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Editor's NOTES

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Welcome to the Winter 2020 issue of *Airside International*, which takes a good look at how ground service providers around the world are faring with the current crisis in the aviation industry.

We talk to ABM in the UK – formerly known as OmniServ – about the measures it has taken to ensure confidence in passengers' welfare should they be taking a flight handled by ABM. We also hear from ATS in North America, which has had an important contract win to handle WestJet at Canada's Calgary Airport.

Also in Canada, GTA dnata has inked a five-year deal to handle at Vancouver International. Elsewhere, dnata – part of the Dubai-based Emirates Group – has been upgrading its pharma handling ability at Singapore Changi, while Fraport has meanwhile been doing the same at Frankfurt with the aid of two new CoolBoxes delivered from Italy's Alha Group.

Elsewhere, *Airside* talks to two of the senior management team at Norwegian Red Handling at London Gatwick about their plans for the future.

Our features look at the issues relating to snow clearance and how airports must keep their pavements clear of snow and ice no matter that their flight operations frequency may well be down this winter on a typical year, as well as the latest technology being brought to bear in the field of airfield ground lighting.

Terri Smart-Jewkes tells us about the latest news from Aviramp, while Vanderlande explains how it is trying to meet the challenges posed by Covid-19 and how disinfection might form an integral part of an airport baggage handling operation.

A demonstration of the capabilities of the new WheelTug system at Memphis International was an interesting diversion in these troubling times, while *Airside* itself has played its part in keeping the industry informed and engaged – if only remotely – by running a series of podcasts in which subject matter experts consider issues of considerable importance to those engaged in airport ramp work.

We hope you enjoy the issue.

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The 'snow' must go on

The measures implemented in response to the Covid-19 pandemic have reduced demand for air travel and altered the face of air cargo transport. But airports must still ensure they can stay open safely through the winter

Globally, the International Air Transport Association (IATA) is forecasting full-year passenger traffic in 2020 to be down by 66% compared to 2019, following "a dismal end to the summer travel season in the Northern Hemisphere".

Nonetheless, Andreas Schwald, manager sales airport markets and sales global/airport at Switzerland-based Aebi Schmidt, points out: "Certain demands need to be fulfilled for safety in winter, even if traffic is quiet.

"On the other hand, at Leipzig Airport, DHL's hub has more to do than it did in the past because of the higher frequency of freighter aircraft."

Indeed, the volume of cargo handled at Leipzig/Halle Airport during the first eight months of 2020 increased by 6.8% to about 865,631 tonnes.

A statement from Leipzig/Halle says that more than 50 freight charter flights, including some involving An-225, An-124, B777, B747F, B787-9 and A350 aircraft have also been handled in addition to the airport's regular cargo traffic.

Success with snow

In May this year, Denver Airport received the prestigious national Balchen/Post award, which recognises airports for outstanding snow and ice removal operations and maintaining airport operations during challenging winter conditions. The Colorado gateway took the prize in the category of large commercial airports with more than 200,000 flight operations a year.

Williams describes the win as "a direct reflection of our employees' commitment to excellence and pride in the mission that Denver will remain open to serve our customers".

She says: "The success of our snow programme hinges on co-ordination between our operations team and our maintenance team as well as years of fine-tuning our snow response; our snow team on the airfield and on airport roads focus on the performance measure of time to clear a runway.

"Denver aims to clear every runway (including our 16,000 ft runway) in 15 minutes or less and during the 2019-2020 snow season, the average time runways were closed for cleaning was only about 10 minutes."

With the peak air freight season imminent, that upward trend is likely to continue into the winter, keeping Leipzig/Halle's winter services team busy despite its drastically reduced passenger throughput.

Liepzig/Halle's snow clearance fleet includes 20 TJS 630 jet sweepers, three TJS 420 jet sweepers and one CJS compact jet sweepers with a snow plough – all Aebi Schmidt products.

Denver International Airport, meanwhile, has seen its passenger traffic recover better than most US airports according to Emily Williams, a spokesperson for the airport operator.

In fact, flights at Denver are at 65-70% of pre-Covid levels. During peak times of the day, the volume of flights is such that all six of the gateway's runways must be accessible – whatever the weather.

"Operationally, Covid has changed how we communicate – during pre-season training and certifications, pre-shift briefings and post-storm analysis," Williams says. The Colorado airport's winter operations training has moved to an online format. Plus, crews sanitise equipment prior to starting a shift, and instead of gathering together, operators report directly to the equipment and wait in their cab for instructions.

In the last five snow seasons, the airport received an average of 45.2 inches of snow each year. Last season it saw above-average snowfall at 57.6 inches. Snowfall at the gateway has been as low as 21.8 inches, while in the winter of 2015-16 it amounted to 72.8 inches.

Denver Airport has over 90 million square feet – 2,066 acres – of airside pavement that its crews may have to clear during a snow event. In addition, its landside snow crew keeps parking lots and the main road to the airport, Peña Boulevard, and other nearby roads clear so that passengers can reach the airport safely.

In order to keep up with those tasks: "We have approximately 200 pieces of airside snow removal equipment and 110 pieces of equipment for landside parking lots, hotel plaza, train platform and roadways," Williams outlines.

Oshkosh snow ploughs at Denver Airport

That equipment includes blowers, brooms, blades, ploughs, runway sanders, snow melters, 5,000-gallon chemical trucks, loaders with box ploughs, bobcats, and bobcats with box ploughs.

Multifunctional

Elsewhere in the US, Chilton, Wisconsin-based MB Companies delivered the first MB3 High Speed Runway Brooms to Chicago O'Hare and nearby Midway airports in June this year.

Alan Luke, federal government and eastern region sales manager at MB Companies, remarks: "Since winter weather conditions in Chicago can change drastically from hour to hour, O'Hare and Midway must have the flexibility to rapidly meet the changing conditions.

"That implies a fleet of high-speed multitasking equipment and blowers for the runways, and dedicated equipment such as front-mounted brooms and ploughs for taxiways and ramp areas. Deploying only one type of machines wouldn't work in such conditions."

Considering how snow clearance operations have changed over the last decade, Luke says that there has been a reduction in the available workforce, which "directly impacts the airport's ability to deploy equipment necessary to keep up with winter operations".

Multifunctional equipment has therefore become increasingly useful. "Multi-tasking can ease the burden of operators to maintain the primary runways," Luke says. "One experienced operator can do the job of three, while less experienced operators maintain the secondary areas such as taxiways and ramps."

Multifunctional equipment also saves time. Williams says: "Denver Airport uses multifunctional machinery that can plough, sweep and blow snow, and some spread liquid products at the same time. By using multifunctional pieces of equipment and making other improvements to snow management, the airport has reduced the average amount of time needed to clear a runway from 45 minutes to under 15 minutes."

There is now a significant presence of multifunctional equipment at various airports. Not only does such equipment improve efficiency, but it also enhances safety: the presence of fewer vehicles on the airfield reduces the risk of accidents.

Denver owns the equipment that is used on its runways and taxiways. It has a contract with Aero Snow Removal

Services for eight snow melters and 59 loaders for snow removal on the ramp areas. Given the amount of snow the airport receives each year, owning the equipment is the most cost-effective option, Williams points out.

Denver also uses sensors installed in the pavement of some of its runways to help determine the freeze point of liquid on the runway, which improves the planning of surface treatment.

Snow melting – a trend at various airports – forms part of Denver Airport's programme too. "We push snow to strategic locations where we have installed drains. This allows us to melt the snow and prevents the team from having to haul it out, which is time consuming," Williams notes.

Currently, the airport is focused on a fleet capital replacement programme, she goes on. "We are committed to replace our equipment at the correct life cycle, so that the snow removal fleet remains in top operating condition. Over the next few years, Denver Airport is funding replacement of its airfield multifunction equipment. This applies to 65 critical snow removal assets."

Andreas Schwald of Aebi Schmidt

Advancing automation

Over the years, Denver has implemented a number of innovative processes to improve its snow programme based on the experiences of each snow season. "For example, as a result of a major blizzard in 2006 that dropped more than 20 inches of snow, the airport added a 'snowman' position in the FAA control tower, to orchestrate runway closures with snow crew movement," Williams recalls.

"This position has streamlined the communication between the snow removal team and the Federal Aviation Administration [FAA] and has bolstered the relationship and level of trust between airport operations and the FAA."

Denver's operations team also meets frequently with meteorologists to learn about new technology and improvements in forecasting.

Back in Europe, Aebi Schmidt is looking to the future, too. The manufacturer has been using this year's unusually quiet summer season to take its products to the next level. Schwald explains: "Our

Continued on page 8

In the last five snow seasons, Denver Airport received an average of 45.2 inches of snow each year

Denver has approximately 200 pieces of airside snow removal equipment

customers are looking for three major topics: efficiency, safety and sustainability. That's why we have started a development project to move step by step towards a driver-assisted, then automated, and finally an autonomous jet sweeper fleet.

"Customer requirements are on different levels," he continues. "Some like to have assistance for the driver with an extra screen to help guide the driver with the interaction of the machine. This is step one, which is already realised.

"The next step is to automate all the movements of the truck, plough, brush and blower according to the route information that is programmed in.

"If snow clearance equipment is automated, it is possible to reduce the down-time on the runway," Schwald notes. "Due to the pandemic cost efficiency is becoming more and more important and we are convinced that automation and digitalisation will be the way of the future."

Another aspect of digitalisation at Aebi Schmidt is the company's IntelliOPS platform, whereby an airport can track vehicles during operations. IntelliOPS will also work to monitor the movements of Aebi Schmidt's automated jet sweepers and other clearing vehicles in the future.

Fully autonomous snow clearance vehicles are already in use at some airports. In March 2019, Winnipeg Richardson International Airport in Canada introduced 'Otto', the first autonomous airport snow plough in North America, developed in partnership with Manitoba companies Northstar Robotics and Airport Technologies (ATI).

Initially, Otto is operating autonomously in low-risk areas of the airport before potentially starting to tackle other areas. It follows predetermined routes, with 3D LIDAR [light detection and ranging] and RADAR [radio detection and ranging] technology enabling it to sense its surroundings.

Denver Airport is also considering pilot projects for autonomous vehicles that could be used. Currently: "We are monitoring the autonomous work that is being performed with the Snowbot in Finland," Williams confirms. The Runway Snowbot project brings together Finnish airport operator Finavia, tractor manufacturer Valtra, renewable fuel producer Neste, Nokian Tyres and Vammas snow ploughs.

The idea behind the project was to "programme the optimised runway clearing patterns to a special unmanned, autonomous tractor running on low-carbon biofuel, pulling an effective snow clearing equipment and ensuring its driving properties with top-notch tires", according to the Snowbot partners.

Matti Tiitinen, senior brand business manager at Valtra Scandinavia, Baltics and Western and Central Europe, says Runway Snowbot shows that "by combining the know-how of five Finnish companies, airport runways can be cleared in a new way – more safely, more sustainably, more economically and more comfortably".

The initial experiment was carried out successfully at Ivalo Airport in Finnish Lapland during the 2018-19 winter season.

"The Runway Snowbot gives a glimpse of what the future will bring for airport snow clearing, and it paves the way for new ways of thinking," Finavia adds.

Training needs

The rarity of staff who are experienced in airport snow clearance operations these days is one of the factors driving automation. After all, it costs a lot of money to bring in new, inexperienced drivers and train them up, Schwald points out.

Automated equipment could help solve this problem, making snow clearance more cost efficient as well as quicker and safer. But full automation is some way off yet, so Aebi Schmidt has developed a simulator to assist its customers with their training needs; the first one was sold last year, along with 12 jet sweepers.

A simulator is a far less expensive way to train a driver than running real equipment. Plus, it allows training to take place whatever the weather – there is no need to wait for a snow event or darkness, for instance. This enables an airport to be better prepared for the winter season.

