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Ground Support

WORLDWIDE
EQUIPMENT – SERVICES – HANDLING

JANUARY/FEBRUARY 2024

2024 State of the Industry

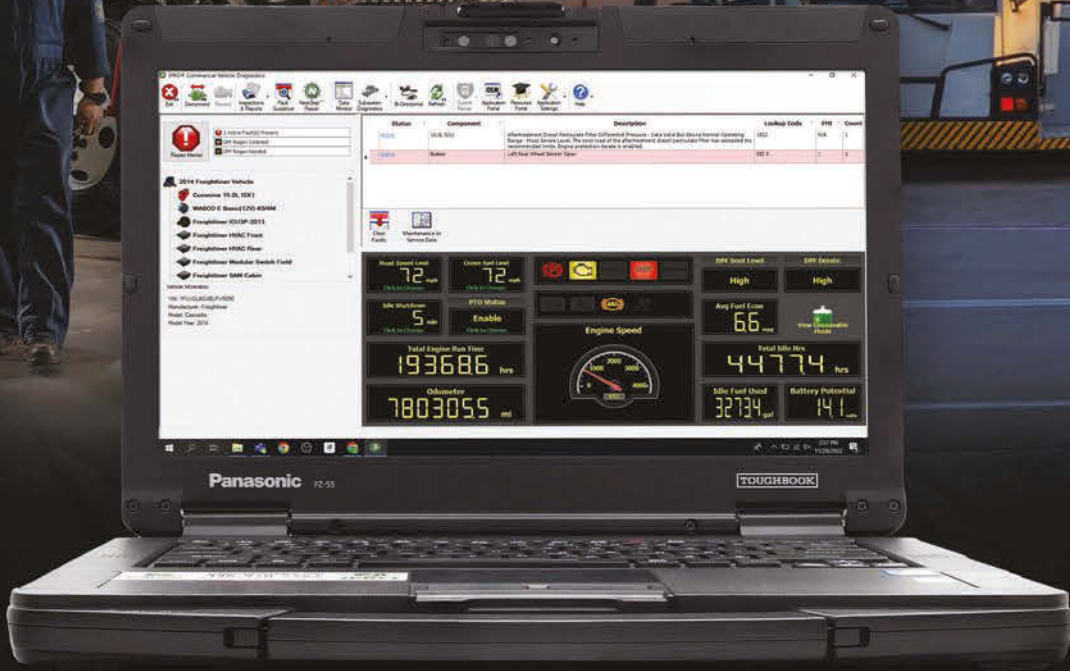


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WORLDWIDE

Why Do Aircraft Misfuelings Happen?

In the last two years, there have been 11 known misfuelings – five in 2023 and six others in 2022, according to Keith Clark, senior quality control and technical representative at Phillips 66.

Eight of these misfuelings were caught prior to take-off, allowing the aircrafts' tanks to be flushed and then refueled with the correct fuel.

Three others took off.

During an industry webinar, Clark discussed the mistakes humans make that can lead to misfueled aircraft. The key to avoiding mistakes is clear communication and verifying information.

"Communication is the critical thing we do every day. We have to communicate. We also have to verify," he said.

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Keith Clark

How to Mitigate Runway Incursions and Train for Emergencies

AVIATIONPROS.com
SPECIAL REPORT

Having an emergency response plan (ERP) in place can mitigate the extent of an accident when the unthinkable happens at the airport.

"You have a much better chance of minimizing the effect of a disaster when you prepare for it ahead of time," said Todd Thomas, safety manager at Baldwin Aviation Safety and Compliance.

Thomas noted an ERP should be developed to fit the size of an organization and be clearly laid out.

Beyond ERPs, many airports are utilizing runway incursion mitigation (RIM) programs.

Justin Bychek and Greg Albjerg of HNTB said airports are using RIM programs to assess airfield safety.

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What Makes a Ground Support Team Successful?



MENZIES TPA

Menzies Aviation TPA was recognized as the inaugural Ground Support Team of the Year.

