SNOW CLEARANCE

KEEPING RUNWAYS IN OPERATION
WHATEVER THE WEATHER
PAGE GSE has been listening to their customer to determine, design, and introduce

WHAT THE AIRLINE INDUSTRY WANTS AND NEEDS

- Aircraft Ground Power Cable Assemblies
- Pre-Conditioned Air Hoses, Connectors, Reels & Trolleys
- 400 Hz Test Equipment
- Passenger Boarding Bridge Baggage Chutes
- Gate Park Systems

As our customers always say:
“IT DOESN’T GET ANY BETTER THAN THIS!”

PAGE GSE
THE LEADER IN BREAKTHROUGH TECHNOLOGY

Your CONDUIT to Performance.

E-mail: sales@pageindustries.com
Phone: 1-707-469-7243
2050 Cessna Drive, Vacaville, CA, 95688 US

www.pageindustries.com
Welcome to the Winter 2019 issue of Airside International, in which the recent inter airport Europe exhibition in Munich plays a leading role. Airside International was there in force, meeting the industry’s big hitters, as well as some smaller, well-established players and new entrants. A large part of this issue is dedicated to the news that they shared at the show.

Our features take in the topical subject of Snow Clearance, assessing the technological changes that are taking place that help airport authorities and their ground service providers to keep aircraft flying through gateways whatever the harshness of the weather.

We also look at how technology is moving quickly in the world of airfield ground lighting (AGL) and the various state-of-the-art surface movement systems that are becoming a feature of today’s airports, another tool to maximise airside efficiency and minimise the time an aircraft spends on the ground between landing and its next scheduled take-off.

The third feature addresses the important subject of assisting passengers with restricted movement (PRM) to reach and then board, as well as disembark, aircraft. Here, too, equipment is changing as new technologies offer improvements to longstanding methodologies.

Airside talks to Giles Elson, who took over the role of CEO at the handler back in June but who quickly settled into the hot seat and has built on previous experience to propel the company forward along the lines of focus he has set.

We meet with Teletel Navman to look at the benefits of telematics to GSE operators and to Turkish GSE supplier Timsan about the importance it is placing on electric-powered vehicles. Another GSE supplier, Bombelli, offers insight into its new Arctic Cool Dolly that is proving particularly popular in the Middle East and Africa, and our Buyer’s Assessment this issue looks at the value that SriLankan Catering assigns to its Timsan catering trucks.

We hope you enjoy the issue.
We’ve set out to build a new single-aisle pushback with one thing in mind—a safer operator experience. It was designed from the ground up to offer best-in-class space and ergonomics—plus unmatched ease of maintenance. There’s only one, and it’s coming in 2020.

Be the first to see all the features that put this new pushback on top at TugAlpha1.com

©2019 Textron Ground Support Equipment Inc. All Rights Reserved.
Contents

Winter 2019

32
OmniServ handles Ryanair at London Stansted

26
Teletrc Navman offers GSE fleet tracking solution

60
Mallaghan hands over the keys to inaugural passenger airport bus

46
Butzbach looks to further international growth

56
HYDRO Systems unveils all-new battery-powered pushback

66
Semmco enjoys full order books

48
dBD looks to potential of aviation market

58
KAMAG offers electric aircraft catering variant

68
TBD goes at full steam

50
Elaflex stays ahead of the game

60
Mallaghan unveils all-new airport bus

70
Vanderlande offers end-to-end baggage handling system

52
Esterer innovates to meet changing demands

62
MC Solutions looks to fibre optics for further efficiencies

72
VRR offers innovative ULD solutions

54
Goldhofer sets the pace on emobility and digitalisation

64
Plug Power works with MULAG on hydrogen fuel cell power
From its high collection capabilities to its amazing speed and unrivalled efficiency it is not just the ultimate FOD sweeper, it is the ultimate FOD*BOSS. Every one of our sweepers is meticulously hand built drawing on 25 years experience. Ask any current owner and they will testify that safety, performance and quality are the key reasons why they chose the FOD*BOSS as the solution to combat Foreign Object Debris.

The result is a virtually maintenance free tarmac sweeper capable of removing dangerous material such as rocks, metallic and non-metallic objects, luggage hardware and even sand, that has a sweep width from 8ft./ 2.4m up to 24ft./ 7.3m and operates at speeds up to 35mph/ 55 kph in wet or dry conditions.

Invented by us in 1994, our multi-patented system has a 10 year unconditional guarantee. Every element from its design to the way its built sets it apart and makes it the safest sweeping option. Tarmac sweeping is essential, make every second count, do not leave anything behind. Put the FOD*BOSS to the test via one of our worldwide specialist dealers. If at any time it is proven not to be the worlds best FOD sweeper, return for refund.

Contact us to arrange a demonstration and see for yourself what makes our sweeper truly exceptional:

www.fodboss.com or fodboss@aerosweep.com

The FOD*BOSS system is subject to patents and or patent applications.
Stormy weather

Keeping aircraft flying safely and on time is the raison d’être of any airport – including those that have to contend with severe winter conditions. Fortunately, technology continues to evolve, making snow clearance more and more efficient.

In 2017, Moscow’s Sheremetyevo International Airport served 40.1 million passengers, 17.8% more than in 2016. According to British research company OAG, that same year Sheremetyevo was the most punctual airport in Europe among those handling 20-30 million departing passengers. Its departure punctuality score was 83.55% – in spite of the often challenging weather it experiences.

Head of press service Roman Genis points out: “The main difficulties that the airport faces are weather hazards in the autumn and winter periods, such as freezing rain, intense black ice, and sudden changes in air temperature, the occurrence of which has grown in recent years.”

Plus: “The airfield is cleaned in conditions of high-intensity aircraft movement and increased take-offs and landings,” he notes. “High-quality cleaning is maintained through close cooperation with the State Air Traffic Management Corporation, the main carrier Aeroflot PJSC and Sheremetyevo Handling.”

Sheremetyevo has a fleet of modern ground support equipment supplied by the world’s leading manufacturers and operated by skilled staff, who frequently undergo specialised training.

According to Genis: “This includes plough/broom/blower towed vehicles, de-icing vehicles, milling and rotor snow-cleaning equipment, plough/broom/blower self-propelled vehicles, tracked and wheeled bulldozers, tractors with a range of attachments for various applications, and friction coefficient testers.”

Sheremetyevo – which is currently investing in an expansion programme that includes the construction of a third runway (which was officially commissioned into service on 19 September this year) and development of its passenger and cargo facilities – continues to invest in equipment to keep pace with its growth in size and throughput.

Meanwhile, far away...

Located 4km from the city of Ushuaia, close to the very tip of Argentina, Malvinas Argentinas International Airport often plays host to cruise passengers bound for Antarctic adventures. It is operated by Buenos Aires-headquartered London Supply Group, which was founded in 1942 and launched its airport division 50 years later.

Besides Ushuaia, the firm operates other international airports in the region at Santa Cruz (El Calafate) and Chubut (Trelew).
SNOW CLEARANCE

It is also active in various other fields, including duty free shops, free trade zones and maritime supply.

Malvinas Argentinas can accommodate two large aircraft (such as B747s or A340s), two medium-sized aircraft (such as B737s, A320s or E190s) and one smaller aircraft (like the F28) simultaneously.

Including both commercial and private flights, Malvinas Argentinas International Airport handled a total of 7,247 movements in 2017 and 6,916 in 2018. María Taratuty, director of communication and public affairs at London Supply Group, points out that passenger load factors on last year’s flights were significantly higher than in 2017, however. She hopes the total number of arrivals and departures in 2019 will reach 7,600.

Considering the effects of the climate on operations at the airport, Taratuty explains: “Although the city of Ushuaia, the southernmost city in the world, is located in the south of Argentina and very near Antarctica, it is during the winter months from May to September that we receive the most snowfall.”

However, it can also snow there – albeit less heavily – as early as March and as late as December. “According to data from the National Meteorological Service, we received a total of 72cm of snow in 2018 – a greater quantity than in 2017 and 2016, but far less than the 142cm that fell in 2015,” she adds.

Before a snowstorm, airport staff evaluate the weather conditions and meteorological data. Following this analysis, the process of removing snow from operational areas begins; a key focus, of course, is minimising alterations to flight schedules.

Depending on the severity of the event, and always with operational safety as...
the primary focus, special circuits are sometimes made in order to improve the conditions for landing and take-off, Taratuty says.

Malvinas Argentinas has a range of specialist and multi-purpose snow clearance equipment such as snow ploughs, solid spread hoppers, liquid sprayers, snow brooms, snow throwers, mini-loaders and trucks, plus the requisite materials, supplies and a repair and maintenance workshop.

Specifically, the airport’s ice and snow removal fleet comprises:

- An Oshkosh 4x4 multi-purpose truck with front and side shovel for snow removal, plus hopper and urea disperser
- A multi-purpose GMC-RPM Tech 6x4 truck with front and side shovel for snow removal, plus hopper and urea disperser
- A multi-purpose GMC-RPM Tech 4x4 truck with front and side shovel for snow removal and mounted snow blower (with a capacity of 5,000 tons per hour)
- An Oshkosh 4x4 truck with a 7m snow broom and air blower
- An International truck with 5m snow broom and air blower
- A Deutz 4x4 tractor with hopper and urea spreader
- A Ford 4x4 dump truck
- Two Nissan 4x4 pick-up trucks with double cab for technical support tasks

Plus: “Recently, we invested more than US$800,000 in an Oshkosh XF Broom with sweeper and blower functions; it is the most modern of its type in South America. We are expecting the arrival very soon of a new Oshkosh unit, equipped with shovels and hopper,” Taratuty confirms.

A staff of 12 people is assigned to the operation of this snow clearance equipment. Known among the airport community as ‘Team Lima’, they are responsible for ensuring the safety, maintenance and clearance of the runways.

Taratuty considers: “Snow clearance methods are advancing and being perfected as new technology develops. The availability of ever-more efficient machines, as well as continuous training, is simplifying the task of runway staff and driving a qualitative and quantitative leap in productivity and care for the environment.”

Currently, in order to minimise the environmental impact of its snow clearance operations, Malvinas Argentinas uses equipment fitted with mobile temperature sensors that help to optimise the use of anti-freeze agents. In addition, its fleet’s diesel engines comply with Euro V standards, which have been applicable in Argentina since 2016.

“In the future, it may be possible to incorporate new energy sources such as wind, solar and even tidal power at airports like Ushuaia that are located near the sea,” Taratuty goes on.

“Such airports could apply these forms of energy to radiant surfaces with the aim of minimising the mechanical work required for snow clearance, resulting in even better operational conditions during Tierra del Fuego’s hard winters.”

Research and development

One area that is receiving a great deal of attention nowadays is automation. Over in Norway, for instance, Yeti Snow Technology spent last winter testing its autonomous snow clearance vehicles.

John Emil Halden, Yeti project manager at Semcon (which co-owns Yeti in partnership with GSE supplier Øveraasen and outdoor power tool specialist Husqvarna), explains: “At Oslo Airport last winter we did 40 test runs – 12 of which had no intervention from the driver. Each test took one hour and we covered the whole airport, following the normal route.

“We also participated in actual snow clearance operations. We carried out full snow clearance with two autonomous vehicles at the front of the group and more than 20 vehicles in total working together.”

The biggest challenge, Halden notes, was finding time after each test run to fine-tune parameters ahead of the next one.
It was vital to have access to the vehicles, skilled personnel and appropriate tools at those times.

He goes on: “The best outcome was learning how to operate in a working airport, with other vehicles, aircraft, schedules, different teams working shifts and all the normal movements taking place. We had to adjust the autonomous operations a bit to work with the rest of the operations. We didn’t have to alter much, but we did learn that we needed to be able to adjust the vehicles’ speed on the fly to fit in with other operations.

“A planned operation uses a fixed speed or set duration for the task, but in reality you may need to slow down to let a plane pass or make room for other vehicles. You need to be close to the operation – say, in the first vehicle or a control car – to react to the movements of other entities.”

At present, the Yeti team is hard at work on the control software and hopes to take Ushuaia receives its heaviest snowfall between May and September

Brand-new and unique:
The new self-propelled snow blower

rolba500

There are no comparable self-propelled snow blowers of this type and size on the market.

The scope of performance can be exactly adapted to customer requirements.

Various clearing widths are available to choose from.

ZAUGG AG EGGIWIL, +41 34 491 81 11, info@zaugg.swiss

SWISS PRECISION
the system from a pilot to a commercial product within the year. Noting the numerous requests for demonstrations, Halden says he is confident of winning customers once the system is available on the market.

As regards implementation, there are questions of budget, skillset and suitable vehicle stock. For instance: “Retrofitting doesn’t work with very old vehicles – but with newer vehicles, maybe two or three years old, it’s definitely possible,” Halden says.

There are four steps in the implementation of Yeti’s technology:

1. Use the software to plan the best and quickest snow clearance routes and methods
2. Install the equipment to monitor and log where the vehicle is and compare the plan with the actual operation, so that experienced drivers contribute to continuous improvement
3. Enable ‘driver assistance’, whereby information is displayed in real time on a screen in the vehicle, rather like a navigation system, to tell the driver where to go, how well he/she is following his line, how to operate the snow clearing equipment and so on
4. If the vehicle is ready for self-driving, the information used in the ‘driver assistance’ stage is sent directly to the vehicle itself

Halden points out that in the end, snow clearance vehicles can only do as good a job as the snow clearance plan allows. “Many airports need to improve their planning, especially if they rarely get snow – which tends to mean they use temporary staff who are less skilled in snow clearance.”

Collaboration

Semcon is also involved in Sweden’s Autonomous Vehicles for AirPorts (AVAP) research project, which aims to demonstrate how vehicle automation can safely help to reduce costs and make airport operation more efficient.

“Our part of the project involves developing an autonomous tractor designed to keep runway edge lights clear of snow,” says Anne Piegsa, technical project manager at Semcon. “This may not seem like much, but the runway gets closed down if 15% of the lights are non-operational, and this causes significant delays and costs. But more seriously, this presents major safety risks as well.

“One of the problems with clearing snow around runway edge lights is that a great deal of precision is required on surfaces that are not always smooth. This is time-consuming work that can be streamlined by means of our autonomous solution. This will also free up staff capacity, allowing them to work on other safety-related tasks that are not suitable for automation,” Piegsa adds.

