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Mototok: 2019 Product Leader of the Year

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The ground handling firm is taking a centralized approach to drive training programs for its employees.



Safety culture and effective training help eliminate risk in ground handling procedures, especially when dangerous goods are

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Cover photo courtesy of Mototok











TOP NEWS

Swissport to Acquire **Heathrow Cargo Handling** from Air France

Swissport recently agreed to increase its shareholding in Heathrow Cargo Handling Ltd. (HCH) to 100 percent from 50 percent, which it held in a joint venture. With the recent agreement to acquire the remaining 50 percent stake in Heathrow Cargo Handling Ltd. (HCH), Swissport will then fully own this cargo handling company. The HCH joint venture has been providing first class cargo handling services to the world's leading airlines at Heathrow, one of Europe's busiest air cargo hubs, since 1995.

"We are very satisfied that we can strategically round off our global cargo business with this selective acquisition," said Luzius Wirth, Swissport Executive VP - Europe, Middle East and Africa. "On the basis of over 20 years



of successful business, jointly with Air France, Swissport now has the right setup to further develop and enhance its service offering at London's Heathrow airport."

The completion of the HCH share acquisition by Swissport is subject to Competition and Markets Authority approval and is expected in the first half of 2019.

ExecuJet's Brussels FBO Achieves IS-BAH Stage II Accreditation

ExecuJet, part of the Luxaviation Group, announced its Brussels FBO has gained the International Standard for Business Aircraft Handling (IS-BAH) Stage II accreditation.



"After being the first facility to achieve IS-BAH status in Belgium in 2017, we are extremely proud to mark this next stage of our development," said An-Céline Claes, Brussels FBO Handling and Protocol Manager, ExecuJet. "The Stage II accreditation is testament to our team's dedication to maintaining the highest levels of safety and service, particularly in the key areas of customer care and safety management. We look forward to further demonstrating our extensive capabilities and above-and-beyond service to all our customers in Brussels."

"The announcement that our Brussels FBO has achieved IS-BAH Stage II is a tremendous achievement for ExecuJet," Ettore Poggi, Group FBO Director, Luxaviation Group, added. "Of the 10 IS-BAH certified FBOs in our global network, Brussels is the fourth facility to have progressed to Stage II, demonstrating the strength of our global network."

IS-BAH is a joint program between IBAC and the National Air Transportation Association (NATA).



WFS to Build New Pharma Facility at Copenhagen

Worldwide Flight Services (WFS) shared plans to invest in a new, stateof-the-art pharma facility at Copenhagen Airport to increase its support of the CPH Cargo Community's growth strategy. WFS will begin construction of the new facility in April.

The new building will provide endto-end handling in a temperature-controlled environment for 2–8°C pharma products incorporating acceptance, offload, pre-storage, buildup and storage. WFS expects the construction process

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to be completed in time for the new building to undergo IATA CEIV Pharma pre-assessment in July.

WFS is also upgrading the existing temperature control areas in its current facility in Copenhagen to handle growing volumes of pharma products requiring a 15–25°C temperature range.

"This new investment in Copenhagen reflects our continued commitment to support airport cargo communities with growing pharma volumes. We already have IATA CEIV certified locations in Amsterdam, Barcelona, Brussels, Frankfurt, Madrid and Miami, and we have further investments planned to upgrade our pharma capabilities in other key WFS stations in the year ahead," John Batten, EVP Cargo for Europe, Middle East, Africa and Asia, said.



IATA Releases 2018 Airline Safety Performance

The International Air Transport Association (IATA) released data for the 2018 safety performance of the commercial airline industry showing continuing safety improvements over the long term, but an increase in accidents compared to 2017.

The all accident rate (measured in accidents per 1 million flights) was 1.35, which was the equivalent of one accident for every 740,000 flights. This was an improvement over the all accident rate of 1.79 for the previous five–year period (2013–2017), but a decline compared to 2017's record performance of 1.11.

The 2018 rate for major jet accidents (measured in jet hull losses per 1 million flights) was 0.19, which was the equivalent of one major accident for every 5.4 million flights. This was an improvement over the rate for the previous 5–year period (2013–2017) of 0.29 but not as good as the rate of 0.12 in 2017.

"Last year some 4.3 billion passengers

flew safely on 46.1 million flights. 2018 was not the extraordinary year that 2017 was. However, flying is safe, and the data tells us that it is getting safer," said Alexandre de Juniac, IATA's director general and CEO.



Siginon Aviation Announces ISAGO Recertification

Siginon Aviation Limited, a Kenyan aircargo ground handling company located in Nairobi and Edloret, announced its successful ISAGO (IATA Safety Audit for Ground Operations) recertification at Jomo Kenyatta International Airport.

This is the company's third successful and continuous ISAGO certification since its initial audit in 2014.

"Successful ISAGO recertification is a great milestone for the entire Siginon Aviation team. It confirms that Siginon Aviation's processes are compliant with ISAGO audited Standards and Recommended Practices," said Maarten Klijnstra, Siginon Aviation's general manager. "It also reaffirms our commitment to provide our customers with safe and quality service delivery. ISAGO recertification contributes to the company's overall success as we strive through continuous improvement programs to meet and exceed our customers' expectations when doing business with Siginon Aviation Limited."

New Aircraft Deicing Facility Opens at O'Hare

The Chicago Department of Aviation (CDA) and its airline partners have opened a new Central Deicing Facility (CDF) at O'Hare International Airport. The airport's first dedicated deicing facility will support airlines in efficiently deicing aircraft away from the gate during snow events, thereby improving access to gates for aircraft operations during winter weather operations at O'Hare.

"The new centralized deicing facility is one of O'Hare's newest and most important assets, as it promises to greatly enhance operating conditions for all of our airline partners, particularly during the win-

► Upcoming Events

April 9-11 MRO Americas

Atlanta, GA

April 27-May 1

International Aviation Snow Symposium

Buffalo, NY

May 7-9

NBAA Maintenance Conference

Fort Worth, TX

May 21-23

European Business Aviation Convention & Exhibition (EBACE)

Geneva, Switzerland

May 26-29

IATA Ground Handling Conference

Madrid, Spain

June 1-3

IATA 75th Annual General Meeting & World Air Transport Summit

Seoul, South Korea

June 16-19

AAAE Annual Conference

Boston, MA

June 25-27

IATA Aviation Data Symposium Athens, Greece

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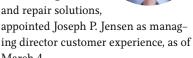
ter season," said Jamie L. Rhee, CDA Commissioner. "Coupled with our award-winning snow operations, and the ongoing investments to modernize our airfield, this new facility builds upon our commitment to improving safety and efficiency at one of the world's busiest and best connected airports."

The 835,000-square-foot Centralized Deicing area, consists of a deicing pad that can accommodate up to 20 narrow body airplanes or five wide body airplanes at a time as well as a fourstory ramp tower that allows airlines the ideal vantage point to control their individual deicing operations. This facility is also equipped with a lighting configuration that allows it to be used 24-hours a day, enhancing visibility during snow events.

PEOPLE

Unilode Appoints Jensen as **Managing Director Customer** Experience

Unilode Aviation Solutions, a global provider of outsourced **ULD** management



Jensen, who has extensive experience in above wing, below wing and cargo operations, will be based in the United States, report directly to CEO Benoît Dumont and oversee the Customer Centricity program to improve the customer experience along the complete value chain, including support of Unilode's digitalization program.

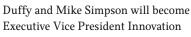
"We are pleased to add Joseph to the team at Unilode, which is another great example of our investment in experienced talents to improve our offering to the market," Dumont said.

"I am truly honored to join the Uni-

lode team," Jensen added. "Benoît and his team have developed an amazing strategy to put the customer at the forefront of the business."

WFS Names Two New **Appointments**

Worldwide Flight Services (WFS) has announced new leadership roles for two of its most senior executives in the Americas. Mike



and Executive Vice President Americas, respectively, reporting to Craig Smyth, CEO of WFS.

Duffy will use his considerable cargo and ground handling expertise, and industry network, to establish new ways of working, identifying and sharing best practice from across the business as well as taking advantage of new technologies. When he takes up this new role in April, he will work across all WFS regions and functions with the single objective of using innovation to make the business better.

Using his strong financial track record across many different industries including spending the last three years as CFO Americas for WFS, Simpson stepped up to his new post on March 1.

NATA Names Freye VP of Government and Public **Affairs**

The National Air Transportation Association (NATA) announced that Jonathon Freye has been named the association's vice president of government and public affairs. Freye will lead NATA's advocacy in Washington, D.C. and will manage the group's external and media relations.