Schwald says: "The simulator has a movement platform to give [drivers] the feel of the real vehicle. It can replicate various conditions such as night or fog, and includes a map of the entire airport with all the snow clearance routes – so it's very realistic."

ABM fights through the challenges

At the end of September, it was announced that UK-based ground services provider OmniServ had officially rebranded as ABM. Meanwhile it has taken steps to optimise its performance during this incredibly difficult year

OmniServ's aviation products take in mobility and VIP passenger service provision, passenger bussing, logistics, ground handling, and aircraft and airport cleaning. While providing services at more than 100 airports around the world, it has a particularly strong presence in the UK and the US. As well as its activity at Heathrow and various other airports across Britain, it has provided bespoke handling services for Irish low-cost carrier Ryanair at London Stansted under the name Blue Handling.

Established in 2004, OmniServ was acquired in 2012 by ABM Industries, a provider of facility management services. ABM has global revenues of approximately US$6.5 billion and employs more than 140,000 people across over 350 offices throughout the US, UK and other international locations.

ABM says that the rebrand brings together "OmniServ's reputation for excellence in airport services with the facilities expertise ABM has developed globally throughout its 110-year history and cements ABM's market-leading position in the aviation industry".

Antony Marke, group managing director of ABM's aviation business, observes of the rebrand: "Our purpose is to take care of people, spaces and places. Our customers and the passengers we serve will benefit from working with one team, one approach and consistent service delivery. "By looking after everything from cleaning and disinfecting to baggage handling and passengers requiring special assistance, we help ensure safe, consistent service for everyone who passes through an airport terminal," Marke adds.

Charting a course through the pandemic

Jim Niblock, ABM Aviation's UK operations director, tells *Airside* that aviation has been one of the hardest hit of all industries in this pandemic. Sadly, he says by the end of March this year, within just seven days of the UK's Coronavirus Job Retention Scheme being announced, the company had furloughed around half of its workforce.

By the end of April, that proportion was over 80% – and then, at the peak of the pandemic, 90% of ABM UK's teams were designated as furloughed workers.

As a result, he notes, "We have regrettably seen redundancies across our UK operation and it will take some time to recover."

But ABM has also adapted to the circumstances and offered customers services designed for the times. It launched EnhancedClean, a comprehensive approach that goes beyond normal cleaning by using rigorous health protocols to ensure consistent cleaning and disinfecting by a specialist team.

Moreover, Niblock informs: "In aviation, we have been reimagining the customer journey and introducing new hygiene measures to increase visitor confidence. These include the use of electrostatic foggers to coat all surfaces with antimicrobial treatment, as well as frequent additional disinfection of high-frequency passenger touchpoints such as security trays and door handles using specialist disinfectant."

At Glasgow Airport for example, ABM regularly makes use of electrostatic fogging machines that disinfect all areas throughout the terminal, offering 360-degree coverage and killing germs within two minutes.

ABM has also introduced a business intelligence tool that enables it to track the cleanliness of vehicles and the location of staff to ensure workplace bubbles are maintained.

The use of face coverings and gloves quickly became the norm across all of ABM UK's operations, including those where the day-to-day work is very physical and can involve everything from assisting a passenger into an aircraft seat, to loading bags into an aircraft hold, to walking vast distances each day.

It also introduced signage on its coaches to help with social distancing and worked with airport partners to install perspex screens on its passenger with restricted mobility (PRM) reception desks, both landside and airside. It even has a one-way system in its head office.

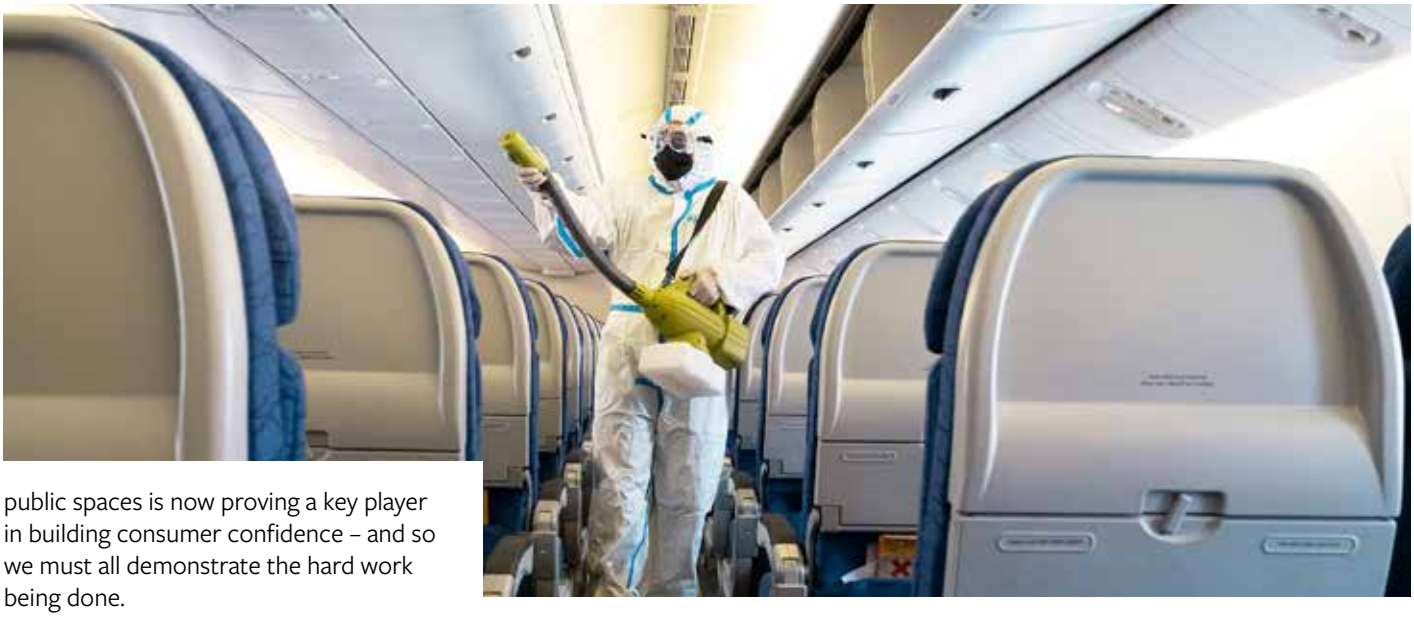
"The team has done an extraordinary job of adapting to all of the new measures while continuing to deliver a quality service throughout," Niblock assesses.

Furthermore, all team members are fully equipped with the necessary personal protective equipment (PPE) to ensure safety when it is not possible to social distance, such as when ABM staff are transporting PRM customers onto an aircraft.

Tackling the future

Increasing consumer confidence over the coming weeks and months is going to be the single most important task for the aviation industry, Niblock considers.

"We know that customers feel safer and are more willing to return to built environments and services if they witness stringent measures and disinfection programmes in action," he says. "Once the service kept behind the scenes, cleaning in



public spaces is now proving a key player in building consumer confidence – and so we must all demonstrate the hard work being done.

"Programmes such as EnhancedClean™ are key. Not only has it been created with the guidance of an Expert Advisory Council of external leaders in infection control, its three-step process offers a holistic approach which includes communicating the measures in place to users of the site or service. This all goes a long way in providing the reassurance people need."

Life at airports throughout this Covid-19 pandemic has been tough but, says Niblock, "It has created a true community of people who want to help strangers, in the moment, every single day. It has been amazing to witness the agility, flexibility and bravery that our employees have shown.

"We must continue to show that comradery and embrace the changes that are coming and work together to make people feel safe and encourage them to fly again."

Finally, he adds: "Another crucial part of this is considering the impact this pandemic has had on disabled passengers, and how we can restore their confidence. We have just introduced a designated email to offer a single point of contact for disabled passengers to raise their questions/concerns. Within the first 30 days of launch, we received over 40 emails.

"The months ahead won't be easy for this industry but together we can definitely take to the skies once again."

ABM inks deal with Virgin and Delta for cabin cleaning

In September, ABM confirmed that it had been awarded a contract by Virgin Atlantic to provide cabin secure cleaning services for its aircraft operating through London Heathrow Airport. Simultaneously, it was announced that Delta Airlines had also agreed a deal with ABM for the provision of cabin cleaning services.

The contract for both airlines came into effect on 1 September 2020. ABM says that this month (November), the terms of the deal with Virgin will be extended to cover the carrier's Manchester Airport operations.
Antony Marke, ABM's UK aviation business group managing director, remarks: "During this period of uncertainty, we're supporting our clients with recovery and helping them to regain the public's confidence to fly again, and to keep flying, by delivering clean airports and aircrafts.

"Our unparalleled cabin cleaning services help create a positive passenger experience and provide best-in-class cleaning for any type of aircraft, which is vital right now."

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Keeping up with the latest in airfield ground lighting

Airfield ground lighting (AGL) technology is changing all the time, pandemic or not. Some of the big players in this market explain how they are moving forward

OCEM Airfield Technology, part of the Aretè & Cocchi Technology industrial holding company, is a specialist in airfield lighting. Unlike many firms supplying to the aviation industry, "Our company has been holding up well during the Covid crisis," says managing director Cesare Rizzoli.

"We see that many airports have kept their planned investments even though some projects have been delayed because people are not able to go on-site and carry out the work needed."

Moreover, Rizzoli continues: "We are on track to continue our solid expansion, consolidating our position in Europe with new wins in Sweden, France, Italy, Germany, Romania and in the former Soviet Union with wins in Uzbekistan and Azerbaijan. Other regions where we have been doing very well include the Middle East, with several military contracts [agreed], and Asia, where we have won some important projects in Malaysia, Vietnam and Hong Kong."

Recent years have seen OCEM launch a series of new products, expanding the range of LED lights it offers to the airport market. Indeed, says Rizzoli, "We really have a unique LED portfolio that in terms of performance, maintenance and reliability stands out."

Supporting the turnkey products that have been installed at airports around the world is a substantial service support effort. "With every turnkey project we are involved from the design phase to the maintenance phase, which has created the necessity to go one step further with our services offering," Rizzoli explains, adding: "We have also seen a move from airports to outsourced maintenance and we are at this moment looking into a series of potential contracts."

Geographical range

Recent contract wins for OCEM span locations as varied as Niger in Africa and Uzbekistan in Central Asia.

With regards to the former, OCEM is to deliver a new airfield lighting control and monitoring system (ALCMS), LED lighting and signs for Diori Hamani International Airport. The turnkey contract was awarded to OCEM by SUMMA, a Turkish contractor.

Elsewhere, as part of one of its biggest contracts to date, OCEM has signed a turnkey contract with a military customer in the Middle East. The contract relates to a new military airfield and covers all LED solutions for two runways and two parallel taxiways. OCEM is to deliver systems that allow the airbase to operate in all weather conditions and 24 hours a day. As part of the contract OCEM is supplying and installing the following: 6,000 inset and elevated lights; 5,000 addressable ILCMS modules; a control and monitoring system, including individual lamp control capability; 114 DIAM 4100 regulators; and 281 LED signs.

OCEM is handling commissioning and installation to ensure that the installation is undertaken to "OCEM's high quality standards", says Rizzoli.

Plus, in Uzbekistan, OCEM Airfield Technology is supporting the development of the new Tashkent East Airport in a turnkey AGL project.

The new gateway is Tashkent's second – adding to Islam Karimov Tashkent International Airport. It is a CAT III airport being built on the site of Tashkent-Vostochny airfield, which previously only served military and cargo operations.

OCEM is supplying its own energy-efficient inset and elevated LED lights and will take care of the delivery, installation and commissioning of the lights and lighting control system.