Semcon is using a Lundberg 6250 tractor that has been fitted with sensors and a computer, enabling it to calculate how to complete tasks sent to it via 4G. The tractor is controlled by the Yeti Control System – the same technology that Yeti is developing for autonomous snow ploughs.

Other elements of the collaborative project include monitoring solutions using drones, automatic mowing and friction measurement systems. The various systems and vehicles have now been demonstrated together for the first time at Örnsköldsvik Airport in Sweden.

Husqvarna Group became an equal co-owner of Yeti Snow Technology in September this year. The two companies have worked together in the past, but Halden is confident that the new relationship will enable Yeti’s self-drive technology to be used in other areas beyond snow clearance.

Hans Peter Havdal, division manager at Semcon, agrees. “We have developed a technology for self-driving vehicles in the very toughest conditions, and this has given us a great deal of knowledge in the area. Partnering with Husqvarna opens new doors for Yeti Snow Technology to scale up and further industrialise the solution.”

Husqvarna’s grass cutting technology, for instance, could be combined with Yeti’s autonomous solutions to streamline what can be a time-consuming job at airports.
A SAFER, ALL-INCLUSIVE PASSENGER EXPERIENCE

DELIVERS HUGE COST SAVINGS

DRIVES TURNAROUND EFFICIENCIES!

To find out more visit www.aviramp.com or contact one of our team on sales@aviramp.com
TEL: +44 (0)1952 291 220
Fast-moving technology throws light on AGL

The technology used by the latest airfield ground lighting (AGL) systems is changing quickly, in terms of both individual lights and airport surface movement monitoring and control systems.

ADB SAFEGATE offers a wide range of integrated solutions that are designed to increase efficiency, improve safety, boost environmental sustainability and reduce operational costs for airports, airlines and air navigation service providers. In particular, it is one of the biggest suppliers of airfield lighting systems.

Reflecting the fast pace of change in this segment of the airport business, Christian Onselaere, CEO of ADB SAFEGATE explains that the company has made substantial changes to its portfolio in recent years.

Those changes to which Onselaere refers started in 2016, when ADB and SAFEGATE merged to become ADB SAFEGATE, which brought under one roof a wider portfolio of brands. “We started back then with a wide review to understand what products would become our main products and what was needed to have them evolve to the next generation,” Onselaere recalls.

The latest development in this process was the recent creation of the company’s ‘RELIANCE’ series of products, which encompasses AGL products, AGL power solutions and ADB SAFEGATE’s Individual Light Control and Monitoring System (ILCMS) offering that adds to its Airfield Lighting Control and Management System (ALCMS) solution.

ADB SAFEGATE showcased its RELIANCE portfolio of products at the recent inter airport show in Munich, with new products within the brand including RELIANCE omni lights, RELIANCE LED signs and what the company describes as the industry’s first red/green taxiway centre line light.

This light fixture switches between red and green, serving the dual function of a taxiway centre line light and a stop bar – this eliminating the need for taxiway intersection stop bars. The light supports safe routeing and guidance and eliminates the risk of behavioural differences between airlines and airports by adding a red stop signal for the pilot to see.

ADB SAFEGATE’s ILCMS and ALCMS also both fall within the RELIANCE brand, as does a transistor constant current regulator (CCR).

Meanwhile, the company has also been growing its customer base. In recent times, “We have been able to register a substantial number of new orders from Manchester to Munich, from Melbourne to Chicago O’Hare, as well as in Kuwait and with the new Istanbul airport,” says Onselaere.

“Ever since we started offering AGL back in 1947, we have been very active on all continents, the major ones being Europe, North America and Asia (including the
Middle East), but we have recently seen a strong increased activity in Latin America and Africa, where we have signed a series of new deals.”

Looking forward, ADB SAFEGATE’s emphasis on AGL is not expected to diminish. “Airfield ground lighting will remain one of our key domains, even if we move to increase our presence in the market for tower solutions (air traffic control) and airport-related systems, following the recent acquisition of Manchester-based Airport Systems,” Onselaere informs.

Airport Systems was bought from Ultra Electronics early this year; it specialised in providing software to airports and airlines designed to improve their operational performance.

**Faster turnarounds**

“We see a clear need to integrate...
airfield solutions across our key domains,” says Onselaere. “AGL plays a key role in the guidance of planes, not only when landing but also once landed. There is continuous pressure on airports to shorten turnaround times but that can only be done with solid collaboration between the tower (ATC), the apron and the terminal.

“AGL will support faster guidance towards the right gate and back, saving substantial time. At the same time we are continuing to look at preventive maintenance: we have our own tools like Alis (a digital asset tracking, inspection and service solution for airside assets) but we also have partnerships that allow us to automate torqueing, cleaning of prisms and even photometric measurements.”

Plus: “We have partnerships such as with a drone solution provider that cuts down on time needed and costs incurred for the visual inspection of difficult-to-reach AGL solutions, as well as the inspection of the runway more generally.

“We see a lot of the action for AGL lying in a radical decrease of the maintenance time and the integration within end-to-end systems that decrease overall aircraft turnaround times, allowing for more movements within a given airport set-up.”

Onselaere believes that the industry still needs AGL in the same way that it always has, but there are clearly identifiable market trends that are evolving the business in significant ways, such as:

- A significant increase in airports looking to bring in more intelligence in an effort to guide aircraft more quickly once they are on the ground, as well as to understand whether lights are functioning without engineers needing to physically check them
- An ever-increasing focus on energy efficiency overall and an emphasis on smaller power solutions
- Seamless integration of airfield lighting control and monitoring systems into tower systems, as ADB SAFEGATE demonstrated at inter airport with its ‘OneControl’ offering

Onselaere summarises: “For us, key trends would be reduced maintenance time, more intelligence, the breakdown of barriers between key functions at the airports and energy efficiency in every aspect, to support the drive towards zero carbon dioxide emissions from airports worldwide.”

Seeking a holistic solution

Honeywell (like ADB SAFEGATE, S4GA and many other AGL system and equipment manufacturers) had a large presence at inter airport in October to offer insight into its expertise in applying cutting-edge technologies in airfield lighting.

That airfield lighting expertise complements its experience in supplying and supporting a wide range of equipment and systems both landside and airside; with regard to the latter, this encompasses airfield lighting, control systems and gate management, including visual docking guidance systems (VDGS).

As a whole, Honeywell is employing the power of Internet of Things (IoT) connectivity to help orchestrate complex airport processes through intuitive mobile applications, dashboards and targeted visual displays, the company says.

Gert Taeymans, sales leader airports Europe at Honeywell Building Solutions, tells Airside something of the company’s expertise in AGL and surface management technologies. All Honeywell’s products
in this area focus on improving their customers’ efficiency, capacity and safety, he says, and adhere to the latest EUROCONTROL standards.

Taeymans points to the well-known Follow the Greens project as an example of what is now achievable in terms of integrating AGL and control system technology. Follow the Greens sees an airfield lighting control system turning on airfield lights ahead of a taxiing aircraft, and off immediately behind the aeroplane. To achieve this, taxiway centre line lights are automatically and progressively switched on in segments (or individually) as the aircraft moves along its assigned route.

Pilots receive a single instruction to ‘follow the greens’ from ATC. If stop bars are implemented to protect no-go areas, then they are also automatically commanded. The solution relies on surface movement guidance and control systems (SMGCS) to provide accurate aircraft position data.

Whatever the method used to guide pilots across an airside environment to/from their aircraft stand, any airport operator needs to be able to clearly identify and understand what it wants to achieve in terms of an integrated AGL/control/alerting/surface management system, Taeymans says.

The requirements must be clearly laid out, and the desired performance of any integrated SMGCS must be clearly defined. For a supplier like Honeywell, he continues, it is vital to be able to educate customers as to whether such performance can be achieved, and how.

SMGCS systems available today have very high levels of performance, as well as high levels of reliability. Associated control systems that are equally capable are also available (Honeywell has its own AGL control system that offers control and monitoring of single lamps and groups of lamps within one series circuit – thereby pinpointing failures more easily, reducing installation costs and shortening response time).

Putting all the elements of monitoring, guidance and control together in a single affordable package is the big challenge for any airport operator, Taeymans believes – and it is vital that airports look at their needs and how these can be met in a holistic way, he insists. Only then can they make the correct long-term decisions, for such systems are not cheap, although existing infrastructure such as AGL and cabling can be used wherever possible during any upgrade programme.

As for Honeywell, it is employing high-performing data fusion systems to consider the various aspects of monitoring, alerting, guidance and surface
management as a whole, working closely with airport operators to understand their needs and what they will require in the future.

Honeywell uses human machine interface (HMI) technologies to model airport environments and operations, harnessing the benefits of Big Data in its efforts to create airside and landside solutions that drive efficiency, capacity and safety improvements.

The technology in this realm has moved incredibly quickly; in fact, so quickly that it has left behind the industry that it can support, Taeymans continues. AGLs last a long time, and moving to new and more sophisticated Follow the Greens-type systems has proven a step too far for many existing gateway operators – and even for many developers of entirely new airports.

Such disruptive technology of which Taeymans talks “puts pressure on budgets”, he readily points out, while those in charge of safety at airports are also often – and understandably – reluctant to move away from systems with which they have many years of familiarity.

**S4GA: the ‘safest’ AGL system on the market**

Warsaw, Poland-headquartered S4GA offers what it describes as ‘the world’s safest runway lighting’. It is a bold statement, and one that business development manager Dmytro Kuczeruk is keen to explain.

By the ‘safest’, S4GA refers to its AGL systems’ reliability – because its lights are solar-powered, and the sun never fails. There are two key elements to the S4GA contention that it provides the world’s safest systems: first, that traditional cable or wire-powered AGL systems can fail, no matter how many back-up systems they have; and, second, that the sun can always be relied upon to provide sufficient charge for certain types of AGL systems, given the nature of the market in which S4GA is selling its systems.

**Traditional systems’ fallibility**

Taking the first of those contentions, Kuczeruk points to the fact that over the last five years a number of the world’s biggest airports have suffered major problems that have caused their AGL systems to fail, with the result that flying operations at those gateways had to cease temporarily – with all the associated inconvenience and cost implications.

Kuczeruk names such gateways as Chicago O’Hare, Atlanta and Dubai International amongst the airports that have suffered major AGL problems as a result of power outages over recent years. He says that even with all the back-up systems and redundancies that these gateways build into their systems, traditional cable or wire-powered AGL systems still suffer failures in power supply or key components that can mean the airfield lights go out. Substation fires, failure of CCRs, cable damage or even main power station outages could all shut an airport’s AGL system down temporarily.

“This fact is not usually discussed,” he points out. Moreover, many airport authorities lack the finances of these global air hubs – and the multiple back-ups they can afford – and are therefore even more likely to suffer a major power outage or system failure.

**Solar reliability**

By way of contrast, the sun offers a cast-iron guarantee of power provision, Kuczeruk insists. Of course, this is not the case in all climates: S4GA systems would not be suitable for Scandinavia, nor even for the UK, he says, but certainly the majority of Europe offers more than enough sun, as do most non-polar regions around the world.

Nor are S4GA AGL systems suited to all airports. They would not work for 24-hour major international hubs that require power for lighting around the clock. But they are ideal for smaller, regional airports that perhaps operate only through around six hours of darkness while receiving plenty of solar charge during the day.

However, consistent daily sunlight is not necessary to charge the two batteries that each individual S4GA light contains. Each light has a 200-hour charge capacity, more than enough for weeks of night operations with no sun at all for most regional gateways – not even a remote possibility across most of the world, Kuczeruk observes.

In fact, he says, with S4GA AGL systems a catastrophic power supply loss is virtually impossible. There are two main reasons for that. First, unlike conventional systems where the power supply is centralised, in an S4GA system each light has its own independent power source. There are as many power sources as there are lights in the system.

Second, because S4GA lights are not physically connected, there is no single element that can cause the failure of an entire system. Potential failure of one or few lights would have a minimal impact on operations.

Moreover, for any customer that really wants peace of mind, S4GA offers hybrid AGL systems that combine solar panel charging with back-up cable/wire-delivered power – but the extra cost is really unnecessary in the vast majority of cases, Kuczeruk adds.
THE NEW TLTV CHARGER 380

fast . strong . comfortable .

CHARGER 380 - the latest innovation in towbarless aircraft tractor technology. This aircraft tractor is ideally suited for pushbacks, intergate towing and high-speed maintenance tows.
Easing the way for PRM

Airport authorities and ground service providers work hard to make flying as convenient as it can be for passengers with restricted mobility (PRMs). Getting on and off aircraft can be a particular challenge, or even impossible, for some passengers without the help of a medical lift – otherwise known as an ambulift.

These days, new ambulift vehicles are entering the market on a fairly frequent basis, improving on the capability and efficiency of their predecessors. One recent introduction comes from Vienna, Austria-headquartered Bulmor airground technologies.

Bulmor, already well known in this field for its SideBull medical lift, recently developed a smaller, compact ambulift for regional airports that it has called FrontBull (the vehicle’s medical lift is positioned at the front of the unit).

Konrad Gruber, head of sales at Bulmor, explains: “The vehicle is electrically powered and offers the same advantages in operation as our larger SideBull – the passenger cabin can be fully lowered to ground level for a fast, safe, and comfortable embarkation and disembarkation for passengers, and without the need for stabilisers it docks to aircraft in only 25 seconds.”

It is that easier, faster and more convenient way of getting on and off an aircraft that makes the FrontBull so appealing to clients, Gruber posits. Time savings of up to 70% in docking procedures compared to regular scissor lift vehicles are achievable, he confirms.

Moreover, the FrontBull is a one-man operation, with a fully integrated operator position in the passenger cabin. As no stabilisers are required, it is also easy to operate – driving and lifting are possible simultaneously. The vehicle can be used for PRMs flying on all types of aircraft, from small aeroplanes to widebodies and even those in the A380’s upper deck.

The introduction of FrontBull to the company’s portfolio has further stimulated what has been a good recent period for business for Bulmor. In fact, “Last year was the best in our company’s history,” says Gruber. “We sold 30 SideBull ambulift vehicles [to customers] all over Europe. SideBull is already in use at seven of the 10 busiest airports in Europe for PRM boarding. Plus, just recently, a SideBull was put into operation at Chicago O’Hare airport, our first one in the US.”