"Jonathon brings to NATA both an

insider perspective on the policymaking process and a technical understanding of the air transportation industry," said NATA President Gary Dempsey. "Jonathon's experience as a strategic communicator will enable the association to advance policy goals that support the business interests of our members."

American Aero Names New General Manager

American Aero FTW. a fixed-base operator (FBO) at Meacham International Airport in Fort Worth, Texas, named Angela Thurmond general manager. Listed among the top 20 customer ser-

vice representatives (CSR) in the world in 2018, she had been serving as assistant general manager since early 2018. "Angela is the perfect choice to lead our team as we work continually to

enhance safety and services to meet the ever-evolving needs of this industry," said American Aero FTW founder Robert M. Bass, adding Thurmond played an integral role in American Aero becoming the first FBO in world to earn International Standard for Business Aircraft Handling (IS-BAH) Stage III safety and ground handling certification from the International Business Aviation Council (IBAC).

Thurmond will lead a team of 26 employees. She holds a bachelor's degree in business administration and management and joined American Aero in June 2017.

Deuschle to Oversee Aviramp's US Office

Paula Deuschle was recently appointed general manager of Aviramp, which plans to open a US office location in Houston.

On joining the company,







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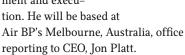


Deuschle said: "How delighted I am to be a part of the Aviramp team, and how thrilled I am to represent the brand here in the States, given how innovative these products are, the genuine benefits they deliver, and fundamentally our quality production. Our values as a business are reflected in our approach and management of our customers before, during and after the sale. And we are deeply committed to delivering a seamless, and stress-free purchasing experience for them. Personally, I cannot wait to get started."

Air BP Appoints Tyzack as Managing Director Asia **Pacific**

Air BP announced the appointment of Daniel Tyzack as managing director, Asia Pacific, effective immediately.

Tyzack will be responsible for operations in the Asia Pacific region as well as strategy development and execu-



Tyzack joined the BP Group in 1994 on the graduate training program. He brings 25 years of highly valuable and relevant fuels experience from key roles in operations, sales and strategy in Australia as well as pricing, supply and commercial roles in Europe. Tyzack joins from BP's Australia and New Zealand fuels business where he served as vice president midstream for the last four years.

"I am very excited to be joining a leading brand in the aviation fuel industry in both a growth industry and a key region. I am also looking forward to working with a great team of people at Air BP and great partners across the region," Tyzack said.

Flexport Global Head of Airfreight Joins TIACA **Board of Directors**

Neel Iones Shah. Senior Vice President and Global Head of Airfreight at Flexport, has been appointed to the

TIACA Board of Directors. Shah, who previously served on the TIACA Board from 2011 to 2012.

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joins with almost 20 years of experience in the aviation and transport industry.

"The freight forwarding industry like much of the supply chain, is going through a period of great change, and improved collaboration and transparency throughout our industry is paramount to our future," he said. "TIACA is the only association to represent all segments of the air cargo sector and is a great platform for us to learn from each other, debate the issues that matter, and develop solutions to the ongoing challenges."

NEW DEALS

Menzies Secures LOT Contract at O'Hare

The Menzies team at Chicago O'Hare International Airport (ORD) has started a three-year ramp handling contract with LOT Polish Airlines. The team turns 14 flights each week on average



throughout the year, providing ramp handling and cabin cleaning services.

"Well done to the ORD team for their great work on this new contract," Ian Craft, director sales and commercial operations, said. "It was a short notice addition to our services at the airport, with an early commencement when the team stepped in at just a few hours' notice. Their dedication and professionalism since December has proven that they were the right choice for the airline."

Gate Gourmet Renews Global Contract with Delta Air Lines

Gate Gourmet has solidified its longterm, successful partnership with Delta Air Lines. Gate Gourmet will be servicing Delta as its exclusive service partner



at 45 locations across North America. Latin America, Europe and Asia Pacific for the next five years.

The new global contract is the result of an ongoing transformation program the two partners have been working on together for several years.

"You have to earn your seat at the table with a global carrier such as Delta," said gategroup's CEO Xavier Rossinyol. "We have partnered closely to design, develop and deliver a unique culinary and service offering that matches elevated operational excellence standards. We look forward to continuing our strong collaboration over the next five years and beyond as we work together to define the gold standard for airline catering."

VANDERLANDE



Vanderlande to Cooperate with Fizyr on AI Robotics Software

Vanderlande has signed a strategic partnership with Fizyr to develop artificial intelligence (AI) technology for its automated order picking, storage, unloading and palletizing robotic solutions. The results will be integrated into Vanderlande's existing product portfolio, such as Smart Item Robotics (SIR), which has been designed to handle the large variety of items common to the warehouse, parcel and airports markets.

"The use of robotics in the logistics industry is extremely complex due to the variety of goods being handled, for example, in terms of the shape, size, color and material," explains Fizyr's CEO Herbert ten Have. "By applying deep-learning technology software, we can identify the best grasp locations for a robot, allowing it to cope with a high level of variation."

"Fizyr is recognized as one of the leading technology companies in its field and this partnership demonstrates Vanderlande's commitment to our customers, who look to us to create innovative solutions that help them to remain competitive," said Vanderlande CTO Vincent Kwaks.



Gazprom Neft Begins Fueling Aeroflot's Flights in China

Gazprom Neft has become the first Russian oil company to refuel Aeroflot's regular flights in China. According to the agreement, Gazpromneft-Aero, the aviation-fuel business operator of Gazprom Neft, will be supplying the airline's flights with aviation fuel at Guangzhou Baiyun International Airport. The volume of refueling will amount to approximately 20,000 tons of jet fuel per year.

"The total volume of our international sales to Aeroflot reached more than 90,000 tons of jet fuel. We expect this new agreement with our strategic partner to double the volume of sales in China by the end of 2019. Gazpromneft-Aero sees great potential in the Asia-Pacific market, primarily in China, due to the growth of tourist flows between our countries. Thanks to our cooperation with CNAF, we have formed our largest international distribution network in China. We are looking forward to expanding our cooperation with airports in China and other Asia-Pacific countries, strengthening our foothold in the region and increasing the volume and geographic reach of our fueling operations," said Vladimir Yegorov, CEO of Gazpromneft-Aero.



Jet Aviation Acquires Full Ownership of San Juan FBO

Jet Aviation acquired full ownership of the San Juan FBO at Luis Muñoz Marin International Airport in Puerto Rico. Jet Aviation has been operating the San Juan FBO under a management agreement with the previous owner, Pazos, since March 2017, when the FBO was rebranded as Jet Aviation.

"Bringing the San Juan FBO completely under Jet Aviation management reinforces our commitment to our customers, our employees and the region," said David Paddock, senior vice president and general manager, Jet Aviation Regional Operations USA. "Our goal is to deliver business aviation services as close to demand as possible, while ensuring consistency across our growing global network. Jet Aviation operates 10 FBOs in the U.S. and Caribbean. San Juan is a high-performing FBO with excellent long-term growth prospects and we are delighted to fully bring it into our fold."

Paddock said a new, larger hangar will open in the first quarter of 2019 to replace the one destroyed by Hurricane Maria in 2017.

Hector Vasquez will continue in his role as FBO director and serve as general manager at San Juan. He has worked in FBO services for 34 years and was at Jet Aviation Teterboro for 26 years before moving to San Juan in 2018.

AVIATIONPROS LAUNCHES REDESIGNED WEBSITE

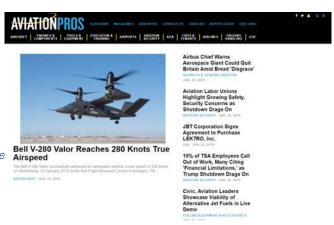
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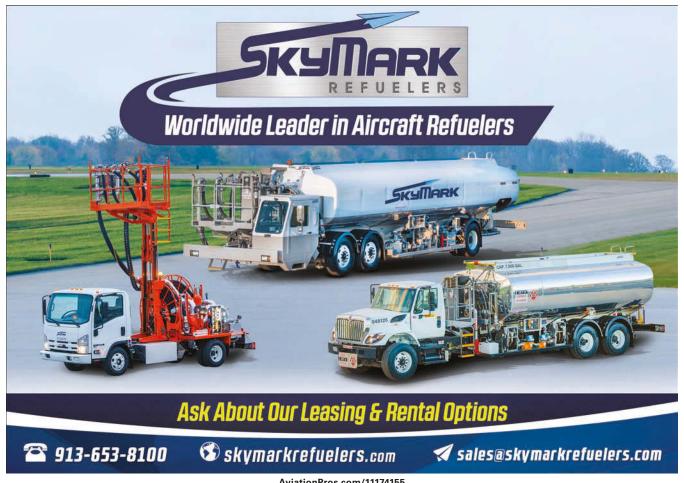
AviationPros, the aviation industry's leading online resource for news, information, and analysis on the global aviation and aerospace industries, announces the launch of its redesigned website. The new site offers a concise and sleek experience for visitors while retaining the same high-quality content that AviationPros readers have come to expect. View the new website at www. aviationpros.com.