In the AviationPros Podcast, Ground Support Worldwide editor Josh Smith talks with John Vollbrecht, general manager for Menzies Aviation TPA, and Jose Valenzuela, account manager for Menzies Aviation TPA. The interview took place during the International GSE Expo to learn what makes their team successful.

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The Importance of Ground Damage Mitigation

A recent accident at O'Hare Airport serves as a reminder of the dangers and costs associated with ground damage.

In December, a ground service provider operating a baggage cart collided with an Aeromexico aircraft parked at the gate. According to a report by ABC7 Chicago, 100 passengers were forced to deplane after the piece of ground support equipment (GSE) damaged the aircraft's engine.

Fortunately, no injuries were reported. However, ground damage remains a key concern across the ground handling industry.

To mitigate the risk and expense that comes with ground damage, aviation stakeholders – including ground service providers, airlines and airport representatives – are working to together on solutions.

For example, the International Air Transport Association (IATA) introduced the ground damage database (GDDB) more than a decade ago with the aim of collecting aircraft ground damage reports, determining trends and enabling analysis of ground damage incidents.

Since the GDDB was established, it has been moved into IATA's Incident Data eXchange (IDX), which uses global and regional trend data analytics to set safety and security performance targets.

IDX is IATA's safety and security incident data management program, IATA officials explained in the Ground

Support Worldwide article "An Analytical Approach to Ground Damage." IDX is a globally aggregated and de-identified database of incident reports. It offers a secure environment, allowing participants to view aggregated data against standards and benchmarked with other counterparts.

"Ground damage events represent a significant safety issue and cost challenge for the industry," IATA officials explained, noting the association has brought together both ground and flight safety information in a more comprehensive and user-friendly format. "Having a comprehensive database of such instances enables the identification of risk factors involved in ground damage events and benchmarking of best practices to avoid them."

With the help of IDX participation, data can be collected and analyzed to identify trends and root causes for ground damage. Armed with the right information, ground service providers and airlines can take necessary steps to manage safety risks appropriately.

Has your operation adopted ground damage mitigations processes as part of a safety management system (SMS) or other stand operating procedures?

Please reach out to our editorial team with examples of effective ground damage mitigation strategies. **GSW**

TOP NEWS

EASA Proposes EU-Wide Regulation on Ground Handling



The European Union Aviation Safety Agency (EASA) published a proposal to regulate ground handling across European Union airports, to increase the safety, cybersecurity and consistency of all the actions that happen on the ground before and after a flight. This opinion proposes a regulation that will affect approximately 300,000 workers in the ground handling industry. The regulation will also ensure that ground handling is covered by Regulation (EU) 2022/1645 on cybersecurity.

“Aviation safety starts on the ground. This entirely new proposal fills an important gap in the overall regulation of aviation operations in the European Union, which means that we will now have an end-to-end approach to ensuring aviation safety and cybersecurity,” said EASA acting executive director Luc Tytgat. “For passengers and their airlines, this will provide increased certainty that ground

handling operations are being carried out safely and consistently in all major airports across the EASA Member States.”

The opinion proposes an efficient approach on the oversight of ground handling organizations by competent authorities. This is expected to avoid multiple verifications of the same activities and organizational aspects and gradually reduce the significant number of audits performed mostly by aircraft operators. This way, organizations should be able to better allocate their resources from auditing to managing the safety of their operations.

The new ground handling regulation would require ground handling organizations and self-handling aircraft operators performing commercial air transport operations with aircraft to self-declare that they comply with the EU requirements. The ground handling regulation is expected to be published in late 2024 or early 2025.

McCreery Aviation Completes Stage 3 IS-BAH Registration Renewal

McCreery Aviation has successfully renewed its Stage 3 International Standard for Business Aircraft Handling (IS-BAH) registration following a comprehensive safety audit.

In achieving a renewal of a Stage 3 registration, McCreery Aviation becomes just the third FBO in the U.S. to accomplish this task. IS-BAH is part of the International Business Aviation Council (IBAC). Stage 3 is the highest level of safety standard established

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

“McCreery Aviation has continued to demonstrate its positive commitment to safety as a core value to their customers. Congratulations to the entire team at McCreery, they should be very proud of this achievement and their drive to promote safer ground handling operations to the business aviation community,” said Terry Yeomans, IS-BAH program director.