Increasing demand for Bulmor ambulifts may now actually be bucking the market...
trend, Gruber considers. “The market for ambulifts has been growing strongly for several years but it now seems to have reached a peak,” he suggests. “Methods such as manually carrying PRMs into aircraft or using stair climbers have almost disappeared and, compared to 10 years ago, the majority of airports nowadays already have ambulifts.”

There are a number of other trends in the market that are readily identifiable and of significant interest to ambulift manufacturers such as Bulmor, Gruber continues. There has been a strong shift from scissor-lift ambulifts with stabilisers or modified catering trucks to purpose-built PRM boarding vehicles, for example.

Meanwhile, speed and efficiency have become all-important. In order to handle the constantly increasing number of PRMs, service providers and airport authorities are looking for more efficient and faster boarding solutions.

In terms of design and comfort, the first ambulifts (typically scissor-lift trucks with rear or side tail lifts) had a very basic typically truck-type design.
A higher comfort level during the entire boarding process has become more important now, Gruber says.

Safety remains a top priority, of course, and in the wake of the new International Air Transport Association Airport Handling Manual (AHM) 913 standard, Bulmor designed a crash and damage prevention system and also further improved its SideBull docking assistance system.

Finally, Gruber points to the special requirements of the A380 upper deck. Although Airbus has brought its A380 programme to an end, nowadays many international hubs serve the A380 upper deck on a daily basis, he says, and they need their ambulifts to be able to reach the upper deck level: 8.1m high. In that regard, he points out that the SideBull XXL can be used for all aircraft types, including the super jumbo.

Finally, Bulmor is continuing to look to the future. It is currently working on converting its entire ambulift portfolio to electric power (both the SideBull XL version and also its XXL for the A380 upper deck). Its first electrically powered SideBulls with lithium-ion battery technology will be available in 2020, Gruber promises.

**Electric power**

Bulmor is far from the only ambulift supplier that has gone down or is strongly considering the development of battery-powered medical lifts. Aprilia, Italy-headquartered AVIOGEI supplies many types of GSE, including passenger stairs, cargo loaders, belt loaders, lavatory and water service units, dollies and carts, as well as ambulifts. In the latter category, it offers the smaller PED vehicle and the Thunderlift, which is available in both diesel and electric-powered variants.

The Thunderlift is very much the focus of AVIOGEI’s PRM offering today and, while only a comparatively recent addition to the ambulift market, it continues to be developed, explains Massimiliano Martone, the company’s international business development and marketing manager.

One particular focus at the moment for the vehicle’s ongoing development is telematics, and AVIOGEI is looking at how the value of Thunderlift can be improved by the sort of sophisticated reporting and diagnostics capabilities of the various telematic systems available on the market today. More and more customers want to use this capability to optimise the value of their ambulift fleets, Martone points out, and the value of these sorts of systems can be particularly important for the customers of battery-powered ambulifts like AVIOGEI’s Thunderlift E.

Such customers are especially keen to keep track of battery performance both on individual units and across their ambulift fleets. And there are more and more of these customers: the Thunderlift E is becoming increasingly popular, although diesel remains
Track your GSE and optimize your Ground Operations in real time with XOPS - SMART Airport Asset Solutions

- Fleet Management System
- Operations Management System
- Data Management System

New for 2019 - GSE Pooling application

Contact Us
www.xops-aero.com
info@xops-aero.com
+33 6 74 68 77 74
+44 208 757 5654
the preferred option for the majority of AVIOGEI’s ambulift customers, Martone confirms.

In response to this growing popularity of electric ambulifts and other GSE, AVIOGEI showed off both its Thunderlift E and electric cargo transporter at inter airport this year.

Various ongoing improvements to the Thunderlift were also available on show at the exhibition, such as the new driver’s panel that offers a number of advantages including enabling operators of the unit to communicate with airport operations rooms. Different communication modes will be available – WiFi, 4G, etc – for use depending on the market in which the ambulift is operated and the communications infrastructure available at the airport concerned.

Meanwhile, the Thunderlift is growing its footprint across new geographical markets. The first units to be ordered from Germany represented a recent highlight, while Thunderlift has now also been sold into Japan and Cambodia. Such is the demand for the unit that AVIOGEI is “fully booked” up to the middle of next year as regards orders for the Thunderlift, and so the company is looking at ways to ramp up production to meet this high demand.

The E variant is at the forefront of that growing demand, with the unit having been in operation since 2017 in Norway, and trials having also successfully been undertaken over the last two years at four different airports: Rome, Milan, Stuttgart and Brussels. Today, customers in Italy, Germany, Portugal, Norway and in the Comoros have either already bought or are looking at buying the battery-powered version.

**Ongoing design development**

Istanbul, Turkey-headquartered Denge Airport Equipment is another of the GSE manufacturers to offer a number of different ambulift variants (it also provides a range of other GSE – including passenger stairs, belt loaders, dollies and carts, de-icers, lavatory and water service units, cargo transfer systems and baggage handling systems).

Says Murat Denge, the company’s managing director, says that while its medical lift range has not been
augmented of late with any entirely new models, its ambulift unit has seen “radical changes and improvements, especially due to the changes in CE Standards as well as changes in AHM [IATA’s Airport Handling Manual] norms.

“These changes push us to improve yet more; thus, the unit has been re-certified with the updated norms and we have some improvements in its technical aspects too.” For example, aircraft proximity sensors on the unit enable the safest possible operations and the operator’s responsibilities are minimised, Murat Denge says. “We have developed some other new features in the unit which were demonstrated at the inter airport show in Munich.”

As regards the ongoing popularity of Denge’s various ambulift offerings, “The one for which we won the innovation award at inter airport [in 2013, in the interRAMP category for its SD 5800 model] is still very popular and the preferred one” [amongst Denge customers], he confirms. Murat Denge puts its popularity down to the wide range of aircraft the model can serve, as well as its automatic transmission and low maintenance requirements.

The SD 5800 has been placed in operation with entirely new Denge customers over the last two years. These customers are also in countries that represent new markets for Denge, so the ambulift is opening us new opportunities for the company’s GSE range.
But all Denge’s medical lifts offer certain advantages over other ambulifts, Murat Denge suggests. “Competing units are either too expensive, or if they are competitive then their quality is not the same,” he says. Especially once they have actually deployed a Denge ambulift in operation, customers “are surely satisfied with what they got and what they paid”, he notes.

Operators of the units want their ambulifts customised according to their particular needs but, says Murat Denge, most of the time the need for modifications from his clients are only small, “since our unit offers almost all the features they require”.

Nevertheless, he adds: “We still try to meet all the requirements of each customer for each unit by manufacturing tailor-made units.”

Denge is adapting to changing demand for electric GSE. “We will have an electric version of the unit soon,” Murat Denge points out. “Electric GSE is very much in our thinking but GSE like PRM lifts, which are continuously in operation, have a higher energy consumption, and we are still developing the right combination of power and battery life.

“We do not want to launch a unit just for the sake of launching one. We rely on the upmost customer satisfaction and we would like to launch an electric PRM lift only when it is fully ready and will offer optimum value.”

Looking at the wider market for medical lifts at the moment, Murat Denge is of the opinion that the opening of new airports means greater demand, as does the expansion of existing airports, but actually most of the increasing demand for medical lifts is being generated by the ever-increasing numbers of operations at well-established gateways (driven by the rising number of passengers choosing to fly).

Denge receives most of its enquiries for equipment such as ambulifts from handlers rather than airport authorities, he confirms.

New kid on the block

An all-new ambulift from a new player in this market was shown off at inter airport in Munich two years ago. The PaxLift from Baumann is a purpose-built ambulift, not one based on an adapted commercial or industrial vehicle.

PaxLift features all-wheel steering and integrated suspension, and has space for six wheelchair passengers, plus assistants. It has a compact footprint, with a small turning radius, yet offers a “modern, comfortable passenger experience”, its manufacturer declares.

Various levels of interior design are available to “suit all budgets”, but the emphasis is on comfort, space, efficiency and safety.

“Our first model proved the concept and we were delighted with the feedback received,” says Klaus Pirpamer, PaxLift managing director.

But: “Since then, we’ve continued to develop refinements and test both in the field and internally. We continue to learn about the requirements of the industry in general and the increasing importance that PRM transport is having in the [aviation] sector.

“We’ve therefore introduced a no-touch system as well as a bird’s-eye view camera. In May, we also completed our new production facility dedicated to PaxLift.”

In fact, PaxLift is now in regular production. Manufacturing takes place at the new facility, although production capacity has still to be optimised as delivery time is about 12 months – “which for us is too long”, Pirpamer says.

The ambulift is now in operation at airports in Italy, Germany and the UK, and in August this year PaxLift took its first order from outside of Europe.

Baumann is currently focusing on the XL version of the PaxLift (which has a lift height of 5.9m) as well as the development of an electric version, the e-PaxLift, which it aims to bring to the market in mid-2020.

PaxLift overcomes the disadvantages of traditional, modified ambulift vehicles while retaining a small ground footprint, Pirpamer insists. Raising passengers from ground level up to 8m smoothly and without a pantograph, stabilisers, mast or chains, the PaxLift utilises three lifting columns to provide a smooth, safe lift, with fully hydraulic suspension for maximum comfort during driving, he informs.

“With PaxLift, there’s no requirement for chain maintenance, no slow loading times or an uncomfortable, often manually intensive, experience for passengers.” Plus, a single operator can drive and lift passengers from ground level to the aircraft door.

Buoyant market

“PRM logistics is a big topic around the whole GSE market, as the number of PRM passengers is growing at a very rapid rate,” Pirpamer considers. “We see many airports are trying to find the best possible solution – one that is both cost- and time-efficient, as well as comfortable for passengers.

“Perhaps a greater awareness of disability rights combined with an overall desire to give all passengers the best possible experience has made airport operators more open to new ways of doing things. However, the sector will remain a relatively niche market, perhaps for us of between 50 and 100 units per annum.”

And what of perceivable evolution in the nature of that market? “The trend is certainly towards greater comfort, ease of use and obviously, safety. We are working on all these points, particularly as regards our electric version, the e-PaxLift.

“Part of our confidence stems from the fact that each of these are fundamental aspects of the machine’s design. The method of lifting itself, via the extending hydraulic pillars, was prompted by a desire to make the experience smooth, stable and comfortable for the passenger.

It also allows operators to offer a far better level of service that no amount of modification to an industrial vehicle can ever hope to achieve,” Pirpamer concludes.
Buyer’s Assessment: SriLankan Catering

Saman Perera, manager – operations of SriLankan Catering (SLC), a wholly owned subsidiary of SriLankan Airlines that offers airline catering from its base at Colombo’s Bandaranaike International Airport, is happy with the performance of the service provider’s recently acquired Timsan catering trucks.

SLC serves all the airlines that operate to Colombo’s Bandaranaike International Airport, as well as providing a range of services for the airport’s lounges and restaurants, including catering, laundry and restaurant management.

SLC was launched in 1979 as ‘Air Lanka Catering Services’, a joint venture between Air Lanka and Thai Airways. In 1998, the company became the fully owned subsidiary of SriLankan Airlines and it was subsequently rebranded in 2000 as SriLankan Catering.

In its role as an airline catering service provider, SLC has 20 catering trucks – including two catering trucks that it bought from Timsan, the Istanbul, Turkey-headquartered GSE manufacturer. The Timsan vehicles are CT 5800 units on a MAN chassis.

Those two units have been in operation with SLC at Bandaranaike since August this year and already, says Perera, the operator has had positive feedback from users about the trucks.

He describes them using terms like “sophisticated” and of “quality” and – as good evidence of this – points out that SLC has already placed an order with Timsan for two more catering trucks.

The supplier has provided good after-sales support, Perera adds, confirming that he has been more than happy to work with Timsan.
Tracking GSE assets on the apron

Teletrac Navman is a software-as-a-service (SaaS) provider leveraging location-based technology and services for managing mobile assets. Its fleet and asset management technology offers significant value in the world of on-airport GSE, as Teletrac Navman’s enterprise bid manager, Kate Cummins, explains...

Can you tell us a little bit about Teletrac Navman and its history, especially as regards your involvement in the aviation industry?

Teletrac Navman is a veteran telematics company leveraging 25 years of experience to help boost fleets’ revenue and lower their operating costs. We equip businesses with advanced data tools for location tracking, fuel monitoring, reporting, safety and compliance – all via one powerful, user-friendly platform.

We’re devoted to providing accurate and precise data secured by the strongest protection and controls. These tools and methods improve businesses’ bottom line and help them stay competitive.

Teletrac Navman currently tracks nearly 500,000 vehicles owned by over 40,000 organisations on six continents, making it one of the world’s largest fleet management providers. The company, headquartered in Glenview, Illinois, has offices in the US, Mexico, Europe, New Zealand and Australia.

What, in particular, do you offer in terms of GSE fleet management?

Our clients have unlimited access to the DIRECTOR platform which can be accessed via desktop, mobile devices, laptop and tablet devices. Functionalities of DIRECTOR normally utilised by an organisation operating airside and landside are as follows:

- 24-hour access to the live locations and tracking functionality on Google Maps, including satellite imagery via Google Maps
- Unlimited access to live and scheduled historic reporting, including but not limited to: fleet and asset utilisation, driver behaviour league tables, fuel usage, timesheets, mileage, engine hours, collision/safety analytics analysis, route replay, speeding, harsh performance (braking, accelerating and cornering), driver and vehicle-based performance, maintenance status and log, location of assets for allocation, executive summary, site and Geofence reporting, job site utilisation and excessive idling

- Intuitive and customisable dashboards, including key performance indicators (KPIs) and fleet metrics to drive improvements
- Live on-screen and e-mail alerting, including but not limited to: excessive speeding, stolen vehicle, Geofencing, excessive engine idling, site/Geofence exit and entry, excessive speeding within a designated site/area, vehicle collision/impact, vehicle maintenance warning and reminders
- Security alerting, including: external power removed, SIM card removed, tamper cover open, vehicle moved, GPS aerial removed, unauthorised move and site/Geofence exit
- The ability to set specific speed limits on a vehicle-by-vehicle basis within designated areas (particularly airside) is imperative. Users have the ability to customise bespoke sites within their airside operating parameters and can set up live e-mail alerting and scheduled reporting to ensure vehicles are not exceeding the imposed speed limits
- Location summary reporting allows users to instantly identify a vehicle and all associated behaviour when an incident or instance of poor driver behaviour is reported. For example, if there is a report of a vehicle that has been involved in a near miss or an incident, clients can interrogate the system to identify the vehicle in question simply by drawing a location on the map through location summary reporting
- Scheduled progressive scorecard reports are also imperative for clients to evidence the monitoring and improvement of driver behaviour
- High definition (HD) data provides granular route replay beyond the industry standard,
detailing exact locations on a second-by-second basis. HD data allows clients to monitor exact driver behaviour without minute-by-minute gaps in data.