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Support for Line Maintenance

Time is everything on the ramp, so maintenance personnel need vehicles to help them work efficiently.

By Chris Jenny

hen aircraft is at the gate or parked elsewhere on the ramp waiting for daily inspections or tire changes, line maintenance can be a very challenging job in the most ideal weather. But add snow, ice and wind, and it becomes almost impossible.

The trucks and stores support vehicles that were previously used were just that - a pickup truck with no covered storage. Everything would just get tossed in the back, and off the crew would go.

But today, in 2019, with security gates and airside inspection booths, time is everything.

In Canada, for example, airports are constructing airside security inspection booths as per Transport Canada. This keeps us all safe, but the downside is the extra time it can take maintenance personnel to get to an aircraft. In fact, it can take up to 45 minutes just to get the Line Office on the ramp from a non-secured parking location.

Delays can cause a trickle-down effect if an aircraft is not ready. The ground handler must wait to tow the plane to the gate or delay loading. This, in turn, leads to baggage sitting at the gate in carts, possibly in bad weather, resulting in damage to the baggage. It slows down cargo processes and can cause back ups for other aircraft as well.

If a head start does not leave on time, every flight that aircraft is doing throughout the day





is also delayed. The list is long, and in the end costs money as on-time performance (OTP) suffers.

So once a crew is on the ramp, using their time efficiently is key. Crews don't want to travel back and forth to the hangar, so they limit those runs as much as possible.

This is why Wilcox Ground Services took an interest in creating custom design line maintenance vehicles and related equipment. Maintenance personnel are seeking solutions to help AME/AMTs work safely. As a result, their ideas have evolved regarding what a line maintenance truck or van should be.

Nothing can replace a great team, but excellent equipment sure helps. The interesting thing that the airline industry is slowly realizing is that GSE is a vital part of the equation when it comes to line maintenance.

When you supply quality equipment that meets maintenance requirements, the stress surrounding the work is reduced.

To assist with this, Wilcox Ground Services has put a new spin on numerous outdated truck designs. With the addition of platforms with fall restraints, sealed tool storage for chemicals and tools, storage boxes for ladders, nitrogen bottle holders, tire racks and lift gates as well as proper work lighting for night maintenance, crews have all the tools needed within reach to complete a variety of work.

This might sound normal or mundane,

but everything has a reason. Something as straight-forward as a sealed storage box for a ladder is invaluable to an AME/AMT. The ladder stays out of the elements, keeping it clean and dry. If it's snowing or freezing rain is falling and a ladder has been sitting in the back of a truck exposed to the elements, no one wants to risk injury by climbing it. So, the sealed storage box can significantly lower the chance of slipping just by protecting the equipment.

The other features have come from AME/AMT input as well, and additional designs are being developed to provide additional solutions.

Wilcox has also designed support units, such as supervisor trucks and stores trucks. These vehicles can allow a runner to assist with line maintenance. With tire racks and lift gates, they can supply tires along with sealed storage areas for oxygen bottles for crew and cabin. Supervisor trucks with lift gates and ample exterior lighting can also help in night time inspections and with tire changes, if needed. They come with two 360-degree remote-control inspection

lights to look at the aircraft at night, as well as a 20-inch LED bar to light up a large area for tire changes.

When trucks are equipped with the necessary gear and lighting, support for AME/AMTs improves, which then leads to more efficient and more cost-effective labor. When selecting a maintenance vehicle, give consideration to specific needs for an operation, so it can be determined if tire/brake carts, lighting, generators or other features are required to make an operation run smoothly.

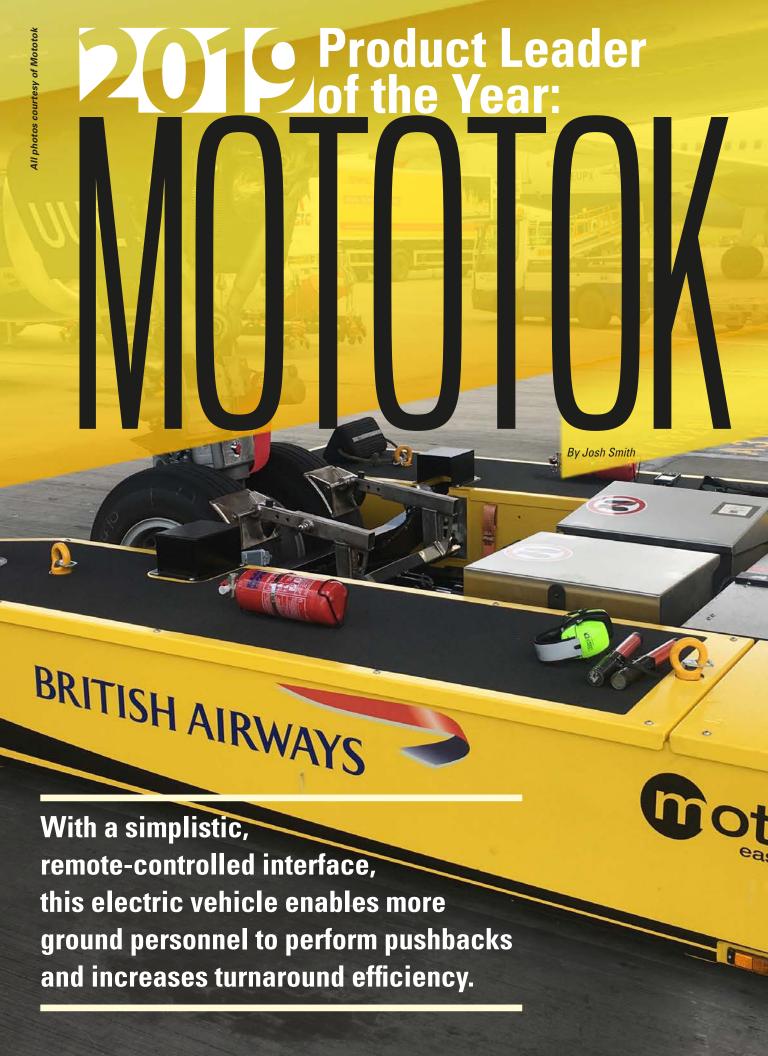
Having too many vehicles can cost both time and money. Driving four units to an aircraft to support one task takes several AME/AMTs away from what they were doing. But having a unit properly up-fitted allows work days to be scheduled efficiently and keeps crews better prepared.

We all know the right tool for the job is important. But choosing the right vehicle to bring the required tools to the job can be equally valuable. **GSW**



► ABOUTTHE AUTHOR:

Chris Jenny is product development manager of ground service equipment at Milton, Ontario-based Wilcox Ground Services. He has more than 10 years of GSE experience, having previously held positions at WestJet and Swissport in technical and advisory roles.





Pushback Requirements

With approximately 150 machines already in the market for maintenance purposes, in addition to units used by aircraft manufacturers in production lines, the vehicle had proven to be reliable.

"It's a very compact machine in comparison to everything else," says Wiers-Keiser. "It's very cost-effective, and it's very easy to integrate because it needs minimal training requirements. It's electrical, wireless and has many unique features."

But when the decision was made to repurpose the machine for pushback operations, some upgrades and adjustments were required. For example, the team at Mototok began by improving the emergency functions to ensure the nose gear could be released quickly in case of a malfunction.

"In the maintenance area, it's not so stressful and not so urgent. But on a pushback operation, it's very urgent. So, this was one of the first actions or first things we changed," Wiers–Keiser points out. "We have two very easy possibilities where it only takes 35 seconds to disengage the nose gear."

Company engineers also developed a sophisticated over-steering protection system, to make operations safer.

"We measure the torque, but we also do a counter-steer," Wiers-Keiser says. "If the operator exceeds a certain level of torque, then the machine starts to make a slight counter-steer.

"This avoids any doubt of over-steering. And to continue the pushback process, you don't have to stop to check everything. In our case, the machine avoids a problem before something can happen."

He says this feature reduces delays, which results in monetary savings.