UPCOMING EVENTS

March 5-7
2024 AAEE/ACC Airport Planning, Design, and Construction Symposium
Salt Lake City, Utah

March 12-14
NBAA Schedulers & Dispatchers Conference
Fort Worth, Texas

March 21-23
Women in Aviation International Conference
Orlando, Florida

April 9-11
MRO Americas
Chicago, Illinois

April 19-24
International Aviation Snow Symposium
Buffalo, New York

April 28-May 1
AAAE Conference
Nashville, Tennessee

April 30-May 2
2024 NBAA Maintenance Conference
Portland, Oregon

May 7-9
36th IATA Ground Handling Conference (IGHC)
Reykjavik, Iceland

May 14-16
Airport Show
Dubai, UAE



PEOPLE

Durst Succeeds Burdakin as JBT AeroTech President

Effective Jan. 1, 2024, Dave Burdakin, president of JBT AeroTech Corporation (a subsidiary of Oshkosh Corporation), has retired. Taking the helm as the new president of JBT AeroTech is Chuck Durst, a veteran in the industry with a career spanning 38 years. Durst has served as the president of the ground support equipment (GSE) business for the past 21 years.

"I have mixed emotions about retirement as I have loved working with our customers and a great team at AeroTech. We have

grown the business dramatically over the last 10 years by working relentlessly to provide our aviation customers with industry leading products and service," said Burdakin.

In his new role, Durst will continue to lead the GSE business and assume responsibility for all of AeroTech, which includes Jetway Systems and Airport Services. He will report directly to Jim Johnson, president of the Oshkosh Vocational Segment.

Moreover, Frank Moore, previously the president and general manager of Airport Services, will



Chuck Durst

now transition into the role of president and general manager of Jetway Systems under Durst's leadership. Burdakin has agreed to serve as an advisor to JBT AeroTech in a part time consulting role.

Mercury GSE Appoints Garner as Chief of Staff



Mercury GSE announced the appointment of Mandy Garner to the newly established role of chief of staff. In this capacity, Garner will report directly to Mercury GSE CEO Jason Gendron, adding leadership to a dynamic executive team.

Garner brings a wealth of expertise in brand management, strategy development and planning. Her diverse background encompasses media, digital, social, creative, experiential and public relations. Garner is a graduate of Illinois State University, holding a bachelor's degree in accounting. Her unique blend of skills, coupled with her extensive industry experience, makes her a valuable asset to the Mercury GSE team.

NATA Promotes Berry to Vice President of Education and Safety



NATA announced a key leadership change with the promotion of Steve Berry to vice president of education and safety. "Steve has contributed greatly to NATA's success over the past several years, building on his wealth of industry knowledge to help advance NATA's education and training programs as well as the overall safety of the industry," said NATA COO Keith DeBerry.

Berry first served as NATA's training and content manager before being promoted to manager of fuel quality and safety and most recently to managing director of safety and training. In his new role as vice president, Berry leads the strategic vision for and oversight of NATA's education and safety

initiatives, including the Safety 1st Training Center and Safety 1st onSITE. He also represents the interests of aviation businesses at industry meetings and hearings, serving on several committees. Berry has helped develop and promote safe fueling practices under www.preventmisfueling.com, Eliminate Aviation Gasoline Lead Emissions (EAGLE) and other initiatives.

"I am proud to serve with the NATA executive team in furthering the association's collaboration with talented aviation business leaders and allied groups to foster the leadership of our member organizations in evolving general aviation safety and education," said Berry. "I look forward to continuing to improve our current Safety 1st training program offerings, while working with our strategic partners to advance the use of data and technology in making the GA ramp a safer, smarter space."

NEW DEALS

Havas Renews Ground Handling License in Latvia

Havas has renewed its ground handling license at Riga Airport until 2031. Havas has been providing ground handling services to various airline companies at Riga International Airport since 2010.

