

Celebrating

30
Years

Ground Support

FEBRUARY 2022

WORLDWIDE
EQUIPMENT – SERVICES – HANDLING

STATE OF THE INDUSTRY

Insights into ground handling operations and ground support equipment conveyed through *Ground Support Worldwide's* annual survey.



**PRODUCT
FOCUS**

Passenger
Stairs/Lifts &
Boarding Bridges

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EASY TO MAINTAIN



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Insights into ground handling operations and ground support equipment conveyed through *Ground Support Worldwide's* annual survey.

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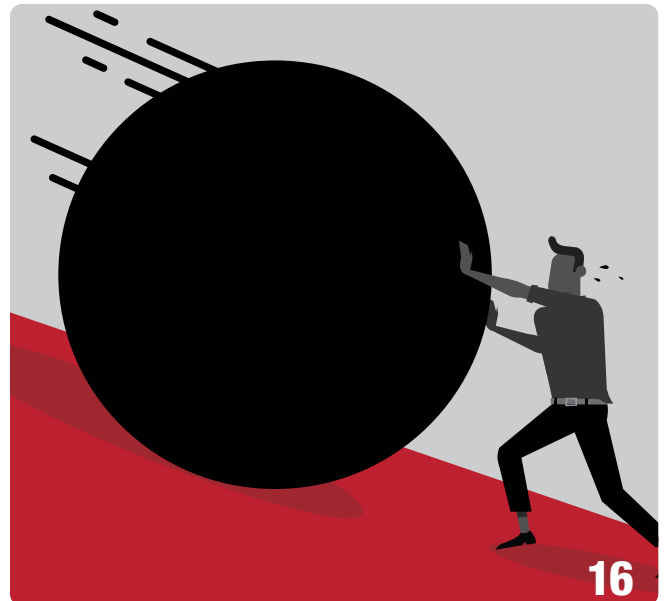
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ONLINE EXCLUSIVES



Map Your Trajectory: Key Insights for Business Aviation and Hangar Design in the Post-COVID-19 Era

By W. Mercer Dye and Cannon Reynolds

As both individual travelers and corporate organizations continue to look for alternatives to commercial airline travel, business aviation support facilities could be looking at a post-pandemic building boom.

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ARTICLES

airport business SPECIAL REPORT

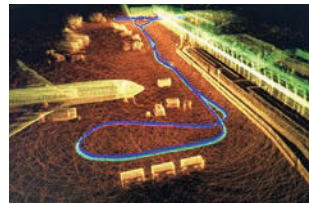


5G and Aviation Explained

By Joe Petrie

Learn what the issues are and what steps you can take to address safety concerns at your airport.

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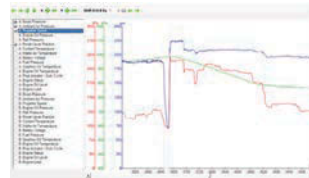


How Airside Simulation Can Benefit Ground Operations

By Josh Smith

Aurigo's Auto-Sim software solution encompasses the complete airside operation, providing site-wide operational insight.

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Little Planes, Big Data

By Marshall Tetteron

Could data acquisition be the beginning of no more AOG situations or maintenance delays for general aviation aircraft?

AviationPros.com/21244719

VIDEOS



IATA Announces Changes in the 10th Edition of its ULDR Manual

To help reduce ULD-related safety incidents as well as damage and loss, IATA has developed the Unit Load Device Regulations (ULDR).

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PODCASTS



How to Improve DBE Programs

Kaven Swan of HOK discusses the current challenges and opportunities for airports to leverage disadvantaged business enterprises to improve operations and development.

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PRODUCTS

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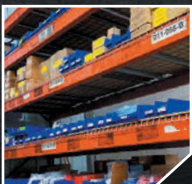


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Always Striving to be Better

Continual growth and progress are necessities for a safe, efficient industry.

One month into 2022, it is easy to imagine that many people have taken stock in their personal and professional lives and established goals for the year. New Year's resolutions, in their most common form, are opportunities for improvement.

If last year's goals failed, we may re-attempt them or recalibrate expectations before embarking on our next goals. But the key should be to seek continual improvement.

Benjamin Franklin said: "Without continual growth and progress, such words as improvement, achievement and success have no meaning."

These words ring true in aviation, where safety is paramount, and efficiency is crucial for businesses to succeed. In the world of ground handling, industry leaders are seeking constant improvement to achieve fewer workplace accidents, improved turn-around times and other gains in productivity.

The International Standard for Business Aircraft Handling (IS-BAH) program is a great example of this.

Initially launched in 2014, the IS-BAH program sought to establish standards and best practices with a proactive approach to manage workplace safety with a goal of preventing accidents like hangar rash incidents and injuries to ground personnel. IS-BAH continues to gain traction with FBOs registering and progressing to Stages 2 and 3.

Of course, ground handling is built on safety. Beyond IS-BAH, safety standards established by industry authorities provide guidance and manufacturers of ground support equipment (GSE) design and engineer features into their products to ensure time-sensitive work can be completed safely.

As ground handlers seek continuous improvement, a move to digitalization is proving valuable.

Recently, Synaptic Aviation announced its artificial intelligence (AI) technology was adopted by

ground handling firm Unifi. By using the AI system and analyzing data that tracks activity and procedural compliance, Unifi's goal is to increase safety, improve on-time performance, facilitate efficient operations and enhance customer experience.

Synaptic officials say the company's solution can track thousands of flights and "provides key operational information like average turn time, gate utilization, mandatory foreign object damage (FOD) prevention walks, ground power unit (GPU) connection times, jet bridge status and more." The technology can also provide compliance reports so Unifi can maintain applicable safety measures around aircraft.

Elsewhere, Aurigo announced a project its company is conducting at Gerald R. Ford International Airport. The company's Auto-Sim software platform is being utilized to create a digital twin of airside operations at the Michigan airport.

Among other goals, the initiative aims to identify cost savings, achieve environmental improvements and identify opportunities for the airport to potentially implement autonomous operations.

Both instances of digitalizing ground handling operations are interesting examples of the industry embarking on new improvements.

As Franklin's quote indicates, continual growth and progress are absolute necessities. Do you have an example of how your operation is striving for continuous improvement? Share your example with me at Josh@AviationPros.com. I welcome your feedback on the topic.

“

Without continual growth and progress, such words as improvement, achievement and success have no meaning.

”

— Benjamin Franklin

Snow Time

□ The winds gusting. The snow piled on everything. It was just past 3AM, the cargo loader for a major shipping company quit working. When a piece of equipment stops in its tracks there's no time to spare. Luckily one of the advantages of leasing from Mercury is our same day service promise. Mercury Keeps things moving, no matter what the weather. Read more Tales of the Tarmac at MercuryGSE.com/stories. □



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Upcoming Events

March 1-3

AAAE/ACC Airport Planning, Design and Construction Symposium

Nashville, TN

March 17-19

International Women in Aviation Conference

Nashville, TN

March 29-31

GHI Americas

Miami, FL

April 5-7

NBAA Schedulers & Dispatchers

San Diego, CA

April 26-28

MRO Americas

Dallas, TX

April 29-May 4

NEC/AAAE International Aviation Snow Symposium

Buffalo, NY

May 3-5

NBAA Maintenance Conference

San Antonio, TX

May 23-25

CNS Partnership Conference

Phoenix, AZ

May 30-June 2

IATA Ground Handling Conference

Paris, France

TOP NEWS

McCreery Aviation Achieves Stage 3 IS-BAH Registration

McCreery Aviation has been awarded a Stage 3 International Standard for Business Aircraft Handling (IS-BAH) registration after successfully completing a comprehensive safety audit. In achieving a Stage 3 registration, McCreery Aviation becomes just the third FBO in the U.S. to attain this highest level of safety standard established by IS-BAH.

IS-BAH Stage 3 Registration verifies that safety management activities are fully integrated into the operator's business and that a positive safety culture is being sustained.

"By choosing to voluntarily adopt and implement the global industry best safety practices within the IS-BAH through to Stage 3, McCreery Aviation has shown continued positive commitment to the management of, and the



accountability for safety at the core of their service provision enabling a consistent experience to their valued customers," Terry Yeomans, IS-BAH program director said. "The entire team at McCreery should be very proud of this achievement and the drive to promote safer ground handling operations to the business aviation community."



dnata Earns CEIV for Pharma and Live Animal Handling at BRU

dnata has been certified by the International Air Transport Association's (IATA) Center of Excellence for Independent Validators (CEIV) for its industry-leading pharma and live animal handling processes at its cargo facilities and the Animal Care and Inspection Center at Brussels Airport (BRU).

"We are proud to be globally recognized for delivering reliable and safe services at our Brussels hub. These certifications demonstrate our team's ability to handle precious cargo under the strictest international standards, consistently providing best-in-class services to

our customers," said Stef Vanbinst, managing director of dnata Belgium.

"The safe and efficient transportation of temperature-sensitive pharma products and live animals is a key priority for our industry. We congratulate dnata for achieving both CEIV Pharma and Live Animals certification at their Brussels hub," Brendan Sullivan, IATA global head of cargo, added. "Shippers can enjoy additional reassurance that their facilities, equipment, operations and staff comply with all applicable standards, regulations and guidelines."

"We are very glad to add dnata to our local community of CEIV Pharma certified partners," Nathan De Valck, head of cargo product and network development at Brussels Airport, said.

"As the first and largest airport community in the world with CEIV Pharma certified stakeholders, this certification of dnata further strengthens our position as preferred EU pharma gateway and increases the guarantee of qualitative handling of time- and

temperature-sensitive cargo throughout the entire air cargo chain.”

The CEIV Pharma program was created by IATA to provide a pharmaceutical product handling certification that focuses on airfreight and temporary storage. Driven by industry standards, IATA’s CEIV Live Animals Logistics establishes baseline standards to improve the level of competency, infrastructure and quality management in the handling and transportation of live animals throughout the supply chain.



Jet Aviation Receives IS-BAH Stage 2 Certificates at Amsterdam and Rotterdam

Jet Aviation has received International Standard for Business Aircraft Handling (IS-BAH) Stage 2 safety registration for its two FBO locations in The Netherlands. The company currently operates 27 IS-BAH-registered FBOs around the world. It expects to gain further IS-BAH certifications in the coming months.

“Along with our commitment to safety and quality, these new IS-BAH certificates clearly demonstrate that challenges are also opportunities to shine,” said Edwin Niemöller, Jet Aviation’s senior director of FBO operations in The Netherlands. “I couldn’t be prouder of our teams for their agility, professionalism and unwavering adherence to the highest standards, particularly during these extraordinary times.

Jet Aviation recently secured an ongoing supply of sustainable aviation fuel (SAF) for offer on-site at its FBO located at Amsterdam Airport Schiphol. Its Rotterdam location remains the only airport in The Netherlands where night operations (PPR) are permitted for business aviation.



Groundforce Portugal Sets New Record in Air Cargo

In December, Groundforce Portugal reached a new monthly maximum for handling air cargo at the airports where it operates. In total, 14,148 tons of cargo were handled at the company’s various terminals, in the set of import, export and transshipment activities, which represents a growth of 46 percent compared to December 2020.

“This new maximum demonstrates the resilience and increasing importance of our customers’ air cargo business and proves Groundforce Portugal’s ability to accompany them in this growth,” company officials said.



Ethiopian Receives IATA’s Certificate of Excellence in Logistics

Ethiopian Airlines announced that it has received IATA’s Center of Excellence for Independent Validators in Pharmaceutical Logistics (CEIV Pharma) certification as an airline and ground handling provider in December 2021. Ethiopian Airlines is the first airline in Africa to receive the CEIV Pharma certification. Achieving this milestone will further improve the airline’s goal in providing efficient and effective transportation of pharmaceuticals throughout its pharma network including Brussels, Shanghai, Johannesburg, Paris, Seoul, Lagos, Lusaka, Beijing, Hong Kong, Maastricht, Chicago and Addis Ababa.

“We are delighted to receive this important global certification, IATA CEIV Pharma certificate, which is a strong assurance of one of the highest global standards in the aviation and logistics industries,” Ethiopian Airlines Group CEO Tewolde Gebremariam said.

“With an annual capacity of more than a million tons, our global air cargo and logistics hub in Addis Ababa has various special cargo handling facilities like pharma and life science, live animals, perishable cargo, live sea food, dangerous goods, etc. Accordingly, we have been working very hard on our pharma and life science handling facility to meet global standards in technology, processes and trainings. The IATA CEIV Pharma certification has come at an opportune time for Ethiopian Cargo and Logistics team as they continue to play key global role in the transportation of life saving COVID-19 vaccines around the world and particularly in the continent of Africa.”

Ethiopian has recently invested heavily in infrastructure, equipment, people, systems and processes to enhance its pharmaceutical core handling capabilities throughout its pharma network. Cold storage areas in these freight facilities are dedicated for the handling of pharmaceuticals and healthcare products and armed with a dedicated climate control ranging between -30 degrees C to +25 degrees C. These facilities are monitored through a smart web-based system that allows real-time management of all zones.



LanzaJet Secures Financing to Construct Alcohol-to-Jet Sustainable Fuel Plant

LanzaJet announced it has secured financing for its Freedom Pines Fuels plant in Soperton, Ga., through the Microsoft Climate Innovation Fund.