As to the future, OCEM is planning for the launch of its L-861 LEMIRL medium-intensity LED lights. They are extremely robust and enable safer operating conditions, the company says. They can be used as runway edge, threshold or end lights, and OCEM describes them as extremely maintenance-friendly, with easy spare parts management (having the same engineering for all configurations, one single electronic driver and one single firmware). Automatic detection of the connected LED board is possible, while the lights' domes, LEDs and prisms can be replaced quickly when necessary.

Moreover, they are environmentally friendly, yet extremely reliable, having been proven and tested against water ingress and guaranteed in all temperature conditions from -55 to +55°C. Finally, they are user friendly, with easy plug and play installation, OCEM says.

"We have a clear goal to be the best option when it comes to airfield ground lighting," Rizzoli states. This goal is to be achieved in four respects, he says:

Quality and reliability
"We have invested substantially in our quality processes and this has had a great impact on the overall quality of our products, as shown by their extremely low failure rates," Rizzoli asserts.

"The other aspect is reliability, which we often consider to be our middle name. People don't want to think about whether they are buying the right product, they need to rely upon the brand name and that name needs to stand for the highest degree of reliability when it comes to fulfilling their airfield ground lighting needs."

OCEM has installed its lighting systems at locations across different continents, including here, in the Middle East

Innovation
"Our approach is oriented towards the latest generation of LED lights and power solutions that boast the highest energy efficiency, and software solutions that focus on seamless interconnectivity with any other system on the airport," Rizzoli explains.

Regional expansion
"Today more than 50 business partners and 100+ colleagues guarantee that you can find OCEM in every key airport from Chile to Australia," Rizzoli notes. "We want to double that number so that in every country we have a solid business partner expert in AGL solutions and services so that – no matter what the country – the client always has a great partner to talk to whenever we don't have our own people in that specific country."

Turnkey projects
"Having seen the sharp increase in the demand for turnkey projects, we have expanded our project team quite considerably to make sure we can give customers excellent project support," Rizzoli asserts. "We see solid growth in ever more complex projects where customers seek the right partner to take full ownership of all aspects, and we have the capabilities to deliver an end-to-end approach with the highest degree of quality of service."

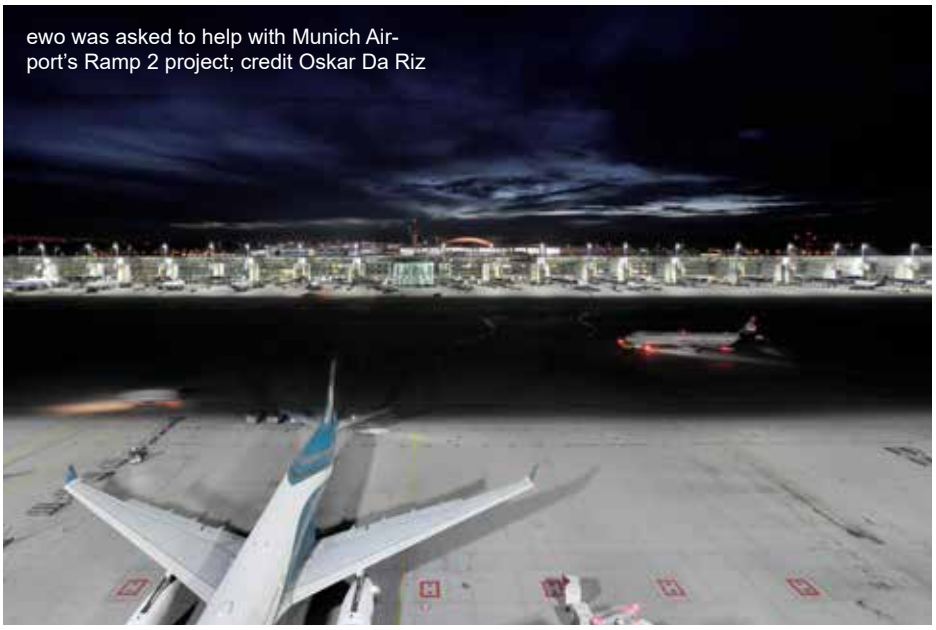
Ewo: pioneering in the field

Headquartered in Kurtatsch/Cortaccia in the Bolzano area of the Italian South Tyrol, though it also has offices in Austria and Germany, ewo supplies lighting systems for public spaces, including airports.

"We consider ourselves pioneers in the field of airport lighting, as the first company to install an apron lighting system entirely with LED-based floodlights" (at Austria's Innsbruck Airport in 2011), says ewo's CEO, Hannes Wohlgemuth.

"This project came about because Innsbruck was impressed with our first large area lighting project with LED fittings at Venice Cargo Terminal, which was completed a year previously," founder and chief technology officer Ernst Wohlgemuth remarks. "Since then, we have branched out into numerous countries of different sizes around the world, and we've increased the versatility of our floodlights considerably."

Today, ewo has lights installed at more


ewo was asked to help with Munich Airport's Ramp 2 project; credit Oskar Da Riz

than 100 airports around the globe, from desert regions to the ice and snow of Greenland.

ewo's R–System, available in many different versions, is its most popular product for airports. In addition to the modularity of these floodlights, lighting designers and project consultants can opt for numerous distributions within each luminaire. "This allows maximum efficiency, power and malleability of our systems for any project, delivering industry-leading performance," says Hannes Wohlgemuth.

Gateways that have installed ewo lighting include Munich, Stuttgart, Hanover, Innsbruck, Linz, Melbourne and Dubai, as well as Thule Air Base in Greenland. The lights are most typically seen illuminating these civilian and military gateways' apron areas.

Munich's Ramp 2 project saw the adoption of ewo's F–System Large lighting, with high poles utilising ewo's lights in various combinations of directional distributions. Ramp 2 followed a lot of other work ewo had previously undertaken at Munich Airport, including prior installations also using the F–System Large, a customised lighting project for a walkway at the airport and one of ewo's most complicated lighting designs: the illuminations at MAC Forum.

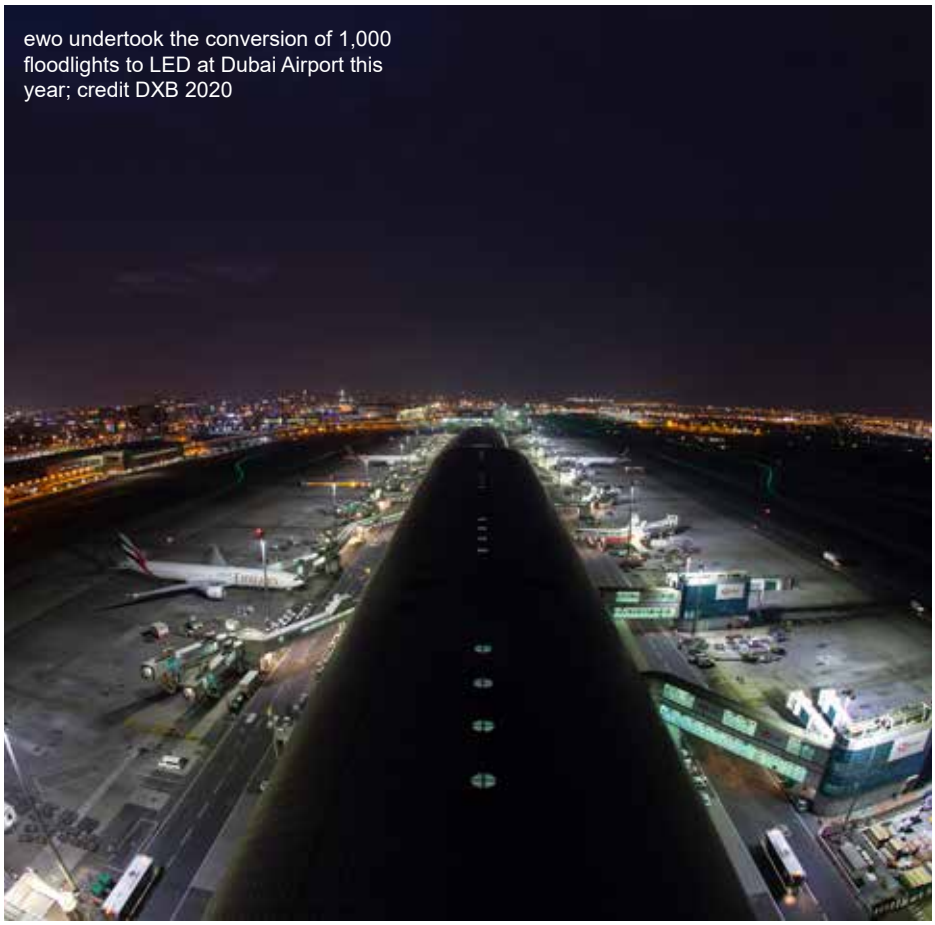
The MAC Forum project was more of an "architectural illumination", says Hannes Wohlgemuth, but it shows the level of customisation ewo that can achieve for "the best possible results".

To take another example, the work it conducted at Thule Air Base, Greenland, required ewo to operate in extreme conditions, Ernst Wohlgemuth recalls. In order to ensure a reliable, functional system, the operating devices of the floodlights were integrated into a switchboard in a hangar and connected to the luminaires on the hangar wall via heated cable, to prevent the intense cold affecting performance.

In June, ewo confirmed that it had supplied 1,000 floodlights for an LED conversion at Dubai International Airport. The recent installation at Dubai would have been a big project for any company, given its 12.5km² installation area, the requirement to replace halogen floodlights with state-of-the-art ewo R–System floodlights, the airport's prestige and its status in delivering 90 million passenger journeys per year, says Hannes Wohlgemuth.

ewo's tender for this project came due to a partnership with pole manufacturer Europoles (now FUCHS Europoles). The R–System's modularity allowed a reduction in power consumption of

Continued on page 18


ewo undertook the conversion of 1,000 floodlights to LED at Dubai Airport this year; credit DXB 2020

ADB SAFEGATE introduces new LED REIL light

ADB SAFEGATE has launched a newly redesigned LED Runway End Identification Light (REIL). REILs provide a visual indication to pilots of the runway threshold during an aircraft's approach.

The company has reduced the size of the flash head to the common PAR56 size flash head that incorporates only 12 LEDs, although – it says – the light retains "industry-leading photometric quality".

Daryl DiNinno, ADB SAFEGATE's vice president airfield, Americas, remarks: "The smaller PAR56 style flash head for styles A and E can now be mounted remotely up to 100 feet from the control cabinet, providing increased flexibility for airport installations.

"The new design delivers energy efficiency, reduced maintenance and unmatched versatility to help lower overall airport operating costs."

The ADB SAFEGATE LED REIL is available as a high-intensity single-step light (L-849A), a low-intensity single-step light (L-849C) and a high/medium/low-intensity three-step light (L-849E), and can be powered by a voltage source or by a constant current regulator.

Airports of all sizes could potentially benefit from the following features of the new light:

- Reduced operating costs: The redesigned LED REIL requires less servicing and offers improved energy efficiency. It has fewer component parts, thus offering increased reliability and having fewer spare parts to maintain
- High photometric performance: It is the only LED REIL to feature a compact PAR56 size flash head for styles A, C and E which, ADB SAFEGATE stresses, delivers "industry-leading photometric performance for all light intensity options" in a design that looks and feels like a traditional xenon flash head
- Improved durability: The smaller flash head is more durable than other products on the market and mitigates the risk of equipment damage such as broken glass from foreign object debris (FOD) or misalignments caused by excessive wind loading
- Added versatility and safety: The flash head can be mounted remotely from the control cabinet, allowing airports to reduce equipment located within the runway safety zone. The low-voltage LED design also eliminates the 2kV flash voltage needed for xenon systems, further improving safety and component life
- Reduced power consumption: Because there are fewer LEDs in the flash head, these lights offer an energy saving of up to 90% compared to xenon flash lamp REILs

ADB SAFEGATE's new LED REIL light

more than 50% on the lighting, offering much greater flexibility for the project as a whole, the company says.

ewo CEO Hannes Wohlgemuth comments: "Safety is the crucial issue in air traffic, and lighting is of paramount importance. Lighting on the apron enhances safety when important standards are met, when it is durable and reliable. Our R–System will do this – no compromises."

ewo continues to develop new products for different applications. It recently released a new Heliport floodlight with a glare visor, making it ideal for low-level illuminations. As the name suggests, it is primarily designed for helipads and landing areas.