"It also warns the operator prior to the event happening to make a counter-steer," Acri adds. When torque becomes too high, the oper-

> ator is notified. But if that person continues, the machine starts the counter-steer.

In this circumstance, an alert is sent to a cloud-based system that notifies managers of the event.



"The computer system allows the owner or fleet manager to check everything that's going on – with the machine and his team. You can check over–steer issues. You can check charging cycles of each unit," Wiers–Keiser says. "For example, you can check how many hours the motors are driven to compare maintenance plans. You can really go deeply into each machine and see, as a technician, what is the status of each unit.

"So, if something is not working, you can see online and analyze the situation and quickly repair the machine."

Managers can use this as a teaching tool if an issue occurs with specific operators or is happening repeatedly.

When maintenance is required, Mototok's machine cover is designed to allow maintenance staff and technicians easy access to the batteries.

"In general, we have all important electrical and hydraulic parts in one compartment," Wiers–Keiser says. "You open one big cover, and then you see everything and can exchange – plug–and–play – especially the electronic parts, if necessary."

Mototok officials say both British Airways and Menzies provided useful feedback during testing that were incorporated into the pushback model.

A Simplistic Process

Capable of handling any narrow-body or regional aircraft, the Spacer 8600 is operated with an intuitive remote-control.

Two joysticks on the device allow an operator to move forward and backward, and left and right. One button raises/lowers the nose gear and another button turns on the lights.

Once the safety check syncs the vehicle to the remote control, the operator is ready to perform a pushback.

The operator drives the Spacer 8600 to the nose gear with the door open. Once engaged with the nose gear according to the tire diameter, the operator closes the door and lifts the nose gear.

"It holds the line very well, and it's easy to connect. It's just one button on the remote control to connect to the nose gear. It takes about 20 seconds to connect," Acri says.

When the pushback is complete, the operator presses the door button again, and the unloading process starts.

"The platform goes down; the wheel will be disengaged as the door is opening. Then he drives out from the nose gear, disengages the pin and the communication set from the aircraft and drives back to the white line; shows the pilot the pin and communication set, then he closes the door, lifts up and goes back to the gate," Wiers-Keiser says. "That's the process."

In addition to simple operation, operators are not burdened with physical tasks that can take





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a toll on the body. The vehicle moves smoothly as well, thanks to programmed torque.

"The torques are always the same, meaning if I give the command to move forward, it's going to be a nice, smooth initial torque," Acri says. "Nose gears and passengers like this. It's not going to be a jumpy start."

Plus, there is an additional safety benefit by not being positioned under the aircraft.

"Due to the wireless remote control, they're standing in a position where the pilot is seeing them and they're seeing the pilot," Acri says. "They're standing a distance away so they can see everything and have better visibility (wingwaker capability), which improves safety. And they never have to go near the engines to disconnect the nose gear."

Electric Benefits

A key to fully utilizing the all-electric, remote-controlled Spacer 8600 is to have the unit near the gates served, Wiers-Keiser explains.

"The advantage of this is you don't need time to travel from gate-to-gate, long distances. The machine is always close to one of these gates," he says, noting a vehicle may efficiently service one to five gates on either side.

Keeping the units close to where they're used also simplifies charging the vehicles. Mototok's proprietary charging systems, or an independent charger, can be installed at the gate to charge vehicles when they're not in use.

"If the machine is parked at that gate, there is normally a charger. If you have a problem with low voltage, you can charge in-between (uses) during the turnaround process," says Wiers-Keiser.

The batteries can perform up to 50 pushbacks with no engines on; and at least 30 if the engines are started during pushback before requiring a charge.

Training Requirements

Another benefit of the Spacer 8600 is the person who operates the unit does not have to be a dedicated pushback driver. Any member of the turnaround team, who has received training, can perform the pushback.

"With our concept, the machine is available always, and not stuck at another gate far away, and you have all these people who are trained, then you can really reduce delays," Wiers-Keiser says, noting at London Heathrow's Terminal 5, British Airways reduced its pushback-related delays by more than 70 percent by training many of its workers to use the Spacer 8600.

According to Wiers-Keiser, the airline has 25 Spacer 8600s at their gates at Terminal 5. They trained 150 people to use the units and would like to increase that number to closer to 200 in order to make operations more versatile.

"The operators do not need a special license like you would with other GSE tugs. They also don't have to get physical," Acri notes. "So, they don't need to bend over, squat, wrap something, put an adapter in, strap onto a nose gear or any of those types of things. So, you're able to have a wide variety of operators."

If a ground handler already has pushback experience, training takes as little as two hours.

"They learn to work the three switches on the remote control, and how much voltage the machine needs to operate and how to change the small battery for the remote control. That's basically the requirement," Wiers-Keiser says.

"If a group has no pushback experience, then the training on the machine is the same - but they have to learn all the regulations, how to communicate with the pilot, (etc.)," he continues. "It's something which everybody who performs pushback has to learn, independent of the machinery."

More to Come

All the notable features of the Spacer 8600 from the cloud-based computer system to the remote control - are designed to take complex-





ity away from the operator and maintenance provider.

"If the machine is not complex to learn and to operate, then you avoid mistakes and it increases, in the end, safety," Wiers-Keiser says, adding an advantage of an electric vehicle is fewer parts that can wear out and need replacing.

With intuitive operation, a 20-plus year life span and the versatility to handle aircraft from CRJs and Embraers up to the Airbus 321, the Spacer 8600 has become an efficient option for many airlines.

The Spacer 8600s in operation at Terminal 5 at London Heathrow have helped perform more than 80,000 pushback operations there. Meanwhile, there are a lot of other airports where the units are in use, for example, in France, China, the United Arab Emirates, Singapore and the United States.

Acri says Allegiant Air became the first airline in the U.S. to utilize the technology, putting units in service at McCarron International Airport in Las Vegas.

"The Spacer 8600 is now dedicated for only narrow-body and regional jets," Wiers-Keiser says. "There will be development for a stronger machine which can handle then wide-body."





The ground handling firm is taking a centralized approach to drive training programs for its employees.

By Jen Bradley

ith more than 200 locations worldwide, Menzies Aviation has taken on an aviation services training challenge to bring this century's modern

thinking and technology across the globe.

Alan Glen serves as head of operational learning for Menzies Aviation, based in Edinburgh, Scotland. He says that in the last two years, a more centralized approach has been driving all training programs for the airline services company, including its ground handling division.

Station sizes can range from 30 to hundreds of staff members, so much of the standardized training Glen and his team are working on can be incorporated into any size classroom, and then added to by local trainers to support their local operations.

"Training is so fast paced; requires so much detail and technical skills," says Elena Flynn, head of training - UK for Menzies Aviation. "There's so much work to ensure someone knows how to do their job correctly and safely, and then be on their own."

Glen agrees. As the head of all operational training for Menzies, he says the trick is to balance investment and profit margins with safety and a well-rounded education.

"I think that's part of my role to manage this centrally, so that we can improve our efficiency," he says.

This is difficult, as he says Menzies Aviation operates hundreds of stations within different cultures, and then established models of learning within those locations. This is the journey Glen has been on, to provide better training resources as well as a centralized and easily adaptable educational program to support better employee retention.

A Re-Focused Training Approach

"We set the standards centrally," says Glen. "We do a lot of the training design for the materials that are distributed worldwide. That's a change in direction for Menzies over the last two years - taking this more centralized approach on design."

He says the three-pronged method includes establishing company standards for safety, security and performance, which incorporate the industry's best practices and known standards. Flynn says that having a consistent portfolio and process for training is a large part of this re-focused approach.

"We work very hard to ensure our training teams possess high qualifications so we don't have to look externally to pass along training," she says. "They can deliver the industry standard and licensed requirements, and then provide consistent training internally across all our locations."

Glen oversees the work being done in setting standards for learning for global teams and all disciplines at Menzies, including ground handling. He also then sets audit standards to make sure the training benchmarks are being met.

Flynn believes this consistency has made



a difference in the field. She says that 30 trainers around the United Kingdom report to her and then work with other local trainers in their regions. The challenge for them that this new approach addresses, she explains, is to stop "chasing their tails" when training all the time, dealing with seasonal projects, and then also finding time and resources to actually teach. This centralized delivery method is making a difference for these trainers and the new employees who need to feel confident in their work.

"We want them to feel comfortable enough to do their job, the trainer to be comfortable that they can do the role, but also know they don't know everything," Glen adds. "We want them to know they should always be confident enough to ask questions."