The Microsoft Climate Innovation Fund has made a \$50M investment to support the construction of LanzaJet's, and the world's, first alcohol-to-jet sustainable aviation fuel (SAF) production plant. The innovative structure of Microsoft's financing will enable LanzaJet to bring lower-cost sustainable aviation fuel and renewable diesel to the global market.

This investment also creates the opportunity for LanzaJet and the Microsoft Climate Innovation Fund to work together in enabling LanzaJet, through the Freedom Pines Fuels plant, to catalyze the market for second generation, waste-based ethanol feedstock, demonstrating clear demand signals for ethanol that can achieve greater carbon reductions.

The construction of Freedom Pines Fuels is progressing as planned, even with supply chain, manufacturing and labor shortages impacting the global economy. The LanzaJet Freedom Pines Fuels plant is expected to achieve mechanical completion this year and begin producing 10 million gallons of SAF and renewable diesel per year from sustainable ethanol, including from waste-based feedstocks, in 2023.

"We are thrilled to bring on Microsoft and its Climate Innovation Fund to help us build our first-of-its-kind sustainable fuels plant in Georgia. The partnership with Microsoft is more than just financing – it advances our work towards net zero fuels, it enables lower-cost sustainable fuels into the market, and it supports the urgency to have real, proven technologies scale-up and deploy," said Jimmy Samartzis, LanzaJet CEO.

"We set a bold ambition to support the White House with a goal of 1 billion gallons of sustainable fuels by 2030. With Microsoft's support, this first plant significantly expands the production of sustainable fuels in the U.S., establishes Georgia as a leader in cleantech, and is the foundation for us as the first alcohol-to-jet sustainable fuels producer, and as a blueprint for the commercial plants we're developing globally."

Menzies Achieves Further IATA Pharma Handling Accreditation at Heathrow and Budapest

Menzies Aviation announced that its cargo operations at Heathrow Airport (LHR) and Budapest Ferenc Liszt International Airport (BUD) have received IATA certification to handle time- and temperature-sensitive pharma products. The Center of Excellence of Independent Validators for Pharmaceutical Logistics accreditation (CEIV Pharma) is recognized by IATA and follows the recent CEIV Pharma accreditations awarded to Menzies' Sydney and Melbourne bases.

This accreditation formally endorses Menzies' ability to safely handle high-value, time-sensitive and temperature-controlled pharmaceuticals transported into and out of LHR and BUD, in line with shipper requirements and with the speed and consistency required. Menzies is currently focusing on achieving CEIV Pharma certification at more locations across its global cargo network.

"The CEIV Pharma accreditation is recognized by all of our customers and the latest certifications represent the strengthening of our supply chain in Europe, providing confidence to manufacturers, freight forwarders and carriers that products handled by our teams at Heathrow and Budapest will be appropriately handled in line with the regulations," said Robert Fordree, executive vice president global cargo services at Menzies Aviation.



Shell Announces Carbon Neutral 100LL Avgas in the US Market

Shell Trading Company and Shell Aviation delivered the first truckload of carbon neutral avgas to Avfuel as part of a new offer for customers refueling at select FBO locations in the U.S. Avfuel purchased a 7,000-gallon truckload of avgas bundled with carbon credits to compensate 75 metric tons of CO₂e emissions.

Carbon neutral 100LL avgas is traditional 100LL avgas that Shell, in collaboration with Avfuel Corporation, delivers bundled together with carbon credits. The lifecycle CO₂e emissions from the product including the raw materials, transport, production and distribution as well as usage of the product will be offset by Shell's global portfolio of verified nature-based carbon credits.

"Avfuel is proud to collaborate with Shell to help further advance aviation's sustainability goals," said Joel Hirst, Avfuel vice president of sales. "By supplying avgas that is already offset with carbon credits — making for a carbon-neutral avgas option—we can make the concept of net-zero more accessible for the aviation community."



FBO Riga Confirms Compliance with IS-BAH Stage 2 Safety Standards

FBO Riga business aviation center located at Riga International Airport (RIX) in Latvia has confirmed IS-BAH Stage 2 accreditation after successfully passing an audit by the International Business Aviation Council (IBAC).

"To confirm compliance with IS-BAH Stage 2 requirements, we again passed an audit of our management systems, security procedures, organizational structure, training protocols and operational processes. This is a detailed audit that takes several months," said Roman Starkov, co-owner of FBO Riga. "Our team demonstrates the first-class quality of service and compliance with the highest safety requirements in business aviation – every day, on each flight – and this has been confirmed by the IBAC audit."

"The international recognition of FBO RIGA's professionalism, confirmed by the IS-BAH Stage 2 certificate, is very important for our clients. This is a guarantee of safety of their travels and proof of the highest quality of passenger and aircraft handling in FBO RIGA," said Leonid Gorodnitski, co-owner of FBO RIGA.

PEOPLE

Swissport Appoints Kaddouri Chief Strategy and Sustainability Officer

Nadia Kaddouri has been appointed to Swissport's group global management team as chief strategy and sustainability officer in addition to her position as chief of staff to the president and CEO, effective Jan. 1, 2022. In her new role, she will drive Swissport's business strategy with a strong focus on market intelligence, trends and innovations, and will take over the lead of Swissport's lounge and executive aviation businesses.

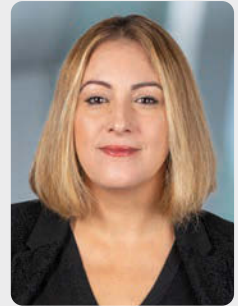
"I am pleased to have Nadia Kaddouri as our new chief strategy and sustainability officer. She has been instrumental in shaping the fundamental transformation that Swissport has

embarked on," said Warwick Brady, president and CEO of Swissport International. "I am convinced that Nadia will be equally successful in leading the implementation of our corporate strategy and sustainability agenda."

Kaddouri joined Swissport in 2014 and brings many years of experience in financial leadership roles.

Kaddouri's latest roles included chief financial officer of the EMEA region, where her efforts centered around business development and commercial strategies.

She assumed the role of chief of staff to the president and CEO in June 2021.



Kaddouri

Stertil-Koni Welcomes New Vice President of Sales

Stertil-Koni announced that Scott Steinhardt has joined the company in the newly created post of vice president of sales.

Steinhardt brings more than 26 years of top industrial sales and marketing experience to the role, having most recently served as director of sales and marketing for H&M Bay, Inc. At Stertil-Koni, Steinhardt will report directly to company president Jean DellAmore and will be charged with growing company sales among its exclusive North American distributor network by managing the organization's five regional sales managers, as well as its salespeople who target the U.S. military, national accounts and shop equipment customers.

"The heavy duty vehicle lift industry is a dynamic, rapidly evolving sector that requires the very best people and technology to succeed. For our part, Stertil-Koni is proud to offer the broadest range of exceptional heavy duty vehicle lifting systems – designed to



Steinhardt

meet and exceed the most demanding requirements in the field," said DellAmore. "At the same time, we are proud to have on our team many of the most knowledgeable and dedicated vehicle lifting pros anywhere in North America. And that is why we are so pleased to welcome Scott into the Stertil-Koni family. He is a proven sales leader with expertise in market analysis, sales forecasting, team building, account development and customer service.

"We are confident his contributions will enable Stertil-Koni to further expand our leadership role in serving and supporting both public and private sector transportation and commercial industry groups across the United States and Canada."

Piedmont's Maslow Announces Retirement

Fred Maslow retired from Piedmont Airlines, Jan. 20.

Maslow began working in the industry in 2003, and first became involved with ground support equipment (GSE) purchasing in 2007.

"Fred has always thought outside the box and viewed things with a practical, direct and honest approach. With Fred, it

truly wasn't 'the way we've always done things,'" said Brian Wemple, Piedmont Ground Handling's director of planning and support.

Osterfeld Joins JBT as VP of Global Sales, Marketing and Customer Care

JBT Ground Support Equipment is proud to announce that Scott Osterfeld has joined its ranks as vice president of global sales, marketing and customer care. Osterfeld will replace Lee Coon, whose retirement was previously announced.

Osterfeld brings a wealth of experience gained over 30 years with heavy equipment manufacturer Caterpillar in various sales and marketing leadership roles.

"I am grateful to JBT, and to Lee Coon in particular, for providing a long job role overlap period where I was able to learn the business and its players from Lee, one of the most respected leaders in the GSE field," said Osterfeld. "The GSE industry, and aviation as a whole, is certainly changing, and I am excited to be leading part of JBT in such a dynamic time."



Osterfeld

NEW DEALS

Global Ground Support Awarded New Contract with the United States Air Force

Air T, Inc. announced that its wholly owned subsidiary, Global Ground Support, LLC, has been awarded a new contract valued at \$34 million to supply deicing trucks to the United States Air Force.

The contract award is for two years, with four additional one-year extension options that may be exercised by the United States Air Force. The award includes standard deicer trucks and extended-reach deicer trucks along with commissioning and training costs. The previous contract held by Global with the United States Air Force expired July 13, 2020.

“It is satisfying to see Global Ground Support once again selected by the United States Air Force to be their sole-source supplier of aircraft deicing trucks. Winning this contract is a testament to the quality of product and after-sale service and support — the same service that Global Ground Support provides to all of its customers,” said Nick Swenson, Air T’s CEO. “The fact that this was won as a sole-source award allows us to continue to supply this essential piece of operational readiness equipment to our military is particularly gratifying. The awarding of this contract furthers

the opportunity for continued strong performance at our Global Ground Support unit in the coming years.”



Waev Inc. Completes Purchase of Taylor-Dunn and GEM

Waev Inc. has purchased the GEM and Taylor-Dunn businesses from Polaris Inc. in a management buyout completed December 31, 2021. Terms of the deal are confidential. Founded by five former Polaris leaders, Waev will strategically place the GEM and Taylor-Dunn brands at the forefront of the business.

“Waev’s ownership of GEM and Taylor-Dunn represents an exciting new era in the legacy of these

brands. We are bringing new life to these businesses enabling growth well into the future,” said Keith Simon, president and chief executive officer of Waev. “Greater demand for electric vehicles along with advancements in EV technology open up opportunities for GEM and Taylor-Dunn in new applications and markets that we will invest in and pursue long term.”

GEM and Taylor-Dunn are uniquely positioned in their urban and industrial mobility industries and the product lines will continue as brands owned by Waev. When GEM production moved to Anaheim in 2017, it joined Taylor-Dunn

Manufacturing and established the Southern California-based electric vehicle center of excellence. This facility will also serve as the headquarters for Waev.



Unifi Begins Ground Handling Services for aha! at 10th U.S. Location

Unifi recently started its 10th station for aha! Airlines, making Unifi the largest ground handling provider for the Reno-based airline. Unifi started its partnership with aha! on Oct. 24, 2021, at Reno-Tahoe International Airport and began operations at Palm Springs International Airport on Jan. 3, 2022.

Unifi provides aha! with ground handling operations and passenger services supporting over 50 flights per week.

“We’re proud to partner with aha! and support their vision of providing convenient, nonstop flights to high-quality

destinations,” said Gautam Thakkar, Unifi’s CEO. “By providing full ground handling services to 10 of their 11 locations, we’re happy to be their largest ground handling partner. We’re committed to providing aha! the high-level service Unifi is known for and strengthening our relationship into the future.”

ExpressJet Airlines relaunched flight operations in 2021 with its aha! leisure brand.

“We have been pleased to partner with Unifi, which has helped contribute to aha!’s launch and our continuing success,” said ExpressJet acting CEO John Greenlee.



ExxonMobil and Neste Team Up to Supply SAF in France

Aviation fuel supplier ExxonMobil and sustainable aviation fuel (SAF) producer Neste announce plans for commercial-scale distribution of Neste MY Sustainable Aviation Fuel at the largest



airports in France. This step was taken in preparation of the 1 percent SAF mandate introduced by the French government and effective on Jan. 1, 2022.

The agreement combines Exxon-Mobil's expertise in the supply and distribution of jet fuel with Neste's market-leading SAF production capabilities to provide a continuous and scalable supply of SAF into France.

Neste MY Sustainable Aviation Fuel is produced from sustainably sourced, 100 percent renewable waste and residue raw materials, such as used cooking oil and animal fat waste. When used at 100 percent concentration, Neste MY Sustainable Aviation Fuel use results in up to 80 percent lower greenhouse gas emissions when all the emissions over the fuel's life cycle are compared to fossil jet fuel use. In this collaboration, the SAF is a 30 percent blend with conventional fossil-based jet fuel.

"We are delivering solutions that enable customers to meet product performance requirements while reducing greenhouse gas emissions. We have the capabilities and infrastructure to safely and reliably supply this energy, and will be ready to comply with new French regulations for sustainable aviation fuel," said Charles Amyot, lead country manager for ExxonMobil in France.

"Neste is committed to helping the aviation industry with its emission reduction targets. Our Neste MY Sustainable Aviation Fuel is a drop-in solution that is readily available now," added Jonathan Wood, vice president Europe, renewable aviation at Neste. This supply agreement is an important milestone for Neste, and we are excited to support ExxonMobil in helping their customers reduce the greenhouse gas emissions from the aviation sector in France."

Swissport Acquires Aruba's Aviation Ground Services in the Dutch Caribbean

Swissport has finalized the acquisition of AGS Aviation Ground Services in Aruba and assumes the Dutch Caribbean company's ground handling operations at Queen Beatrix International Airport in Oranjestad (AUA). With the acquisition



of AGS Aviation Ground Services, Swissport extends its service portfolio on the island to include airport ground services and aviation security services.