This year has also seen ewo release the third generation of its high-power floodlight R–System. gen3 is designed for lighting any large area, allowing up to 480 LEDs and numerous distributions, from asymmetrical to rotational, within each luminaire. It also has wide-ranging configuration options, high thermal performance and a lifetime of more than 100,000 hours, the company claims.

ewo developed a new left/right asymmetrical lens series specifically for this product, with distributions capable of delivering higher lumen output, increasing the potential for large areas in general. Founder and chief technology officer Ernst Wohlgemuth observes of these new lenses: "The key factor is precision. Our left-right system illuminates containers and aisles for example, without casting shadows, of course with 0% light pollution.

"This is in addition to continuing activity with our smaller R1 panels, which offer industry-leading accuracy of illumination for smaller areas."

ewo has also developed LightLogger, an easy-to-use mobile measuring instrument that increases accuracy and saves time for precise measurement of luminance. It can be quickly assembled and is easily transportable, allowing geo-referencing via GPS, with self-aligning measuring sensors.

It also gives measurement of single points or wider surface areas, with simultaneous measurement of up to six measuring points, a horizontal measurement of 2m, with vertical measurement at 2m in four directions. It automatically records and evaluates in real time, with various measurement modes, producing reports and management of measurements, allowing the export of data in numerous formats. It is compliant with numerous regulations and standards (such as those of the European Union Aviation Safety Agency, EASA, and the International Civil Aviation Organization, ICAO).

LightLogger is part of what ewo call its 360° service offering. "The company remains close to the customer from the initial project idea, through support in project planning, to installation and beyond," says Hannes Wohlgemuth.

"In addition to our focus on products, we provide all-encompassing solutions and a full set of services for sustainable projects, through design support, installation support and commissioning and after-sales support."

S4GA offers Online Academy

Partly in response to the continuing Covid-19 pandemic that has made face-to-face meeting so difficult, in early autumn solar AGL specialist S4GA introduced what it describes as an Online Academy.

The S4GA Online Academy is a series of online courses dedicated to solar airfield lighting, the aim being to share knowledge about such systems among those working in the industry, be they airport engineers, electrical engineers, AGL maintenance managers, airport consultants and planners, or airfield lighting suppliers.

The first course – Solar Airfield Lighting Overview – contains 10 modules covering different aspects of solar airfield lighting, such as International Civil Aviation Organization (ICAO) compliance, product portfolio, installation and maintenance, case studies and others. Each module includes video lessons and a quiz. At the end of the online course, a student must pass a final exam in order to be awarded a digital certificate from S4GA. According to S4GA, "We've already received many very positive references from airport engineers and consultants who took the course and received certificates."

The Online Academy, the first online course dedicated to solar airfield lighting, complements a series of free online webinars that S4GA has offered in recent months. One was entitled 'Hybrid Airfield Lighting', for example.

As another part of its online offering, S4GA has also made available on YouTube an educational animation explaining how solar-powered airfield lighting can operate continuously for 365 days a year. It can be found at https://youtu.be/DfRZQXttOxg.

Finally, the company has also maintained a presence at those trade shows that have gone ahead this year. For example, it participated in the MSPO International Defence Industry Exhibition that took place in Poland in September. There, it presented the S4GA Military Airfield Lighting Trailer, which was specifically designed for NATO forces.

S4GA is a specialist in solar-powered lighting

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credit Fraport (Stefan Rebscher)

Alha Group hands over CoolBox dollies to Fraport

Italian cargo services provider Alha has delivered two specialised CoolBox cool dollies to German airport operator (and handler) Fraport

CoolBox is manufactured by Alha Group's own GSE manufacturing company, A+tech. A brand new design, the refrigerated dolly offers a handler the ability to move pharma and other perishable cargo from a warehouse or specialised pharma facility to an aircraft (or vice versa), without breaking the cool chain.

CoolBox is said to be the largest cool dolly on the market. Its interior consists of two main deck units and two independent spaces ('cabins' or 'rooms') with separate cooling systems. Each cabin is also fitted with an individually adjustable cooling system. Even when the engine is switched off and the outside temperature is as high as 30°C, the cabin will remain at the set temperature for over an hour.

The vehicle has been successfully tested in ambient temperatures ranging from -20°C to +50°C. It has an electronic temperature monitoring system and a tracking system, which enable continuously transmission of up-to-the-minute loading information. CoolBoxes are powered by hybrid engines.

Alha currently has five CoolBox units at its cargo terminals at Milan Malpensa and Rome Fiumicino airports. The two units acquired by Fraport, meanwhile, are to be used at its home base of Frankfurt Airport.

Recognition

Alha Group sales manager Andrea Piai tells *Airside* that the two CoolBoxes, delivered by Alha via special convoy directly to Fraport in the third week of July, represented the first time that the Italian handler had worked with Fraport. "We are proud and honoured that they immediately pinpointed the added value CoolBox can bring to airport cargo operations," he says.

CoolBox was first shown off to the market only a little more than a year ago, at the combined transport logistic/Air Cargo Europe 2019 event in Munich, where it attracted the attention of ground handling agents and airport authorities alike. Since then, Piai reports: "The CoolBox has been recognised as a prime product and has created great interest in the [aviation] market. We have been approached by various international players (airports and airlines) and have had open discussions [with them]."

The cool dollies are the work of A+tech, a new GSE division of the Alha Group, entirely dedicated to the development and production of ground support equipment for the air cargo industry.

Its products are developed on the basis of operational experience gained in the field, Piai says, and are designed to manage complex air cargo operations in an agile and efficient way. A+tech solutions are made entirely in Italy and are

built according to the highest standards of quality, safety and respect for the environment, he insists.

"The initiative started when we saw that the market did not offer what we were looking for – in respect to the fact that we are a 'one-stop shop' service provider for cargo warehouse and ramp handling services and that we specialise in controlled-temperature services, operating to IATA CEIV Pharma and Fresh certification standards."

The International Air Transport Association's CEIV – or Center of Excellence for Independent Validators – Pharma and Fresh programmes set the highest standards for those companies and agencies involved in moving temperature-sensitive commodities by air.

Piai continues: "In order to further streamline our handling timings and operational performance, we had a clear idea of what we needed, but what was offered on the market did not meet our expectations. That's when we decided to develop our vision and started production of the first concepts of the CoolBox.

"From that day it has been continuous improvement of the product, up to the presentation at the transport logistic trade fair last year, which was a big success."

CoolBox production began early this year and, says Alha, more deliveries are expected in coming months.

A+tech also manufactures side-loading 40ft dollies and is currently developing a new product – though one on which it is "too early to comment" – that is related to the 40ft dolly but "has the potential of being a game changer like the CoolBox", Piai declares.

"A+tech was created to satisfy our needs as an air cargo handler and to further our vision of [developing] innovative high-tech tailor-made GSE. The short history of A+tech and the CoolBox testifies how

The initiative started when we saw that the market did not offer what we were looking for

Andrea Piai,
Alha Group

passion for the air cargo industry can lead to the creation of new solutions to make air freight better, more efficient and competitive," he concludes.

Fraport builds its cool-chain fleet

Fraport's acquisition of the two CoolBoxes from Alha takes its fleet of cool chain dollies to 20.

"The two new refrigerated transporters will give us maximum flexibility when it comes to handling temperature-sensitive goods," advises Siegfried Pasler, head of ground handling services at Fraport.

"We have profound expertise in this area, and our customers benefit from this. It means that we can offer ideal infrastructure conditions together with our partners at Air Cargo Community in Frankfurt."

Max Philipp Conrady, head of cargo infrastructure and development at Fraport, adds: "Last year, we handled 120,000 metric tons of pharmaceutical products at Frankfurt Airport, making us Europe's leading pharmaceutical hub. The expansion of the fleet significantly underpins our status even further, particularly with a view to the upcoming transportation of the coronavirus vaccine."

Fraport has a long track record in the use of temperature-sensitive dollies, having used such vehicles for over 20 years now. Frankfurt Airport currently has around 12,000 square metres of temperature-controlled handling capacity available for pharmaceutical products. Another 2,000 square metres are about to go into use, it confirms.

Conrady confirms to *Airside* that Fraport is – as of late October – training its staff in handling the new CoolBox transporter units, which, he says, will soon go into service.

"With this latest acquisition, Fraport boasts one of the largest fleets of cool-chain dollies in the world – a total of 20 units that are all deployed at Frankfurt Airport," he notes.

credit Fraport (Stefan Rebscher)

"Thus, our Fraport Ground Services division is optimally equipped to meet the growing demand for continuous cool-chain logistics and transport on the ground at Europe's busiest air cargo gateway."

Fraport has been using temperature-controlled transporters at Frankfurt for more than 20 years. Says Conrad: "Our experience [of them] has been very positive. Furthermore, along with expanding our fleet size, the new units provide additional benefits and flexibility. Each CoolBox has two cabins. There is capacity for two lower deck units, whereas the existing cool-chain dollies can only transport one lower deck unit.

"Each cabin can be accessed efficiently from both sides which simplifies handling. And each cabin has its own individually adjustable cooling system," he notes.

Conrady also highlights the units' temperature monitoring and tracking systems.

Frankfurt Airport has around 12,000 square metres of temperature-controlled handling capacity, with direct apron access. Some two-thirds of this capacity is to be found in the modern Lufthansa Cargo Pharma Hub. An additional 2,000 square metres of space at CargoCity South will soon be taken into operation at the new Swissport facility there.

"During the handling of urgently needed protective equipment and other vital pharmaceutical goods at the beginning of this year, we showed that the Frankfurt cargo community makes an essential contribution to supplying the population," Conrady observes. "More than a billion protective masks reached Europe via Frankfurt during the earlier months of the Covid-19 crisis."

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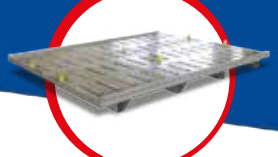
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Red Handling looks to spread its wings

Two members of the senior management team of Red Handling, the in-house ground service provider of Scandinavian low-cost carrier Norwegian at London Gatwick, talk to *Airside* about the latest trend toward smaller, bespoke handling operations, and the quality of service that it can offer to third-party airlines

Robert Williams, head of planning for Norwegian Red Handling, and James Collins, head of airside operations at the handler, are firmly of the opinion that operations like Red Handling are becoming increasingly popular for a wide range of reasons.

At the South London gateway where Red Handling is based, there is also British Airways' wholly owned subsidiary Gatwick Ground Services (GGS), while easyJet has turned to the services of DHL, not known traditionally as an on-airport ground service provider, for its handling at the airport.

Elsewhere, Ryanair's handling needs at London Stansted are met through what was OmniServ's, and is now ABM's, dedicated Blue Handling service, while Jet2 has also made a move into self-handling across its network. According to Williams, "Airlines are increasingly beginning to see that the benefits can outweigh the costs of bespoke handling operations, especially at key stations."

For a carrier such as Norwegian, to have its own in-house ground services provider at its key UK hub offers numerous benefits in many areas, he says, not least

in the amount of control the airline thereby retains over its own performance, the full oversight it has over the handling provided, the capacity to react quickly to operational changes or problems, and the ability to customise and control all aspects of its customers' experience in terms of ground service provision.