- Safety analytics uses HD second-by-second data to overlay exact locations, speeds and G-force on the Google Mapping facility, which in the event of a road traffic accident can help identify the cause and severity of the collision. This information also proves extremely effective in improving driver behaviour when used to coach drivers around specific events of harsh braking, speeding and harsh cornering.

- The impact detection facility will generate an e-mail alert to multiple employees to alert them in the event of a collision. E-mail alerts can also be sent to third parties (for example the security office) who do not need to have access to the DIRECTOR platform. This proactive approach replaces the norm of transport managers being notified of an incident by the driver – or indeed third parties – sometimes hours after the event has occurred.

**What additional functionalities might also be available?**

There are multiple driver identification options including Dallas key fobs, RFID cards and PINPAD ID. Driver identification assists clients in improving specific driver behaviour regardless of the vehicles being used and importantly allows clients to identify the individual driver of a vehicle involved in a reported incident.

In addition to driver ID, our clients have the option to inhibit a vehicle from starting without an authorised PIN or key fob being presented (immobilisation). This ensures that only authorised drivers can use vehicles airside. From a health and safety perspective, this functionality will also ensure that only drivers with relevant licence classes can drive vehicles within their remit.

In-cab devices can be supplied including the MNAV950. This includes PIN driver ID, vehicle safety checks and bespoke job forms, unlimited two-way messaging, driver performance feedback, satellite navigation and lifetime mapping. The MNAV950 can also alert drivers to speeding offences within designated areas. For example; the device will present a pop-up and beep at a driver if they are exceeding the agreed speed limit airside within a pre-determined area.

In-cab devices can be hardwired to ensure they do not have to be removed when crossing from landside to airside. This will limit damage and potential loss/theft of devices as they will not have to be removed and re-installed every time the vehicle crosses over.

An audible in-cab buzzer can be installed to improve driver behaviour and ensure continuous improvement. When a driver breaks a behaviour threshold such as speeding or undertakes harsh braking, harsh acceleration or harsh cornering, an in-cab alert will be generated to...
coach drivers to gradually improve and maintain safer driving styles. The audible alert will sound shortly after the event has occurred to ensure drivers are not distracted by lights or any other visual prompt.

For lone workers in isolated locations, a panic button can be installed to offer peace of mind and added protection. The Teletrac Navman solution links the panic button to the vehicle’s tracking unit. When the panic button is used, an e-mail alert is generated and sent to specified users/managers, alerting them that a driver is in urgent need of assistance.

Our Qube50 (OBDII) plug and play device can be supplied for short-term/spot hire vehicles to offer accurate vehicle tracking and driver performance monitoring.

Qtanium100 or Qtanium200 devices can be supplied for both powered and non-powered assets requiring a tracking device. Clients may have certain assets such as airfield sweepers or tractors that may require a robust IP66 or IP67-rated device.

Power take off (PTO) monitoring can be provided for vehicles that require an output to be monitored. Examples may include airfield sweepers. Users are able to report exactly when and for how long the sweepers were used for and can offer evidence with second-by-second tracking data.

Integrated camera technology is another possibility, to support near miss and accident investigation.

**On what sorts of GSE is your technology best installed and used?**

Typically, on all support vehicles, but non-powered equipment from trailers to lifting gear can also benefit.

**And what are the primary benefits it offers in terms of airport operations?**

Mapping specific areas of airfield such that alerts can be raised in real time on entry and exit, and allowing activity within these areas to be monitored. As a result, the user benefits from:

- Improved driver behaviour
- Reduced penalties and fines for speeding
- Improved driver safety and proactive management of incidents
- Reduced fuel spend
- Reduction in carbon footprint
- Improved visibility and accountability
- Improved customer service

**Do you have many of your fleet management systems installed with on-airport operators?**

We cannot share some client information; however, we provide services to OCS, amongst others. The OCS Group is an international supplier of essential services to facilities and premises around the world. As part of its offering, OCS Group provides support services to airports, and has been a trusted specialist in the sector for more than 50 years.

**Our clients have unlimited access to the DIRECTOR platform which can be accessed via desktop, mobile devices, laptop and tablet devices**

Kate Cummins, Teletrac
Engine fires in GSE machines can involve extreme risks

Engine fires at airports involve extreme risks to human life, property and machinery. Fogmaker's fire suppression system, with high-pressure water mist, will give you the best possible fire protection performance. The system is fully automatic, position independent, requires no power supply and there is a minimal clean up after system has been deployed. Fogmaker has a global network for service/installations and we have currently made 184,000 installations worldwide.

Fogmaker.com
Leading the way

Menzies group chief executive Giles Wilson talks about the strategies he has been implementing at the handler since he took charge during the summer.

You took over as CEO of Menzies in early June. Did you settle into your new position quickly?

Although I was formally appointed as CEO in June, I joined Menzies back in 2011, and held several financial and operational roles throughout the subsequent eight years. The experience and knowledge gained during that time has proved invaluable in my new role as CEO.

It has been a busy few months since June, with a renewed focus on customer engagement and new appointments to the board. We have implemented a cost and efficiency programme to deliver savings across the business, and despite weaker markets in the wider aviation sector, our contract renewal rate has been excellent, with key agreements secured.

We have won a number of new contracts across the group, including aircraft cleaning contracts with British Airways at London Heathrow and easyJet at London Luton and Edinburgh Airports, as well as winning for a further five years the ground handling contract with easyJet at its home hub in Luton.

What priorities did you have for your business when you first took over as CEO?

My main priority has been to ensure that we continue to deliver a safe, secure and premium service offering, to remain a partner of choice to our customers. That’s why I am driving a company-wide focus on customer engagement and operational discipline.

We want to recruit and retain the best teams across our network, and our focus on our people is absolutely key to the delivery of premium service.

The priority is to grow the business organically, although we will consider the right M&A [mergers and acquisitions] deals when the time is right and when both the financial impact and strategic logic are attractive.

Have you made a start on implementing these changes?

We’ve already implemented a cost efficiency programme, which will deliver significant benefits, and we have restructured the global commercial team with a focus on organic growth.

We have also launched a customer engagement programme to ensure we regularly communicate with our customers to keep their needs at the heart of all we do. Recent contract renewals have shown that this approach is already paying off.

Is the handling industry – and I am thinking particularly of ground handling – changing drastically? How will Menzies need or want to adapt as a result?

The modernisation of ground handling systems continues at pace. Industry standards have been notoriously legacy-based, and reliant on paper trails. Adopting technology and upgrading current systems is crucial to maintaining a competitive edge in both the
ground handling and air cargo industries.

Ground handlers need to embrace technologies that drive the industry forward and deliver bottom-line benefits to customers.

Menzies deploys some of the most cutting-edge technologies in the sector, through our rostering, telematics, billing, safety and operational delivery systems. We implement these systems across the network to drive efficiencies and provide a premium, safe and secure service for our customers.

Elsewhere, what are going to be the focuses of your time looking forward over the coming months?

We will continue to develop our systems to innovate every aspect of our operations, and our commercial focus will be on winning new business as well as maintaining our excellent contract renewal rate.

We are looking to grow the footprint of all our service lines, including ground handling. We see clear opportunities to grow across the globe, and we will focus on both expanding our service offering across the existing network, as well as targeting new markets.

We are working on the full integration of [recently acquired handler] Airline Services into Menzies Aviation, which has enabled us to extend our product lines in the UK. The acquisition has given us the opportunity to strengthen our existing market position and expand our de-icing service offering to new and existing airline customers at a wider range of locations.

At its heart, Menzies is a people business. Developing our people and culture is crucial to our growth aspirations, and so we are focusing on recruiting and retaining the right people. We have a great HR [human resources] strategy in place to ensure we are investing in the future and development of our people, so that they can receive the training they need to deliver operational excellence around the world.

It has been a busy few months since June, with a renewed focus on customer engagement and new appointments to the board

Giles Wilson, Menzies
OmniServ’s handling for Ryanair at Stansted reaps rewards

OmniServ began providing bespoke, managed handling services for Ryanair at London Stansted earlier this year, and it believes that the difference in quality quickly became apparent.

OmniServ is not known as one of the bigger ground or passenger handling service providers but it occupies a distinct niche in these markets. In December 2016 it began providing managed handling services for the Scandinavian airline Norwegian at London Gatwick. Called Red Handling to match the airline brand, this was OmniServ’s first such foray into ground handling.

OmniServ then developed Blue Handling (again, to match the carrier’s brand) for Ryanair at London Stansted, and began providing passenger and ground handling services for the Irish low-cost carrier (LCC) in February this year at the airport.

According to OmniServ, Blue Handling has already delivered a “90% improvement on performance and satisfaction levels compared with a year ago, under the previous supplier”.

Stansted – located north of London – is Ryanair’s biggest hub, and OmniServ developed Blue Handling as a completely bespoke product for the LCC following the approval of its tender as part of a wide-ranging competitive process.

OmniServ worked closely with the Ryanair team at Stansted to develop the details of the customised Blue Handling offering in the wake of the contract award. Blue Handling involves OmniServ managing nearly 1,000 staff for Ryanair.

Blue Handling takes in both above- and below-wing ground handling services, including the provision of ramp and passenger service agents, toilet and water services, de-icing, aircraft towing, cargo handling, ticket desk staff, baggage handling and operations.

OmniServ developed a new brand identity, logos and uniforms – previously, there had been no single corporate identity for Ryanair’s Stansted ground handling operations. Although OmniServ recruits and manages all the staff, they thus appear to all concerned as employees of the airline itself.

All these employees go through “extensive training to unite them behind the new brand and instil them with a sense of mission – to provide the best possible service for Ryanair’s passengers”, OmniServ says.

Indeed, Rob Stefanovic, senior commercial manager at OmniServ, observes: “We wanted team members to feel part of the brand. They now have a strong sense of teamwork, passion and pride in their jobs.”

Meanwhile, Ryanair also invested in new equipment and technologies to support the transition. Acquisitions included GSE such as pushback tugs, electric belt tractors (EBTs), baggage belts and trailers – all bought as new assets.

Ryanair operations director Adrian Dunne enthuses: “Blue Handling has been a major success, and was up and running very quickly, delivering above and beyond what we would have expected.”

All-in-one package

Paul Williams, OmniServ’s head of business development at OmniServ
business development, tells Airside that Blue Handling – as is also the case with Red Handling for Norwegian – is “as close to self-handling as an airline can get” without the carrier having to recruit, train and manage the staff itself.

“The model [of both Blue and Red Handling] has been extremely successful,” says Williams. “And we want to expand it further.”

This might involve offering other bespoke managed handling services for carriers in the UK or in mainland Europe, anywhere where an airline has a sizeable operation and is looking for managed service provision. It could also involve taking the product to the US, where OmniServ’s parent company ABM already provides various airport and airline services at more than 100 airports.

Kalmar Motor AB makes it possible to move commercial aircraft of all sizes with a ‘full range’ of cost saving and environmentally friendly, electric drive ‘conventional’ and ‘towbarless’ tractors. During deceleration the electric motors function as generators charging the Lithium Ion batteries, transforming the aircraft moving mass into energy.

Read more about this invention and our other products at www.kalmarmotor.com

Now Available - FB600 FULL ELECTRIC up to 70 Tons
Timsan powers ahead on electric GSE

Istanbul, Turkey-headquartered GSE manufacturer Timsan offers a wide range of equipment to the market. One focus of its strategy to continue developing its growing GSE offering is a move towards producing more environmentally friendly electric vehicles.

Timsan was established on 5 May 1982 specifically to manufacture ground support equipment for the aviation sector. It has three production plants that have a total land area of 11,500 square metres: 5,000 square metres at its Dudullu, Istanbul facility; 4,500 square metres at its Dilovasi, Kocaeli plant; and 2,000 square metres at its Izmir facility.

Timsan manufactures vehicles used for on-airport passenger and cargo transportation, as well as a wide range of GSE including tow tractors for ground operations at civilian airports and in the defence industry.

The company holds ISO 9001-2015, OHSAS 18001-2007, Utility Model and CE certifications and manufactures in accordance with Airport Handling Manual (AHM) and European standard EN norms. It currently exports to 65 countries across five continents and no less than 70% of its annual turnover is derived from its export sales.

Timsan manufactures towable, self-propelled and truck-mounted GSE for passenger and cargo transport. As of today, it supplies a total of 25 different products in 14 different GSE groups, the latter taking in such product types as luggage conveyor belts, tow tractors, passenger stairs, catering vehicles, water and septic tank service vehicles, conveyor belts, ambulifts, aircraft maintenance vehicles and aircraft de-icing vehicles.

According to Suat Aytoz, vice general director of Timsan, “Our design centre develops innovative products by making best use of technical and technological developments and, with these products, Timsan has acquired a distinguished reputation to compete with leading brands in the market.

“Our company has the ability to design and produce projects to provide different sizes and options according to the special demands of each customer,” Aytoz adds.

Supporting customers’ greener strategies Timsan has a burgeoning electric-powered portfolio of airport vehicles, Aytoz explains: “In line with increasing environmental awareness around the world, we continue to work on the development of electric vehicles and have successfully manufactured electric versions of aircraft tractors and baggage loading conveyors that form part of our main manufacturing groups.

“Our products are designed according to aesthetic, quality and safety criteria, and we have ongoing research and development activities to support efforts to reduce carbon emissions through alternative energy sources that can be used in other product groups.”

Aytoz believes that the Timsan Electric Ambulance Vehicle, or EAV, “stands out among its competitors because of its structural features and functionality”. Timsan only added the EAV to the wider range of electric vehicles it offers quite recently; two units are actively used at airports in Sulaimaniyah in northern Iraq and on the island of Aruba in the Caribbean.

The EAV was developed for the fastest possible patient transport at both small and medium-sized airports, says Aytoz. The number of patient transport operations performed at small and medium-sized airports is relatively small compared to ambulift operations at larger airports, he notes. “Thus, it was decided to produce electric ambulance vehicles, because they offer a more effective and environmentally friendly solution for small and medium-sized airports.”
“The experience gained during the construction and use of this vehicle provides us with very useful information on the application of the same technology to vehicles that can be used at large airports in the future.”