“During our operations at Riga Airport, we have continuously expanded our portfolio with our customer satisfaction-oriented approach. The fact that our company was granted a seven-year service license for the third time following the tender opened by the Latvian Ministry of Transport shows that our efforts are appreciated by both the authorities, airlines and passengers. In our cooperation with our airline customers, we focus on providing the highest level of service and continuously improving our



operations with innovative solutions. Utilizing our expansive know-how, we are evaluating growth opportunities in the international arena,” said Havas general manager S. Mete Erna.

At Riga, Havas provides passenger and operation services, including passenger and baggage handling, ramp, aircraft cleaning, load control and communication, deicing, flight operations, transportation, representation and supervision services to Turkish Airlines, Lufthansa, LOT Polish Airlines, Norwegian Airlines, Wizzair, British Airways, SkyUp, Smartlynx, Transavia and Aegean.

dnata's Airport Handling Set to Launch Operations at Rome Fiumicino (FCO)



Airport Handling, a majority-owned subsidiary of dnata, has been awarded a seven-year ground handling license by Aeroporti di Roma and will establish operations at Rome Fiumicino Airport (FCO). The company is targeting to launch operations in the Italian capital in the second quarter of 2024.

Airport Handling will provide a range of quality and safe ramp and passenger services to airlines in Rome. It has already committed an investment of more than €20 million to purchase new ground support equipment (GSE), including advanced electric vehicles. Having recruited a local senior management team, which is very familiar with the Rome market, Airport Handling is targeting to employ more than 1,800

customer-oriented aviation professionals at FCO.

“We are proud to have secured operating license at another leading Italian airport as a result of a highly competitive tender process. Expanding into Rome Fiumicino is a significant milestone that aligns with our growth strategy and underlines our commitment to consistently enhancing our operations,” said Alberto Morosi, CEO of Airport Handling.

Aviator Extends Strategic Partnership with Lufthansa Group

Aviator Airport Alliance has announced the expansion of a strategic collaboration with Lufthansa Group. The expanded arrangement is effective from December 2023 until November 2026 and applies to an Aviator-operated station in Gothenburg, Sweden (GOT).

“I am glad to express sincere gratitude to Lufthansa Group for choosing Aviator and trusting us

with confidence. After the expansion of the partnership, we will have around 75 weekly turns, and this is a bold sign of trust from our partners. We commit to delivering world-class ground handling and deicing solutions that meet and exceed the industry's highest standards,” said Jo Alex Tanem, CEO of Aviator Airport Alliance.

“Our partnership with Aviator has grown every year along with operational efficiency. I firmly believe that, built on mutual trust and respect, it will remain strong for many years to come. Having partners like Aviator is a key element of our success,” added Sven Thaler, head of ground operations Continental North at Lufthansa Group.





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Sensor Technology: Powering Precision and Progress in GSE

Sensor technology is revolutionizing GSE operations, enhancing safety and improving efficiencies for ground service providers.

BY TIM CONKLIN

Mobile machines are essential workhorses in various industries, including aviation. One of the biggest trends in mobile machines is automating more of the basic functions of equipment.

On refuse trucks, for example, a driver only needs to know how to drive a truck. The machine can locate the container and lift it, while monitoring the hopper level and weight in the back.

Ground support equipment (GSE) plays a crucial role in ensuring efficient and safe aircraft turnaround times and is therefore seeing similar trends.

In recent years, automation technology has emerged as a game-changer, bringing a plethora of benefits, including enhanced performance, simplified operation and increased reliability.

Sensors provide real-time data on equipment operation, enabling precise control and optimization. Automation also reduces complexity, making GSE easier to use and requiring less training for operators. What's more, sensor-driven monitoring and diagnostics identify potential issues early, preventing downtime and costly repairs.

Sensor Integration in GSE

Deicers were among the first GSE machines to embrace full automation.

These critical systems require precise fluid application and boom positioning to ensure efficient ice removal without damaging the aircraft.