Moreover, commercially, self-handling can be a very competitive proposition at an airline's key hubs, Williams points out. Of course, the volume of traffic handled has to be high, Collins observes, if self-handling at a gateway is to be a financially viable alternative, but where the volumes are there – such as for Norwegian at Gatwick – the potential advantages are significant.

Adding to those listed by Williams, Collins also points to the fact that the airline's own loyal staff being so customer-facing means that they can genuinely represent the carrier in the best possible light. The start-up costs to an airline for self-handling at a given station may be higher than those involved in contracting the work out to a third-party supplier, but most of the costs can be mitigated. For example, one of Red Handling's biggest outlays is GSE, but equipment can be leased rather than purchased to cut down on initial investment. Likewise, office space and other infrastructure can be leased rather than purchased.

Looking for new customers

Red Handling is not only serving its parent carrier Norwegian at London Gatwick; it would also – in normal times – be handling for Portuguese airline TAP. TAP's flights into Gatwick have been suspended for the moment because of Covid-19, but Norwegian Red Handling's successful tender win proved that it has the capacity and the capability to handle for other carriers.

One-stop shop

Red Handling can act as a pretty comprehensive one-stop shop to its own carrier, Norwegian, as well as to any third-party airline. It offers a wide range of ground services as part of its offering – everything from passenger baggage tracing to on-airport de-icing.

With regard to the latter, Red Handling is one of only two handlers performing de-icing services at Gatwick. It uses JBT's proportional mix Tempest 2 de-icers that are under two years old. While the handler is very cost-conscious and of course safety is the number one priority, Norwegian is also a very environmentally aware airline, and so Red Handling does everything it can to minimise the impact of the glycol it uses on the environment.

Hence, says Collins, it uses the proportional mix Tempests to create its own water/glycol mixture as required according to ambient temperatures, weather conditions and other relevant factors.

And that is a line that Red Handling wants to explore further. It will not be a case of taking any or all business on offer, says Williams: in fact, he suggests, "We will probably turn down as much business as we take on," adding that Red Handling's approach is to consider its position very carefully before competing in any ground service provision tender.

"We have to see that benefits will accrue," Williams informs, "both for Red Handling and for the airline in question."

Size is not an issue. Indeed, when it comes to handling, "We don't see small as being a bad thing; in fact, it can be a benefit," he says. "Each of our team is very accountable, working together to ensure that any new business is sustainable.

"Yes, we don't have the large corporate structures [of the globally active handlers] but we meet the same standards and provide high-quality services."

As an airline's own in-house handling operation, Red Handling knows what a carrier wants and needs from its ground services provider, Collins declares. That knowledge and experience can be very usefully applied to other airlines for which it might handle, he suggests. Red Handling's proactive approach to relations with its own parent carrier can also be adopted for TAP or any other future airline's clients.

credit Luke Grima

The global operators may find it very difficult to please all their customers all the time by very virtue of their scale, Collins opines. Looking back at the TAP tender win, he recalls that Red Handling thought carefully before entering the competition process, looking closely at issues such as TAP aircraft types, the airline's schedules through Gatwick and the GSE that would be required, before coming to the conclusion that both parties could benefit from the relationship.

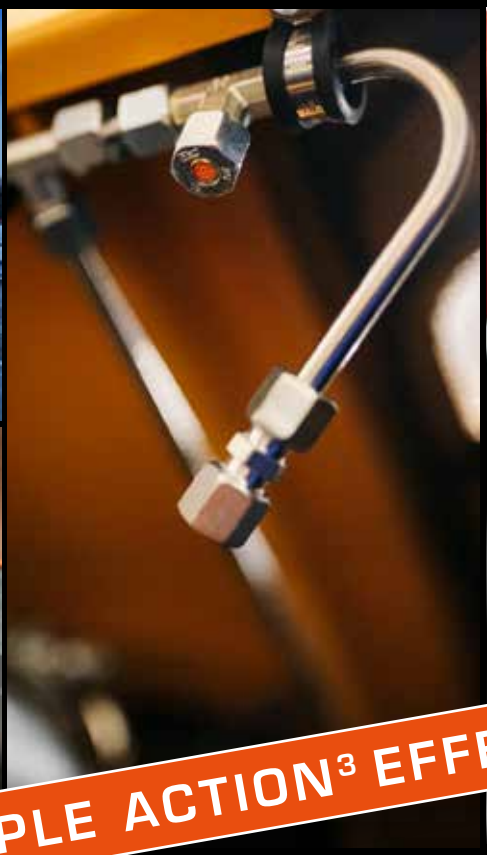
credit Luke Grima

"TAP has been very happy with our performance since," he says; "[it's been] a very good fit for both us and them." Collins confirms that Red Handling stands ready to take up its duties for TAP at Gatwick as soon as the carrier returns to operational flying through the gateway. The relationship has also offered Red Handling a shop window to the market to demonstrate that it can handle for third-party airlines very successfully. "We are now on the radar of other carriers when it comes to approaching the time for issuing new tenders," Williams notes.

And, while the Covid-19 pandemic of course has impacted airlines' willingness to invest in the future as well as denting the intensity of current flight operations dramatically, Red Handling is "ready to take the next step" in handling for other carriers, Williams adds, and can ramp up as required very quickly.

FOGMAKER

FIRE SUPPRESSION SYSTEMS FOR GSE



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GSE Safety Systems: the latest technology

Airside talks to two manufacturers of innovative GSE systems about their products and how they are making airport ramps safer

Lippstadt, Germany-based ASO Safety Solutions produces pressure-sensitive sensors as well as wireless signal transmission systems, safety relays and proximity sensors such as light curtains. It has developed a unique anti-collision system as a retrofit solution for all types of GSE. Its solution ensures a damage-free approach of the vehicle to the aircraft, says the company's head of sales Europe, Dirk Danzebrink.

Consisting of a proximity sensor and tactile sensor as well as different types of control units, it is a modular component system made in Germany.

The LISENS proximity sensor detects the aircraft fuselage and shows the operator of the GSE the exact distance to that aircraft. It also gives an alarm if necessary, so that the operator can react accordingly.

If a collision cannot be avoided, the actively switching SENTIR bumper – mounted on the front of the vehicle – ensures that neither the aircraft nor the vehicle are damaged, and also announces the collision via peripheral components such as lights and beepers.

ASO offers the world's largest portfolio of active switching and highly resistant safety edges, Danzebrink says. SENTIR edges can be installed between crushing and shearing points.

Acting as an interface for all ASO components is its ELMON control unit that enables quick and easy installation of the company's products.

Specially developed for the GSE market, ASO's safety foot is a pressure-sensitive sensor that is placed below the aircraft door in order to detect and report the lowering of the aircraft.

The company's in-house research and development department enables it to meet customer-specific requirements and to produce customised solutions, Danzebrink observes, also pointing out that ASO develops all products in accordance with applicable international standards. With regard to the GSE market, this means that it has designed its collision avoidance system according to the latest International Air Transport Association (IATA) Airport Handling Manual (AHM) recommendations.

In fact, he says, "At our headquarters in Germany, our products go through a strict release process, which is characterised by normative and – even more importantly – application-relevant tests.

"With respect to our GSE products, that means they are tested on a variety of vehicles such as belt loaders, cargo loaders or catering trucks and under different environmental conditions (temperature, humidity, wind forces, etc). This is how we ensure that our sensors can be used for any type of vehicle and anywhere in the world."

ASO headquarters in Lippstadt, Germany

Wide-ranging customer base

ASO's customer base includes all those in the aviation industry who are interested in the safe handling of aircraft, including service and maintenance companies, GSE manufacturers, airports and airlines.

Supporting customers at this difficult time has been an important part of many GSE system suppliers' operations over most of 2020, but less so for ASO.

"Fortunately, our [client] companies currently aren't affected by Covid-19 infections and we see only a little impact on our operations. Our production, development and administration departments remain active, although as an internationally operating company we certainly face the challenges posed by travelling restrictions, delays in the supply chain and quarantine measures.

"ASO will continue to visit the well-known industry events or participate as an exhibitor once they begin to take place again. We will also participate in important conferences to continuously

ASO Safety Solutions can test its collision avoidance system on its own belt loader, shown here beside head of product management Nick Klause and Jan Barnhusen, who handles GSE sales

monitor market requirements and take current standards into account.

"The GSE market remains an interesting industry for ASO and hopefully it will recover quickly from the Covid-19 impact," Danzebrink remarks.

Besides its headquarters in Germany, ASO also has subsidiaries in New Jersey in the US and Nanjing in China, supported by a worldwide network of distributors.

Fogmaker: specialised fire suppression

Växjö, Sweden-based Fogmaker International supplies highly specialised fire suppression systems for engine compartments. The system uses water mist created under high pressure to both cool and douse any fire that breaks out in the engine compartment of a vehicle fitted with Fogmaker; the foam produced also prevents any fire restarting.

Fogmaker has been manufacturing the system since 1995, originally developing the technology for rally cars. In 2004, the company branched out when it began supplying to the bus market, its sales growing strongly as a result. Today, it supplies Fogmaker into numerous industry sectors, including motor sport, buses, mining and tunnelling, material handling, forestry, construction, trucks, agriculture, marine and, of course, into airport GSE. Today, more than 200,000 vehicles, operating in more than 50 countries, are believed to be equipped with Fogmaker.

Its manufacturing and research and development (R&D) facility in Växjö, in the south of Sweden, has nearly 100 employees manufacturing and improving the high-pressure water mist fire-protection system.

Engine fires are hard to combat with traditional fire suppression systems, mainly because they are hard to detect when they first start and then – once going – burn extremely intensely. Fogmaker is designed to tackle the three components that are required to start and maintain any fire: an ignition source and/or heat, oxygen and fuel.

Designed to attack all three sides of this 'fire triangle', Fogmaker is made up of three components: the detection system, an activation and suppression delivery system, and a system status display. The detection system does not rely on electrical sensors but on a hydro-pneumatic tube that ruptures and depressurises once the surrounding environment reaches a predetermined high temperature.

A Fogmaker fire suppression cylinder

A loss of pressure in the tube triggers the opening of a release valve and a collection of patented-technology nozzles then deliver a high-pressure foam mixture in the form of atomised droplets. This foam contains both water and aqueous film-forming foam (AFFF) agents. Each droplet rapidly absorbs heat as it expands into a vapour and, collectively, they can reduce the ambient heat within an engine compartment by somewhere between 700 and 1,300 degrees in just 10 seconds. The water, expanding into steam, also displaces the oxygen that is required for any fire to keep burning.

An automated engine shutdown option is also available with the system.

Fogmaker can be installed in under a day, with the process being carried out by one of the company's own travelling teams of engineers or by one of its many certified installers that are to be found around the world. Such partners are trained within the Fogmaker Training Academy programme and certified on passing the course.

While complex in its operation, the system is a simple one in that no power supply is required. There is little ongoing life cycle cost, and maintenance requirements are small.

Airport application

Lars Alrutz, sales and marketing manager at Fogmaker, notes: "Our system has a well-known efficiency for all vehicles that have a risk of fire.