The EAV is based around a structure consisting of two vertical motorised movement systems, a pump motor operating the hydraulic systems, a traction type battery and a controller area network (or Can-Bus) based programmable logic controller (PLC) system.

The motors in the movement system are long lasting. The pump motor has been specially selected to meet all the needs of hydraulic systems operating in short periods. The vehicle’s battery has the capacity to accommodate one day-operation and its weight is distributed such that it offers a “positive influence” on the stability of the vehicle, Aytoz says.

Because the movement of the operator’s cabin is independent from that of the chassis, cable connections are reduced to a minimum by utilising a Can-Bus system.

The EAV has an air conditioning system that is powered by the battery inside the vehicle body to ensure that both the patient and the attendant reach the aircraft in as much comfort as possible.

The ambulance vehicle has a precise and wide-angle steering system to ensure a high degree of manoeuvrability in tight spaces as well as rapid movement during approach to an aircraft. It was designed to be used electrically or hydro-mechanically as required.

“The EAV offers a very important advantage to users during operation, as it halves the time in which passengers with reduced mobility or patients can be embarked and disembarked in and out of the vehicle from the same access point, since there is no rear lift. Also, thanks to the EAV’s design, it can approach an aircraft at a safe speed and controlled distance, thus ensuring safe use of the vehicle,” Aytoz concludes.
Bombelli **keeps it cool**

Milan-headquartered GSE supplier Bombelli has confirmed the launch of its latest offering, a redesigned cool dolly. Oman Ground Handling has bought six of the cool pallet dollies and Bombelli is hopeful that it will take more

Oman’s biggest ground handler is only the first of many customers likely to take up the Arctic Cool Dolly, believes Andrea Bombelli, who is in charge of the Italian GSE manufacturer’s international sales and marketing. In fact, Ethiopian Airlines has also bought five units and Bombelli is closing another deal that he hopes can be announced very soon.

The Arctic Cool Dolly bridges the gap between arrival of perishables or pharma cargo from a warehouse at an airport and the loading of that freight onto an aircraft. Any delays in the loading process can result in precious temperature-sensitive cargo being spoiled by the hot weather that is pretty much an all-round feature of countries such as Oman.

The cool dolly might actually act also as a short-term repository for any temperature-sensitive cargo if there is a lack of suitable cool-chain warehouse space available at an airport.

Oman Ground Handling is likely to be expanding its perishables handling business, says Andrea Bombelli, as a result of an Omani government strategy to promote trade in temperature-sensitive goods such as fish, and the handler is therefore likely to be particularly appreciative of the equipment’s capabilities.

Bombelli believes that the Middle East is probably the biggest potential market for the Arctic Cool Dolly, but clearly many other regions are also on his radar. There has certainly been a lot of interest in the equipment since it was completely redesigned into its present form over the last year or two, and it also attracted plenty of admiring glances at the recent inter airport show in Munich.

The unit can maintain an interior temperature of between -25 degrees C and +25 degrees C — enabling it to keep cargo cool in hot conditions, or even keep other sorts of cargo relatively warm as required in cold conditions.

In its standard variant, the cool dolly uses a diesel engine to power its refrigeration unit. Electric power from the mains can also be used when it is possible to plug the unit into the grid. Another option would see a fully electric version with not only connection to the grid and battery power but solar panels
providing top-up energy when the machine is away from mains power.

Not only does the Arctic Cool Dolly ensure the integrity of the logistics cool chain, but it can also prove that fact. Temperature status within a unit is continuously monitored and logged and stored for up to a year; this allows the unit’s operator, or relevant forwarder or shipper, to prove the integrity of its role in any cargo’s cool chain: a considerable benefit if problems arise somewhere in transit, or indeed if there is a move from the customer towards certification under some sort of industry standard such as the International Air Transport Association’s CEIV Pharma.

The machine is built entirely at Bombelli’s Milan factory, alongside refrigeration systems and insulated panels from carefully selected companies specialising in these areas. It is a strong, sturdy machine to survive the rigours of busy and congested ramp environments.

Bombelli also offers a live animal version of the Arctic Cool Dolly. This comes equipped with an air conditioning and air circulation system rather than a refrigeration unit. It is ideal for the safe and comfortable transport of domestic pets or more commercial animal cargo, such as racehorses.

Feedback from Oman Ground Handling suggests the company is keen to take delivery of its six Arctic Cool Dollies. A member of the handler’s ramp team said that the units will be particularly useful for handling meat and fish as well as pharma cargo.

The vehicles are expected to be delivered this month (November), and will be placed into service at Muscat International Airport.
The airport industry gathers in Munich

The inter airport Europe event in Bavaria in October was the latest iteration of the world’s biggest airport show, where the great and the good of the industry come together. Of course, Airside International was there.

This year’s inter airport exhibition was the 22nd time that this show has taken place (the first event was held back in 1977), and it was bigger than ever. Speaking at the opening ceremony, Nicola Hamann – managing director of exhibition organiser Mack Brooks — confirmed that at 33,550 square metres, this year’s footprint was up 5.5% on its predecessor two years ago. Likewise, with 659 exhibitors from 40 countries, exhibitor numbers were also up.

During the four exhibition days, a total of 14,962 trade visitors from 108 countries roamed the inside and outside areas of the Munich Trade Fair site. This represented an 8% increase in visitor numbers compared to the previous show in 2017.

Away from the exhibition booths, a new digitalisation seminar put a focus on topics of particular interest to the airport industry today. Each day of the event was dedicated to a different topic. Tuesday concerned itself with airport IT and the systems and innovations pertaining to day-to-day operations, while Wednesday brought presentations on airport development and design, and Thursday’s theme was IT developments in airside technology. On Friday, the main focus was drones and unmanned vehicles as they might relate to airport operations.

“The world’s leading event for the international airport community”, is how Hamann described the show at the opening ceremony, and it is difficult to disagree. Taking place in what is currently a very challenging operating environment — she pointed to such issues as the prevailing feeling of uncertainty in the global economy as well as the fast-changing technological background to the industry— the focus of this year’s event was ‘Connecting Future Airports’.

Every forecast suggests that passenger numbers will continue to grow in the foreseeable future, despite the challenges of the current operating environment.
Hamann noted, and airports will have to find ways of delivering the additional capacity required. Improving airport connectivity through greater digitalisation will be key, she said.

Michael Kerkloh, who followed Hamann to the speaker’s podium at inter airport’s opening ceremony, added to her comments about that challenging backdrop. The current managing director of Munich Airport (though he is to resign from that position at the end of this year) observed that the rapid expansion in numbers of the world’s better-off will undoubtedly also lead to much higher numbers of international air passengers, and airports will have to find ways of coping with this.

Munich itself has grown hugely over the years, just as has its operating company of which Kerkloh is the current head, but space is limited and new efficiencies will have to be implemented. Growth in the aviation sector has come alongside globalisation and new technologies like digitalisation, so it was entirely appropriate that networking airports was a focus of the show, he opined.

The networking of airports is, of course, not something new, Kerkloh continued. In fact, it has always been vital to airport business. What has changed, he observed, is the complexity and multi-dimensionality of the networked air gateway community. Digitalisation of real-time communications has facilitated significant advances in airport operating efficiency and it will continue to do so, Kerkloh added.

The final speaker at the opening ceremony was Kay Bärenfänger, president of German Airport Technology & Equipment, better known as GATE,
the unifying alliance of German airport suppliers.

Bärenfänger spoke about the future demands of the airport industry: such as sustainability, artificial intelligence and autonomous driving.

He also suggested that alongside the ongoing exponential increase in flying passenger numbers is a change in what those passengers expect from airport services. At GATE, he said that the group’s members offer insight into how those demands are changing and he was happy to have the opportunity to pass that information on to those he would be meeting at inter airport.

The opening ceremony concluded with an announcement of the winners of this year’s inter airport Excellence Awards. The winners, across five categories, are decided by an online vote. The winning companies and their products in each category were:

**interTERMINAL: Sym3 Operator from the UK’s Daifuku Airport Technologies**
Sym3 Operator offers a 3D rendering of an airport’s baggage handling system. Especially notably, Sym3 gives users the ability to view and access data on any device via a web interface.

**interDATA: ISAC from Alpha-CIM of France**
ISAC is a stop bar and lead-on control system benefiting from fibre optic technology. It is said to bring responsiveness and reliability, with excellent response times and ease of implementation.

**interRAMP: Linde Safety Guard from Linde Material Handling of Germany**
The Linde Safety Guard detects other vehicles or pedestrians before any collision can take place. It can automatically reduce the speed of a vehicle equipped with it in advance of any impact. Active alarms triggered by hazards enable operators and pedestrians to react immediately.

**interDESIGN: Air5 from VRR of the Netherlands**
The inflatable Air5, which weighs approximately 68kg (150lbs), folds out automatically and takes shape in just 30 seconds using air pressure to inflate the container. To collapse the container, air is released, which takes just two people and one minute. More details on this product, and on VRR’s other offerings at the show, can be found later in this issue of Airside.

**interFUTURE: BAGFLOW from Vanderlande of the Netherlands**
The BAGFLOW end-to-end baggage logistics solution takes in a complete journey of a piece of luggage from the moment it is handed over by the passenger to the point where it is loaded onto an aircraft. It makes use of innovations in autonomous vehicle technology, artificial intelligence and predictive data analytics. More details on this product, and on Vanderlande’s other offerings at the show, can be found later in this issue of Airside.

The networking of airports is, of course, not something new

Michael Kerkloh, Munich Airport

The next inter airport Europe, the 23rd International Exhibition for Airport Equipment, Technology, Design & Services, is scheduled to take place from 5 to 8 October 2021, once again at the Munich Trade Fair Centre.
YOUR SUPPLIER FOR
USED REFURBISHED GSE
AND RENTAL SOLUTIONS

More than 25 years
of experience supplying used and refurbished ground support equipment across the five continents.

A “Full-concept” services portfolio including:
- Sales & purchase of high-quality used and brand-new GSE
- Short and long-term rental services
- Refurbishment and R&M services
- Fleet management
- Door-to-door transport
- Spare parts delivery
- Commissioning on-site

Aviaco, your best choice to meet all your GSE requirements.

Danny Vranckx
CEO
Tel. +32 471 942 780
danny.vranckx@aviaco-gse.com

Bart Kroonenberg
COO
Tel. +31 653 765 332
bart.kroonenberg@aviaco-gse.com

www.aviaco-gse.com
info@aviaco-gse.com
AVIOGEI shows off its electric portfolio

On the AVIOGEI Airport Equipment stand in Munich were a number of different items from the Italian GSE supplier’s extensive product range, sharing one common factor: they are all electrically powered.

Front and centre on the company’s outdoor stand was AVIOGEI’s Thunderlift E, the lithium-ion battery-powered ambulift variant of its popular Thunderlift vehicle for passengers with reduced mobility (PRM). It now comes with a newly designed operator’s control panel, while the ambulift’s charger unit is now carried within the chassis of the vehicle for ease of recharging.

Solar panels on top of the unit offer another source of power that currently feeds into the main battery, although – says international business development & marketing manager Massimiliano Martone – in the future the Thunderlift E will have a separate solar-powered battery that can be used to power the vehicle’s air conditioning system, thereby allowing the AC’s use in hot climates while not depleting the main battery.

This particular ambulift was on its way to Stuttgart Airport after the show. More details of the Thunderlift and Thunderlift E can be found in the PRM feature of this issue of Airside.

Also on the AVIOGEI stand was an example of the company’s NT280EH towable conveyor belt, but one that has been specially modified for use by American Airlines. This particular airline wanted some limited alterations made, including changes to the belt’s elevation system to add even greater stability.

The unit is “very quiet, very efficient”, says Martone. Able to operate for up to three days on a single charge of its 24V system, sales of the NT280EH have been good, he says.
The NT280EH has an operational reach of between 0.8m and 2.8m, and a loading capacity of 150kg per minute. Its belt width is 0.6m.

The AVIOGEI NS450LE electric self-propelled belt loader was also on display. It is now available with a redesigned operator’s cabin area, including new control panel and steering wheel. “We keep on improving all our GSE,” says Martone.

It too has a belt width of 0.6m, with an operating reach of between 1.1m and 4.5m. Its loading capacity, like that of the NT280EH is 150kg per minute, but it works off an 80V power supply. Its maximum speed is 30km/h.

Also on show was an NT280E towable belt loader with a side standing driving position to improve the operator’s view looking forward and enable easier handling of the equipment.

Elsewhere on the stand was the TVP7000 electric transporter/loader. All set to be transported to its operator at Rome Fiumicino Airport straight after inter airport, the TVP7000 has a loading capacity of up to 7 tonnes. It has a maximum speed of 30km/h and works from an 80V power supply.

---

**Hangar doors for efficient operations**

Offering exceptional functionality, durability and availability for your hangar door. With 35 years’ experience of innovative construction with over 850 worldwide installations.

**BUTZBACH - THE DOOR COMPANY®**
Bulmor reaches the heights

Bulmor is a leading player in specialised lifting vehicles, especially side loaders. Its airport ambulifts were on display in Munich.

Konrad Gruber, sales manager at Vienna, Austria-headquartered Bulmor was demonstrating to inter airport visitors two of the company’s products: the well-known SideBull PRM vehicle and its more recently developed FrontBull.

The popularity of SideBull continues to increase, says Gruber. The vehicle has been sold widely across Europe, and recently the first SideBull was sold for the first time into the US (specifically, into Chicago O’Hare Airport).

But development of the unit continues. And an electric, lithium-ion version is in the offing; in fact, it should be ready sometime next year, Gruber confirms.

A fully electric FrontBull was also on the stand. A smaller vehicle than its SideBull colleague, it is designed for airports where space is at a premium. It is equipped with a lead acid battery producing 48 kWh for four to six hours of use.

While the SideBull is suitable for serving all aircraft types, being able to reach up to 8.1m (the XXL model can handle the A380’s upper deck), the FrontBull has a lower reach, of 5.7m. It can take two passengers in wheelchairs, or a single stretcher/gurney passenger.

More details on Bulmor’s SideBull and FrontBull can be found in the PRM feature of this issue.