Reaching 200 locations worldwide and the wide variety of languages is a challenge that Glen says the company faces more each year. But they are beginning to address it.

"We're finding our way," he says. "We can't assume English in most places and need to better support our local teams."

For example, the new Dangerous Goods in Aviation eLearning program is being translated into multiple languages, a first for the company.

Since the classroom materials are centralized, he says the local translation can be done by the staff on the ground.

When it comes to necessary training, Glen says a typical ground handler will drive basic equipment, perform ramp activities and help load aircraft. For Menzies, that's usually a week or so of classroom learning, and then practical training follows. That training phase is all heading towards a series of competency assessments.

"Not everyone will take the same time

with this," he says. "It's all about getting to the standard."

Following curriculum, Glen says a person can be safe and productive on the ramp in about two weeks.

Flynn adds to this, saying that a development path approach has been successful in the UK after the basic training is completed. Every six months, employees are skilled to another level, whether loading bags, driving different equipment, etc. She says she can remember when she was new in the industry, working on a couple of services, but needed to be trained in five, six or seven other systems.

"We don't do that in one go - it's quite challenging," she says. "We make sure to teach in methodology for each level and







lead up to other systems to make it easier for everyone."

Adjusting As They Go

Glen says Menzies' "Excellence Manifesto" is a big driver of this company-wide training initiative, which is helping provide learning materials from a centralized source. A big part of the process has been finding out where training tweaks are needed.

"I have to listen when we have incidents and issues," says Glen. "I get a lot of action items from our safety and security action group, things we want to be transferred into learning."

He says the question in these open discussions becomes: "Is this actually a learning issue, or a process or compliance issue? Quite often, it's a learning thing."

At that point, the team sits down together, with technical services and addresses what processes should be put in the manual, how it can be trained, and then work together to roll this out.

Glen says his role is to find a solution if training is needed. From looking at current materials, deciding to add or change something and just sometimes figuring out what to do next.

"The benefit of the centralized approach we're driving is that information can be shared across the network," he says. "Some training must be localized, of course, but often we see similar things popping up.

"We want to make sure the processes and training go hand-in-hand," he explains. "That's how we're able to drive this from the core."

Flynn explains that part of the adjustment in training has been understanding how new ground handlers actually learn. The days of only PowerPoint presentations are gone, as Menzies realizes adults learn better with hands-on, task-oriented training.

"We have to help them study and learn the different theoretical elements, but then allow them to do some competency basics and demonstrate their learning practically," she says.

The new training approach has been proving itself successful, with the huge improvement in the U.K. stations' safety performance. Flynn says incidence rates



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have been reduced considerably, and when there has been one, it is very rarely related to a training problem.

"This has shown us that they have been given the right tools, and sometimes it's just more of a human factor rather than they weren't given a chance to learn the job in the first place," she says.



While Glen admits there is a lot to do yet, he believes this has been a journey already, and will continue to be a long, winding one. He's excited to see some "wins," though, along the path, like the safety numbers mentioned above.

Technology-Driven Future

To streamline and organize training documents, technology has become a big part of the new Menzies Aviation protocol, and the team's focus on centralized training.

"We think this is significant, from a management perspective," says Flynn. "There used to be so much room for error, when paperwork was moving from one area, to a trainer, to the next database. We were constantly having to audit and double check what was in the paper trail."

Today, real-time data and training actions are recorded digitally. Glen says inches of employee records stored in a filing cabinet are in the past. Today, trainers are taking tablets in the field, and monitoring the training process digitally. Competencies are signed off when completed, and trainers never have to break and go back to the office to file paperwork.

When the new learning management system is available globally, Glen can monitor staff training worldwide from his Edinburgh office. This will be a value-add for customers, who can easily audit Menzies' training records centrally, rather than going around to every port, which Glen says is a win for both sides.

"But more importantly, we're beginning to integrate our training records into our rostering system and integrate those records into telematics systems for our vehicles," he says.

This has given Menzies control over when an employee can operate a piece of ground support equipment on the ramp.

"If that equipment is out of their training capacity, they will not be able to start it," explains Flynn. "The learning management system is completely accurate and is realtime data we can trust."

Glen says that it also applies to those ground handlers who haven't kept up their training requirements and have expired certificates.

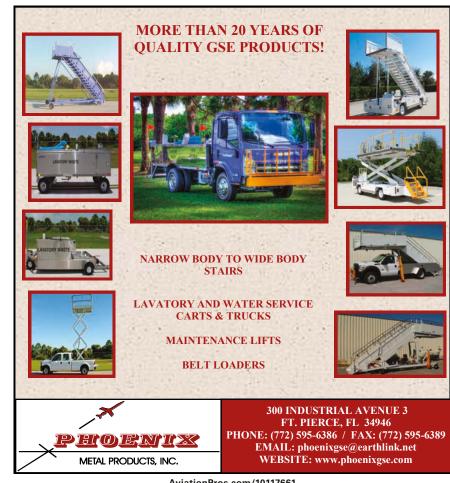
"It gives us an assurance in safety, too," he adds. "In the future, this will also help with scheduling. We won't roster someone to do a task on a shift they are no longer qualified or were never qualified to do. We are beginning to connect the dots with technology. and it gives us internal efficiency but also improves safety."

The training initiatives are in place, Glen concludes. "I think it will differentiate us. It's been hard to do, but sometimes the things that are hard to do will make you a more attractive partner. It's required a lot of rethinking of what we need to do, but it's quite exciting." GSW



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How dnata's Training Evolves to Keep Pace with Demands

By Jen Bradley

Steve Clark, head of global training for dnata, says that new hires spend two weeks in initial training before being operational as ground handlers.

"As they progress onto other roles on the ramp they undertake more training accordingly," he points out.

dnata believes that a mix of classroom and practical-based training is key to success. The classroom element includes everything they need to know about working with the company, but also a series of mandatory safety and security modules to ensure they can operate safely and confidently on the ramp, Clark explains. Experienced and qualified dnata trainers ensure new ground handlers are fully competent in their roles.

Clark explains that dnata's training is constantly evolving to ensure it keeps pace with the operational and business demands.

"As improvements are made within dnata's SOPs or as our customer requirements change, these must be rapidly reflected within the training system to ensure continued alignment,"

he adds. "We are constantly working to improve the effectiveness of the training programs, moving more to point of need training and competence-based assessment, along with establishing more consistent coaching and mentoring for our new hires."

A new observation program has been a key initiative in improving safety programs, as has the implementation of widespread Incident Management training. All levels of leadership and management teams have been involved in this initiative.

"Safety is integrated within all of our training programs, however our approach to safety isn't limited just to training – it is embedded throughout all of our operational and management systems," he explains.

New and updated regulations do drive training for dnata, as do safety initiatives and internal needs. Clark concludes by saying, "our training system must be agile and responsive in order to react to changing requirements."



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Safety culture and effective training help eliminate risk in ground handling procedures, especially when dangerous goods are involved.

By Mario Pierobon

n the context of an expanding aviation industry, aircraft ground handling safety is a particularly hot topic in the Middle East and training is key to achieve and maintain safety standards during aircraft ground handling operations.

According to crew resource management (CRM) and human factors (HF) expert Thomas Fakoussa, safe aircraft ground handling training should start with the training of perception, i.e. what and where to look, to hear and to touch.

"The sequence of these sensory inputs is important, as this is when it comes down to experts and their expertise. Experts are such because they have learned what to perceive at which point and in which sequence in order to be safe," he explains.

Effective Training

In order for aircraft ground handling training requirements and programs to be effectively tailored to the Middle East region, it is first of all important that the trainer understands the group's basic knowledge and its basic attitude to learning.

"This will decide how to tailor the program according to the group's motivation. That will shorten the training time and improve the outcome," says Fakoussa.

At dnata, before employees can undertake any of the key functional training content, they must first complete a theoretical training program and demonstrate they fully understand all safety and risk considerations associated with the role they are being trained for.

"In terms of tailoring programs for the Middle East, there may be some additional or varied local regulatory requirements that will need to be adhered to. But this is also considered in every location the training is delivered," says Shaun Hannam, head of safety at dnata. "Local, cultural considerations are also factored in to the training solution."