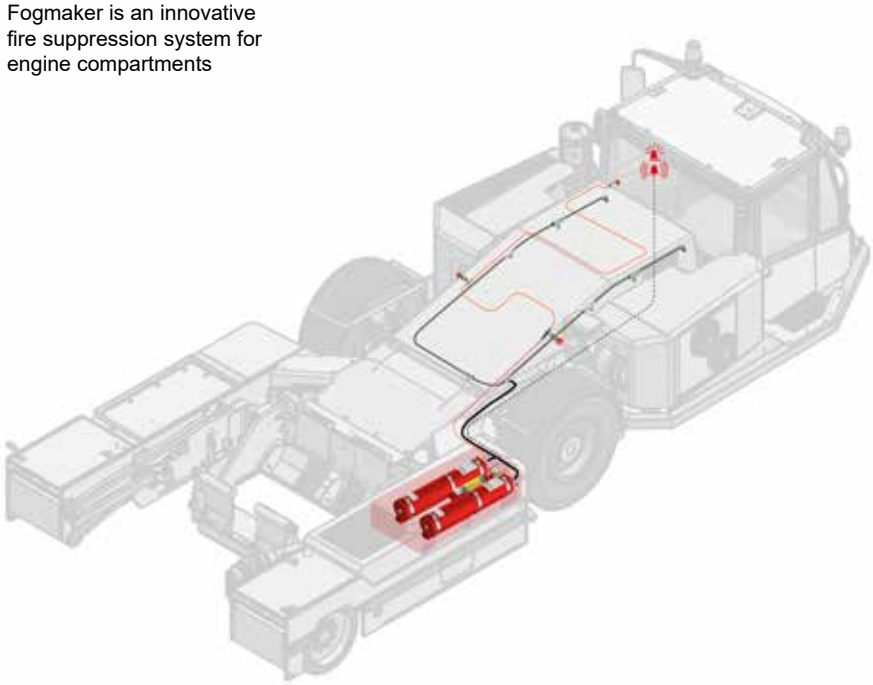
"The water mist cools down the fire and the steam that is generated pushes out the oxygen so that the fire is choked. Plus, the small amount of foam that is added to the agent will create a blanket over the fuel to prevent fumes from reigniting. Our patented nozzle technology gives a

long activation time that is crucial, both to have a desirable cooling effect and to prolong the fire incident so that an airport fire safety crew has time to reach the vehicle and assist.

"When there are valuable assets that need protection, our system is the solution," Alrutz declares. "To ensure as little down-time as possible for the vehicle, the water mist can easily be rinsed off after a fire incident and after the damaged components have been replaced, the vehicle can be put into operation again."

A number of aircraft tow tractors have been equipped with Fogmaker. Last year, the company installed approximately 150 systems on tow tractors, but Fogmaker recommends that all GSE that either comes into contact or approaches an aircraft should have a fire suppression system to minimise risk to life and equipment.

Fogmaker is an innovative fire suppression system for engine compartments



Considering it only entered the GSE market in 2018, the firm has made good progress in this segment. Fogmaker currently supplies to GSE manufacturers like Sweden's Kalmar Motor, while it has also undertaken numerous retrofits in the German market.

Fogmaker is equally applicable to both petrol and diesel engines, and is also suitable for hybrid vehicles. In fact, the company has equipped a lot of hybrids with fire suppression systems and is now working on new solutions for fully electric vehicles.

dnata upgrades its pharma handling capability at Changi

As we saw in an earlier article, Fraport has invested in new CoolBox equipment for use at Frankfurt – but it is not the only ground service provider to have invested in cool dollies of late. dnata, the air services provider that forms part of the Emirates Group, has introduced two cool dollies for handling pharmaceuticals at Singapore Changi Airport

The cool-chain dollies that dnata has introduced into service at Changi are for moving pharmaceutical shipments between cargo warehouse and aircraft, ensuring that the temperature-sensitive cargo maintains its temperature integrity throughout its movement through the airport.

Providing temperature-controlled storage from -18°C up to +25°C, the cool dollies have a closed structure, with alarms on opening and closing, as well as alerts if temperatures rise above acceptable ranges. They are fitted with solar panels, so they are also environmentally friendly and offer cost economies in terms of power requirements.

The units are also said to be hygienic and easy to clean, an important consideration for pharma cargo.

Dirk Goovaerts, dnata's regional CEO for Asia Pacific, observes: "It has become increasingly crucial for both airlines and freight forwarders to be supported by a reliable, certified handler that can protect their pharma shipments and ensure the products remain in perfect condition until they reach the end customer.

"We constantly invest in our people, facilities, equipment and processes to provide world-class services to our customers. Our latest investment in cool dollies underlines our commitment to ensuring the highest quality of supply chain management when handling temperature-sensitive cargo."

He adds that dnata will "continue to enhance our operations to deliver the promises our customers make, every day".

The Dubai-headquartered ground services provider has become the first handler to operate cool dollies at the Singapore gateway and Lim Ching Kiat, managing director, air hub development at operator Changi Airport Group (CAG), notes: "Pharmaceuticals and perishables shipments are highly sensitive to temperature fluctuation and require stringent temperature control to maintain product effectiveness and freshness.

"The cool dolly services further enhance Singapore as a reliable and quality air hub for pharma and perishables products."

Lim continues: "Through close collaboration with our air cargo community, Changi Airport is committed to continuously develop our cold chain handling capabilities, providing shippers with the assurance of safe, reliable and efficient air transportation for their special cargo. Changi currently features the largest IATA CEIV Pharma-certified air cargo community in Asia Pacific. Together with our community, we are preparing for the effective global air transportation of Covid-19 vaccines."

Operational experience

Goovaerts tells *Airside* that dnata advised on the design of the cool dollies based on its own operational requirements and preferences. A Singapore-based company, Monzone, manufactured the units in line with dnata's requirements.

The handler acquired the equipment at the end of September, and then began staff training and operational trials.

The first two cool dollies will be supplemented by a further two that are on order, Goovaerts informs. As well as the four units it will operate at Singapore, dnata has also ordered four more cool dollies to serve the market in Australia. The handler uses similar dollies in Dubai in the UAE and at Amsterdam Airport Schiphol in the Netherlands.

Prioritising pharma

dnata operates a 1,400m² pharma and perishable handling centre at Changi, which is able to handle 75,000 tonnes of temperature-sensitive goods a year.

The facility was designed and built with flexibility as well as the specific requirements of perishables handling in mind. Its temperature-controlled areas are modular, enabling teams to manage changing handling demands with dedicated climate control capability.

A web-based monitoring system is also used to facilitate real-time management of all areas. dnata is able to provide its customers at Changi with a one-stop audit trail of all consignments processed through its cool-chain facility there.

GTA dnata inks deal for handling at Vancouver

At the end of August, Canadian ground services provider (GSP) GTA dnata confirmed that it had been awarded a five-year licence to handle at Vancouver International Airport. It will set up a team at Canada's second-busiest airport (in terms of passenger numbers pre-Covid times) that will be able to provide ground (ramp and passenger) handling as well as cargo handling services

The thinking behind the contract is innovative, given that when the agreement was signed GTA dnata did not actually have an airline customer to handle at the gateway. GTA dnata CEO Antonio Alvarez explained the concept to *Airside* soon after the deal was announced: "Because of the Covid pandemic, these current times are unique. We had been considering going into Vancouver for perhaps 18 to 24 months, but these strange times have thrown up new opportunities."

While there has been plenty of interest in GTA dnata's services from various airlines flying through Vancouver, no deal has yet been confirmed. Nevertheless, said Alvarez, "We are confident that once we are all set up there, the business will come."

GTA intends to offer the complete range of ramp, passenger and cargo handling at Vancouver, just as it does at its home base of Toronto Pearson International Airport. The three services go hand in hand and complement each other well, while providing quality handling across all three areas is also "the formula we have used very effectively in Toronto", Alvarez pointed out.

Because of the downturn – or rather, the near collapse – in flight operations, GTA dnata had redundant equipment in place at Toronto and it made sense for those items to be used effectively elsewhere. Approximately half of the GSE that will initially be deployed into the new operation at Vancouver will be sourced from Toronto, Alvarez informed, while the other 50% or so will be freshly acquired.

The equipment to be deployed at the west coast airport is likely to include a tractor for narrowbody aircraft pushback, another for widebody aircraft pushback, belt loaders, lower deck loaders, a maindeck loader if a freighter customer is signed up, an air start unit (ASU), ground power unit (GPU), lavatory service truck and of course a range of dollies and other non-powered equipment.

If a warehousing operation is required as part of the service, then forklifts, X-ray machines and other equipment will also be put in place.

Because the Vancouver Airport Authority has an aggressive GSE electrification programme in place as part of its efforts to minimise its environmental footprint, half of GTA dnata's powered GSE on-site will need to be electric – and this percentage will need to rise in subsequent years.

A team of 20 or so staff will initially be based at the new station. Some employees

will be redeployed from Toronto to begin with, although the long-term plan is that as this team grows to handle newly signed-up customers the staff will sourced locally. The Vancouver operation will at least initially receive administrative support from the handler's Toronto headquarters.

Alvarez expects GTA dnata to be ready to operationally handle any of the flights through its second station as required in early 2021, be they passenger or freighter services.

Quality of service

As a business, GTA dnata dates back to late 2016, when Dubai-based dnata (part of the Emirates Group) took a 50% stake in warehouse service provider GTA Aviation. GTA Aviation had itself been established in early 2014, when it began handling Lufthansa Cargo freighters at Toronto Pearson.

The company grew between 2014 and 2016 and expanded further following the creation of the new GTA dnata business four years ago. And it continued to grow after that, says Alvarez, until it was handling 17 airlines at Toronto, 1.2 million passengers and moving over 90,000 tons of cargo over the course of 2019.

That process of growth continued right up until the collapse in operational intensity at the vast majority of the world's airports – in Canada as much as elsewhere – began in March this year.

March and April were terrible, Alvarez admits, but business has slowly begun to recover since then. What has not changed is the GSP's business model, he continues: "Our calling card is to have the best employees possible, operating the best-possible equipment, and to treat them commensurately."

Only through that model will GTA dnata be able to provide its customers with the best possible service, Alvarez asserts, in Covid-affected or non-Covid-affected times. "The model works; we are not the cheapest option but our customers value quality, and we provide that."

He observes: "Handling is hard work, requiring employees to operate at all times of the day and throughout the year, whatever the weather. It is difficult and it should be rewarded."

Hence GTA dnata is perhaps the only handler of a significant size, he says, to profit share – when they have been in service for a financial year, its employees are eligible for a share of the company's profits.

"This has been a very trying period," Alvarez admits, but we are starting to come out of it and this deal with Vancouver represents a significant opportunity about which we are very excited.

"It really represents an opportunity for us to build something new," he concludes.

Bridging the gap

Terri Smart-Jewkes, Aviramp's global sales and marketing director, tells *Airside* why she thinks the company's unique form of boarding bridge is a good option in these days of social distancing

Aviramp's Terri-Smart Jewkes

Have you seen reason to think that passengers' habits have changed in relation to boarding and deboarding aircraft during this pandemic? Are passengers attempting to social distance during these processes, would you say?

Passenger habits vary depending on individual attitudes towards the pandemic but all are complying with mask wearing and social distancing measures when boarding and deplaning.

Do Aviramp's mobile and fixed bridges allow for greater social distancing than is usually seen with standard aircraft passenger stairs?

Exactly right. This is what we have discovered. Customers who have invested in our products are finding that airports/airlines/handlers can ensure a safer process and deliver a better passenger experience due to social distancing on an Aviramp as opposed to stairs.

It is giving those customers with our boarding ramps more of an edge than those having to use stairs.

Clearly, airport operators and handlers are less willing to invest in infrastructure and GSE of all forms right now, so has demand for your product been significantly affected by the pandemic?

We have been selling, but obviously in much lower volumes given that capital expenditure has been frozen for many. Also, we offer all products within our suite as solar/electric versions, so many of our existing customers have had their existing suite retrofitted to implement this huge cost-saving alternative. These alternatives are also much kinder to the environment.

Have your new solar-powered bridges been well received?

The solar boarding ramps and bridges have been very well received around the world. They represent a unique product offering within aviation ground handling, with huge benefits for all stakeholders.

Given the economic impact caused by the pandemic the feedback we have been receiving is that investment in our solar suite will deliver huge cost savings long term whilst still delivering safety, speedy turnarounds, and a great passenger experience for all (including dignified, all-inclusive boarding/deplaning for the elderly and disabled) – all while protecting the environment.