"Following significant regional growth in the previous year, Swissport looks forward to strengthening its footprint in the Caribbean with the acquisition of Aviation Ground Services," said Rene Pascua, Swissport's head and managing director for Latin America and the Caribbean.

"The expansion in Aruba uniquely positions Swissport as the ground services provider of choice for all of the Dutch islands in the Leeward Antilles: Aruba, Bonaire, and Curaçao."

The acquisition of AGS Aviation Ground Services comes on the heels of Swissport's purchase of Bonaire Air Services and assumption of ground handling operations at Flamingo International Airport in 2021.



Menzies Secures New Contracts in Mexico

Menzies Aviation announced several new ground services contracts in Mexico, where it now operates at 31 airports. The contracts are with American Airlines, Aeroflot, Air Canada, Delta Air Lines, Flair Airlines, Frontier Airlines and TAG Airlines, and represent the strengthening of Menzies' presence in the Latin American market.

"We are excited to further expand our presence in Latin America with these new contract wins across Mexico, which highlight the positive reputation Menzies has built for providing safe, secure and consistent quality service across the region," said John Redmond, executive vice president – Americas, Menzies Aviation. "We look forward to continuing to strengthen and grow our relationships with each of these airlines in the future."



WFS Grows Partnership with Polar Air Cargo through New LAX Handling Contract

Worldwide Flight Services (WFS) announced that Polar Air Cargo has expanded its cargo handling partnership with WFS in North America through a new long-term contract at Los Angeles International Airport (LAX).

As of December 2021, WFS is providing full warehouse handling services for the more than five million kilos of cargo carried each month by Polar's all-Boeing freighter fleet ex-LAX. Polar is a joint venture of Atlas Air Worldwide Holdings and DHL Express. WFS also manages handling for Atlas Air's scheduled and ad-hoc freighter service from Los Angeles.

"Our partnership with Polar Air Cargo is strategically important to WFS in North America, and globally. We are proud to be winning new station contracts on the strength of our performance at other major airports across Polar's network," said Guido DiGiandomenico, vice president of sales for WFS in North America.

"In Los Angeles, thanks to the hard work of our local WFS team, we have earned a solid reputation for providing quality cargo handling services in what is a challenging marketplace. We look forward to supporting Polar's continued growth at this very important west coast gateway."

Crossing Over to Digitalization

Paper documentation is outdated and the need to digitalize manuals and standard operating procedures continues to grow.

BY KRISTER GENMARK

Like all businesses, the success of ground handlers relies upon consistent and efficient execution of a task. Something that can only be achieved by ensuring that the team knows exactly what to do and that there is an easy and effective way of improving the way of working.

How to achieve this is often detailed in standard operating procedures (SOPs), integral to all organizations involved in the aviation industry, whether an airline carrier or ground handler.

Manuals and SOPs may not always be the most exciting, but they provide vital instructions on the running of key processes, as well as details on how to implement new practices and adhere to the latest regulations and safety advice. They are often used across departments and need to be accessible and easy to handle.

The information they contain can sometimes make the difference between

success and failure. Sadly, in the aviation industry, failure has the potential for catastrophic consequences, so quite simply, it is not an option.

However, despite their importance, for many years aviation manuals have been giant, doorstep encyclopedias that were not easy to handle or read and were often stored away until it was time for them to be replaced. Thankfully, many companies in the aviation industry have now recognized that paper documentation is outdated and the growing need to digitalize information.

Although the benefits may be recognized, organizations often lack the knowledge of how to begin the process of digitalizing manuals.

Impact of COVID-19

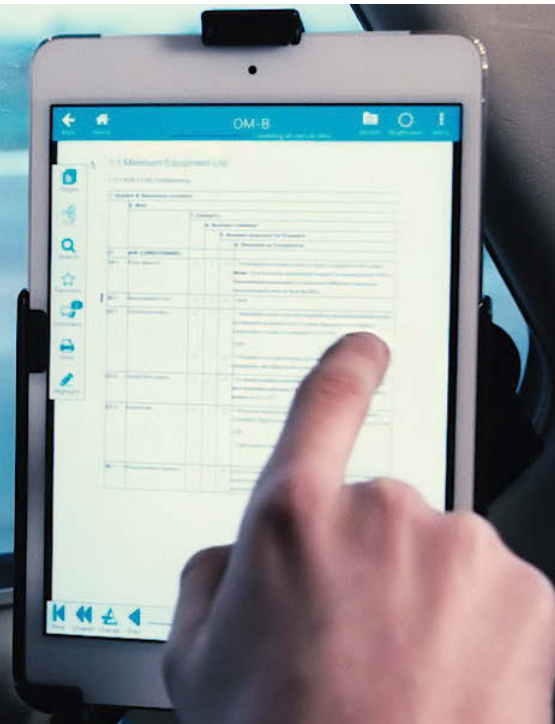
This trend for moving online has increased significantly over the past two years as a result of the COVID-19 pan-

dem. Even though nearly every company in the aviation industry has been affected by COVID-19, not every company has suffered equally. Regardless of size or activity, those that have coped best either had a strong digital infrastructure in place when the pandemic began or rapidly and willingly embraced new technologies when COVID-19 struck.

Although it has often been hard to find positive news during the pandemic, the acceleration of technology use within the industry has been encouraging.

Quite rightly, the need for aviation safety has not disappeared, or even reduced by a fraction, during the crisis. Regulatory compliance always remains vital. Disseminating safety-critical updates quickly and directly to teams, through an efficient and consolidated digital system, has never been more important. So, it hasn't been a surprise to see aircraft operators and ground handlers

By implementing a digital platform, modifications can be made to manuals and SOPs at the touch of a button while keeping the document revision in good order and then shared almost instantaneously.



introduce and accelerate the use of document digitization to become more agile and effective during the pandemic.

Benefits of Digitalization

Aside from the effects of the pandemic, why would moving a company's documents from paper or clunky digital solutions to a truly digital environment improve the day-to-day running of operations?

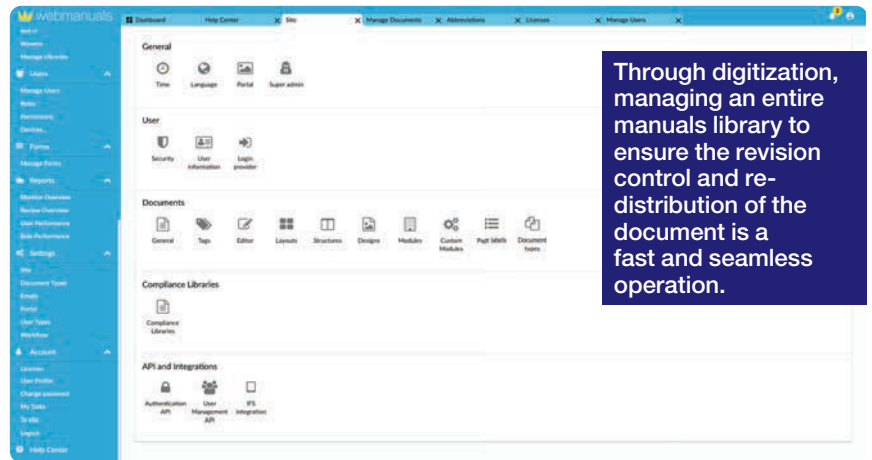
Firstly, ensuring ground handling services operate as safely and efficiently as possible is the number one priority for any business in this sector, and moving to a paperless platform will bring about significant time and cost savings as well as increased safety awareness. What was once a laborious task for a dedicated librarian or a team of people — managing the thousands of pages of an entire manuals library to ensure the revision control and re-distribution of the document — is now a fast and seamless operation.

In the past, all documentation would have been created using a word processing tool. But by implementing a digital platform, modifications can be made at the touch of a button while keeping the document revision in good order and then shared almost instantaneously. This brings considerable efficiency both economically and in terms of time.

As a result, staff can focus on what really matters to a business, rather than forcing teams to spend far too much of their precious time preparing and organizing paperwork and compliance documentation.

Improved regulatory compliance — leading to improved flight safety — is another benefit of digitizing industry manuals. It ensures that complying with the very latest regulations is as simple a process as possible.

There is a constant plethora of new regulations for ground handlers, and these can quickly render manuals redundant — no matter how recently they were updated. So being able to modify them as soon as a new regulation or standard is introduced is an extremely beneficial practice. This is true not only from the perspective of complying with customer demands, but also because many times



there are considerable gains in safety and efficiency to be realized in the daily operation of the business.

To avoid costly mistakes or inefficient working, ensure manuals are rapidly and reliably updated to reflect regulations coming into effect.

Digitalization for Ground Handlers

There is no denying that digitalizing manuals used by ground handlers will also solve some of the problems faced on a daily basis. Having a fully digitalized platform will enable ground handlers to be better prepared, communicate clearer with colleagues and react to situations, such as bad weather or flight delays, quicker.

This will ensure that the impact of any issue is minimized.

Take Time to Plan

So, we know the benefits of digitalization, but how do you choose the right technology for your company?

There are a number of different options but it's important to take your time and take advice to ensure you only invest in the right IT for your business. Understand your needs and how these are likely to change. And what if an unexpected crisis happens? Spend time and money wisely on IT now and you'll be saving time and money across your business for years to come.

COVID-19 has shown us again that the companies best placed to make composed, correct decisions in an una-

voidable crisis are the companies that went into that crisis with a strong digital infrastructure. However, regardless of the virus, digitalization is a necessity for any aviation business whatever the size or type of their operations, all areas of aviation are regulated and monitored in order to ensure safety.

There can be no denying that implementing a digital approach to ground handlers' operations manuals can improve efficiency, but it is important that the transition from paper or clunky digital solutions to a truly digital solution is carefully considered and that you know precisely what you want to achieve from the outset.

We live in an age of convenience, which extends to the workplace, and a digitized system frees up space and time for other areas of your ground handling activity while helping achieve continuous improvements that will sharpen your competitive edge. **GSW**

ABOUT THE AUTHOR

KRISTER GENMARK

is the vice president of sales worldwide at Web Manuals, a Swedish software company that specializes in aviation document digitization solutions. Genmark joined Web Manuals in 2016 as the regional manager for the Americas and has been responsible for setting up Web Manuals' North American operation. Prior to joining Web Manuals, he successfully developed and managed training, safety and quality systems for different companies in the aviation sector, including Nordic Aero and Aviator.



State of the Industry

Insights into ground handling operations and ground support equipment conveyed through *Ground Support Worldwide's* annual survey.

JOSH SMITH

Ground Support Worldwide surveyed members of the industry during the fourth quarter of 2021. More than 100 ground support professionals from around the world offered input about ongoing challenges they face, current staffing levels and the condition of their ground support equipment (GSE). The following pages offer highlights of the data collected during this survey.



What are the greatest challenges to your business?