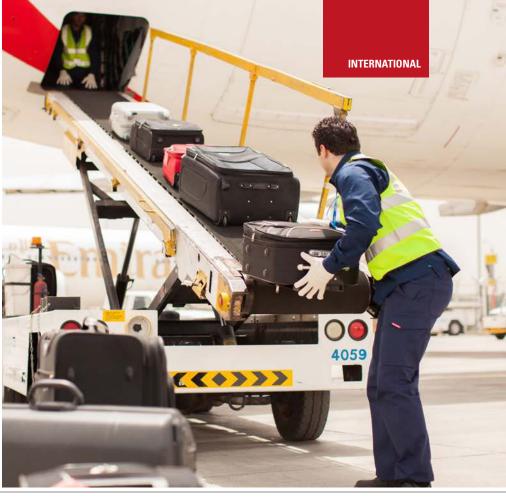
Safety Culture

Safety culture plays an important role, as it links directly with professional behavior on the ramp. Safety culture is particularly critical as there are some operational challenges given the common industry tendency to get more work done in a shorter time while keeping the safety level high.

"It is pretty self-explanatory that this is not an easy task to achieve. It is quite clear that if the ratio of work done and time limit reach a critical point, safety will have to decline," says Fakoussa.

It is therefore key to commit efforts to improve the safety culture.

"At dnata, safety culture is part of many cultures, including reporting culture, just culture and learning culture, which are all linked to professional behaviors on the ramp," says Hannam. "By adopting these cultures, it assists staff in looking after their own personal safety and the safety of the operations. Part of implementing safety culture is to ensure there is a clear understanding of expected behaviors. This includes treating staff just and fairly and









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ensuring lessons learned are shared among them as part of continuous improvement.

"Some of the challenges in the airport environment is linked to many different cultures and awareness of staff," he adds. "There are often small and unique cultures within the ramp operation, so it is equally important to ensure the same standards and expectations are communicated to and understood by all staff, contractors and third-party providers."



Dangerous Goods

Like in many other parts of the world, a safety issue that is quite strongly felt by aircraft ground handling companies in the Middle East is when dangerous goods (DG) are undeclared.

"There are quite strict international and national regulations on the packaging, shipment, storage and segregation of dangerous goods," points out Hannam. "We invest significant time and resources in training to ensure our staff detect and properly handle and segregate undeclared dangerous goods. In most countries, 100 percent of cargo is screened and technology continues to be enhanced, including the provision of X-ray machines. We expect the number of undeclared dangerous goods to decrease."

GSE Technology

Ground support equipment (GSE) technology is enhancing the ability of line operatives to work safely on the ramp in the Middle East.

"There is a continued evolution of ground support technology with ever–increasing automation and standardization of equipment to help improve safety on the ramp," says Hannam. "IATA has also mandated the implementation of aircraft protective systems on ground support equipment to help eliminate damage to aircraft. All our new equipment has been purchased in com-

pliance with this. We are also looking at retrofitting some existing equipment, which can be costly, but provides multiple benefits.

"Airports are also working closely with ground support equipment manufacturers to consider human factors and manual handling issues as part of airport and infrastructure design," he adds. "The implementation of the new baggage handling system at Dubai World Center (DWC) has recently reduced a lot of the concerns around manual handling, along with more automation and less possibility of human error."

"Working too heavily for too long in very hot temperatures can be devastating to perception, power and motivation. So, any equipment that can support the ground crews to use less of their energy is a success story," adds Fakoussa. "On the other side too easy a job will make crews be less aware. So, the correct balance is important."

Indeed, there are some schools of thought whereby technologically advanced equipment may make the operator become complacent when operating the equipment. **GSW**



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Technology can ensure simultaneous passenger ease and safety.

By Sudhir Singh

lying is more popular than ever. Last year alone, worldwide passenger traffic jumped to 8.3 billion - a 7.5 percent increase from the year before and aircraft movement rose 3 percent in the same period. With travel becoming more common around the world, airports are facing the difficult challenge of accommodating more travelers than ever before while avoiding investing in larger spaces or purchasing additional aircrafts. Physical infrastructure expansion is often not an option due to lack of land; not to mention large-scale construction projects take up valuable time, during which travel needs continue to evolve and expand.

The answer to moving a higher volume of passengers at faster speeds is to simplify the traveler experience. From walking into an airport, to arriving at a destination, technology will make the future of travel an easy and simplified process, allowing passenger traffic to flow and profits to roll in. While every airport recognizes this need to streamline, some fear easy airport experiences will come at the price of decreased safety. But security and simplicity do not have to be mutually exclusive for long. We are rapidly moving toward a future in which emerging technologies are solving the tug-of-war between the desire for simple, intuitive experiences, and increased security. These

technologies are currently being rolled out around the world and will soon be a fundamental part of every airport, altering the way we experience air travel.

Here are the three areas of air travel that will be most affected by technology that ensures simultaneous passenger ease and safety:

1. Disrupting Security Lines with **Biometric Scanners**

Security lines are the number one way airports keep people safe - and slow them down. Airport security check points, while the most time-consuming and unsavory part of flying, serve a valuable purpose in ensuring all travelers remain safe from harm. These checkpoints cannot be removed entirely, but they must be reimagined if airports are going to continue increasing customer volume. TSA PreCheck has made a significant impact on efficiency in recent years, but the inconvenient process to achieve this status deters many passengers from taking advantage of the system. The solution in redesigning security check points is replacing the current system with biometric scanning technology.

Biometric technology offers facial, fingerprint, palm, voice, iris, and retina recognition capabilities that identify passengers with hyper accuracy. Com-



bined with a database of biographic information on travelers that will flag any suspicious activity, these solutions allow people to step through security lines in literally a blink of an eye. Companies like CLEAR are already putting this technology to the test at over 30 airports worldwide, simultaneously improving safety measures and increasing checkpoint speed. The reliability of biometric scanning makes scanning IDs and boarding passes obsolete, opening up the possibility of airports eliminating the requirement for passengers to carry them completely.

2. Prioritizing Flight Landings with Voice Technology

Scheduling flight landings and take-offs is complicated business, involving many oscillating factors from the wind speeds to fuel levels. Luckily, automation technology is simplifying the process by proactively evaluating and ordering each flight. By deciphering all the data points involved with each flight, automation technology determines which flight can leave and arrive on which runway and at which time, cutting down on bottlenecks and unnecessary taxing on the ground. Besides speeding up the process and decreasing delays, this technology greatly enhances the safety of passengers just by analyzing the pilot's voice.

Due to weather, scheduling, or personal reasons, pilots can experience high levels of stress in the air.

According to a recent account, pilots can even go without eating between back to back flights or work over 13-hour days. Using natural language processing (NLP) technology, solutions are actively being discovered that prioritize flights based on the tone and perceived anxiety level of a pilot's voice, giving landing preference to a plane that may be at higher risk.

3. Navigating Baggage Claim with IoT Tracking

Anyone who has checked a piece of luggage knows the feeling of anxiously staring at the conveyor belt, waiting for the right suitcase to appear. But worrying about baggage safety will soon be a thing of the past. By retrofitting checked luggage with Internet of Things (IoT) enabled tags, passengers will be able to see exactly where their bags are moving from an app on their phones, tracking them from the moment they are out of sight, to picking them up at baggage claim. Imagine the peace of mind for passengers in being able to pin point their luggage, and decrease the time spent crowding around the conveyor belt.

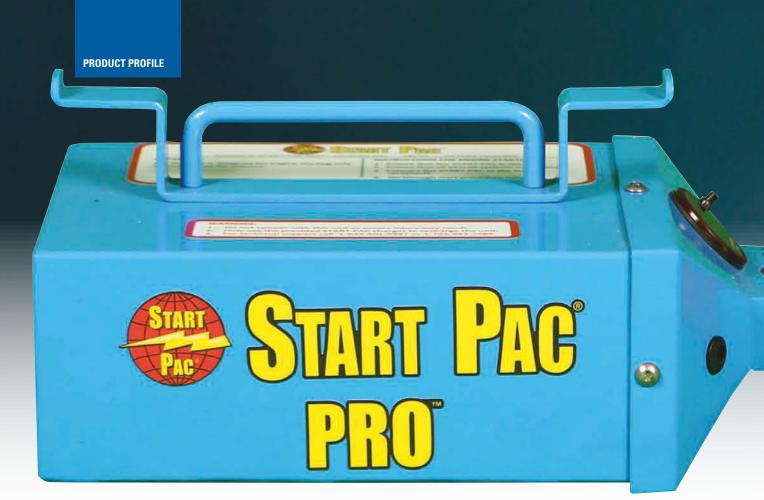
IoT technology also has the power to help airport officials keep track of cargo, streamlin-

ing the ground handling system with greater visibility into the moving bags. Last year alone, cargo traffic rose 7.7 percent worldwide – making IoT solutions more needed than ever as airports manage a high volume of moving pieces on the ground. The sensors will also be able to detect temperature and humidity of these bags in transit, quickly identifying any luggage that could pose a threat.