Solar-powered bridges are a much more sustainable alternative to stairs and ambulifts. Also, there is no real maintenance required, so no big extra costs to factor in.

Have you continued to support your existing customers during the crisis in various ways?

Absolutely, we have continued supporting them with maintenance and spare parts along with general morale boosting! We enjoy such positive relationships with our customers, that we see ourselves as an extension of their own team and often they see us that way too.

We are less of a supplier and more of a partner, because we help to provide solutions to very specific challenges and work in a very bespoke and collaborative way.

Do you think that there will be a 'new normal' in terms of aircraft turnarounds and supporting equipment? How will this affect Aviramp and what you offer the industry?

I think most of us want to return to normality but I do feel that the emphasis on cleanliness and hygiene will be maintained, which has to be a good thing. That said, regarding our product, if social distancing is here to stay longer term, then our suite can certainly deliver that mandate.

We can provide boarding ramps to be used for passenger boarding and quick fixed jet bridges so that they can be used for boarding and queuing. The product is so versatile and easy to use, adding to how it assists with social distancing regulations for as long as they might be in place.

I think that, from a ground handling perspective, those airports and airlines using Aviramp are more than ready to move people around the world again safely and securely knowing that all social distancing measures can be implemented safely and effectively during this worldwide pandemic.

GSE&RAMP-OPS Podcasts: sharing experience and knowledge

Complementing *Airside* magazine are a range of other offerings we provide that help to bring the industry together to share views and experience. A number of GSE&RAMP-OPS Podcasts are now available in which aviation industry stalwarts offer their thoughts on issues of relevance and interest...

The GSE&RAMP-OPS Podcasts were first made available in mid-October, with the last of an initial series of seven programmes posted by the end of that month. They are all entirely free to watch, and available at https://evaintmedia.com/theevapodcast/

Paul Drever, general manager – GSE engineering & standards at Menzies Aviation

They are hosted by Chris Notter, a name that is well known to just about everyone in the aviation business, especially those who have been involved in airline and cargo operations, or in handling. Each podcast sees Chris welcome two or three guests – all recorded remotely, of course, because of Covid-19 precautions – who discuss subjects that are of importance to the airside community.

These issues are all of contemporary relevance, pandemic or no pandemic, but many of them take on a particular importance in these challenging times.

The first of the series relates to effective GSE resource planning, and features Steve Cannon, head of global fleet management at ground services provider Swissport, John Edmunds, head of fleet management EU at Swissport, and Paul Holmes, managing director of telematics systems provider Smarter Asset Management. Cannon and Edmunds discuss how a GSE operator can ensure that its fleet is of the optimal size for its operations, while Holmes explains how telematics supports effective asset utilisation, not only for the actual GSE operator but also how it also benefits their customer by optimising fleet size and deployment.

The second episode concerns preventing aircraft and GSE damage: namely, eliminating ramp rash. It brings together Robert Powell, vice president technical services at globally active service provider dnata, and Colin Temple, director, ramp operations and maintenance for handler Bangkok Flight Services (BFS).

Episode 3 continues this theme, assessing the issues relating to preventing aircraft damage with particular regard to the GSE safety approach systems that are now becoming so much more common, as well as in terms of the guidance provided by the International Air Transport Association's Airport Handling Manual – especially the provisions of IATA AHM-913. It features the wise words of Steve Savage, senior analyst ground operations at IATA, and Bibin George Samuel, group GSE manager at National Aviation Services (NAS).

Equipment pooling is the subject of the fourth programme in the series, as Liam Bolger, head of airside operations at London Luton Airport, and Gennaro Carcassa, UK station coordinator for GH London Ground Handling Services, discuss how multiple ground services providers can improve ramp operating efficiencies and cut down on congestion on airport aprons by sharing their GSE.

Gokmen Aritay, chief operating officer at Limac Kosovo Airport, and David Uclés, GSE management & services contracts at Iberia, next offer their views on the pressing need that now exists for airside

charging infrastructure to support expanding fleets of electric GSE. Is the lack of that infrastructure holding back the efforts of those handlers who are wanting to go green?

Through-life GSE capability management and issues relating to total cost of ownership (TCO) are the concern of Episode 6 of the GSE&RAMP-OPS Podcast series. Paul Drever, general manager GSE engineering & standards at ground services provider Menzies Aviation, and Gerd Van Damme, chief asset officer at leasing specialist TCR, discuss how a GSE operator should be calculating an item of equipment's TCO before acquiring it, and assessing how that cost can be minimised.

The final programme concerns how data-driven approaches can be implemented to best ensure safety on the ramp. Witold Jaroslaw Proszynski, manager occupational health, safety & emergency at Qatar Aviation Services, and David Storey, senior manager safety for Qatar Airways, look at the value of passing data between handlers, airlines and airport operators in relation to any unwanted incident on the ramp, and on sharing safety records more generally.

Witold Proszynski, manager occupational health, safety & emergency at Qatar Aviation Services

The GSE&RAMP-OPS Podcast series is sponsored by Aviaco, dBD Communications, JBT, Sinepower and Textron GSE.

The podcasts have been hailed a big success, and more of them will be made available as time passes: another vehicle for keeping us all both informed and engaged during this incredibly difficult period.

Thank you to all our sponsors

ATS expands in Canada

In late summer, WestJet selected Airport Terminal Services (ATS) as its ground handler at Calgary International Airport – the airline's home base and largest airport hub

Prior to the inking of this latest deal with WestJet, ATS was already handling for the airline at some 19 cities across the US and Canada, including a GSE maintenance operation in Calgary. But with the addition of the new ground handling agreement, ATS set itself to "building a new focused team dedicated to support the WestJet operation in YYC [Calgary Airport]".

Sally Leible, ATS's president and CEO, said at the time of the contract announcement: "We are thrilled to be awarded this contract and are committed to making the WestJet ramp in Calgary one of the best operations in our network.

"WestJet has played a vital role in our history, and we are proud to still be growing our partnership more than 20 years later."

Robert Antoniuk, WestJet's vice-president, airports, added: "For more than two decades ATS has provided safe, dedicated and caring service to millions of WestJet guests across our network.

"Due to this longstanding relationship we know ATS is aligned with our culture and commitment to 'safety above all'; these were the principal reasons we selected the company as our ground service partner for our largest hub."

ATS is due to begin ground handling for WestJet at Calgary this month (November), as *Airside* goes to press. According to Ingrid Braeuninger, chief commercial officer at ATS, with the launch of its new responsibilities at Calgary and assuming pre-pandemic 2019 levels of service frequency, ATS would expect to handle approximately 140 daily flights involving WestJet, Encore and Link aircraft through the gateway.

(Encore is a regional carrier owned by WestJet, while WestJet Link is the brand name under which Pacific Coastal Airlines operates local feeder flights out of Calgary for WestJet to smaller towns and cities in British Columbia and Alberta under the terms of a capacity purchase agreement, or CPA.)

ATS is to provide all ramp service functions for WestJet at Calgary, including loading/unloading baggage and cargo, aircraft repositioning and load control.

The Calgary operation adds to the eight locations in Canada and 11 locations across the US for which ATS also performs various services for WestJet. ATS also provides aircraft ground handling services or airport support operations to over 150 other customers at nearly 50 stations across North America. These carriers include United Airlines, Air Canada, Hawaiian Airlines, JetBlue, Volaris, Alaska Airlines, Japan Airlines, Hainan, Spirit Airlines and Frontier.

The WestJet deal also adds to a number of other new contract wins confirmed by the handler in recent years. Just last year, ATS opened up new operations at Tampa International Airport, Orlando International, Baltimore/Washington and Boston Logan.

It is by no means a programme of unconsidered expansion, however, Braeuninger explains. "Our growth comes from where our customers need us," she says. "We do not have a strategy for growth of certain locations, rather a strategy for growth where our customers see the biggest value."

Indeed, Braeuninger continues, ATS's caution has left it well positioned during this period of great challenge for the aviation industry. "At its core, ATS is a conservative company and we have not taken large financial risks that would have put us in a precarious position," she informs.

"From that starting place, we have right-sized our operating teams to be in line with current loads and flight activity, while maintaining our staffing by putting them to work in other areas of our station operations through the protections we offered with funding given through the CARES Act."

The USA's Coronavirus Aid, Relief, and Economic Security (CARES) Act was passed by Congress and signed into law

by President Trump on 27 March 2020. It promised more than US$2 trillion as an economic relief package intended to provide "fast and direct economic assistance for American workers, families, and small businesses".

"Prior to the CARES Act, we downsized our corporate functions considerably and leveraged the technologies we had implemented over the last couple of years to further streamline our processes," Braeuninger remembers.

"And, most importantly, we are focusing on an aggressive growth strategy in order to recover at least three times faster than the market by optimally utilising our existing team members, GSE and lease holds."

ATS has had to meet a range of challenges associated with the Covid-19 pandemic, just as so many of its competitors and industry peers have had to do. Thus, for example, "We have had to address the physical and mental health of all of our team members as they struggle and deal with the series of national crises that have taken hold of our country," says Braeuninger.

"Our Pandemic Committee's sole focus has been on continuing to improve the safety and wellbeing of our team and their families by creating a safer workplace and facilitating Employee Assistance Programs wherever needed."

ATS's strategies for future success remain consistent with those that have served it so well up to now. "Our plan for the future is to be one of the strongest, if not the strongest, US, privately held aviation company in the US and Canada," Braeuninger declares.

"While not such a different plan than a year ago, navigating through this crisis has shown how much stronger we really are. We will continue to grow our Hospitality Business – [branded] Airport Butler and Wingtips – growing a customer base that is adjacent to the traditional airline or airport contract."

Of course, ATS will have to adapt to whatever may be the 'new normal', Braeuninger considers. "This pandemic has forever changed the course of our industry. From safety, to business contract terms, to training and online learning, to assessing the value of financing terms of assets as well as longer term contracts, to how we engage with our customers.

"We used to 'jump on a flight' to anywhere to get something done; we now know that so much can be accomplished without the need for that."

WheelTug demonstration shows off wide range of benefits

In mid-September, the WheelTug taxi system was put through its paces at Memphis International Airport. The innovative aircraft tow technology was being shown off publicly for the first time in a live airport environment

As described in the autumn issue of *Airside* (https://www.airsideint.com/issue/autumn-2020/), WheelTug has continued to grow in popularity during its development and trials process, though it is not yet in serial production.

A WheelTug unit, installed on to the nose wheel of an aircraft, can drive the aeroplane forward and backward when approaching or leaving a gate. Using the power of the aircraft's own auxiliary power unit (APU), WheelTug drives the machine either on to or away from a stand, obviating the need for the engines of the aircraft to run on power – they can remain on 'idle' – or for a separate tow tug to be used at that point.

The aircraft's pilot or co-pilot controls the movement of the aircraft from the flight deck. A camera system can be fitted as part of the WheelTug product – as it was in the Memphis demonstration – to offer the aircrew all-round visibility from near ground level.

WheelTug is said to save between seven and 20 minutes per flight in terms of turnaround times, as well as reducing aircraft fuel burn, minimising engine and brake wear, cutting harmful emissions and significantly lowering pushback costs. The system also offers a high degree of manoeuvrability in the ramp area, something that is of significant benefit on today's crowded ramp areas.

Test Drive 2020

The Test Drive 2020 demonstration at Memphis took place in front of invited guests, some of whom were on the aircraft, and was then presented to a wider online audience as part of a 75-minute Zoom video meeting (followed up by a Q&A with WheelTug CEO Isaiah Cox).

As well as footage of an AlbaStar B737NG moving on to and off-stand using the WheelTug system, the presentation also included a number of interviews with

project partners and potential customers, as well as other interested parties, offering insight into the capabilities and benefits of the technology.