Acquiring and/or maintaining equipment

48

Finding and retaining staff

44

Training and staying current on new technologies

38

Complying with industry regulations

31

Building and maintaining vendor relationships

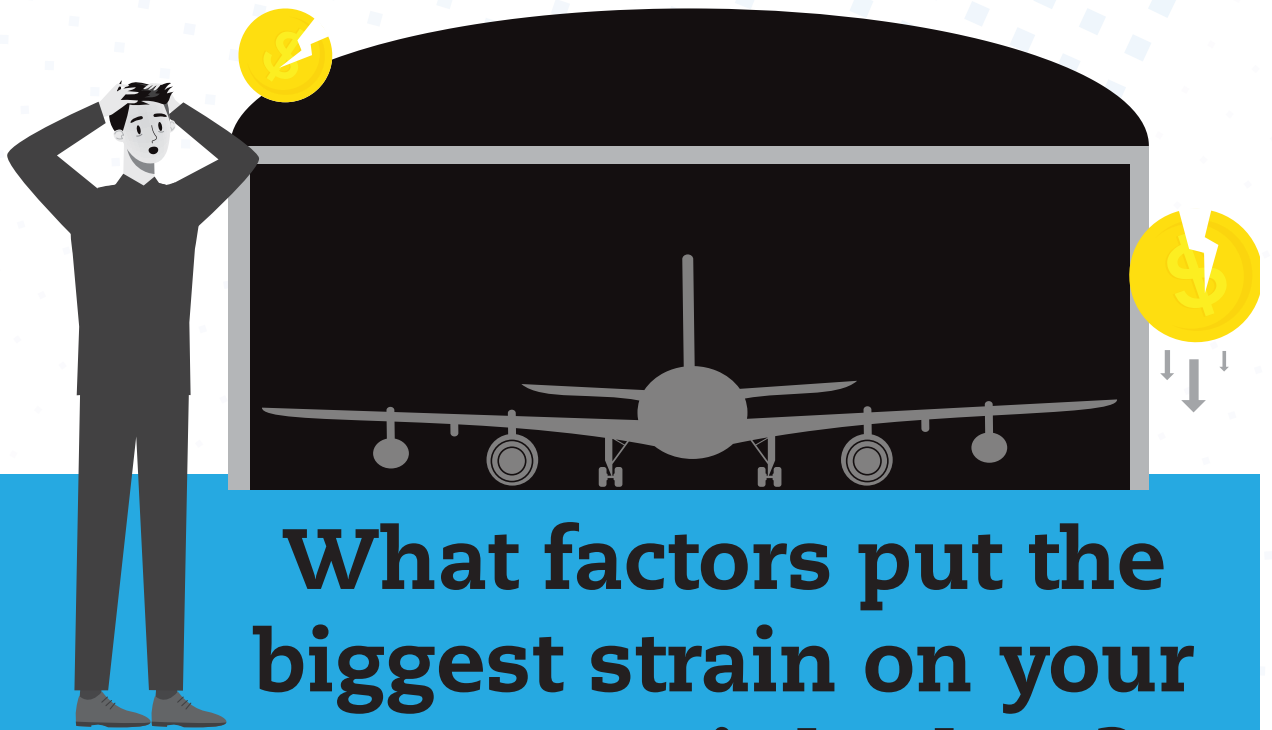
26

Submitting competitive bids and securing new business

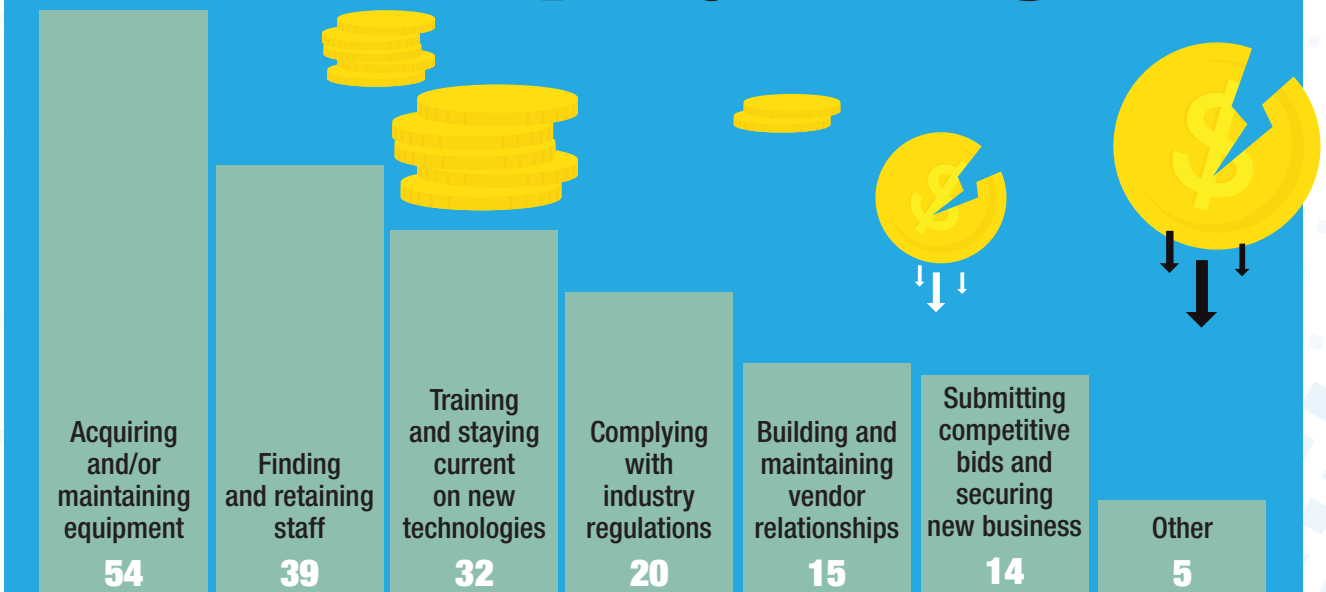
20

Other

7



What factors put the biggest strain on your company's budget?



Much like other industries, aviation has grappled with supply chain shortages and staffing challenges. Based on the survey's results, these issues remain prevalent. Equipment acquisition and maintenance was the most selected response in this survey and staff acquisition and retention had the

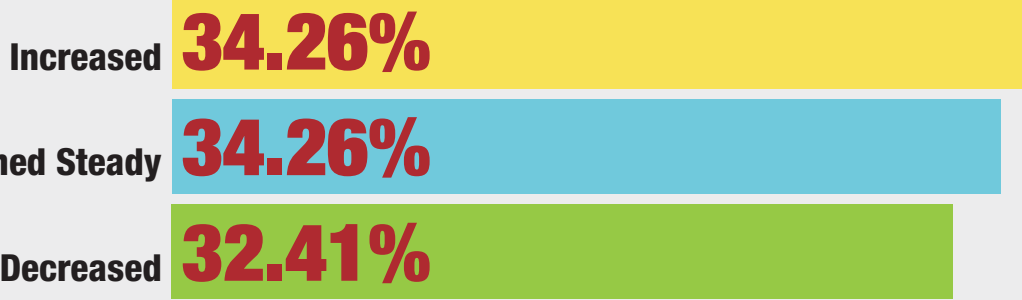
second highest number of responses — those surveyed were instructed to select all that apply.

As these issues continue, the costs associated with them also rank high among respondents. As new equipment is acquired and new personnel is onboarded, training takes on a

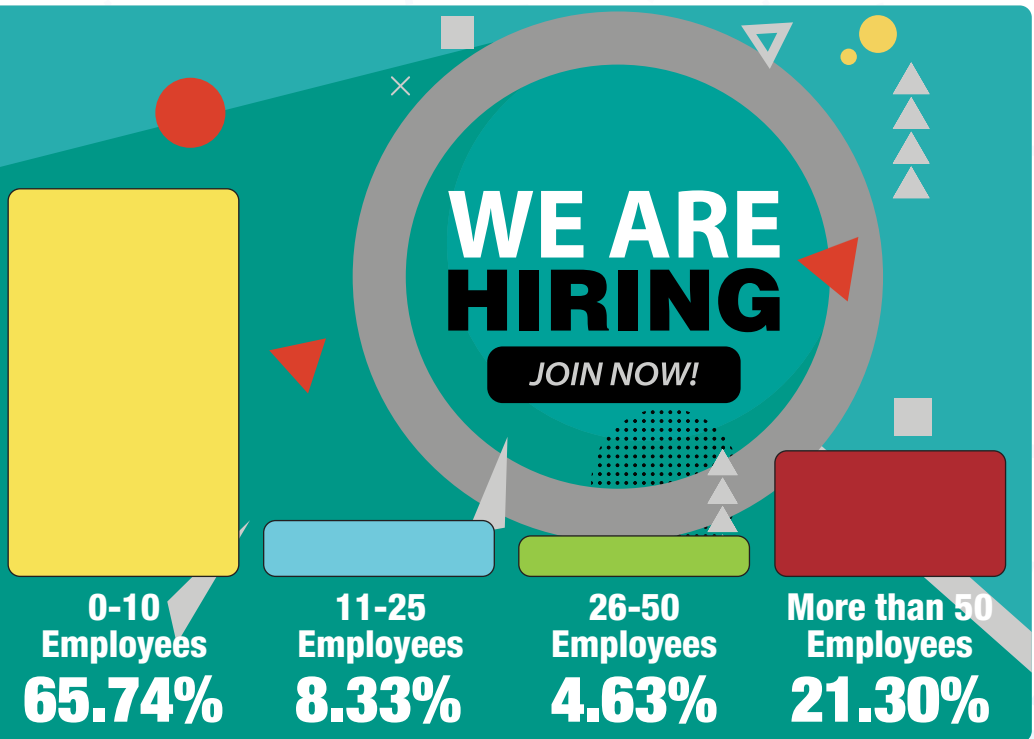
larger emphasis and checks in as the third-biggest strain on companies' budgets.

Other current challenges called out by survey respondents include managing fuel inventory, government regulations and financial assistance.

In the past year, has your company's staff:



In the past year, have you hired:



Staffing levels for the majority of those surveyed remained steady or increased in 2021, which is a welcomed development following significant layoffs and furloughs in 2020. However, employee turnover is a continuing trend as 25 percent of respondents hired 26 or more new employees and have taken on the costs associated with onboarding and training new personnel.

At the IATA Ground Handling Conference in Prague, Monika Mejstrikova,

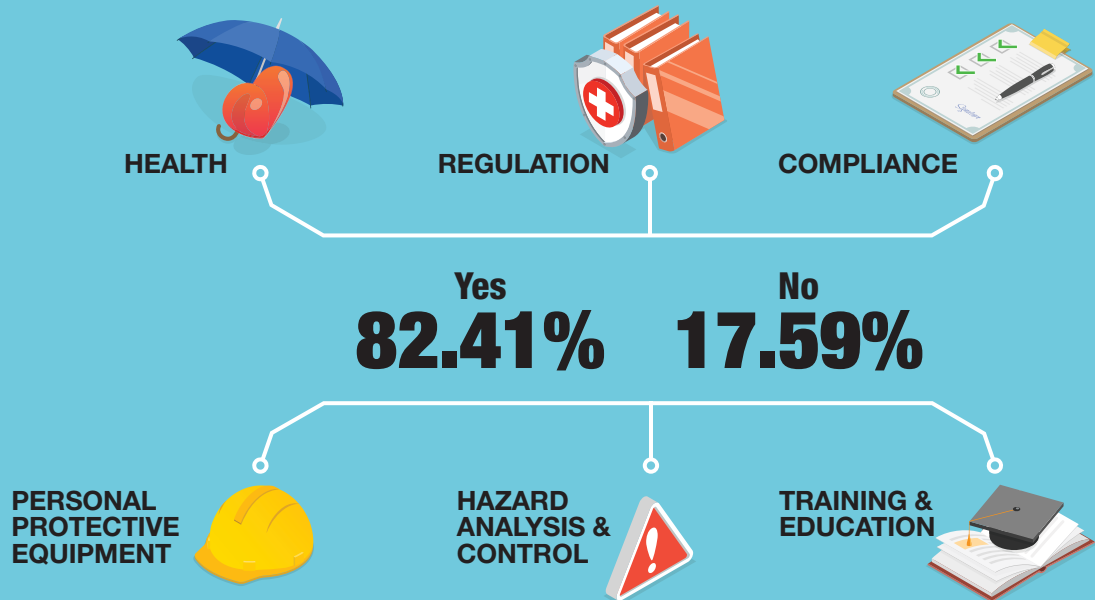
director of ground operations at IATA, noted that labor shortage is a frequently discussed topic among airlines, airports and ground service providers. Speaking on the same panel, Azeem Mistry, managing director of airport operations strategy at Delta Air Lines, suggested flexibility is critical to retain qualified ground personnel.

“We’re losing our talent to different industries. We’re losing talent, especially from our skilled positions. We’re

losing them to companies that offer a better value proposition,” said Mistry.

“We have to be flexible. We have to de-stress the job,” he continued. “We have to introduce technology that makes the job easier for the employee and the customer. We have to become less transactional. We have to become more experiential. We have to introduce a higher level of safety and a focus on safety that we’ve never done before. Nobody wants to come to work with a risk of getting hurt.”

Does your company have a safety management system (SMS) in place?



How many workplace accidents have occurred at your company in the past year?



On the topic of mitigating risk, more than 85 percent of respondents indicate they have a safety management system (SMS) in place and the number of workplace accidents appear to be

benefiting from safety measures being adopted and implemented.

An SMS is the foundation of the International Standard for Business Aircraft Handling (IS-BAH)