An electric, lithium-ion version [of the SideBull] is in the offing

Konrad Gruber,
Bulmor
Introducing the Ultimate One
Changed From The Inside Out

While the Ultimate One looks exactly like the Deicers produced by Global for the last 30 years, the internal design and components are completely new. We’ve integrated new products and technologies to eliminate the need for an auxiliary engine. This design reduces fuel consumption and reduces annual maintenance while increasing reliability. The Ultimate One deicer is available with all options and configurations; AirPlus, Premium Blend, Midas, Single Operator and XR Extra Reach.

One Engine • Reduced Fuel Usage • Lower Maintenance Costs • Higher Reliability

Reduced Time and labor for Preventative Maintenance. All filters and electrical boxes in one location and are accessible from ground level.

Glass Control Panel, One Button Start, Self-Diagnostics, Telemetry Ready.

Hydro-Static Deicing Drive
Low engine RPM

www.globalgroundsupport.com
Butzbach looks to further international growth

A family-owned business (son Thilo took it over from his father in 1999), Butzbach has been making doors for over 35 years, selling its first hangar door to Nuremberg Airport more than three decades ago. But it is now determined to enter a new period of rapid expansion.

Butzbach manufactures both industrial doors and hangar doors, large and small, from a range of materials, although its forte is fibre glass. Employing approximately 350 people, it has a primary engineering plant in Unterroth, Germany, and another factory (as well as its headquarters) in Kellmünz, also in southern Germany. Butzbach manufactures the bulk of the materials it uses in its hangar doors itself at these plants, including the fibre glass doors that are a cornerstone of its offering.

Its business is not dominated by German airports, however. Butzbach is a truly international company, having sold into markets right around the world; it recently completed a job in Nagpur, India, for example, while next year it will begin work on its first project in the Middle East. Another big project will see Butzbach fit giant hangar doors on a high-end new glass hangar facility at Denmark’s Billund Airport, with work starting in March next year.

Approximately 65% of the hangar doors that it has installed are of essentially fibre glass composition (the balance incorporating a range of other materials, such as glass). It offers the fibre glass leaves from which its hangar doors are built in different colours, but they each share the natural advantages of the material.

These are primarily to be seen in light levels: while glass is fully transparent and incoming light can be blinding for those working within the hangar, fibre glass offers a pleasant alternative without

Roberto Blickhorn, Butzbach
shadows. Other beneficial properties of the material include its thermal insulation properties, its resilience and durability, and its comparatively lightweight.

The doors that Butzbach fits vary widely in size, some measuring more than 30m in height. They come with an innovative, patented safety system on their leading edges that incorporates both a crumple zone and an automatic stopping capability should a closing door meet an obstruction (in fact, a door that meets an obstruction will automatically begin to reverse).

Over the last 35 years, the company has handled about 850 different hangar door projects, says chief sales and marketing officer Roberto Blickhan. It is currently working on roughly 15 such projects around the world.

Yet, Butzbach continues to innovate. Blickhan points by way of example to its development of a new modular form of door that can be delivered in a kit-like form from the factory to the hangar.

The prefab package for doors right up to 13.6m high can be installed very quickly, as most of the work on the leaves and the fibre glass is completed in advance at the Butzbach factory. The first such prefab was installed at the airport at Wevelgem in Belgium recently.

The company has also designed and built innovative solutions for many individual projects, especially with regard to what it describes as ‘king size’ hangars. It developed a special centre door leaf with a length of 110m for quick opening to receive A380s for the Airbus facility at Hamburg, for instance.

Another project for Airbus saw the design of a cutaway in a hangar to allow that part of the massive Beluga XL that does not fit within the hangar confines to remain outside while the doors nevertheless shut snugly around the fuselage. Cutaway modifications to hangar doors allowing them to close around the body of tall or extra-long aircraft can also be made on a retrofit basis.

The top and bottom rails guiding Butzbach sliding hangar doors support efficient and safe opening and closing. The bottom rail not only controls the exact movement of the door leaves but also allows rainwater to drain away from the hangar safely. Loads, from wind and the weight of the door itself, are transmitted directly into the bottom track foundations, and the rails are engineered to remain flush with the ground surface (particularly important when wheeling helicopters in and out of hangars).

Door motors, controlled by a simple button, are used to move heavy door leaves.

These high quality standards will help Butzbach as it drives ahead with its ambitious growth programme. Now branded as ‘The Door Company’ able to meet all needs for both hangar and other industrial purposes, Butzbach is investing heavily in new sales staff and its global presence as it works to stretch its international footprint yet further.
dBd looks to potential of aviation market

Basildon, UK-headquartered dBd Communications, a specialist in Bluetooth communications solutions for the ramp environment (as well as for other industries, such as rail and construction), was at inter airport to demonstrate a number of its wireless systems.

dBd's Turnaround Integrated Gate And Ramp (T.I.G.A.R) system, for example, is designed to link gate, turnaround co-ordinator, ramp team and cockpit as necessary and thereby speed up aircraft turnaround times. It enables unwired line of sight communications over a distance of up to 500m.

T.I.G.A.R allows connectivity of up to four users in a wireless-based network. It comes not only with separate transceiver capability on each headset worn by individual handlers turning around an aircraft at a stand but also a speaker that can be located with the ground handling team at an aircraft gate.

Plenty of other dBd systems, such as its Minerva system that allows users untethered communications around the aircraft at ranges exceeding 150m, were also available for demonstration at the booth.

Business is good for the company right now, although the aviation sector remains its greatest untapped market, says managing director David O'Connell. Sales into the Asia-Pacific region have been particularly buoyant of late, with systems now having been sold into locations including Singapore, the Philippines, Thailand and Papua New Guinea.

Wireless systems may be more expensive than wired communications networks, but they may well offer total cost of ownership savings when the not-uncommon problem of broken leads on congested aprons is taken into account. Wireless also represents greater freedom of movement for those wanting to move unhindered around an aircraft at a gate, O'Connell points out.
e-mobility
Committed to GSE quality and innovation since 1970, we proudly introduce our new all electric product line

- Cargo transporter - TVP 7000 Electric
- PRM Vehicles - Thunderlift Electric
- Conveyor Belt - NS450L Electric

- MAINTENANCE COST REDUCTION
- OPERATIONAL COST REDUCTION
- EMISSIONS REDUCTION
- TCO REDUCTION

aviogei@aviogei.it
sales@aviogei.it
www.aviogei.com
Elaflex stays ahead of the game

Fuelling hose, couplings and nozzle supplier Elaflex is augmenting and improving its portfolio of products on an ongoing basis as the needs of the on-airport fuelling business change. It was exhibiting some of these innovations on the company’s booth at inter airport.

Ulf Peemöller, sales director at the Hamburg-based manufacturer, was on hand in Munich to discuss the company’s latest product offerings.

Elaflex is an international market leader in Europe for aviation refuelling hoses and nozzles, he asserts, but the company is continuing to develop its product line to benefit from new technologies and to react to changing market demands.

For example, it has reacted to the introduction of new unleaded fuels, such as Sweden’s UL91 (‘UL’ stands for unleaded), by launching a specialist over-wing nozzle – the ZVF 50 UL – to cater to the specialist needs of such UL fuels.

Its standard ZVF 50 is suitable for all jet and avgas fuel types, providing over-wing fuelling for both aircraft and helicopters. Of low weight, it has a light lever action and easily rotating swivel. It offers a high flow rate alongside a low pressure drop, while a sensitive flow control allows for easy top-up of fuel. Colour coding of the nozzle avoids mistakes in fuelling (black for jet fuel and red for avgas, with green for unleaded). Integrated bumpers prevent aircraft damage.

Elaflex has introduced a new corresponding ZVF 50 nozzle boot – the NB-ZVF 50 SR with an additional spout retainer – that facilitates the safe stowage of refuelling equipment on a refueller or dispenser after completion of the aircraft fuelling process. The driver/operator of the refuelling vehicle cannot move away if the nozzle and the second spout have not been correctly stowed in place aboard the vehicle.

Elaflex has also extended its product range by adding hose reels that can be customised for every client’s own particular needs, says Peemöller. The reels can be used with mobile refuelling equipment as well as for fixed installations next to dispensers at airports. They are modular and designed to meet different space and other requirements. Grounding reels are also available with earthing and bonding function for on-airfield use.

Newly developed hose trolleys also support the company’s widening product range. They are designed for the safe and easy movement of DN 100 refuelling hoses on refuellers or dispensers.

INTER AIRPORT EUROPE | ELAFLEX
Earlier this summer, Elaflex confirmed that it had acquired a shareholding in Middlesex, UK-based Aljac Fuelling Components, a specialist supplier of aviation refuelling systems and equipment that offers its own products as well as those of other international manufacturers.

According to a statement from Elaflex regarding Aljac: “Its product range is one of the widest in the aviation refuelling industry and is underpinned by premium quality branded products from internationally respected manufacturers, and by a wide range of its own products.”

“This partnership takes Aljac to the next level of our development and will bring about a tremendous improvement in the global support of our product range,” said Dave Smith, managing director of Aljac. “The combined resources of Elaflex and Aljac will generate a lot of added value for our clients.”

Stefan Kunter, managing director of Elaflex, added: “Our product and customer structures complement each other well and bring together respected products in the fuel handling world.

“This allows us to further expand our expertise for the benefit of our customers. Equally important, both our companies share similar values and goals. We are a committed partner to our customers and constantly improve our premium quality approach.”

Aljac will continue to operate independently.
Esterer innovates to meet changing demands

One of the trends seen at this year’s *inter airport* – one that has been a common feature of GSE shows for some time – was the number of suppliers promoting electric equipment. One of them in Munich in October was Helsa, Germany-based fuelling specialist Esterer.

Esterer had two electric refuellers on its outside stand, one an electric avgas refueller, the other what Nico Hanemann – head of the company’s aviation department – describes as a ‘maintenance refueller’.

This latter vehicle can undertake simultaneous fuelling and de-fuelling on two different circuits. This is extremely useful for aircraft manufacturers undertaking test flights that require complete and quick de-fuelling and refuelling without any possibility of pollution between the two.

It is an unusual and very complex piece of machinery, says Hanemann, which is why Esterer showed it off on its stand at *inter airport*.

TOTAL is operating one of these vehicles for D’Assault in Bordeaux, while another, larger version is in use with Airbus in Toulouse.

Esterer’s electric refuellers are said by the company to be its “latest, most innovative and sophisticated product”. Esterer has developed its own battery management system for its electrically driven fuelling. The electric refuellers are fully Joint Inspection Group (JIG) compliant.

Demand for electric refuellers continues to grow, Hanemann confirms, whether they be Esterer’s refuellers or semi-trailers. Allowing fuelling while the main diesel engine is off, these electric fuelling systems reduce emissions and are of course much less noisy. They also save on diesel costs and cut down on maintenance requirements.

Electric drive is by no means Esterer’s only focus when it comes to ongoing innovation. Digitalisation and the power of data were other themes of *inter airport*, and Esterer has placed great store in these advances.

Thus, for example, it offers Smart Service, a free app for customers that connects the user to Esterer engineers for audiovisual discussions. It provides a rapid after-sales service that even incorporates an automated language translation option,
thus obviating the need for customers to wait for an Esterer service engineer to come to their place of work.

Esterer proRefuel, meanwhile, is a web-based system for monitoring the performance, maintenance and health of Esterer trucks during use. Data connected by a truck’s telematic system is collected by Esterer, collated and analysed to identify problems at the earliest possible stage. Pre-emptive maintenance can be scheduled as necessary, and new parts ordered as required.

Plus, the telematic data allows Esterer to check how the vehicle is being used and to alert the customer’s management to any issues of concern: does the driver exceed speed limits, for example, or are interlock overrides activated?

All these innovations support Esterer’s focus on product quality. Its equipment is manufactured and engineered almost wholly by the company itself (including tanks, although not chassis).

As a result, perhaps, business is good, Hanemann confirms. Its semi-trailer and rigid refueller and dispenser vehicles are in daily use in 70 countries around the world and the company’s order book is full, he observes, with Esterer selling into markets all the way from Argentina to Singapore. It also offers a line of products specifically dedicated to military customers.
Lothar Holder, the member of the board responsible for the Airport Technology division of the company, began the briefing with a presentation considering the main drivers in the GSE market today, and how Goldhofer is meeting evolving customer needs. He stresses that the company is not reacting to change, but is instead “always ahead of the market” in its assessment of what tomorrow will bring.

Calling them ‘mega trends’, Holder points to such factors as digitalisation, the possibilities opened up by the Internet of Things (IoT) and the ‘blue sky’ policies and thinking in which Goldhofer is keen to engage.

These external influences have had a fundamental impact on Goldhofer’s product portfolio, he notes. Its Sherpa, Bison and Phoenix baggage tugs and towbarless tractors are all relatively new products that now make up a modular family of products that can meet the entire range of on-airport towing requirements, Holder states. They each offer not only optimal performance, but also the best possible total cost of ownership (TCO).

“We now have the most modern product portfolio in this market,” he says. And the company's latest product and system developments are making it even easier for customers to transfer to emission-free, electric variants of each of these vehicle models.

For example, on the Goldhofer stand at inter airport for the first time was its Phoenix E towbarless tractor (‘E’ for electric). And on the subject of operators moving over to electric GSE, Holder opines: “It’s not a matter of ‘if’; it’s a matter of ‘when’ and ‘how fast’.” Of course, the switch is not going to happen overnight, and there will be plenty of demand for conventional diesel tugs for some time to come.

Away from the product line, Goldhofer is also continuing to implement its corporate strategy of establishing regional hubs. The company created a North American corporate footprint with the establishment of Goldhofer Inc in the US and its purchase of a majority shareholding in its longstanding sales and service partner Flite Line in 2017, and late last year it did the same in the Middle East with the creation of a sales and services office in Dubai. It also opened up a parts distribution warehouse in the emirate in partnership with a local company.

Then, just after inter airport had closed its doors for this year, Goldhofer confirmed that it had signed a joint venture agreement with Francis Klein Machine Tools (FKMT) for the production of ground handling equipment for customers in India.

“The subject of the agreement is the production and sales of the Goldhofer range of cargo and aircraft tow tractors for the Indian market and the establishment of a service hub and training centre there,” a press release confirmed. According to the plan, the first phase of the operation in Bangalore will involve the manufacture of conventional Bison aircraft tow tractors and Sherpa baggage and cargo tow tractors.