Sensor feedback empowers intelligent systems like JBT's EZ-Jib on the Tempest-i to control the boom with a single joystick, simplifying operation while maximizing effectiveness. Sensors monitor the real-time position and can even enable automatic stowing in the correct position.

Most GSE uses sensor technology to improve performance or safety in a variety of ways.

Lavatory service trucks, for example, utilize sensors that can monitor incoming and outgoing fluid levels, ensuring complete servicing before departure. This data can be recorded for improved equipment design, or simply show the operator a red/green alert to indicate the service is complete.

On towbarless pushback tractors, pressure sensors in the equipment verify secure grip on the aircraft wheels, adhering to nose landing gear (NLG) limitations and preventing damage. In the future, we may also see the machine identify the aircraft automatically to match manufacturer lifting guidelines.

When it comes to deicing technology, advanced systems like Safeaero's Intellimix use sensors to monitor fluid temperature before spraying, optimizing performance



Sensors provide real-time data on equipment operation, enabling precise control and optimization.

ALL PHOTOS COURTESY OF IFM

and ensuring passenger safety. This is another simple step that takes a complex task out of the operators' hands, so they can focus on the intricate task of spraying the aircraft.

Emerging Technologies

In today's GSE landscape, there is currently a race to implement a number of emerging technologies on machines.

Collision Avoidance Systems

The International Air Transport Association's (IATA) Airport Handling Manual (AHM) 913 regulations prioritize safety, and collision avoidance system (CAS) technology helps prevent costly and potentially disastrous collisions between GSE and aircraft. This might include radar or lidar sensors to detect the aircraft from longer distances and short-range sensors for final positioning.

Combining these sensors with a high-performance control system can support slowing/stopping the machine before contact.



Automation technology has emerged as a game-changer, bringing a plethora of benefits, including enhanced performance, simplified operation and increased reliability.

Remote Equipment Tracking

Sensors enable real-time monitoring of GSE performance and location, enhancing efficiency and simplifying maintenance planning. This data can be stored locally on an intelligent display for later analysis, or can be automatically transmitted to the cloud to manage the whole fleet at a glance.

Beyond the “must-haves,” other sensor solutions offer valuable advantages.

Seat Belt Tracking/Operator Presence Monitoring

Seat belt tracking/operator presence monitoring is a simple technology that promotes operator safety by ensuring proper seat belt use or operator alertness.

This is sometimes integrated with the vehicle’s drive to stop an operator from moving if the seat is empty or if the belt is not fastened.

Electric Machine Battery Monitoring

Real-time data on battery health identifies potential faults or charging errors before they lead to disruptions or safety hazards. Over time, this data can be analyzed to identify where to invest in new equipment or when to refurbish existing equipment.

Technology adoption is constantly advancing, and new advancements can be expected soon.

Boarding Bridge Automation

Sensor-driven systems can automate bridge movements, dramatically speeding up gate turnaround times while ensuring passenger safety.

The same technologies that are being implemented on other equipment can be applied here to improve this process.

Most passenger boarding bridge (PBB) systems already incorporate automation for the auto-level system. It could easily be taken another step forward with sensors to measure



Most GSE uses sensor technology to improve performance or safety in a variety of ways.

distance to the aircraft and the angle of approach.

New Industry Requirements

As safety standards tighten, sensor and control technologies that comply with the International Organization for Standard’s ISO 26262 specification, which is focused on functional safety, will become increasingly important.

Sensors and program logic controllers (PLCs) that are rated to ISO 26262 have feedback that can detect faults as well as provide communication redundancies to assure proper sensor status. This allows the customer to create a system that achieves ISO 26262.

Right now, equipment manufacturers and end-users are optimistic that uniform safety standards will make it easier to guarantee safety on the ramp.

Sensor Technology’s Impact on the Future of GSE

Sensor technology is revolutionizing GSE operations, driving precision, improving efficiency and enhancing safety.

From deicing automation to collision avoidance systems, automation is empowering a new era of intelligent ground support.