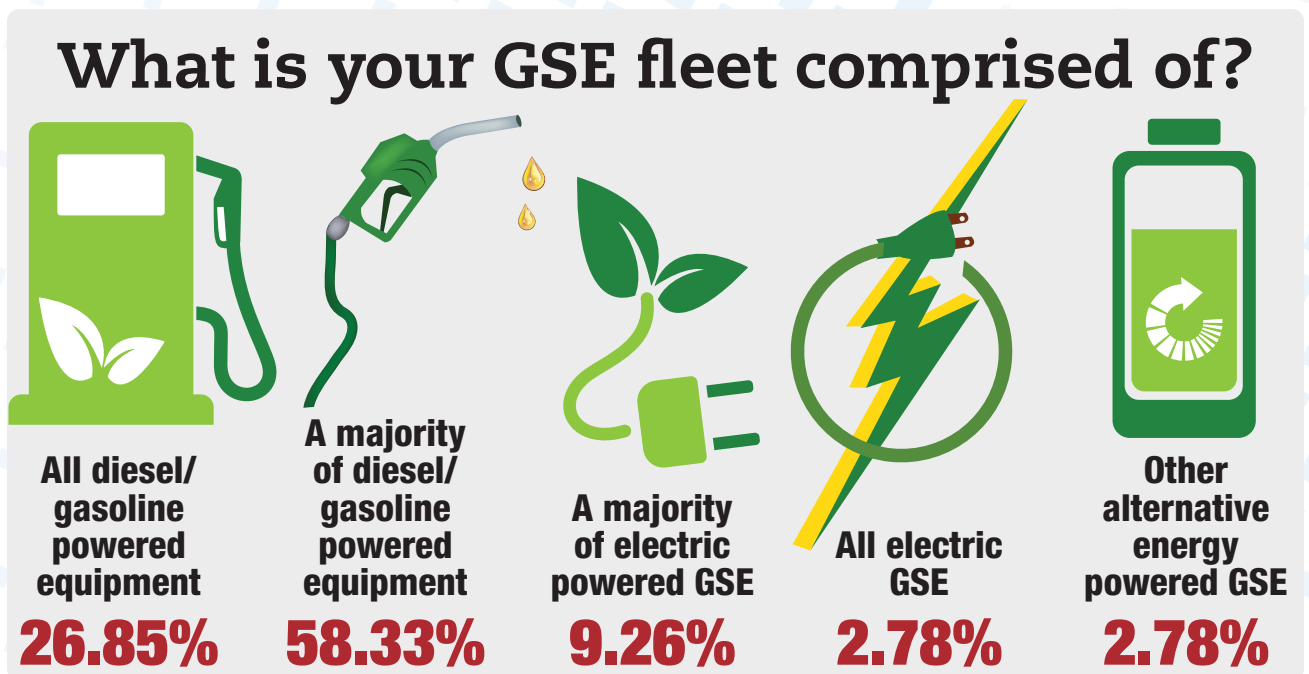
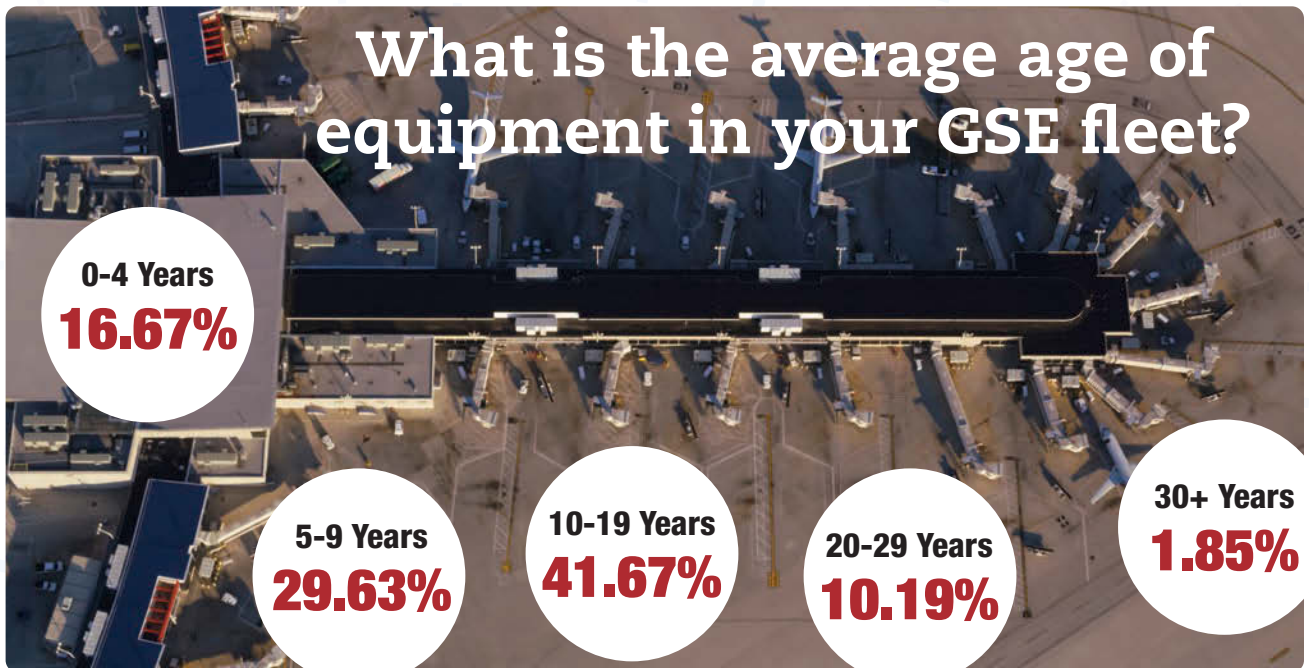
registration. Among applicable respondents, more than half of those surveyed have become IS-BAH certified or are taking steps to become IS-BAH registered.

The availability of equipment may be impacting responses. As environmental initiatives have been established and charging infrastructure at airports has increased, a move toward electric and other alternative power GSE has gained momentum. However, survey data shows that more than half of

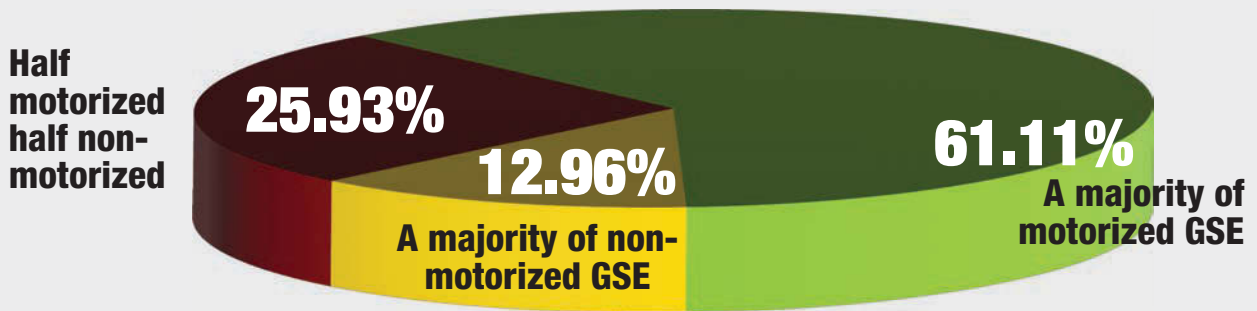
respondents' equipment is at least 10 years old, and 85 percent of respondents stated their fleets are comprised of either all diesel/gasoline powered equipment or a majority of diesel/gasoline powered GSE.

As new equipment with alternative powertrains enters the market, we may

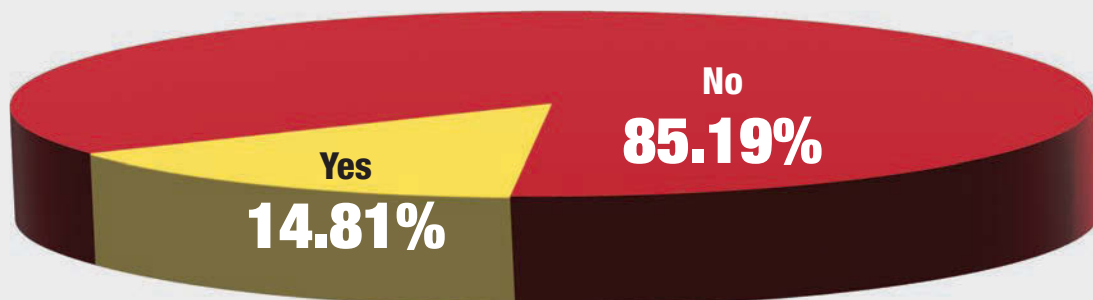
see these figures continue shift. The same may prove true for new technology features, such as collision avoidance. Respondents who have adopted collision avoidance technology have primarily purchased cargo loaders, belt-loaders, passenger boarding equipment and pushbacks and tractors outfitted with the technology.



What is your GSE fleet comprised of?



Does your company currently operate GSE equipped with collision avoidance technology?



Revenue across the industry is expected to rise as airline traffic rebounds. Supply and demand would suggest that as passenger traffic increases, the need for additional ground support equipment and ground service personnel will also increase. An increase in passenger traffic also means an increase in cargo capacity as suppliers can take advantage of additional belly hold space, allowing air freight to improve the supply chain flow.

Whether the workforce can rebound to meet an increased demand is yet to be seen. Where workforce requirements fall short, automation and technology can assist.

More than 75 percent of survey participants stated they were age 50 or older. Even with an aging demographic, the industry appears open to the idea of implementing additional tech. According to respondents, asset management solutions are assisting ground operations, primarily with preventative maintenance, user accountability and security.

Ground support professionals also appear willing to adopt the use of handheld devices, mobile apps and cloud-based applications. Survey respondents indicated the cost of equipment is the biggest deterrent for adopting technology. The cost, time and complexity of training also hinders wider adoption of new tech-based solutions. **GSW**

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The Necessity of Skilled Handlers

Although the demand for passenger flights has been reduced, it is essential to maintain well-trained employees to ensure safe ramp operations.

BY MARIO PIEROBON

In the last couple of years, the COVID-19 pandemic has significantly affected the aircraft ground handling industry. Indeed, border restrictions have made travel more difficult, and this has had several knock-on effects. This has been true also in the Asia-Pacific region.

With the reduction in the volume of passenger flights, aircraft ground handling companies have had to cope with challenges pertaining to skill retention, among others.

Although the demand for passenger flights has been reduced due to the pandemic, it is essential to maintain skilled employees in certain areas because cargo flights have soared, observes Doohyuk Im, managing director of ground handling for Swissport at Incheon.

“We must also retain skills and experience in our team for the post-pandemic surge in passenger flying,” he says.

Ground handling organizations have been introducing measures to manage the reduction in business with many having utilized furlough schemes, long-term leave and reduced hours, according to officials at Universal Aviation, resulting in staff


working intermittently. The reduction in traffic can result in a weakening of proficiency due to the lack of opportunities to consistently apply their skills.

“This can lead to a poor customer experience and an increased exposure to risk on the ramp for everyone,” say Razali B. Abdul Rahim, operations manager at Universal Aviation Singapore, Fabian Cyril Gimson, local safety and training coordinator at Universal Aviation Singapore, and Simon Wade, head of international safety at Universal Aviation.

Importance of Skill Retention

According to Christopher Barker, Swissport Japan’s head of quality, health, safety and environment (QHSE) and training, skill retention is important as a skilled, experienced workforce can deliver high quality, safe service in line with customer requirements.

“During the COVID-19 pandemic, many staff have been dispatched elsewhere or working sporadically, so it is important to keep staff skills and knowledge up to date,” he says.



Among the main factors that influence skill retention in the ground handling sector is the low number of flights currently operated.

Ground handlers must ensure training systems are set up and resourced to deliver the required training to any new personnel.

“With staff returning from extended operational absences, skill refresher training is essential to maintain safety and quality standards.”

Indeed, skill retention is very important from the perspective of the ground handling operator and aircraft safety, observe officials in the ground handling department of Japan Airlines.

“In terms of skills, in addition to the operation of vehicles and equipment, a correct understanding of work procedures and sensitivity to hazards in the work environment are also important,” say Japan Airlines ground handling officials.

Skill retention is vital across all areas of ground handling, according to Steve Clark, head of global training at dnata.

“The ability of our personnel to perform their operational functions in a safe, competent manner is crucial to ensuring we remain operationally effective, achieve our required business outputs and continue to meet and exceed our customers’ expectations,” he says.

It is essential to understand skill levels and ensure sufficient skilled staff are available to cover for any unexpected contingencies, affirms Barker.

“With flight schedules still uncertain, flexibility is required to ensure skilled staff can fulfill customer handling requirements and that safety-critical functions are well covered,” he says.

Losing experienced staff or having poorly trained staff affects the overall customer service aspects of the business. The most important area is frontline ramp and line services, according to Rahim, Gimson and Wade.

“This work involves the interaction of people, ground support equipment and vehicles close to very expensive aircraft, and it is vital that beyond just standard operating procedures (SOPs), frontline personnel are consistently competent in working in such a high-risk environment,” they say. “This reduction in skills

may not be limited to frontline staff and can include instructors providing training, which can then inhibit the enhancement of proficiency or expertise. If risks are not mitigated, the resulting effect can be far more severe to both man and machine.”

The pandemic has provided additional challenges to the aircraft ground handling business, affirms Clark.

“However, as part of our recovery we have ensured that all our returning personnel receive all required refresher trainings, and then actively demonstrate they are at the required standard of competence before they return to the operation. This way we can ensure that the skills and competences of our personnel remain at the required, high standard,” he says. “Safety is obviously a top priority; therefore, we must ensure that all personnel adhere to all safety protocols and SOPs as they carry out their operational roles.”

Peculiarities of Ground Handling

Skill retention is an ongoing challenge for the ground handling industry and one which has been exacerbated by the

COVID-19 pandemic and the uncertainty faced by the aviation sector, according to Barker.

“While ground handling is, for many, an excellent career path with diverse, interesting work and strong development opportunities, employees can also be challenged by work which can be shift-based, labor-intensive and performed outside in all weather conditions,” he says.

A key aspect of high personnel turnover with respect to skill retention is the loss of knowledge and experience, especially for long-serving personnel, according to Rahim, Gimson and Wade.

“This is detrimental in maintaining good standards. Regular customers can recognize this shortfall in their interactions and may reconsider the need to stay loyal. High staff turnover can lead to a direct increase in providing training to on-board new staff, upscale existing skills or to get current staff to take on additional roles,” they say.

Ground handling companies must ensure training systems are set up and resourced to deliver the required training to new joiners, according to Clark.

“The focus must be on the development and assurance of safe operational competence prior to being released to live operations. We must also remain flexible in terms of personnel coming into the business with any identified prior experience, i.e., not necessarily delivering the full initial training program for their role, but potentially conducting the relevant practical assessments to confirm they are also at the required competence level to perform the operational tasks safely and with confidence,” he says. “Leveraging established best practice from one part of the business provides us an opportunity to realize efficiencies across the rest of our business. This is part of our dnata ‘onetraining’ approach designed to deliver the highest degrees of operational effectiveness in the most efficient manner possible.”

What Influences Skill Retention

Motivation and mental health well-being are other key factors influencing skill retention, say Rahim, Gimson and Wade.