These are just a few of the ways emerging technologies are greatly impacting both the safety and ease of air travel, making it possible for airports to continue to meet the demands of the growing number of passengers. Not only will IoT, NLP, and biometric solutions accommodate the already increasing passenger traffic, they will make flying so simple that it will attract new customers. In the future, it may even be considered easier to fly than take a train or car for mid-range distances. The future of technology-enabled, passenger-centric security and simplicity is on the horizon – and it will transform the way we think about flying for the better. GSW

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Sudhir Singh is CEO of NIITTechnologies, a global IT solutions organization with a focus on multiple verticals, including travel and transportation.



Need a Jump?

Start Pac's portable starting unit, the Start Pac PRO, provides reliable aircraft starting power at a smaller size.

By Walker Jaroch

hen an aircraft battery is not up to the task of starting, a dead battery can cause potentially life-threatening situations. As Eve Storm, president of Start Pac relays, it was one of those situations that lead to the 1997 founding of the Las Vegasbased company and its release last year of the Start Pac PRO.

"Our chief engineer [Jim Wurth], one of the founders of the company, flew his MD 500 helicopter out into the Arizona desert during the winter in 1997. The battery got cold soaked and he was stranded until late afternoon when the battery could heat up," Storm says. "He was 400 miles from any town and no cell phone service. So, if they couldn't get the helicopter started, it could have gone badly."

From that real-life near-catastrophic incident, Start Pac formed and has since spent years researching lithium battery technology and implementing it in their portable and ground power units.

"We've been manufacturing safe lithium-ion products since 2007. We have about 8,000 lithium

units in the field all over the world with a perfect safety record," Storm says.

Last year, Start Pac took its lithium technology and downsized it to create the Start Pac PRO, a 28-volt portable starting unit, as well as the Start Pac ONE, a 26-volt unit for voltage sensitive aircraft. Storm says the PRO is designed for use with any small to medium turbine engine or piston engine aircraft.

"We recognized there was a need, especially with medivac companies, where weight is everything. They needed something even smaller - even though we manufactured the smallest lithium units ever they needed smaller ones for emergency starts. They didn't need to do three or four individual starts in the field before, just needed one or two," Storm says. "We were able to downsize our existing technology that was proven for almost 12 years into something that was even more portable and that is how we developed the PRO and the ONE."

Weighing 14 pounds, the Start Pac PRO boasts a 14-amp hour capacity, and up to 1,800 peak amps for engine starting.



The Start Pac PRO comes with a standard 3-pin aircraft cable extension kit, a 5-amp universal charger and carrying bag.

The advantage of the PRO's lithium-ion battery over traditional lead-acid batteries is that it holds a charge twice as long, has twice the cycle life, is 40 percent lighter and 32 percent smaller.

Lithium batteries also do not suffer from sulfation - the buildup of lead sulfide crystals and the chief cause of premature lead-acid battery failure.

"You can leave it in a discharged state with no damage being done to the batteries," Storm says, "unlike a lead-acid battery where sulfation can begin within 72 hours after discharge."

One drawback to the PRO's battery is that, by nature, lithium batteries do not like cold temperatures and should be stored at room temperature to provide optimum starting capability.

No special care is required when recharging the PRO and Storm says its recharge time is dependent on the number and size of engine starts done with it.

"If you're starting a small turbine engine it can recharge in 20 to 30 minutes. If you start a medium turbine engine or did a couple of engine starts on a smaller turbine engine, it could take two to three hours to recharge," Storm points out.

Once charged, the PRO can be disconnected from the charger. For optimal battery health, Storm recommends performing one engine start a month to exercise the PRO's battery's chemistry.

"The great thing about the unit is that once it's charged, you unplug it from the even though you should do one engine start a month just to get the maximum battery life from the unit, you maybe only need to check the level of charge every two to three months."

Over a year on the market, the PRO sees use worldwide by private pilots, FBOs, the military and maintenance facility personnel. Storm says they've received nothing but positive feedback, thanks in part to Start Pac's real-world aviation know-how and the fact that the product line is high quality and cost-effective.

"Our chief engineer, who is an aeronautical/ mechanical engineer by degree and has 12,000 plus flight hours in both fixed-wing commercial aircraft and helicopters, knows what he's doing in designing the product line." GSW





MODELS TML-704 AND TML-704H LIFTS **NMC-Wollard Inc.**

Models TML-704 and TML-704H offer hydraulic stabilizers that allow full capacity at maximum extension. Lever actuated stabilizers deploy for lift, retract for travel. Lifts have elevating work platform height to 16 or 30 ft. (488 or 914 cm), giving workers repair access to most aircraft. Low profile travel mode is only 43 in. (109 cm). 20 mph top speed (32 km/hr.).

AviationPros.com/12440140

ALTUS Minit Charger

The universal fast charge system is

specifically designed for airport electric ground support equipment and the harsh environments in which they operate. It can be used on electric baggage tractors, belt loaders.



pushbacks and other electric GSE for reduced downtime and optimal performance.

AviationPros.com/12434672

ACT QUANTUM GSE CHARGER Advanced Charging Technologies (ACT)

The ACT Quantum GSE Charger is an industrial battery charger and smart appliance, NEMA 3R outdoor rated and optimized for airport ground support equipment. It is designed with WiFi connectivity for remote monitoring, control and seamless integration with ACT's automated data management platform. It features conventional, opportunity and fast charge capabilities all integrated into a single, modular design.



AviationPros.com/12419777

TIRE INFLATION CAGE **Alberth Aviation**

Alberth Aviation manufactures safety products designed to protect employees, aircraft and property. The Tire Inflation Cage was developed and tested for overinflation failures specifically for the aviation industry. The larger cage is now available for G650 and Global Express wheels. Additionally, the Hydraulic Wheel and Brake Dolly prevents hand and back injuries and aircraft damage.

AviationPros.com/12434258





ENGINE COMPRESSOR **WASH RIG**

A.T. Juniper (Liverpool),

The 2x25 gallon engine compressor washing rig is the mainstay of the Juniper range. Versatile enough to tackle most engines when partnered with A.T. Juniper's growing list of wash probes, lances and spray rings, yet maneuverable enough for the most remote areas of an airfield.

AviationPros.com/10027072



Hydraulics International Inc.

BOOSTER

The Hydraulics International, Inc. (HII) portable Electric Driven Gas booster is rated to 10,000-psi for breathing air/N2 and 4500-psi for oxygen service. It's ideal for filling or topping off cylinders, tires, accumulators, struts and life rafts. Its two-stage and double acting design uses no belts or pulleys, making it the quietest electrically operated booster in its class at only 60 decibels. It comes complete with safety controls, filters, gauges and valves.

CHARGER AND BATTERY POWER SOLUTIONS FOR ELECTRIC GSE

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Averest, Inc. offers technically sound charger and battery power solutions for electric GSE, which includes Deka Lead Acid Batteries, Flux Power Lithium Batteries and PosiCharge Outdoor Fast Chargers. In addition, Averest provides



custom cable management solutions along with replacement parts and service.

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MULTI-STAGE TRIPOD JACK

Columbus Jack, a Tronair Company

Designed for the Navy Fleet to cover all their aircraft, Columbus Jack consistently complies with tough military standards, which aligns well with its culture of quality and customer service. Columbus Jack was founded in the 1940s as a supplier to the U.S. military. Regent was founded in 1929, and over the course of time, has served most of the world's airlines, airframe and aerospace manufacturing companies.

AviationPros.com/12427239

NITROGEN SERVICING CART

FLAVIA Aeronautics

The Nitrogen Servicing Cart is designed to carry two 50-liter nitrogen cylinders on a flipping frame for easy replacement. Two high precision reducers are ergonomically installed on a panel, which includes an intuitive synoptic. They control the pressure

of the gas which is delivered to the aircraft by two hoses which are rolled on robust reels



(up to 500 psig and up to 3,000 psig, respectively). Both lines include safety devices. A booster pump is used to make sure that up to 90 percent of the gas in the cylinder is used.







FLIGHTMASTER GSE

FluidTran Inc.

The Flightmaster product line includes traditional hand pumps, higher pressure carts for landing gear and cowl/thrust reverse systems and fluid management equipment compatible with all aircraft.

AviationPros.com/12440134

HEAVY-DUTY TRAILER MOVER Power Pusher, Div. of Nu-Star Inc.