A further hub is planned for the Asia Pacific region, through a partnership with a local player in Singapore for after-sales service, parts distribution and the like. A formal agreement on this is expected in
the near future, Holder says.

Goldhofer is also reinforcing the resources it allocates to key account management, Holder confirms, while ensuring that its brand and marketing promotes a clear and consistent message of the company and its products.

**Investment**

Christof Peer was appointed Goldhofer’s sales director airport technology on 1 July this year. Continuing from where Holder left off, he explains that Goldhofer is “investing in products and investing in our customers”. He goes on: “We want to make their operations as efficient as possible.”

The strategy seems to be bearing fruit, with Peer informing that already more than 200 Phoenix vehicles have been sold, alongside more than 250 Sherpas. These relatively new models are a “continuing success story,” he enthuses, and are “doing even better than expected”.

But there is much more to come. On the Goldhofer stand at *inter airport* was what it called a ‘Future Zone’, where it could demonstrate to journalists, customers and potential customers alike what it will be able to offer in the future as a result of the latest digital technologies.

Through-life customer service will be supported by the latest telematics and associated analytic technology, while comparative analysis can also be used to inform customers of the potential benefits (for some at least) of switching to electric tugs.

——

**It’s not a matter of ‘if’; it’s a matter of ‘when’ and ‘how fast’**

Lothar Holder, Goldhofer
HYDRO Systems unveils all-new battery-powered pushback

On the HYDRO Systems stand at inter airport was its all-new emover electric tug. The first and only prototype of this all-new, innovative aircraft tug was available for viewing at the Biberach, Germany-headquartered company’s outdoor booth.

The emover is a lithium-ion battery-powered tug that will be able to push/pull aircraft of weights of up to 600 tonnes. This will allow it to handle all types of narrowbody and widebody aircraft, from E190s right up to A380 super jumbos.

According to the company, this “unrivalled universality of aircraft types” that the tug can handle will be one of its “key success factors”. The emover’s flexibility means that any ground service provider needs access to only a relatively small fleet of units, while also allowing each tug to reach any aircraft requiring pushback quickly, given that the units are not restricted to particular aircraft types.

The capability of handling such a wide range of aircraft types, right up to the A380, is pretty much unique for a solely battery-powered pushback tug.

Its low-profile design gives the emover a sleek appearance and also enables it to get under low-slung aircraft such as the B737. Its six driving and steerable wheels give it excellent manoeuvrability. In fact, the machine can rotate through 180 degrees, allowing it to make extremely tight manoeuvres in a hangar and so make optimal use of the available space within the facility.

The emover has a top speed of 23km/h, while its cabin has seating for the driver and up to two others.

It offers automated change of tow heads (up to eight) depending on the aircraft to be handled, with accurate measurement of push, pull and torque forces available to the operator. A 2D scanner assesses the aircraft type as the emover moves up to the aircraft, and the unit’s control system then automatically selects the appropriate aeroplane-specific force profile for the pull. This minimises the force needed to push/pull an aircraft, saving energy as a result.
The tug incorporates the latest in safety features, including automated positioning to the aircraft and a collision warning system supported by a bird’s eye view camera system for all-round visibility.

With cabin, it measures 10.35m by 4.85m by 1.55m and weighs between 52 and 60 tonnes. Its battery – which takes an hour to charge – offers 195kWh capacity.

A future option for customers could be a remote-controlled emover variant that would have no need for an operator’s cabin at all, further saving on space and operating costs.

Gap in the market
HYDRO was founded back in 1965 in Biberach, producing axle and tripod jacks. Since then its footprint in the aviation industry has grown.

While expanding the product portfolio has always been a key element of the corporate strategy, the emphasis has remained on GSE and airframe and engine tooling solutions.

So what inspired HYDRO to branch out into the aircraft tug market, and in particular the fast-changing world of battery-powered tow tugs? Simply put, the company spied an opportunity in the market, recalls head of innovation management Ulrich Ockenfuss.

While most of the tugs operating at airports around the world remain diesel-powered, the trend is very much towards battery-powered variants and that process is only likely to speed up, he notes. Airports around the globe are now installing the necessary charging infrastructure, so HYDRO took the decision to develop an emissions-free, low-maintenance and no-fuel-cost electric tug.

The resulting emover has been in development since early 2017, with detailed engineering work on the vehicle having taken up a little less than two years of the period since. The one prototype on the stand at inter airport is soon to be joined by a second (possibly ready by February or March next year), while the current unit was to go into a rigorous internal validation programme straight after the show.

That programme will include battery tests and vehicle driving and pulling trials, and is expected to last for perhaps four or five months. Practical testing of load pulling will begin at a former NATO airbase in Germany called Lahr, with a phased process leading up to full aircraft towing, which is expected to take place at a Fraport airport next year – the German airport operator is a key partner in the emover development programme, and the vehicle at the HYDRO booth at inter airport carried the Fraport logo.

Certification with Boeing and Airbus will also form a key part of the development process, with HYDRO expecting the necessary certification to be granted by about October next year. And the hope is that the emover will be ready for commercial deployment by the spring of 2021.
KAMAG offers electric aircraft catering variant

Ulm, Germany-based heavy transport specialist KAMAG had on its stand at *inter airport* its Electric Catering Wiesel, or E-Catering Wiesel. It offers an emissions-free alternative to conventional catering trucks.

KAMAG specialises in producing vehicles and related equipment for transporting outsize and super-heavy loads for industries such as maritime, oil and gas and mining. It manufactures multi-axle self-propelled modular transporters (SPMTs), for example, for the movement of outsize and heavy project cargo loads.

The company has been producing the Wiesel chassis for some three decades, producing more than 2,000 of them – by no means all of them catering vehicles – informs head of global marketing Volker Seitz.

Its Wiesel catering trucks have been in use with ramp operators for about 15 years. Moreover, *inter airport* Europe 2019 marked the world premier of the new all-electric aircraft catering variant.

And it drew plenty of attention at the event, says Seitz. This unit is currently operating at Vienna International Airport, while there are many more of its conventional diesel variants in use at various locations.

The vehicle offers three main advantages to other catering trucks, Seitz declares. First, it is electro-hydraulically powered, making it quiet and emission-free. It is powered by a 156kW motor that directly drives the rear axle of the vehicle, so there is no need for a gearbox or converter. The hydraulics of the vehicle are in turn driven by a separate electric motor.

The batteries can be recharged using charging stations or with the help of a wall-mounted box. Plus, the vehicle has an on-board charger with a capacity of 22kW that enables charging from conventional power sockets.

The cooling unit of the box body is a so-called split device in which the chiller is positioned on the chassis while the evaporator is fitted in the body of the vehicle. The use of multiple electric motors improves the energy efficiency of the vehicle because only that which is required at any given time is in operation.

Volker Seitz, KAMAG

The vehicle offers three main advantages to other catering trucks
Second, the E-Catering Wiesel has the very unique capability of dropping its main body right down to ground level by sliding the operator/driver’s cabin sideways and therefore out of the way of the catering space when it is required to descend to floor level.

A third important characteristic of the unit is that it can handle such a wide range of aircraft. It can serve almost all types of aircraft, the only exception being the A380’s upper deck.

Other benefits include a fully equipped driver’s cab, with two full-sized, comfortable seats. The large, undivided glass front windscreens of the cabin allows an unobstructed view of the area in front of the vehicle while – in order for the driver to see the aircraft he is serving clearly – there is also a large roof window.

Provision of a covered balcony area in front of the refrigerated main space means that an operator does not have to wait in the refrigerated body until the vehicle has safely docked onto the aircraft. And because the operator does not open the roller door of the refrigerated area until the transfer of the catering roll containers can actually begin, there is no loss of cooling performance through the door.
Mallaghan unveils all-new airport bus

Dungannon, Northern Ireland-headquartered Mallaghan made a big splash at this year’s inter airport, unveiling with much fanfare an entirely new airport bus – said to be the world’s largest in terms of passenger capacity.

Mallaghan is a rapidly expanding GSE supplier, and this move into the airport bus segment represents an important further addition to its product line that already takes in such lines as catering and cleaning trucks, medical lifts, motorised and towable passenger stairs, water and toilet service trucks and even aircraft de-icers.

At the unveiling on the Mallaghan stand at inter airport, along with a crowd of well wishers was a representative of the bus’s launch customer – Irish low-cost carrier Ryanair – to whom the keys to the first vehicle were ceremonially handed. The airline has ordered 32 Mallaghan 50W buses, with an option for a further 20.

The vehicle has a welded, fully galvanised chassis, powered by a six-cylinder diesel engine with automatic transmission. It has a hydraulic brake system benefiting from ABS anti-lock braking, and is steered by means of the hydraulic front steering axle.

The Mallaghan 50W is 15m long, 3.2m wide and 3.1m high. It can transport up to 118 passengers in accordance with the International Air Transport Association’s Air Handling Manual (AHM) 950.

Options include air conditioning in the driver’s cabin, a hydronic heating system for the driver’s cabin and passenger compartment, air curtains on the double doors and foldable seats in the passenger.

Ronan Mallaghan
Niall Mallaghan announces the arrival of the company’s all-new airport bus compartment. On-board Wi-Fi and on-board speaker system are other options.

Director Niall Mallaghan said that he was “excited, delighted and very proud” of Mallaghan’s achievements in developing the new bus. He described the moment as representing a “new generation” for Mallaghan.

In a statement, Ronan Mallaghan, the company’s managing director, notes: “The airport bus will be an excellent addition to our current brand of GSE products.”

Adrian Dunne, Ryanair director of operation, who was at the unveiling to receive the keys to the first bus, informs that the airline worked closely with Mallaghan on the vehicle’s design, specification and delivery.

He states: “As we expand the Ryanair Group operations we expect this to be the first of many orders and look forward to working with Mallaghan, which is one of our key suppliers of ground support equipment.”

He also adds that Mallaghan offers great service, before and after sale. “They are always there when you need them,” just a phone call away, he enthuses.

Also on the Mallaghan stand was its innovative Bendi-Belt airport baggage loading system, an MPL self-propelled maintenance platform, a T8200 de-icing unit in IDS branding and a CT6000 catering truck with TCR markings.
MC Solutions looks to fibre optics for further efficiencies

MC Solutions is a Milan-based supplier of a modular system for ground lighting and surface guidance monitoring. It is offering a new fibre optic-based Modular Intelligence Airport product for greater safety and efficiency in a gateway’s airside ground lighting environment.

At inter airport, MC Solutions was particularly interested in showcasing its Modular Intelligence Airport (MIA) solution for airfield ground lighting (AGL) and surface guidance control that makes use of the latest fibre optic technology.

Being modular, MIA can be adapted to meet airport’s differing requirements. It offers remote monitoring and testing of an AGL system, with high-speed connectivity and low maintenance, and incorporates an aircraft detection system that can highlight any runway incursions as part of a wider surface management ground control system. This technology need only ever be calibrated once – on installation.

A state-of-the-art fibre optic MIA system has been installed at Italy’s Venice Marco Polo Airport. There, MC Solutions’ MIA is monitoring the performance of more than 1,000 of the Monitor Control Lamp Optical (MCLO) modules that control the airport’s airfield lights.

This fibre optic design is a development of the company’s longstanding copper wire-based AGL monitoring system that is in place at a number of other Italian air gateways.

The module with fibre optic data transmission has a worldwide patent pending, evidence – a spokesperson says – that the company “deeply believes in this new technology as opposed to power line data communication, and for this reason has decided to invest in this direction”.

MC Solutions offers support to its airport customers 24 hours a day for handling any urgent issues.
EVA International Media Presents

THE EVA PODCAST

Featuring Chris Notter & Guests

The place to gain & share knowledge, empower people to learn from others & understand the individuals behind the world of aviation.

@evaintmedia
@evaintmedia
Plug Power works with MULAG on hydrogen fuel cell power

There is plenty of evidence of GSE operators – and therefore suppliers – looking at the benefits of lithium-ion battery technology. Still not on everybody’s radar, however, is another option: hydrogen fuel cells. One GSE supplier that is taking the option seriously is German manufacturer MULAG, which is working with Plug Power, a supplier of such technology.

Established in 1997, Plug Power is a North American company headquartered in New York. It considered all sorts of applications for hydrogen fuel cell technology before beginning to sell into the logistics business; materials handling equipment (MHE) such as pallet stackers offered a significant potential market and big names such as retailer Walmart and e-tailer Amazon have become important Plug Power customers.

In fact, there are about 30,000 Plug Power hydrogen cell-powered MHE units now out there, says Tim Schulz, the company’s director sales – Germany, who was on the MULAG stand at inter airport.

Plug Power’s biggest customer site that employs hydrogen technology, he adds, is a BMW facility in North Carolina, which has about 500 MHE units equipped with Plug Power hydrogen fuel cells.

But the company is now looking beyond this market for expansion, and getting into GSE applications. It is also keen to develop beyond North America and into Europe. To this end, Plug Power partnered with MULAG to equip one of its Comet 4 tugs, known as a Comet 4 FC (Fuel Cell), with one of its hydrogen fuel cells.

That tug then underwent operational testing at Germany’s Hamburg Airport. On trial for two months between the beginning of August and late September, the airport has provided positive feedback on the vehicle’s performance, Schulz confirms. A required speed of 30km/h was reached and exceeded, while acceleration rates were found to be good.

Hamburg Airport is looking to new technologies to support its green agenda, Schulz observes, and the absence of harmful emissions from hydrogen fuel cells is an obvious attraction.

Of course, there are other options. Hamburg has battery-powered GSE of many types already, but lead acid batteries take a comparatively long time to charge, while lithium-ion recharging represents a significant drain on the electrical grid, Schulz points out.
Hydrogen fuel cells can be refilled in a matter of a few minutes, and require very little space to do so. The fuel cells and hydrogen can be stored outside in the open air, rather than taking up valuable space indoors (in fact, hydrogen refuelling can also be performed indoors).

These represent significant potential benefits, says Schulz, especially on a 24/7 busy and congested airport ramp, which may well offset the higher initial cost of hydrogen fuel cells.

The partnership with MULAG having gone well, Schulz informs that Plug Power is developing a new hydrogen fuel cell for the GSE supplier that should be ready for installation in MULAG vehicles by early next year.

Moreover, “I am very confident that Hamburg Airport is moving in this direction,” he adds.