“There is a level of uncertainty or fear that can drive a staff member to lose interest in providing his/her best efforts. Aspects such as job security and exposing themselves and their families to COVID infection does play on their mind, affecting mental health and concentration at work,” they say. “Less opportunities to put into practice skills regularly and improve skillsets can result in errors, mistakes or even violations which can have a negative effect on personnel, aircraft and equipment.”

Currently, among the main factors that influence skill retention in the aircraft ground handling business is the low number of flights currently being operated.

“The decrease in opportunities to perform ground handling operations had a significant impact on maintaining skills,” say Japan Airlines ground handling officials.

Indeed, the key factor affecting skill retention has been extended absences from the operation, according to Barker.

“There can also be difficulties with accessing opportunities to employ practical skills in operations following training, and it has been more important than ever to actively encourage engagement with, and effectiveness of, recurrent training,” he says.

Strategies and Tactics to Support Skill Retention

From a training perspective, the use of micro-learning nuggets and increased exploitation of digital technologies to continually reinforce certain messages or requirements on an ongoing basis can help support skill retention, according to Clark.

“Training should not just be seen as an activity undertaken during onboarding, and then again every 36 months as a requirement for formal recurrency, but as being embedded within the operational lifecycle,” he says. “This will reduce the training burden placed on operations and therefore should increase operational effectiveness and efficiency.”

According to Rahim, Gimson and Wade, the use of live drills and scenario programs enable staff to practice



regularly helping to retain knowledge and competence.

“Drills can help trainers detect complacency and reinforce correct operating procedures and can provide a good opportunity to expose and test staff to emergencies or abnormal situations,” they say.

Another way to reduce the likelihood of skill decay is through close tracking/monitoring of individual work exposure by recording how many handling or towing operations has a staff member performed in a month, point out Rahim, Gimson and Wade.

“If operatives have not had a chance to practice their skills in the last month, it would be good to ensure the staff undergo some form of refresher. In case of longer leaves, they can undergo a refresher with a short on-the-job stint, followed by a certification by a supervisory staff,” they say.

Swissport focuses on targeted skill development programs in which employees can drive their own professional development and the company can target skill gaps, affirms Barker.

“Improved on-the-job coaching processes are also important, as are increasing operational assessments and breaking down recurrent training into small ‘bite-sized’ modules that are delivered more frequently. Skilled employees can also be retained by focusing on work conditions and rewards,” he says.

Continuous Improvement

It is important that organizations constantly look for ways to improve the proficiency and competence of their staff to reduce risk and mitigate the hazards present in such a varied and time-critical sector, according to Rahim, Gimson and Wade.

“By driving risk down, organizations can improve staff retention and, by doing so, can maintain their overall skillset thus reducing the risk to the aircraft and clients performing their critical missions,” they say.

According to Clark, there needs to be focus on the ongoing maintenance of operational competence, such as conducting informal observation and assessment of operational performance on a routine and regular basis.

“This can be done as part of standard leadership or safety walkarounds and

should ensure that the ground handling activities continue to be performed against the organization’s SOPs and safety standards, and therefore that the required skills/competences have been maintained,” he says. “Data gathered through activities such as audits, safety inspections and incident management procedures can also be used to identify whether there may be gaps in skill or competence. Any identified gaps can then be quickly rectified through a relevant and targeted improvement plan, again ensuring that the required skills and competences are maintained at the level needed for operational effectiveness.”

Together with skill retention, it is important that organizations implement and follow a structured safety management system, according to Rahim, Gimson and Wade.

“Universal Singapore have recently been awarded Stage 3 certification under the International Standard for Business Aircraft Handling (IS-BAH). By achieving this certification, organizations such as Universal, can demonstrate their commitment to safety, quality and training in a documented and consistent manner,” they conclude. **GSW**

ABOUT THE AUTHOR

DR. MARIO PIEROBON

Dr. Mario Pierobon provides solutions in the areas of documentation, training and consulting to organizations operating in safety sensitive industries. He has conducted a doctoral research project investigating aircraft ground handling safety. He may be reached at mariopierobon@az-all-in-one.com.



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One of the first steps to improving security should be to brainstorm as many possible scenarios as possible.

Aviation Security, Keeping Insider Threats Out

While outside threats may be obvious, insider threats can be more insidious. By combining new technology with tried and true security practices, an operation can avoid danger.

BY WALKER JAROCH

Aviation security is both crucial and complex. While Transportation Security Administration (TSA) checkpoints may be the most public-facing, security measures run deep through an operation, often outside of the public eye.

From cyber security threats and malicious actors to an employee forgetting to leave a pocketknife in their car when they clock in, possible threats run the gamut.

According to Everett Deanes, security general manager for Unifi, trying to guess what the next threat might be is like trying to see the future.

"The criminal element is always crafty. That's almost like making a prediction, on my part. What is the next threat going to be? There are many past

security risks that have threatened airports and passengers that modify the way we adjust our procedures," he says. "I think collaborations amongst the law enforcement and the aviation field is probably the only way that we're going to be able to mitigate security threats."

Threat Anticipation

The first step to assessing what threats an operation should prepare for is to brainstorm as many different scenarios as possible.

"You have to sit down and do roundtables and talk it out and try to come up with potential threat scenarios. When I was in law enforcement, we would talk about different scenarios, many of which would come into play. They key is to always be prepared and be able to

come up with a basic scenario to hamper whatever situation arises," Deanes points out.

Broadly, threats fall into two categories: terrorist and insider. In both categories, security teams work with TSA agents and local law enforcement to make sure they are providing the best intelligence possible.

Deanes explains that terrorist threats originate from organized groups and those people associated with them. Since 9/11, those threats have been at the forefront of the flying public's mind and the potential harm they can cause is obvious.

Rouge employees are those who are not affiliated with any group, but act on their own accord. These could include a disgruntled employee who commits an

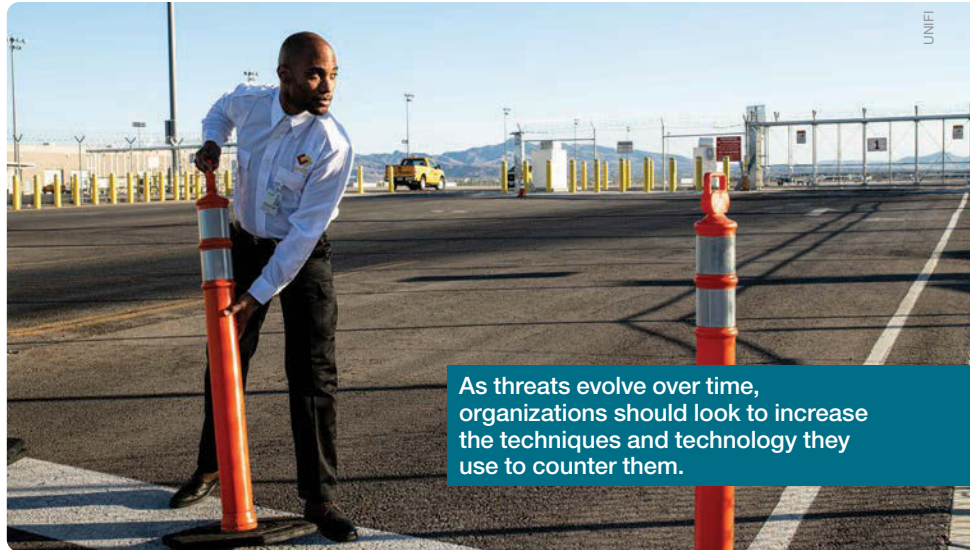
act of sabotage or plays a prank, to an employee stealing from the work site.

Theft is common crime committed by rogue employees. Deanes says people may be surprised that it is not always what an employee enters with that is the problem, but what they try to leave with.

“You would be amazed at what is pilfered at locations. People go in with nothing, but they sometimes come out with things that don’t belong to them,” Deanes says.

The key to anticipating these different possibilities is, when brainstorming possible scenarios, to rule out nothing — no matter how outlandish it may seem during initial conversations.

“Who ever thought that we’d have an underwear bomber or who ever thought we’d have a shoe bomber?” Deanes points out, adding it’s better to have




As threats evolve over time, organizations should look to increase the techniques and technology they use to counter them.

measures in place and not need them than to need measures and not have them available.

However, Deanes notes that the most common threats are those of airport employees bringing prohibited items to

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work — and not necessarily with malicious intent in mind, but having merely forgotten the item was on them or not realizing the item isn't allowed on-site.

"During our screening procedures, we recover prohibitive items from employees that shouldn't be brought on the airfield," he says.

Possible items can include knives and guns, or self-defense items such as mace and pepper spray.

Evolving Threats, Evolving Security

As the possibility and scope of potential threats have grown, so has the technology to prevent them.

Technologies and methods such as having employees walk through metal detectors, using X-ray machines and doing bag searches have become more common place. Deanes says this was not always the case.

"Many years ago, prior to modern mitigation efforts and technologies, it was a lot more difficult to catch insider threats. Our newer technologies and continually evolving security procedures have made our workplaces, and the skies, safer for everyone," he explains.

"Screening is one of the most effective ways to prevent threats from materializing and is something that an operation should be instituting. What has seemed to be very effective for us and for the airlines that we deal with, is screening employees," Deanes continues.

"Screening and reverse screening can save the airlines and other employers a lot of money and effort. By screening all airport staff, we catch a lot of prohibited items, whether intentional or unintentional."

But even with the increased use of technology, Deanes stresses that the human factor cannot be removed.

People are often the best at recognizing and preventing possible threats and assessing when a situation is actually benign despite a machine flagging it otherwise.

Human intuition is a key component, Deanes stresses.

"One of our best tools that we actually use are cameras, but you always have to have the human factor to show up to verify or to check out what is actually happening during those situations," Deanes adds.

The human element of security can start as soon as the hiring process begins as long as interviewers are trained for what to look for, says Deanes.

Although background checks are part of the equation of hiring the right employees, no background check is perfect. This is why it is important to have an extensive training program on how to properly interview employees.

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“One thing to do is to train your managers, or people who are actually doing these interviews, on how to interview people properly. That sometimes comes from some of my training that I received. When I’m sitting there and interviewing people and I’m asking them questions, and they look right or if they look left and learning how to do deep dive, do follow-up questions,” Deanes says. “I think that when interviewers are properly trained on how to pick up these cues, they find out that certain applicants might not be the right person for a job.”

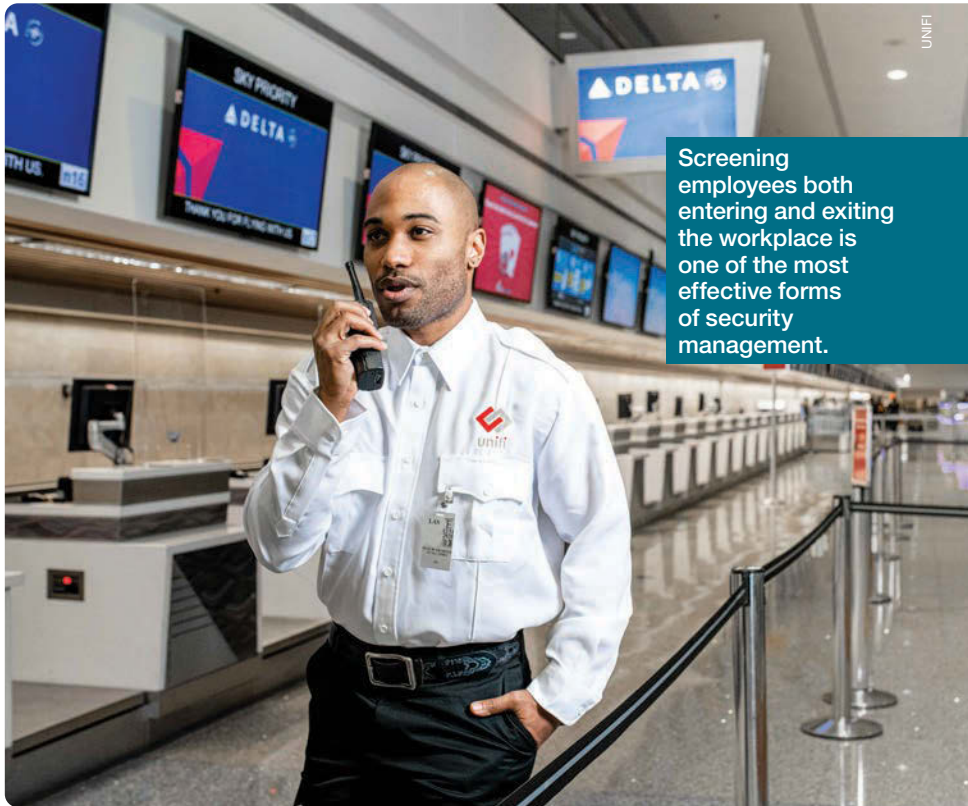
An operation should aspire for employee retention.

When employees are trusted and retained, an organization does not have to fret over having a revolving door of unknown persons entering and exiting their facilities.

“Not only do you want an employee who’s trustworthy and has the right character, but you also want a long-term employee. And that goes a long way when you’re conducting interviews,” Deanes says.

However, there is no one-size-fits-all approach.

At the end of the day, an operation needs to layer all of its security measures to be successful in stopping possible threats.



Screening employees both entering and exiting the workplace is one of the most effective forms of security management.