Improved operational performance

While Cox introduced Test Drive 2020, Scott Brockman, CEO and president of Memphis International Airport, said the gateway was delighted to be involved in the demonstration, being as it is keen to help in any effort that might make the aviation industry safer and more efficient.

He described WheelTug as a "visionary and revolutionary system" that will potentially give many airlines a major leg-up in their operational performance.

The first interviewee was Arlie Stonestreet, vice president engineering at project partner Ultra Electronics. WheelTug brings together numerous technological disciplines – mechanical and electrical, hardware and software – he said, and the demonstration was an ideal opportunity to see all these disciplines come together in a working product. "We have been able to address and overcome so many challenges" in the development of WheelTug, he added, to produce a system that many did not think was possible.

Mike Silvius was next to share his thoughts on the importance of the technology. Silvius, an MRO services advisor on the programme, said that, "An incredible team has been involved in developing WheelTug."

Together, that team has made full use of aircraft's own capabilities in order to provide the power required for the WheelTug system. By, adapting what is already available, it has been possible to minimise the changes needing to be made to any aircraft during WheelTug installation.

In fact, he noted, WheelTug can be installed on a single-aisle aircraft like a B737 in a surprisingly short amount of time – perhaps in a two-phased process over two nights to avoid any aircraft having to be taken out of revenue service, he suggested. Moreover, removal is just as easy as installation; this might be an important factor given the business offering that WheelTug is making: that prospective customers can trial the system, once it is operationally ready, but have it removed similarly free of charge if they are not happy with it.

WheelTug has no impact on an aircraft's airworthiness, Silvius insists, because the installation of the system does not require significant structural alterations to an aircraft, while any maintenance to WheelTug can be performed during an aircraft's regular line maintenance schedule.

Moving in

The first part of the demonstration saw the AlbaStar B737 move on to a Memphis stand without its engines running – in fact, they were covered over – and come to a stop at the appropriate apron line marking. A jet bridge then moved to the aircraft to simulate passenger offloading. Subsequently, the jet bridge withdrew, and the aircraft could move off stand, again under pilot control of the WheelTug system.

Camera views were available from the terminal gate, from the stand and from WheelTug's own 360° camera system.

Two subsequent demonstrations showed off WheelTug's 'twirl' and 'twist' capabilities. The first of these is an almost 180° turn by an aircraft, manoeuvred by WheelTug, once it is clear of the gate; this allows the aircraft to be driven forward away from the gate and into the start of its taxi to the runway (where the main engines can be used to achieve a much greater speed than the 8 miles per hour permitted by WheelTug).

The twirl can be undertaken on pretty much any regular airport stand, while the twist requires a larger gate area – that for a B757 aircraft or larger. The twist comes into play as an aircraft approaches nose-on into a gate before turning on the spot through 90 degrees such that it stands parallel with the terminal gate. In that position, any gate with two jet boarding bridges can be used concurrently to enable much faster deboarding (and subsequent boarding) from an aircraft's front and back doors.

Many gates are equipped with two boarding bridges, says Cox, especially in Asia, and enabling passengers to get off and onto an aircraft through both of its doors represents a significant potential time saving for any aircraft turnaround.

Savings

Test Drive 2020's third interview involved Professor David West of East Carolina University, located in Greenville, North Carolina. He talked about the importance that airlines attach to minimising turnaround times and, with WheelTug promising significant improvements in this regard, described it as "a significant and important innovation" in the airline industry.

Next, Stefan Kracht, a pilot and technology consultant, discussed the many potential benefits of WheelTug as regards airport operations. He talked about the various problems associated with using an aircraft's jet engines during pushback on to and off a stand: namely, it entails fuel consumption and so is costly, represents a potential danger to people or equipment in terms of jet backwash, is noisy and is environmentally damaging.

The fact that WheelTug avoids jet wash use also means that taxiing aircraft near stands can be closer together, separated only by the safety distances required between aircraft moving on a ramp with their engines only idling.

WheelTug is usable in all weathers and – with the Northern Hemisphere winter not far away – it was pointed out that using WheelTug as opposed to main engine power will also offer greater safety and flexibility during de-icing procedures.

Captain Ashim Mittra, senior vice president flight operations at IndiGo, the Indian airline that has expressed its interest in the electric tow technology, added his thoughts on the time savings WheelTug enables. Moreover, the fact that the system does away with the need for a separate tow tractor when an aircraft is leaving the gate represents a significant benefit, he suggests, perhaps especially so in a country like India where there is sometimes little spare cash to spend on GSE.

Using WheelTug will allow airlines such as IndiGo to substantially reduce turnaround times and improve on-time performance, Mittra declared. "The fuel-saving opportunity is substantial," he continued, while the environmental benefits are important too.

Test Drive 2020 also included discussion with the pilot of the demonstration

aircraft, Jose Lorenzo. Having shown off WheelTug's prowess in the various demonstrations, the AlbaStar B737NG's pilot said he had been impressed by the smoothness of the manoeuvring that the technology allows, as well as its ease of use.

Training of aircrew on WheelTug is a fairly quick and painless process, the company insists. No special simulator is necessary, although computer-based training will be used. The hardest part, it has been suggested, is getting used to using the wheel nose camera, a process somewhat similar to the thinking required when reversing a car.

The chat with the AlbaStar pilot was followed by a brief discussion with the Palma de Mallorca, Spain-headquartered airline's CEO, Michael Harrington. AlbaStar handles a large volume of pilgrimage traffic and, as many pilgrims are elderly and/or infirm, handling passengers with restricted mobility (PRMs) is an important part of its business.

Harrington is therefore "excited" by the way that use of WheelTug and its 'twist' capability facilitates the use of two jet bridges to quickly carry passengers onto or off an aircraft quickly.

AlbaStar tries to take passenger steps out of the equation in its aircraft turnarounds, he says, as they are not ideal for any passengers but are especially troublesome for PRMs. Avoiding the use of steps also cuts down on incidents of ramp rash, Using WheelTug could represent "an absolute revolution" in this context, Harrington enthuses.

The future

WheelTug expects to gain B737NG Supplemental Type Certificate (STC) approval from the Federal Aviation Administration (FAA) by the end of next year, with certification on the A320 to follow sometime later.

Cox explains that airlines can already reserve "a place in the queue" for WheelTug. An interesting leasing option offers much that might attract them, he says: a carrier customer would lease WheelTug and both the airline and WheelTug would then share in the savings which the airline derived from its use.

If the carrier were not happy with the product, it would be uninstalled and removed for no charge. (WheelTug can be fitted as standard to new-build aircraft or retrofitted to operational machines.) Thus, the customer need make no long-lasting commitment to WheelTug in order to test its efficiency, its developer notes.

As well as the narrowbody aircraft types that WheelTug is currently focusing on – particularly the B737 and then the A320 family of aircraft models – longer term plans envisage modifying the system for widebodies or for possible use with regional aircraft types.

GSE&RAMP-OPS
PODCAST

In case you missed it

The GSE&RAMP-OPS Podcast offers listeners the opportunity to learn from industry-leading experts from around the world, focusing on equipment and operations, current industry challenges and topics that are of interest to operators around the world which are as relevant now as they were pre-pandemic and will be in the future.

Robert Powell
dnata

Colin Temple
Bangkok Flight Services (BFS)

Paul Holmes
Smart Asset Management Ltd

Witold Proszynski
Qatar Aviation Services

David Storey
Qatar Airways

Paul Drever
Menzies Aviation

John Edmunds
Swissport

Bibin George Samuel
National Aviation Services

Gokmen Aritay
Limak Kosovo Int'l Airport JSC

Gerd Van Damme
TCR

Steve Cannon
Swissport

Gennaro Carcassa
GH London Ground Handling Services

Steve Savage
IATA

David Ucles Samuel
Iberia Airport Services

Liam Bolger
London Luton Airport

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Vanderlande thinks outside the box

The pandemic has led many suppliers of airport systems and equipment to offer their customers a little extra to help them through the crisis. Baggage handling systems provider Vanderlande has released advice on what it describes as "360° disinfecting systems" for hold baggage, part of the wider effort to restore passenger confidence in flying

Vanderlande's advice on wide-ranging baggage disinfection is based on analysis that the Veghel, Netherlands-based logistics automation specialist has conducted regarding the processes involved in passenger and baggage movements through airports.

"Our research has shown that an effective solution cannot be solely dependent on one specific technology," it says. "It must also encompass the process flow and environmental constraints, as well as being cost-efficient.

"Determining the right combination of all these factors can be challenging and requires a partner that can help you find the solutions that meet your specific needs," Vanderlande insists.

Revealed in October, the company's specifications for 360° disinfecting systems for hold baggage were based primarily on research conducted in North America. The advice is being released freely across the aviation industry, "in order to support airports and airlines as they adapt to post Covid-19 operations", it says.

"We believe it is crucial to work in partnership with our customers and the airport industry at large to restore passenger confidence in travel," informs Vanderlande's executive vice president

airports and board member Andrew Manship.

"This sector has endured one of the biggest impacts of the coronavirus crisis, and we believe that the sharing of information and working closely together are the key to our market being able to adapt rapidly to the continuing challenges of the pandemic."

Extensive research

Mike Holloway, Vanderlande's vice president of sales & systems engineering, airports North America, tells *Airside* that shortly after traffic started to drop in North America, and news of airlines planning to make use of sanitisation devices in aircraft cabin became available, one of Vanderlande's airport customers that is heavily focused on tourism reached out to the company to see if it could offer anything that could protect its employees as well as its customers.

"At the time, there weren't any solutions available on the market, but over the following few weeks, more and more customers started to reach out to us for similar requests," Holloway recalls.

"The focus for most of our customers was for low-cost, easy-to-install solutions that provided 360° coverage of bags to help restore confidence among passengers that it was safe to fly. Based upon this feedback and some brainstorming amongst customers and Vanderlande's engineers, we developed two solutions that we feel will meet the needs of the market in North America and abroad."

The first of these two solutions is the use of an enclosed misting unit (or fogger) that sprays a fine mist of sanitisation fluid such as hydrogen peroxide, such that the mist reaches all sides of an item of baggage.

The unit is electronically controlled and only sprays the mist when a bag is present. The intent is to integrate this process into the existing inbound or outbound operation over/around an existing conveyance system, says Holloway.

The unit can also be installed over existing flat plate claim conveyor systems. The device is recommended for applications that involve movements of less than 150 feet per minute, which are typically found at ticketing desks, screening areas such as those of the US Transportation Security Administration (TSA), or at inbound load belts.

The second aspect of the company's proposed solution is an enclosed ultraviolet germicidal irradiation (UVC, or germicidal ultraviolet light) unit that is electronically controlled and emits UVC only when bags are present.

The idea is to integrate this into an existing inbound or outbound operation over/around an existing conveyance system. A small amount of system modification is likely to be required to enable light to reach the underside of bags. The device will come in three sizes (2 feet, 4 feet and 6 feet), whatever is needed to accommodate enough UVC exposure at speed.

Vanderlande recommends the UVC unit for application in process of up to 270 feet per minute, which can incorporate ticketing, screening areas, main lines, outbound sortation lines and inbound load belts.

For both the fogger and the UVC options, Vanderlande advises customers interested in the solution to consult their local service team or Vanderlande for systems engineering support.

'On pause'

Of course, Vanderlande has continued to serve its customers wherever and whenever it can during the pandemic. As for new-build baggage handling systems, generally all airport investments are being reassessed, says Mark Lakerveld, executive director global markets strategy & markets airports at the company.

Many investment programmes are being put 'on pause', he observes, although some airport operators are continuing with theirs – as, for example, at Dublin in Europe and generally across China.

More and more customers started to reach out to us for similar requests

Mike Holloway
Vanderlande

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