The Heavy-Duty Trailer Mover transports 25,000+ pounds on level grade. Available with multiple hitch options, a single operator can do the work of more than 10 people, increasing productivity and reducing the risk of injury. Its electric motor and compact design allow for moving all types of trailers and carts in tight locations where it is not realistic to



use a car or truck and where gas or diesel engines are not appropriate.

AviationPros.com/12434965

WIDE BODY ENTRY STAND

The Adjustable Height Entry Stand is made for all wide body aircraft. This

WAAG



stand easily adjusts from 168" up to 216" and can be locked in place at 3" increments. There are no hydraulics, and it can be moved with two people.







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AIRCRAFT MAINTENANCE AND ENGINE ACCESS STAND DF071554-07-10

Liftsafe Fall Protection Inc.

The Aircraft Maintenance and Engine Access 07-10 Stand was specifically designed for the A350 and the B777. The company uses anti-fatigue ladder rungs rather than narrow ladder rungs to ensure comfort when using the stands to change LRU'S, adjust components or connect/disconnect engines and nacelles. Design improvements include a lighter stand utilizing a smaller footprint and greater geometry for optimum usage.



AviationPros.com/12434613

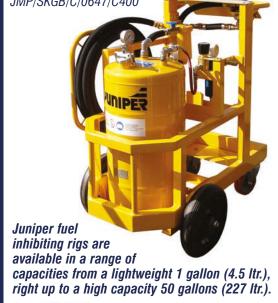
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INDUSTRIAL DUTY LED LIGHTS FOR PC13 MODEL Coxreels

Coxreels offers a line of three industrial duty LED lights available on the PC13 (Power Cord) cord reels. The LED lights feature a variety of industrial-grade features and options, including: a 50,000 hour rating, internal light diffusers and shatter-resistant polycarbonate lenses. The UL Listed LED lights feature adjustable steel hooks for hands-free placement and are made in the USA.





SMART CHECK Semmco Limited

The new digital tire SMART Check gauge from Semmco is a premium indoor and outdoor electronic gauge, with calibrated accuracy of +/- 2 psi up to full scale reading of 350 psi. Robust, lightweight, accurate, fast and versatile with a backlit LCD screen for ease of use both day and night, the SMART Check comes with a 1m hose and a range of tire valve connectors are available to suit all customer and airplane inflation applications.

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POSICHARGE PosiCharge

PosiCharge is a provider of electric ground support equipment chargers, powering 13 of the world's largest airports, six of the largest airlines and US Air Force bases around the world. The PosiCharge SVS, DVS and MVS product lines help keep operations running efficiently.

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THE FOD-RAZOR AIRPORT RUNWAY **SWEEPER**

The FOD Control Corporation

Keep personnel and aircraft safe with the FOD-Razor Airport Runway Sweeper, an efficient, portable and affordable system for eliminating

Foreign Object Debris (FOD) from runways, taxiways and aprons. It requires little maintenance, has a small environmental footprint and is easy to operate. The equipment was recently upgraded with more durable materials and a streamlined hitch design.



AIRCRAFT WHEEL MOVER Newbow Aerospace Ltd.

The Newbow Aerospace Aircraft Wheel Mover is designed to support safe and efficient handling and transportation of aircraft wheels. Offered as a single or double bay unit and being suitable for narrow or wide body aircraft, the wheel mover allows operators to easily maneuver aircraft wheels around the hangar, apron and be taken on-board aircraft wheel change trailers.

AviationPros.com/12436654

FOD BOSS Myslik Inc.

The FOD BOSS works by capturing debris as it passes over the tarmac. The force of friction and a series of specially designed brushes scoop up foreign objects and hold them in an easy-to-empty mesh capture zone. With a sweep width of 2.4 meters (8 feet), 4.8 meters (16 feet), or 7.2 meters (24 feet), the FOD BOSS can clean up to 300,000



square meters (3 million square feet) per hour, at speeds from 6 kph (4 mph) to 40 kph (25 mph). Aerosweep Pty. Ltd. has released the latest improvement to the FOD BOSS speed sweeping system: the Phase Three Retention Blade (P3R). The latest technology provides even greater FOD collecting and retaining capability with new built in ribs.

AviationPros.com/10300255

C-DUCT/HIGH PRESSURE UNIT U.S. Mfg. & Design Inc.

The five–gallon C–Duct dispenser is used for opening engine cowlings, thrust reverser, maintenance, control surface, and landing gear testing. Unit develops 5,000 psi with a 4,000 psi relief valve to protect the aircraft. The company has more than 100 of these units in service world wide. It has many years of reliable service, and the company offers a lifetime limited warranty.

AviationPros.com/12434707



MEDIUM DUTY POWER AND LIGHT CORD REELS Reelcraft Industries Inc.

Reelcraft's lightweight and compact Series LG cord reels are constructed from a durable, impact resistant composite material. Three new models have been added to this medium duty line of cord reels with two new cord endings. The new power cord reel option features circuit breaker protected, quad grounded NEMA5-15 outlets with

LED power "on" indicator light. The quad outlet reel is available with 65' of 12/3 cord or 75' of 14/3 cord. The new light cord reel option features a 1300 Lumen LED light with bright COB illumination, a grounded 12 amp outlet and an on/off switch on the handle. The LED reel model is supplied with 50' of 14/3 cord. All three new Series LG models are ETL listed.

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CONTACT: David Zschunke - DavinGSE@att.net 95 Crooked Hill Road, Commack, NY 11725

This Month's Featured Equipment:

PUSHBACKS

(1) 2005 FMC Model B400 35K GVW, 28K DBP Cab & AWS

(1) 2007 TLD, Model TMX-150-15 33K GVW, Cab & AWS

DEICERS

(1) 1999 FMC, LMD2000 Freightliner Chassis, Open Bucket (1) 1999 FMC LMD2000 Sterling Chassis, Enclosed cab, First Air

CARGO LOADER

(1) 2006 FMC Commander 15l Wide Deutz diesel 9,100 hours

CABIN SERVICE TRUCKS

(1) 2000 Global, CT-22-228, High-lift, International 4700 diesel (3) 2005 Global, CT16-168, High-lift, Ford F650 diesel

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ELECTRIC TWO-STAGE, HORIZONTAL-TANK STATIONARY AIR COMPRESSORS

Jenny Products Inc.

The Jenny Products line of Electric Two-Stage, Horizontal-Tank Stationary Air Compressors can be used for applications requiring greater pressure as the line displaces between 9.1 and 107.0 cfm at 175 psi. Made in the U.S.A., the 22 belt-driven models in Jenny's two-stage horizontal-tank line

provide an extensive range of size and power options, with tank sizes spanning from 60 to 240 gallons.

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Malabar has a group of products for the P-8A Poseidon and similarly sized aircraft. The 759A 50-ton fixed height tripod jack, 714A 12-ton variable height tripod jack and 50P9AR axle jack are built to withstand harsh environmental conditions and rugged use. Malabar's product line has expanded to include B787 and A350 coolant service carts; hundreds of different types of fluid dispensers, test stands, weigh equipment, strut service equipment, nitrogen/oxygen equipment and more.

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▲ Editor - Josh Smith jsmith@aviationpros.com 920-563-1644

Make the Right Decision

It's important that we don't confuse good luck with good choices.

recently caught an interview with radio personality/podcaster Jordan Harbinger, who was sharing some concepts he learned from a professional poker player.

You might be thinking poker and aviation don't really go hand-in-hand. But consider that both come with "high stakes" situations that can lead to devastating results if bad decisions are made.

While Harbinger spoke to poker player Annie Duke about her book "Thinking in Bets: Making Smarter Decisions When You Don't Have All the Facts," they investigated the concept of separat-

ing luck from decision-making. If luck gets confused with decision-making skills,

> a person can convince themselves they made a good decision despite the outcome.

Harbinger learned from Duke that "resulting" can be a dangerous concept. Since we can't control luck, we should focus on the quality of our decisions. But it's easy for people to associate the quality of an outcome with the quality of a decision.

However, negative results aren't always a result of bad decisions; and positive results aren't always the result of good decisions.

Over the course of time, bad decisions may not yield poor results (thanks to luck). And as a result, we may inadvertently train ourselves to become bad decision-makers.

So, Harbinger encouraged people to think of decision-making as a skill and attempt to better develop that ability, rather than blaming bad luck for an undesired outcome.

In short, while it's easy to be focused on results, spend time thinking about the process that led to the result.

In the aviation industry, and ground support specifically, a bad decision can cause catastrophe. Evaluate your processes and consider how decisions are made. If it is time to update your process, there are numerous industry organizations poised to help improve safety and overall operations.

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