“The only thing I can say is continue to add layers of security. And when I talk about layers of security, I mean start with the basic layers; educating the workforce, using technology to your advance such as x-rays, the metal detectors, explosive trace detection machines,

training employees not to accept the norm, meaning that if you see something, say something. That was a big campaign back in the day,” Deanes says.

“Those are some of the things that I would say would help you prepare for the future.” **GSW**

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VAN DER GRAAF

Drive Reliability in Your Baggage System

New innovations in baggage handling system drives provide more reliability and predictive maintenance to keep luggage moving.

BY JOE PETRIE

VDG gears are manufactured to AGMA 12 standards, that is honed and ground for low noise standards to 46db.

Upggrading an airport baggage handling system offers airports a unique opportunity to address operational reliability, sustainability and a better passenger experience knowing luggage will get to the travelers in a timely fashion.

Energy efficient components are becoming more prevalent in baggage handling systems. Efficiency is a quantifiable standard established by the International Electrotechnical Commission (IEC). The standard defines five International Efficiency (IE) classes for single-speed electric motors, related to efficiency, power output and size for motors.

Picking a motor type for your drivetrain can be difficult, as each has advantages and disadvantages.

Reliable Systems Keep Bags Moving

Airports and airlines need to keep their baggage handling systems online to ensure traffic keeps moving and delays aren't created by broken systems.

"What I'm seeing is everyone looking to put their best foot forward," says James Chandler, key markets manager for Nord Drivesystems. "How efficient can I be? Is it from a retrofit or is it looking at a full CAPEX project to renovate or upgrade the complete system? In many cases, airports are taking a deep dive into looking at how they upgrade and be efficient."

Chandler says U.S. airports want network connection of their systems to keep on top of their performance and provide a tool for predictive maintenance. This gives customers and end users oversight of their systems. Visibility also helps with efficient commissioning and seeing what drives are up and which are down, etc.

Monitoring these elements provides feedback on how a system is performing and data trends will show when an item needs to be addressed before failure.

"It's not just all about more efficiency. It's all about durability and uptime," Chandler says. "All airports are looking at reliability and being up when those bags need to get on the next airport and keeping in line with the traveler's schedule."

Predictive analytics monitors live operational data measured by various sensors and compares it to historical data to identify abnormalities within the measurements and uses probability through machine learning to predict necessary repairs and imminent component failures.

Larry Studdiford, president, Studdiford Technical Solutions, LLC says a good predictive analytics platform can provide many operational benefits; the most promising being the ability to develop a planned, versus a reactionary, maintenance and repair schedule. This reduces the number of surprise outages and potentially helps reduce the staff headcount.



VAN DER GRAAF

Drum motors take up less space than external drive systems allowing more space in current BHS footprints to expand.



VDG drum motors are permanently lubricated, so vibration analysis isn't needed.

VAN DER GRAAF

It also identifies equipment irregularities with enough time to ensure that materials required to repair or replace the equipment is available on-hand.

“Both these, and other benefits drive towards a status-based maintenance approach instead of a time-based maintenance plan, allow repair and replacement when components require it, and not necessarily based on a calendar-driven schedule,” Studdiford says.

“This could also lead to an increased life cycle of equipment while monitoring components during their decline instead of replacing based on the manufacturer’s recommendation. There are huge overall cost savings to be had with regard to the life of a BHS and its overall total cost of ownership,” he adds.

Nord Drivesystems recently introduced its generation of IE5+ motors utilizing a reduced noise, high efficiency design suited to acoustically sensitive areas in airports. They present flexible mounting solutions whether direct mounted to a gearbox or mounted to a NEMA or IEC adapter.

The two frame sizes, 70 and 90, offer a power range from 0.5 – 3HP and a speed range from 0 – 2,100 rpm. IE5+ synchronous motors are outfitted with an integrated encoder that can be programmed for precise control over speed, synchronization and position.

Permanent magnet motors (PMM) like the IE5+ offer durability and sustainable energy savings for airports.

“We’ve seen projects in testing where it provided double-digit efficiency gains over previous installations,” Chandler says. “However, we also look at how what we can take out. We’ve looked at direct drive solutions, eliminating

pulleys and chains so there’s a lot of opportunity in increased gains.”

Studdiford says the permanent magnet motors promise higher performance and generally lower weight than traditional AC induction motors. They also tend to have a smaller footprint, which makes permanent magnet motors good for retrofitting older systems.

“While more expensive than induction motors in their initial product cost, PMMs and their energy savings can realize a full return on investment in as little as two years,” he says. “They are also synchronous, which allows them to work in applications where induction motors cannot.”

Drum Motors Drive Potential

North American airports and airlines want their luggage systems to handle twice as many bags on a similar footprint as their current baggage handling system. Drum motors provide a solution to meet this demand.

Drum motors hermetically seal the electric motor and gear reducer inside the head drive roller. This eliminates the need for external drive system components, such as chains, sprockets and chain guards. It also eliminates the need for pillow block bearings because the shafts on a drum motor are stationary.

“When you use our drive system, you can put conveyors closer together in a closer space so you can achieve better space utilization,” says Alex Kanaris, president and owner of Van Der Graaf (VDF). “And using these drive systems are going to cost them about 30 percent less than what they’re using now.”

The Nord Drivesystems next generation of IE5+ motors utilize a reduced noise, high efficiency design suited to acoustically sensitive areas in airports.

Drum motor mechanical efficiency is about 96 percent compared to 70 percent or 80 percent efficiency of an external drive. The gears are manufactured to AGMA 12 standards, that is honed and ground for low noise standards to 46db compared to 56-60db for conventional systems.

When the conveyor load is higher than what it was designed for and the windings temperature reaches 135 degrees Celsius, an overload protection device connected to the motor control stops feeding voltage to the motor.

Kanaris says VDG designs its drum motors to be maintenance-free for almost 10 years or 80,000 hours. This compares to 37,000 for conventional drive systems, according to VDG testing.

VDG uses high quality components for its motors and all units are sealed under a vacuum to increase the life of the motor. They're permanently lubricated, so vibration analysis isn't needed.

"It's a safer system to use, it doesn't need to be maintained, you save money on electricity and it provides the same work with less space," Kanaris says.

Traditional conveyor motors are fan cooled. The newest generation of drum motors addresses heat via magnetic density of the core and current density of the winding. Kanaris says this redesign allows VDG drum motors to run cooler without the need for external cooling methods. The operating temperature of the VDG motors is 75 degrees Celsius, giving the oil a viscosity of 50-60 centistokes.

"The true source of the heat is current density and magnetic density," Kanaris says.

Baggage handling systems depend on lagging for operation. Cold bond and hot bond vulcanized conventional lagging relies solely on the adhesive bond between the lagging and the shell to transmit power to the belt. If the lagging process is not properly executed or expired material used, the shear force on the adhesive can result in lagging delamination.

VDG introduced the IronGrip lagging system in 2019, which has steel bars welded across the drive drum with lagging materials between these bars. The system eliminates uneven lagging wear, since the rubber cannot wear below the steel bars.

The IronGrip provides higher pulling force so the belt can perform with less tension. This extends the life of the belt and other mechanical components like bearings and idlers.

In-house tests by VDG estimated the life of the IronGrip lagging to be 4 to 5 times longer than the standard lagging.



NORD DRIVESYSTEMS

NORDAC ON was developed to meet the special requirements of horizontal conveyor technology, as well as for the interaction with the new IE5+ synchronous motor.



DuoDrive is a integrated gear unit/motor concept with a hygienic wash-down design.

"The question is, if we have a conveyor belt drive that consumes 30 percent less energy, requires no maintenance, streamlines the conveyor design, improves belt tracking, increases the life of the belt and the service life of other mechanical components, and lasts longer than traditional external drives that are used today, why the VDG Drum Motor is not used in airline baggage systems," Kanaris says. "VDG drum motors are very popular in other industries like postal parcel, warehousing, mining, aggregates, agriculture, food processing and others."

Think Long Term on Your Investment

Supply chain currently remains a challenge and baggage handling systems are not immune to this issue.

Studdiford says many ongoing baggage handling system projects are experiencing delays in various components and parts manufactured overseas, but airports considering improvement projects should not slow down the upfront planning and design phase. By the time those projects go to contract, he believes those supply chain issues should be resolved.

There's a lot of opportunity when it comes to upgrading baggage handling systems, so Studdiford advises airports to think longer term on their investment.

"If there is one thing that the global pandemic has shown us is that there needs to be more consideration of the total cost of ownership (TCO) of the baggage handling system with regards to maintenance, staffing and longevity of the system," he says. "In other words, balance out the focus from CAPEX to look at the operational expenditures (OPEX) more closely and the overall best value for the airport in the long run." **GSW**

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An Alternative Energy Boarding Solution

Aviramp has expanded its solar power option to all five of its boarding bridge and ramp models.

By Rebecca Kanable

Aviramp's solar-powered boarding bridges and ramps, known collectively as the Aviramp E-Series, provide a sustainable and environmentally friendly, carbon-free option to diesel. Solar power is an option for all of five of the UK-based manufacturer's boarding bridge and ramp models.

"They operate exactly the same as the diesel-powered versions and have all the benefits associated with them," says Terri Smart-Jewkes, Aviramp's global sales and marketing director. "Of course, solar also offers freedom from noise pollution alongside emissions."

Aviramp first introduced its solar-powered models with the Lite Boarding Ramp for ultra-narrow-body aircraft. Next, solar power became an option for its Domestic, Regional and Continental models. In November 2020, Aviramp shared an update saying the company had been using its time during the pandemic lockdown to develop and introduce the solar-powered International model. For those who are not in the market for a new ramp or bridge, there's a kit to retrofit diesel units with solar.

Solar-powered products from Aviramp offer the benefits of the company's existing products with the added advantage of zero emissions and freedom from noise pollution, says Smart-Jewkes.

"They are very cost-effective and completely maintenance-free so they have longer term advantages over other GSE," says Smart-Jewkes. "Moreover, they deliver the most in terms of sustainability and are environmentally friendly due to being carbon-free. So, they are uniquely positioned."

Benefits of the Aviramp E-Series include improved speed, turnaround, safety and passenger experience. Compared to other GSE, the Aviramp International, for instance, increases the flow rate of disembarkation by almost 30 percent, according to an independent trial at Gatwick Airport. A low gradient ramp with anti-slip flooring improves the boarding experience for customers of all abilities and makes boarding safer by removing the risk of tripping on stairs. The ramps can be used as a mobile boarding ramp or static, fixed jet bridge.

"All our ramps have customized additions so they can be more bespoke to cater for specific airport operations," Smart-Jewkes says.

With the Aviramp E-Series, there's no additional GSE needed for passengers boarding in wheelchairs, according to Smart-Jewkes.

All of the Aviramp E-Series models offer one-person operation.



Solar power is an option for all five of Aviramp's boarding bridge and ramp models.



Aviramp designs products to allow step-free boarding. With extended turning platforms, this unit is stretcher compatible.

"They are simple and safe to use," Smart-Jewkes says.

The International is operated by remote control. The ramps are patented and unique with a 360-degree switchback design, which creates gentle gradient slopes. The foldout walkway lifts to store with a safety chain.

Ramp height is based on the size of the aircraft and ensures a flush transition from the ramp into the aircraft. Optional features include a canopy and enclosed roofing.

Prior to the pandemic, Aviramp customers showed interest in solar power, Smart-Jewkes says. Among the first customers seeking the larger models, like the Continental and Regional, were Lyon-Saint Exupery Airport in France and Aarhus Airport in Denmark.

"Aviramp continued to sell solar ramps during the pandemic but not in the volumes that were forecast pre-pandemic," Smart-Jewkes says, adding today there are solar models at six different airports.

A 2021 Queen's Award for International Trade was awarded to Aviramp for the company's overall outstanding short-term growth in overseas sales over three years. CEO Graham Corfield came up with the idea for the Aviramp after seeing passengers with ski injuries use stairs to board an aircraft. Returning home from Switzerland, he started designing the Aviramp.

The main current markets are Saudi Arabia, United States, Canada, Philippines and Australia and new markets during the award application period were Saudi Arabia, Philippines, Punta Cana, Norway and New Zealand.

Recently, Smart-Jewkes reports, Aviramp has seen an influx of orders for its solar products as well as its Chair Lifter, which can carry up to three mobility aids and is towed using a single tug.

"Aviramp are innovating all of the time, refining existing kit and improving the range alongside, introducing new ground handling products that deliver real solutions and value for our customers," Smart-Jewkes says.

During the pandemic downtime, the company also developed a model that enables the boarding and deplaning of stretchers.

"I think we can conclude that although the pandemic has been a debilitating chapter in aviation generally, Aviramp has used that time wisely to develop and launch new operational and cost-efficient products to facilitate the rehabilitation that a near-post-COVID aviation industry is about to face." **GSW**

A Simplified Approach to Passenger Boarding

AERO Specialties' Towable Passenger Stairway allows for boarding and deplaning while complying with OSHA requirements and passenger safety protocols.

By Josh Smith



AERO Specialties' line of Towable Passenger Stairways can service aircraft ranging from an ERJ to a B747.

AERO SPECIALTIES

The need for passengers to safely board and disembark aircraft is universal. However, some ground handling operations are not in need of fixed boarding bridges or stair trucks.

