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Airports Council International (ACI) World has released a new tool to assist airports in terminal planning to increase their capacity. The new Static Capacity Tool - developed by ACI World business partner Redwater Consulting Group, QLD, Australia - will assist by helping airports to evaluate the level of resource and equipment needed throughout the airport passenger journey, and assessing queue length, queue time and breaking points with a particular focus on the challenges arising from physical distancing. It has been designed to provide a simple method for evaluating any additional space or queuing requirements needed as a result of Covid physical distancing measures and the impact of adding more process points to address additional health checks that have been introduced at many airports. ACI World selected Redwater for this project following an open Request for Proposals process which was designed to meet the needs of members. Managing Director of Redwater Anthony Cicuttini said this simple tool can assist users to gain insight and optimise their operations during the pandemic recovery and beyond. The tool focuses on terminal process points including check-in (online, bag drop, traditional desks) security, emigration, immigration, boarding, and baggage reclaim, and uses average cycle times throughout each process point to generate an overall queue time for that process point.

Meanwhile, ACI World has launched comprehensive guidance to help airport executives approach digital transformation as the industry enters a post-pandemic environment. The second edition of the Airport Digital Transformation Handbook - supported by Honeywell and Mott MacDonald - examines how new technologies and the digitalization of existing manual processes can lead to new ways of addressing airport capacity challenges as the aviation industry recovers to pre-pandemic levels of air traffic. The handbook provides advice on focus areas of technology adoption, how to approach digital transformation, and case studies. It has been adapted to include the challenges and opportunities brought by Covid. "The Covid crisis necessitates new systems and processes that are more efficient and touchless, enabling quick recovery and future growth," ACI World Director, General Luis Felipe de Oliveira, said, adding: "The challenge for aviation is to manage health issues, restore confidence, contain costs, make better use of resources, and find efficiencies, all while increasing sustainability, improving passenger experience, and maintaining safety and security."

The handbook has been developed by experts from the ACI World Information Technology (IT) Standing Committee, which aims to provide airports with concrete and practical advice to embark on or improve upon their digital transformation journey.

Germany-based INFORM GmbH has been awarded a contract by Brazil's Azul Linhas Aéreas to implement its GroundStar (GS) solutions, GS Planning and GS WorkforcePlus. Together they create long-term, mid-term and short-term resource planning scenarios for staff and equipment, as well as generating work schedules. The contract was the result of a cooperation between INFORM and Portia LAC, an optimisation solutions consultancy based in São Paulo, Brazil. Portia provides local support to INFORM's Brazilian customers for greater cost efficiencies, offering implementation services, support services and being a channel for maintenance issues.

INFORM's GS Planning can be applied to create long-term, mid-term and short-term resource planning scenarios for staff and equipment and improve assessment of flight schedule changes through 'what-if' analyses. It optimizes services across multiple areas, from customer services, gate services, passenger bus services and aircraft services, to aircraft movements, loading/unloading, baggage services, cargo, line maintenance, marshalling, crew transport and turnaround supervision.

GS WorkforcePlus is a powerful staff scheduling solution using a unique deduction system, which will enable Azul to automatically generate work schedules that reflect specific conditions and goals, as well as effectively address demand fluctuations. With GS WorkforcePlus, Azul acquires the core system including the system's intelligent optimizer, a reporting database, as well as an employee portal that offers a team view and allows shift swaps as well as preference entries.

According to Azul's capacity and OCC director, Daniel Tkacz: "Together, these two INFORM solutions will deliver important benefits for our 2,700 employees worldwide at a critical time when, like all airlines, we are focusing on a steady recovery from the pandemic."

SITA has taken over Safety Line SAS, a France-based start-up focusing on digital technologies for aviation safety and efficiency, to facilitate sustainable aviation. The deal is expected to fortify SITA's Digital-Day-of-Operations (DDoO) portfolio, enabling airlines to operate more efficiently and reduce their carbon footprint by minimising fuel consumption. SITA stated that the acquisition will speed up its development of sustainable technologies that can be incorporated into its current suite of airline and airport solutions. The company further noted that Safety Line offers "significant improvements" to aircraft operations through predictive analytics, complementing SITA's current portfolio. The takeover follows the commercial partnership that was signed between the two firms in September 2020. The partnership was aimed at aiding airlines to cut down their carbon emissions with OptiFlight. A predictive in-flight fuel efficiency solution, OptiFlight uses machine learning performance models for each aeroplane to improve all flight phases such as climb-out, cruise and descent. This solution, which is completely integrated with current applications in SITA's DDoO portfolio, has been installed by Air France, Transavia Airlines, Aerologic and Condor.

