struck a chord with global carriers and airports, fuelling significant growth in its short history.

The scope of the Elenium solution will cover six new bag-drop units and a further nine self-service kiosks by June this year, which will provide a full and fast check-in process. This is in addition to the 15 kiosks that were installed in 2019, along with full management and monitoring software that will ensure operational issues can be addressed proactively.

Vanderlande has been commissioned by Schiphol to develop a new baggage handling system for the yet-to-be-built baggage basement. To this end, the two companies have signed a so-called framework agreement, the airport announced Friday, 14 January. Schiphol would not say how much money is involved in the investments in the new baggage basement and the purchase of the new baggage handling system. "Because we are currently in the design phase, we cannot yet make any statements about that," the spokesman said.

Construction of the new baggage basement is still to be put out to tender next year. "No party has been selected yet," says the spokesman. "We will make an investment decision about the baggage basement as soon as the design phase is completed." Schiphol expects that construction of the basement where the new baggage system is to be located can begin in 2026.

At the same time as building the new basement, Schiphol plans to renovate existing baggage basements located underground at the various piers. The airport now has 145,000 m² of area for baggage systems, equivalent to about 29 soccer fields.

The construction of the new baggage handling system will also involve replacing old baggage systems that have a lifespan of some 30 years with new ones. Further automation and robotization should also lighten the physically demanding work of baggage workers, who now complain about poor working conditions.

Austin-Bergstrom International Airport (Texas) will soon be equipped with Siemens Logistics' new outbound baggage handling system (BHS). The new BHS will replace the existing system at the airport that has been processing outbound passenger bags for more than two decades. Siemens' contract scope includes the delivery of a new mainline belt conveyor, sortation through high-speed diverters, and vertical sorters. The company will also be responsible for upgrades to the higher and lower-level controls for the complete system.

Upon completion of the work, which is expected by late 2024, the new BHS will improve the flow of airport operations, the logistics solutions provider stated.

The Weitz Co., which is headquartered in Des Moines (Iowa), has been selected by Phoenix Sky Harbor International Airport to upgrade its Terminal 4 Baggage Handling System for an estimated USD 50 million in construction costs. The project award encompasses preconstruction services and construction in partnership with JSM & Associates. Weitz and JSM have successfully completed years of baggage handling system projects together. The two companies plan to modernize the 32-year-old Phoenix terminal system in part by using a phased design and implementation plan, including contingency planning, showing a smooth transition between new and existing systems while not affecting active airport operations and passenger experience. BIM Technology will also be used to show work in 3D, which increases cost certainty and project communication. The terminal upgrade project is expected to begin in 2024 and be completed in 2027.

Auckland Airport says it is in the process of designing a new back-of-house baggage handling system for the international terminal. The system will use Radio Frequency Identification (RFID) technology to track bags. The announcement comes at a time when many passengers have seen their luggage go missing. Like other airports around the world, Auckland Airport has experienced higher numbers of mishandled bags than usual since Covid-related travel restrictions eased. Extreme winter

weather and industrial action at overseas airports have contributed to the situation at Auckland Airport, along with the labour issues, Auckland Airport general manager customer and aeronautical commercial, Scott Tasker said.

New Zealand's remoteness makes New Zealand travellers more likely than many to have their bags go missing, Tasker said. "New Zealand as a long-haul destination often requires passengers to change flights several times and there's a risk at each of these connections that bags will not make it to the next flight," Tasker said. "The global aviation labour shortage at airports has exacerbated this."

He pointed to research from aviation technology provider SITA Aero which found that the leading cause of mishandled baggage – the industry term for missing, damaged or delayed luggage – is a missed transfer, when the passenger makes their connecting flight but their bag does not.

Toronto Pearson International Airport has awarded a contract to JCAII for the replacement of EMBs at its Central de-icing Facility. Following a competitive RFP process, the Greater Toronto Airport Authority (GTAA) has awarded JCAII a contract to provide its latest generation Electronic Message Board (EMB) technology at one of the largest Central de-icing Facilities (CDF) in the world.

The GTAA's CDF handles hundreds of flights per day and EMBS have been an integral part of the airport operations for close to 15 years. Since 2008, JCAII's EMBS and integrations have guided flight crews through the CDF with safe and efficient 'engine-on' de-icing operations in accordance with SAE best practices.

As part of the contract, JCAII will provide twenty-six (26) of its latest generation EMBS for installation during the 2022/23 de-icing season. The modernized EMBS can be integrated into JCAII's Icelink solutions and are designed to be backward compatible to legacy systems and forward integration into Icelink SmartPad automated digitalization platform.

All diesel-powered ground vehicles and machinery at Amsterdam's Schiphol airport will begin using Neste MY Renewable Diesel in January, the Finnish refiner said in a press release. The airport has about 1,900 ground-handling diesel vehicles from standard cars, vans, pushback tractors and trucks to more-specialized ground support like pallet or container loaders, catering high-lifts, aircraft fuel dispensers and passenger steps.

Neste's fuel is being provided to KLM Equipment Services (KES), the fuel supplier for all vehicles and machinery at the airport, via EG Group, Neste's distribution partner.

About 40% of the motorized equipment at the airport now runs on electricity, according to KES, but that number will increase over the coming years. "However, for a number of specialist heavy vehicles, it is a technical challenge to develop a battery with sufficient capacity that can also be charged quickly enough," Paul Feldbrugge, who is responsible for the Zero Emission Program at KES, said in a statement. "Using Neste MY Renewable Diesel is therefore a good solution." Neste said that its renewables production capacity will increase to 5.5 million metric tons by the end of 2023 and to 6.8 million metric tons by the end of 2026.

Threat detection and security inspection technologies provider Smiths Detection has introduced its new model of a fully automated tray return system. Dubbed iLane A20, Smiths Detection developed the new system in partnership with material handling solutions provider Interroll. The intelligent lane builds on the company's existing portfolio of iLane tray return systems and is claimed to scale up throughput, reduce queues and boost operational efficiency at airport passenger checkpoints. The automated technology enables multiple people to prepare for security screening and simultaneously perform empty tray verification and the diversion of suspicious baggage.

In addition, iLane A20 features customisable configurations and enables cost reductions as the upgradation does not require the replacement of the whole lane.

The new system can be integrated into Smiths Detection's centralised screening and management platform, Checkpoint.Evop^{plus}.

This platform analyses data from the entire screening area offering insights on how to improve operations and security. In addition, the iLane A20 is compatible with Smiths Detection's Universal Checkpoint Interface for deploying third-party X-ray systems and accelerating airports' operations.

Last October, Smiths Detection joined forces with security technology company Pangiam to accelerate open architecture (OA) adoption in the aviation security space.

A collaboration project between Titan Aviation & Electra Commercial Vehicles have created the TITAN-eRR20 together, a new, 100% electric refueller articulated truck designed to reduce airport greenhouse gas emissions. This zero-emission tractor-unit and semi-trailer will be shipped to and operate at an Irish Airport. The strategic partnership between the two innovators will mean a significant turning point for decarbonising the airport's operations. It will be the first fully electric refueller in operation in Ireland.

The Titan-eRR20, mounted on an Electra e-Star electric chassis, (which uses the Mercedes-Benz Econic glider chassis and cab) is adapted explicitly for refuelling operations by Titan Aviation. The electric refuelling system can deliver more than 110,000 litres of Jet A1 or SAF on a single charge at flow rates of up to 2,500 LPM, and its battery can be charged in around five hours using the onboard charger. The Titan-eRR20 is also equipped with the EZ CONTROL digital refuelling interface, which guides the user through every step of the job, facilitating maintenance and optimising operational safety.

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