To assist customers that need a passenger access solution, but cannot afford or do not need a stair truck, AERO Specialties provides a line of Towable Passenger Stairways.

According to Derek Rose, vice president of sales and marketing at AERO Specialties, the company's line of towable stairs provides a low-cost method for passenger boarding and deplaning while complying with all Occupational Safety and Health Administration (OSHA) requirements and passenger safety protocols.

"These units are designed to be pushed up to the aircraft by hand," Rose says. "That leads to less potential aircraft contact damage and safety issues."

"We offer three variants – regional aircraft capable, narrow-body aircraft capable and wide-body aircraft capable," he continues. "Platform and stairway sizes are similar throughout."

The height of the platform, and the subsequent number of steps, vary depending on the model. The line of Towable Passenger Stairways can service multiple door sill heights, with one

model accommodating a range of 58"-93", the next reaching 88"-161" and the third extending to a height of 134"-223".

With that flexibility, the line of Towable Passenger Stairways can service aircraft ranging from an ERJ to a B747.

"We have a model that is compatible with any aircraft that does not have its own stairway," Rose points out.

Additional standard features include sliding handrails to clear the aircraft door, stabilizer jacks and non-marring soft rubber bumpers.

The most popular option for these stairs is an electric lift assist, according to Rose. He notes this feature replaces the need for a handpump to raise the stand. Furthermore, solar power panels can be added to a unit to charge the electric lift-assist battery.

"The grip strut footsteps are now galvanized for added durability," Rose says, adding improved LED step and platform lights have been integrated as well.

Officials at AERO Specialties seek to keep these units as easy to use as possible.

"These are simple products that provide extreme durability and longevity of use," Rose says. "The simple design makes them easy to maintain and operate."

A general visual inspection and preventative maintenance for the hydraulic

filters is required, as is checking the state of the battery for the light system and inspecting the wheels.

"Units should be washed and cleaned frequently, especially in corrosive environments," Rose says.

Customer feedback has remained positive, and Rose says this is a testament to the simple design of the units.

"The units also can ship in a sea container, which makes them very popular with operators outside the USA," he says.

"These are very popular with military customers as well as FBO and charter operations," he continues. "This a popular option for customers with hardstand operations or locations that do not utilize a boarding bridge or have access or funding for a stair truck."

When selecting passenger boarding stairs, a customer should consider what will be the smallest and the largest aircraft they intend to service.

Towing distance is also a factor when considering a towable stand versus a truck-mounted unit.

What's more, the number of daily turns will have an impact on whether a towable unit or a truck-mounted unit is the best option for a specific location. The ability to affordably handle passenger flights with an easy-to-use and low maintenance solution is an additional benefit. **GSW**

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The Flight GSE B737 Crew Stair mirrors the company's Passenger Stair design for the same aircraft and features a hot dip galvanised steel chassis mated to an aluminum stair and platforms. LED lighting with solar charging capabilities are included.



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MOBILE STAIRS WOLLARD INTERNATIONAL

Wollard International Mobile Stairs can reach doorsills up to 228." The company offers the CMPS 170 Stair and CMPS 228, which offer a reach of 170.5" and 228," respectively.



Both models are available with electric power. Diesel and gas power units also are available. The rugged wrap-around steel bumpers protect units from dings and dents inherent with ramp traffic, and the company says they hold up longer in the ramp environment compared to modified pick-ups.

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Advertising Index

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Stinar offers three models of chassis-mounted passenger stairway: SPS-3517 (88-212" service range), SPS-3518 and SPS6018 (96-228" range service range). The SPS-3517/18 has 48" wide steps and 72" wide platforms. The SPS-6018 has 60" wide steps with a 96" wide platform. Both have a variety of options. Also available, are two models of towable stairways to fit all passenger boarding needs.



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The Timsan SAV5800 is a self-propelled ambulift for transporting reduced mobility passengers to all types of aircraft with front platform service heights from 0 mm to 5,800 mm. All aircraft doors are safely interfaced with Timsan's collision detection system. It is designed with a trustworthy can-bus system and sturdy structure, which can carry up to eight wheelchair passengers and four attendants.



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The APS 60 Series Truck-Mounted Air Stairs are available with a wide range of options including an overhead canopy along with two air-driven canopies located at both the top and the bottom of the stairs, giving passengers complete protection from the elements. Normally mounted on a Ford XL F550 series and available in gas or diesel models, the most recent edition includes an automatic handicap wheelchair lift.

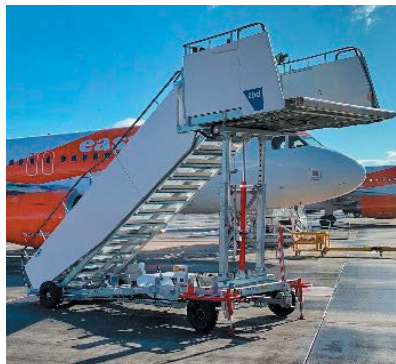
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PASSENGER BOARDING STAIRS TBD

Manufactured to withstand years of constant use in the most arduous environments with their rugged construction and superior finish, TBD's range of variable height telescopic and parallelogram powered towable and powered passenger stairs represents a wise long-term investment. Designed for rapid but safe deployment to access wide-, narrow- and regional-body aircraft, TBD's passenger stairs can reach doors across any fleet composition.

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The e.COBUS has been designed for increased autonomy with higher capacity and more efficient air conditioning systems for the hot summer climate. Pre-cooling/pre-heating the passenger compartment is possible during opportunity charging between operations.

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FRONTBULL AMBULIFT BULMOR INDUSTRIES GMBH

The compact FrontBull Ambulift is designed for regional and small airports with an environmentally friendly electric drive. This ground support vehicle has been specially developed for boarding passengers with reduced mobility.

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PBB REMOTE CONTROL OPERATING SYSTEM ADELTE

ARCOS is an innovative system specifically developed to enable passenger boarding bridge (PBB) operations in a remote, safe and fast manner. ARCOS is composed of customized desk(s) located in a technical room of an airport where trained operators remotely perform PBB docking and undocking procedures. Due to the interconnectivity of all PBBs, with one centralized and secure system, the required number of operators can be reduced by 65 percent and docking times by 20 percent.

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SIDE SHIFT CAB R.J. DESIGN LLC

The Side Shift Cab was designed to eliminate misparking of aircraft and promotes safety for both employees and passengers.

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Three Decades of Ground Support

As our publication celebrates its 30th year of covering the industry, we invite you to share memories and help highlight the ‘unsung heroes’ of aviation.

BY JOSH SMITH



We're in the mood to celebrate at *Ground Support Worldwide* as 2022 seems ripe with optimism and excitement that the industry can continue its return to the levels of success we saw prior to 2020. What's more, our publication is celebrating a milestone as we begin our 30th year covering the ground support industry.

Since its inception, the publication has always had the same mission – to bring compelling, informative coverage of the ground support equipment (GSE) and ground handling industries and help stakeholders find suppliers to meet their ground support needs.

George and Jennifer Prill sought to achieve this goal when they launched *GSE Today* 30 years ago.

"We have always approached ground support people as the unsung heroes of the industry," Jennifer Prill, publisher of *GSE Today*, said in 2001 when the magazine was acquired by Cygnus Business Media (now Endeavor Business Media).

While ground support personnel may be overlooked by some, the magazine's staff has always strived to highlight the important work carried out on the ramp as the publication rebranded as *Ground Support Magazine* in 2003 and *Ground Support Worldwide* in 2006 to better illustrate the scope of our coverage.

We look forward to commemorating the 30th anniversary of the magazine throughout the year in this column, and we hope you will consider celebrating with us, too.

Please reach out to us to share memories, highlight the people that have made great contributions and spotlight the innovations in GSE that put the industry on course for where we are today.

We know that among the GSE fanatics that make up the industry, there are a few collectors out there. We'd love to see the oldest issue of the magazine you have in your collection.

If you happen to have a copy of the very first issue, send us a photo!

Celebrating
30
Years

We want to celebrate the companies and the people that have spearheaded our industry as well. Show us issues of the magazine that highlighted your major achievements and moments that were important to your companies' successes.

We will also use this milestone year as an opportunity to not only look back fondly at our industry but focus on what the next 30 years have in store for ground support.

We're looking forward to a fantastic year and honoring the ground support industry with all of you.

Please stay in touch by emailing Josh@AviationPros.com. **GSW**

Publisher's Note



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LinkedIn

Big Shoes to Fill

Our plan to pick up Missy's torch and carry it forward.

When I joined the Endeavor Aviation team last year, I was in the comfortable position of working alongside an industry icon.

Someone who has grown to the level very few ever achieve. Being loved, respected and being known, universally, by a single name – Missy. I'm not even sure if people know that she even has a sir name – Zingsheim.

In an industry where personal relationships and longevity are paramount, Missy Zingsheim has thrived, growing her reputation and the *Ground Support Worldwide*, *Airport Business*, *Aircraft Maintenance Technology (AMT)* and *AviationPros.com* brands into media leaders of the markets they serve.

As she takes on her new role as vice president of sales operations here at Endeavor Business Media, I've been asking myself a question. How are we going to fill those shoes?

My plan is to pick up the torch and carry it forward.

While I'm relatively new to the aviation space, I've worked in a number of related industries, and they all seem to share common challenges that revolve around three things —people, infrastructure and technology.

From everyone I've spoken to over the past few months, these are the major pillars the aviation businesses will be trying to solve for over the coming years. As a media company, we are committed to addressing these challenges in the pages of our magazines, our websites, our live and virtual events, podcasts, videos and any other platform that becomes relevant to you.

Our commitment to you is that we will continue to do everything we can to provide you with the most timely, useful and insightful information.

In return, I would ask one favor of you all. Let's connect. Let me know what you like or don't like about our coverage. What could we do more of? Are there things we don't need to do anymore?

Let me know what information you need to make your job easier and your organization more successful.

I look forward to meeting up with you at a trade show, conference or other event in the coming months. You can also reach out to me at bill@AviationPros.com and connect with me on LinkedIn – [linkedin.com/in/baumannbill](https://www.linkedin.com/in/baumannbill).

Let me know how we're doing. **GSW**

Let's connect. Let me know what you like or don't like about our coverage. What could we do more of? Are there things we don't need to do anymore? Let me know what information you need to make your job easier and your organization more successful.



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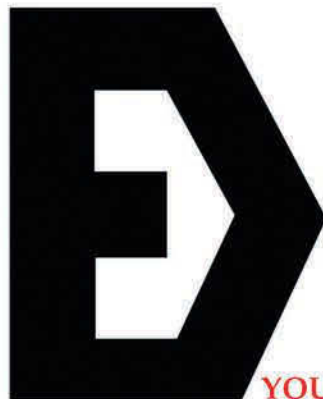


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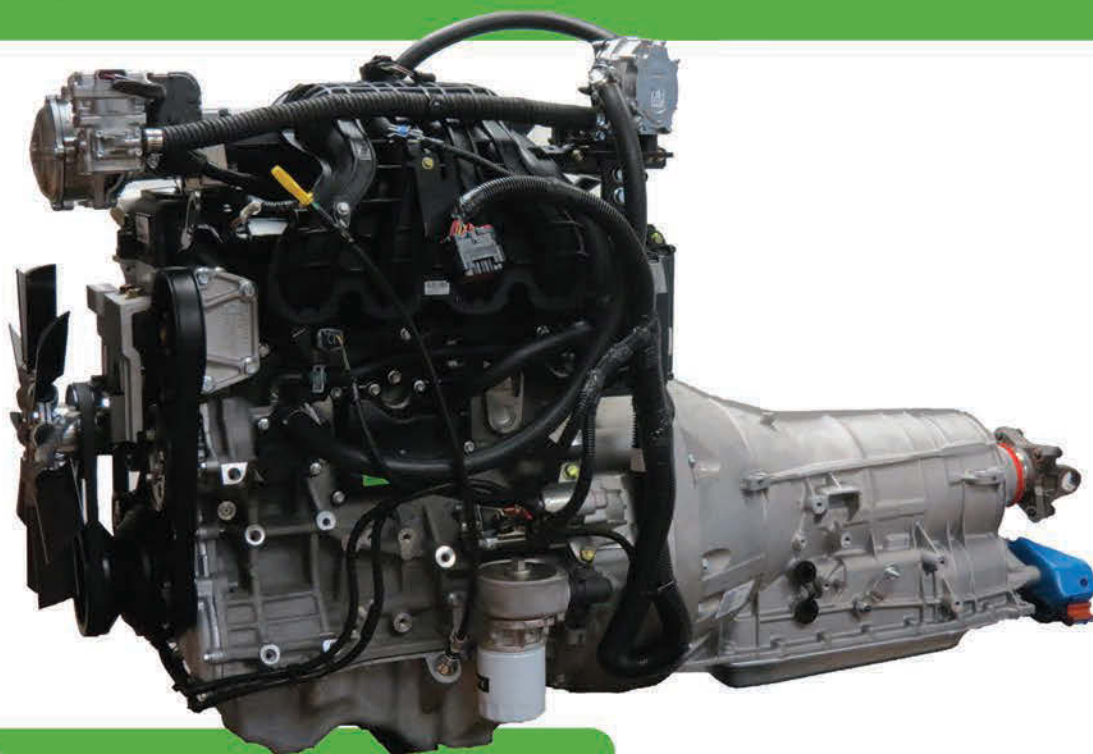
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