Schulz believes that a hydrogen fuel cell-equipped baggage tug would perhaps need to be refuelled once or twice a day, while the cells themselves might have a lifetime of about 10 years.

**The MULAG commitment**

MULAG has been delighted with what the partnership has achieved so far.

Recalling how the hydrogen fuel cell project got under way in the first place, MULAG marketing manager Oliver Kesy explains: “We wanted to provide an economically feasible alternative to diesel-driven vehicles and avoid the negative aspects of electric drive alternatives (like long loading cycles).

“MULAG had already demonstrated an initial stage of development with an H2logic fuel cell at inter airport Europe in Munich in 2013.”

Hamburg Airport helped get the ball rolling as well. “The first contacts were made via Hamburg Airport, which wanted to set up a pilot project to test the replacement of existing CNG-powered vehicles by hydrogen technology,” Kesy remembers.

It’s not all plain sailing, of course. “Despite many technical advantages, the acceptance of fuel cell drive at airports depends heavily on a corresponding infrastructure investment in hydrogen filling stations, which is why this technology has hardly been used so far,” Kesy notes.

But, “The tests of our new updated prototype with the Plug Power fuel cell, which were carried out in summer this year at Hamburg Airport for several weeks, were extremely positive and without any downtimes.”

“The successful tests at Hamburg Airport represent the next step to the final development of a vehicle ready for series production in 2020,” Kesy concludes positively.
Semmco enjoys full order books

On one of the outside stands in Munich was Woking, UK-based GSE supplier Semmco. It was displaying a wide range of its GSE and aviation access equipment, large and small: from variable height access platforms and landing gear platforms to fixed and variable height refuelling steps and hand-held tyre chargers and gauges.

Semmco is on a high. In April it was recognised with the UK’s Queen’s Award for Enterprise: International Trade, and it welcomed the Duke of Kent to its Surrey headquarters facility in early October, when he presented the company with the prestigious award.

Business is good at the moment, particularly in terms of export sales. In fact, while exports accounted for 25% of its revenue just three years ago, foreign markets now comprise roughly half of all sales.

Much of that increased business has come as a result of investment in boosting Semmco’s international footprint. For example, explains managing director Stuart McOnie, Semmco opened a manufacturing facility in Arlington, Texas, in January. The new site is ramping up production, benefiting in large part from a recently signed US$1 million contract with US low-cost carrier JetBlue.

Staff have been recruited locally, supported by a team of five flown out from the UK to support their efforts. Much of the equipment they are building in Arlington is the same as that produced at Semmco’s Woking facility, with a significant proportion of it relating to the airline’s large A320 fleet.

Export sales have also been strengthened by greater business elsewhere in North America (supporting a new Air Canada hangar facility in Toronto for example), in Europe and the Middle East.
Growth in the latter market has been promoted from Semmco’s Dubai office, while a manufacturing partner also based in Dubai is meeting the growing demand that the company is seeing in the region.

North Africa is another market where McOnie sees plenty of potential.

SMART designs
Semmco’s range of ground support equipment is designed by engineers, for engineers, and has been created to prioritise safety and reduce the burden of heavy day-to-day maintenance tasks. On the stand in Munich, McOnie and his colleagues particularly brought visitors’ attention to the variable height maintenance steps on display, as well as the much smaller SMART Check tyre gauge and SMART Charge tyre inflator.

The latter demonstrate Semmco’s innovative approach to making engineers’ jobs easier, says McOnie. Offering a digital display with the readings held for 30 seconds gives engineers, who may well be working at night in the dark by the light of a head torch, just a little bit more assistance than traditional instruments, he believes.

Indeed, Semmco is all about coming up with smart designs to meet the challenges that engineers face on a daily basis. Thus, McOnie says, innovation lies at the heart of the company’s product strategy, alongside such staples as incorporating the best possible safety features and making all its equipment as user-friendly as possible. Long-term, through-life reliability is another core selling point, while much of Semmco’s equipment is modular in nature in order to offer greater flexibility and customisation.

A number of Semmco products have digital capabilities that help to increase efficiency and accuracy. Both the SMART Charge digital tyre inflator and SMART Check digital tyre gauge feature a backlit digital display that allows for accurate and efficient readings at a glance, even in low lighting conditions.

The three-cylinder nitrogen demountable SMART trolley features a digital control panel, and the solar-powered readout allows users to set an inflation limit that will alert them once that limit is reached.

Also on stand at the event were variable-height access platforms, an aircraft wheel and brake changer, a Universal Landing Gear Platform and fixed and variable height refuelling steps.

Semmco’s customer base includes a global network of aviation clients such as Delta, Air Canada, JetBlue, Virgin and British Airways amongst many others.
TBD goes at full steam

Jonathan Attfield, sales director at TBD, the Wales-headquartered GSE and hangar access platform manufacturer, is a busy man, as are all his colleagues.

Such has been the demand for TBD’s products in recent times that over just the last calendar year sales have risen by something like 50%. Over that same period, the company has taken on about 20 new staff (thereby adding about 20% to its workforce); most of them are engineers, but TBD has also hired new sales reps, new customer service representatives and other support staff.

Needing to ramp up production, the company looked at opening an entirely new production facility, but in the end settled on moving to a two-shift system (of eight hours each) at its Bridgend plant.

“We’ve had more and more enquiries for products and more and more success across tenders that TBD has entered into,” Attfield observes. “Everything is going flat out!”

There has been plenty of success in the company’s core domestic UK market – one notable win has seen TBD supply TPS 2435 narrowbody aircraft passenger stairs to Rushlift for DHL handling operations at London Gatwick, as well as other markets in Europe.

Meanwhile, two big projects have been launched in North America to supply equipment such as engine lifts to two of the US conglomerate General Electric’s huge facilities at Raleigh in North Carolina and Cincinnati in Ohio. There’s also been strong demand for TBD products from Delta Airlines in North America.

Product development has continued apace with this burgeoning demand. TBD’s strategy is to supply high-quality yet affordable GSE and access platforms. It is important that its GSE meets the latest requirements of the International Air Transport Association’s Air Handling Manual (AHM) 913, Attfield confirms.

One example of how TBD achieves this high-quality/affordable combination can be seen in its popular passenger stairs product that were on show on the company’s stand at Inter Airport. These self-propelled stairs feature: an anti-collision approach system that slows them through three phases, and one in which any collision is automatically electronically logged by the control system; a wide control station platform at the top of the stairs, which ensures that control is handled from the best vantage point; and electric drive. The last of these is an ever-more popular option, although Attfield notes that sufficient charging infrastructure remains in short supply at many airports.

Sufficient airport charging infrastructure remains in short supply at many locations

Jonathan Attfield, TBD
JOIN US IN

ISTANBUL

15TH – 17TH SEPTEMBER 2020,
WYNDHAM GRAND ISTANBUL LEVENT

For exhibition and sponsorship information please contact Ian Talbot:
ian@evaint.com - +44 (0)208 253 4011
Vanderlande offers end-to-end baggage handling system

Netherlands-based baggage handling system specialist Vanderlande was at inter airport to promote its latest offerings. In particular, it was marketing its new end-to-end luggage logistics approach called BAGFLOW.

BAGFLOW is a scalable and modular system designed to seamlessly integrate all the various elements of the journey of any piece of airport luggage from check-in to its delivery at an aircraft stand.

Sven Platschrorre, commercial solution manager airports at Vanderlande, explains that part of the beauty of BAGFLOW is that it connects both landside and airside aspects of any individual piece of baggage’s movement through an airport. At most gateways, of course, the landside journey of luggage is pretty much automated, while airside it remains a manual process in the main. But, today, many more airports are looking to automate the entire process.

Likewise, the location of any particular piece of baggage can usually be tracked in an airport departures terminal by the airport nowadays, while handlers would be aware of the location of the luggage of any particular flight airside. Airport authorities are now looking to ensure that they can track baggage along its entire journey through the gateway – and, as a corollary, tell the luggage’s owner where it is, should that be necessary.

Vanderlande’s efforts to automate the whole process take in a number of different capabilities. Its robotic Bag-runners (which transport bags) and ULD-runners (which transport ULDs) can take luggage from a bag drop/check-in area and move it without any manual input through the departures terminal. Such autonomous transport is by no means uncommon in the logistics and materials handling sectors – consider the prevalence of similar robotic equipment in Amazon warehouses, for instance.

Vanderlande has tested this capability landside at a number of airports, including at Dallas Fort Worth International Airport in the US and at Lelystad Airport in the Netherlands.

Moreover, the runners have already been introduced in operational format at another Dutch gateway – at Rotterdam The Hague Airport (a gateway that comes under the ownership of the Schiphol Group, which also operates Amsterdam Schiphol Airport).

Vanderlande’s robotic Dolly-runners will be expected to perform a similar job airside.

Put together, BAGFLOW represents a modular system that can be customised to fully automate an airport’s baggage handling
process, says Platschorre. Implementation of such a system across gateways around the world is likely to be evolutionary rather than revolutionary, he readily admits. But, because of BAGFLOW’s modularity, airport operators will be able to introduce the capability incrementally as testing phases are completed and full confidence in the automation of the baggage handling process grows.

The biggest obstacle to implementation may be the aversion of some operators to risk taking on robotic technology like this, even though there are advantages to be gained in terms of both efficiency and tracking capability. Moreover, robots do not mishandle baggage and they certainly don’t pilfer from it.

BAGFLOW would also allow for the prioritisation of bag flows; ULDs with ‘hot’ bags could be moved immediately, while those containers that are less urgent could wait until a quieter time in the airport operating schedule. Plus, because the whole system can be fully automated and all movements tracked, accurate predictions of future flows can be made, enabling accurate future resource allocation.

BAGFLOW encompasses Vanderlande’s FLEET brand, which takes in FLEET Bag (for single item movements), FLEET Batch (for indoor applications involving cargo and containers) and FLEET Apron (for airside operations).

The intention is not to replace the fixed infrastructure of luggage belts that are ideal for large volume luggage movement along limited routes, but to offer both mobile (autonomous) and fixed infrastructure options for end-to-end baggage handling, Platschorre insists.

Vanderlande’s BAGFLOW was recognised in the inter airport Excellence Awards this year, winning in the interFUTURE Special Award category. Vanderlande board member and executive vice president airports Andrew Manship commented: “Winning in this category is confirmation that we not only understand the challenges facing the aviation industry, but are able to define solutions that help it surpass them.”

The most reliable hangar door choice from Arctic areas to scorching hot climates. Weathertight and insulated.

Hangar Doors

Vanderlande won an inter airport Excellence Award again this year, in the interFUTURE category
VRR offers innovative ULD solutions

Rotterdam, Netherlands-based VRR had a very busy show. The ULD supplier unveiled an innovative collapsible AAY container at inter airport, and announced that ULD lessor ACL Airshop will be the launch customer for the new product. It also showed off its inflatable – and award-winning – air5 ULD.

VRR’s collapsible AAY container is designed to meet a particular challenge that the air freight industry faces today: namely, the imbalances in ULD container stocks across airlines’ international networks. Those imbalances – lack of stock at some stations, too much at others – mean that empty ULDs often have to be returned or sent on to other airline stations once they have completed their immediate mission; yet they are bulky and require the capacity of sometimes empty aircraft to carry them on their return or onward journey (or they may be carried by sea, a slow process).

Collapsible containers like the VRR AAY can be stacked one on top of another, taking up far less room on the lower deck of an otherwise occupied passenger aircraft or, indeed, on a truck. In fact, up to 24 of them can be moved on a single standard European-type truck used for these sorts of loads, compared to perhaps six standard ULDs, VRR asserts.

When folded, the container is seven times smaller than its built-up form, and has a height of only 255mm. It weighs just 280kg. The units can be stacked up to four high on the B737F main deck, and six high on the lower deck of a widebody aircraft. On land, the units can be stored up to six high.

Thus, says Jos Jacobsen, ACL Airshop’s managing director Europe, global leasing & technology, these collapsible containers represent significantly reduced logistics costs for their users. For ACL Airshop, which has a fleet of some 60,000 ULDs, its numerous customers have plenty to gain, he points out.

VRR does offer other collapsible containers – namely horse containers – but this collapsible ULD is the first larger, maindeck general cargo container of its type. Jacobsen enthuses that the new container is “light and flexible. It’s one of a kind. There is nothing else like it in anywhere in the world.”

ACL is also expecting to equip each of its collapsible AAY containers with tracking technology to ensure that users know where each of them is located at any given moment.

Ben Lakerveld, VRR’s sales manager, explains that the collapsible AAY has been specifically developed with the needs of the burgeoning e-commerce market in mind, and in particular for the integrators that support that traffic with their huge fleets of B737 or similar narrowbody freighters.

Jacobsen adds: “Embracing the development of this collapsible AAY container and being the first to market them for our ULD lease fleet is a logical step forward in optimising our management capabilities.

“E-commerce is becoming an integral part of our society, and the AAY has proven itself as a very good cargo carrier. In order to save on logistics we can now move the AAY container in larger quantities using less volume. This will save time and money for the airline and the end consumer.”

The VRR air5 container can be inflated in less than a minute, yet is still strong and robust.

air5

Back on the stand, Lakerveld pointed to another innovative VRR design, an inflatable AKE ULD called air5. With a fixed base and only one rigid side, it can be folded flat when not in use. The air5 can be automatically inflated in less than a minute. It can then be quickly deflated and laid flat in just a couple of minutes.

Unlike the collapsible AAY, the inflatable VRR AKE container is intended for cargo carriage on the lower deck of airlines’ big widebodies, but it also addresses that problem of imbalance in ULD stocks at carriers’ various hub stations. It weighs just 68kg, and can be stacked five-high in the lower deck hold of a widebody aircraft.

air5 was first demonstrated at the World Cargo Symposium (WCS) in Singapore some months ago, but already VRR is working on a second, improved version that is expected to be ready for commercial sale next year. The current air5 model is not yet certified, but the new one will be.

Recognising its innovative design, the air5 ULD was awarded the interDESIGN award at this year’s inter airport.
ZERO EMISSIONS AND REDUCED NOISE

The ITW GSE 7400 eGPU offers flexibility, zero emissions, silent operation and reliable power. It simply changes how airports think about ground power.

itwgse.com/7400
ALL Electric

COMMANDER 30"

EASY TO OPERATE

EASY TO MAINTAIN

GREAT RELIABILITY

jbtc.com/aerotech