As part of the deal, Safety Line's AirsideWatch will enable SITA to develop its airport offering to airside operations. This solution deploys surface movement radar data for optimising and assessing the ground traffic of aircraft between gates and runways, aiming to minimise unnecessary emissions. In a statement, SITA said: "With safety being a key pillar in aviation alongside efficiency, the acquisition also covers SafetyCube, a solution that enables aviation stakeholders to pro-actively manage their safety and compliance."

Collins Aerospace, part of Raytheon Technologies, has completed the installation of its ARINC SelfPass biometrics solution at Haneda Airport (HND) in Tokyo, Japan. ARINC SelfPass is equipped with a facial recognition feature, which reduces physical interactions and enhances passenger convenience. It has been designed to streamline passenger processing and minimise physical interactions and bottlenecks at various passenger touchpoints, noted Collins. The project involved the installation of 98 self-service check-in kiosks, 30 biometric enrolment kiosks and 104 biometric devices for self-bag drop. It also included the deployment of 17 biometric automated security gates and 42 biometric automated self-boarding gates.

Tokyo International Air Terminal Corporation facility department senior manager Shoichi Ohashi said: "Our 'Face Express' system will allow passengers to efficiently proceed through procedures at the airport (baggage drop, security checkpoint entrance, boarding gate) utilising facial recognition, eliminating the hassle of showing their passport and boarding pass. We worked closely with Collins Aerospace to achieve this and enhance passenger convenience at Tokyo Haneda airport."

Seattle, WA-based provider of AI safety technologies, Xsight Systems, has announced a new system to continuously monitor runway conditions. Called ArcWize, the technology uses radar and both visible and Infra-Red (IR) cameras, and automatically alerts airport operators and air traffic controllers to any change to the contaminated runway surface condition. Contaminants such as slush, water and snow are measured by depth, type, and coverage. Runway Condition Codes, required to

provide landing and take-off braking action calculations, are automatically issued for each runway third, aligning with the new Global Reporting Format and Takeoff and Landing Performance Assessment regulations. ArcWize also instantly generates the required data to enable real-time updates of SNOWTAM/NOTAM notifications addressed to aircraft operators. Amir Leybov, CEO of Xsight Systems, said: "Take-off and landing are the most critical phases of flight and by providing airports with access to real-time information regarding the runway surface condition, we can reduce the risk of runway safety events, mitigate delays and loss of revenue. The advanced sensing solution ultimately keeps the airport's most valuable resource, the runway, safe and productive." The company also provides solutions to combat FOD and bird detection through similar AI-based systems.

British Airways has partnered with AirPortr to develop a series of fast bag-drop areas for Terminal 5 (T5) at London Heathrow Airport (LHR) in the UK, before travellers head to the departures concourse. Launched on 19 July 2021, the first drop-off point is for the Heathrow Express train platforms, enabling customers to drop-off luggage during peak travel times before traveling through security bag-free. After drop-off, AirPortr's team will seal, secure, and check in bags for passengers' flights.

Through the AirPortr service it is also possible for customers to book luggage collections from their home. This allows travellers to check in their bags prior to traveling, and once collected, AirPortr ensures that the bags are sealed and tracked throughout the delivery process to the airport. Upon choosing this option, passengers can track their luggage online, from their door, all the way until the point it is loaded onto the plane. A digital bag tag receipt will also be sent to users of this service.

In addition to AirPortr's luggage service, the airline also offers a twilight baggage drop service the night before travel from Heathrow T5, enabling customers to drop their bags at the airport terminal between 4pm and 9pm the day before flying.

MAG USA has combined with Jabbrbox to introduce co-branded Escape Pods - technology-equipped private spaces which turn underused space into revenue for airport operators.

Some 50 Escape Pods will begin operations in airports across the US by Autumn 2021, with the first already launched at Greenville-Spartanburg International Airport (SC). The new pods will become part of the Jabbrbox network, a 'space-as-a-service' platform that provides an ecosystem of technology-enabled micro-spaces to consumers for privacy, productivity, and wellness. The company has an existing network of 16 pods across eight US airports. The Jabbrbox and MAG USA partnership allows the Escape Pods to become an extension of the latter's well-known Escape Lounges brand.

Each Escape Pod has a table and is fitted with a fast, private, encrypted Wi-Fi connection as well as a 24-in screen where users can interact with the Jabbrbox app to track their flight, adjust the comfort of their environment, and take a business video call.

Jabbrbox Co-Founder and Co-CEO Jeremy Jennings said: "In a post-pandemic world, as passengers' needs are constantly shifting, the demand for technology-enabled private space is at a premium. The fact that we can be a revenue generating amenity for an airport is a win-win for the passenger experience and the airport authority." MAG USA said that other airports which are set to offer Escape Pods in the coming months include Chicago O'Hare International Airport (ORD), Las Vegas McCarran International Airport (LAS), New York John F. Kennedy International Airport (JFK), and Seattle-Tacoma International Airport (SEA).

Warburg, Germany-based Lödige Industries is providing its first Automated Guided Vehicle (AGV) as a pilot project for Swissport's new air cargo terminal at Frankfurt Airport's CargoCity South. The autonomous vehicle is one of the company's latest innovations and is claimed to offer users a high level of flexibility and safety during unit load devices (ULD) transport. The project will start in November 2021 and marks an important step towards highly efficient and automated 24/7 operations.

The AGV is part of Swissport's commitment to innovative cargo handling processes. With a load capacity of 6,800 kg, the 10-ft-long AGV is designed to transport a variety of ULDs including 15-ft containers and can replace the manual transport of ULDs by Slave Pallet Mover or other ground handling equipment. It

also eliminates the need for fixed ground transportation routes. Compared to conventional solutions, this not only frees up personnel for higher-value tasks, but also saves space. The AGV is highly mobile thanks to an omnidirectional drive system making use of a secure laser scanning system redirecting the AGV in case of obstructions on its route. The AGV's data-based control gives users full control over operations and allows the integration into a warehouse management system for execution of fully automated transport commands. Within the terminal, the AGV connects several strategic handover positions. These include the roller decks of the fully automated Material Handling System (MHS), the pharmaceutical area, the truck dock, and other stations.

The AGV is Lödige Industries' latest addition to Swissport's terminal equipment. When building the 17,000-m² facility in 2020, Lödige designed and installed the entire cargo handling system, which already includes automated storage and retrieval systems. The use of an AGV was planned from the very beginning and fits in seamlessly as a complement to the existing systems. Permanent availability is ensured due to the use of a lithium-ion battery system and an inductive charging station.

Threat detection and security screening technologies provider Smiths Detection, along with New Zealand Aviation Security Service (AvSec), has finished the installation of 18 units of its new ultraviolet (UV) light tray disinfection kit at airports across the country.

With this deployment, AvSec New Zealand aims to alleviate the risk of Covid-19 transmission and improve public safety at airports. Around six units have been deployed at Auckland, four units at Wellington, two units at Dunedin Airport (DUD) and six units at Christchurch International Airport (CHC). According to Smiths Detection, these UV disinfection kits have been proven by independent laboratory tests to eradicate up to 99.9% of pathogens, including coronaviruses, detected on trays at checkpoints.

AvSec capability group manager Ben Smith said: "Smiths Detection's UV disinfection kits help ensure that surface contamination and the spread of viruses are minimised during security screenings, providing peace of mind to passengers and airport staff. This ongoing working relationship with Smiths Detection helps bolster New Zealand's capabilities in safeguarding passenger health and safety across airports where AvSec screens, which we see as important in boosting consumer trust during the gradual recovery and resumption of aviation travel."

By using short-wavelength UV light (UVC), which is frequently used in healthcare and industrial production for decontamination, the UV kit alters the genetic material's structure. As a result, it does not allow the viral particles to infect or multiply. These kits are shielded with metal housing, preventing exposure of travellers and staff to UV light.

Publisher's note: The articles in this special report, compiled for **inter airport Europe**, are samples from the biweekly **Momberger Airport Information** newsletter, published since 1973. The newsletter is an advertising-free, global airport news service that consists of 8 modules and allows subscribers to customize their own newsletter package. The items in this report represent only a small sample of **Momberger Airport Information**. The modules that make up the biweekly newsletter are Airport Development (DEV), Calendar of Events (CAL), and the subscriber-selectable modules Airport Operations (OPS), Ground Support Equipment (GSE), Air Traffic Services (ATC), Consultant & Contractor / Sustainable Aviation (CON), Airport Information Technology (AIT), and Maintenance Base & FBO (MRO). For more information and to order an annual subscription, please visit www.mombergerairport.info