By leveraging the power of technology, we can ensure that GSE continues to evolve alongside the aviation industry, supporting continued growth and innovation above and below the wing. **GSW**

ABOUT THE AUTHOR

TIM CONKLIN

Tim Conklin works in business development – mobile vehicle perception at ifm efector inc. ifm has implemented technology to support all applications for the ground support equipment industry. He can be reached at tim.conklin@ifm.com.



2024 State of the Industry

A look at the latest trends across the GSE and ground handling markets according to Ground Support Worldwide's annual survey.

BY JOSH SMITH

As 2023 came to an end, Ground Support Worldwide conducted its annual survey of industry members to gather insight into various topics that directly impact the ground support equipment (GSE) and ground handling markets.

The feedback received from the survey is reflected in the following pages, allowing us to explore the trends shaping industry moving into 2024.

“Air travel’s ramp up since the pandemic has created more business opportunities for the majority of those polled. Only a slim margin of those polled reported being unable to keep up with current demand

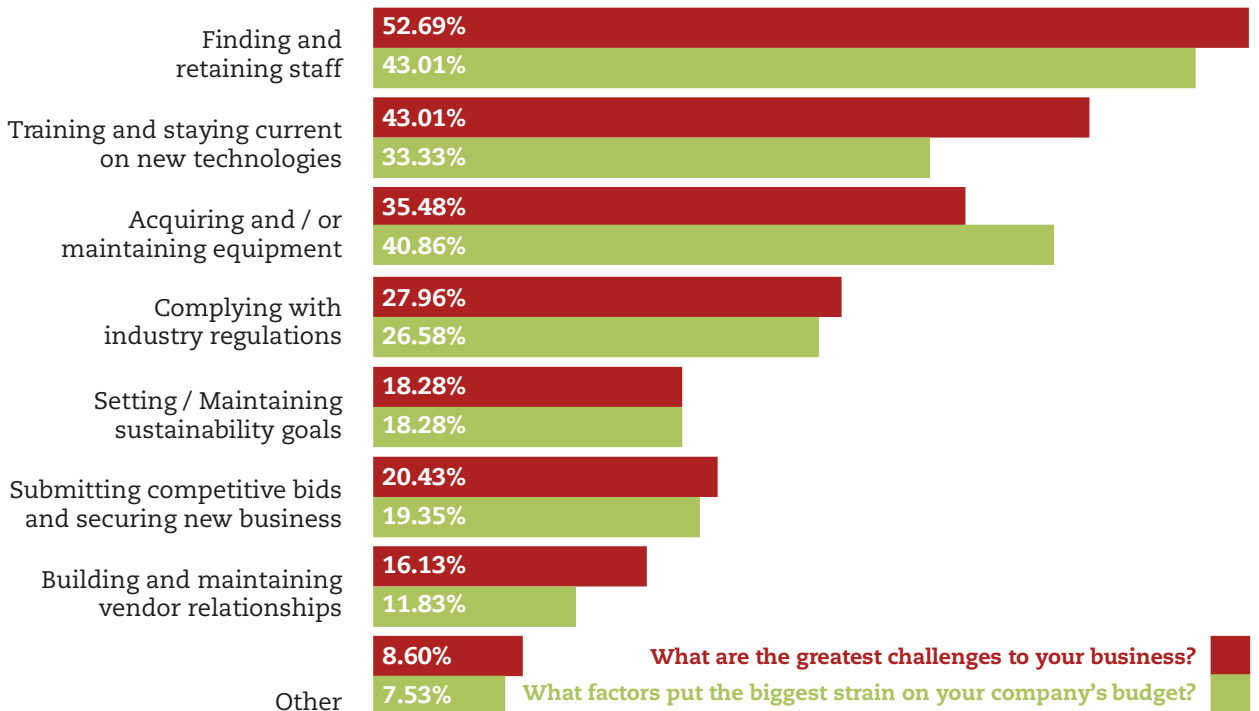
“Barring any significant correction in the industry, in the economy, it’s going to continue to move forward. I’m very bullish, if you will, on the industry going forward,” says Louis Sorrentino, CEO and managing director at AvMaSSi.

For the second year in a row, the greatest challenge facing businesses

in the ground support market was finding and retaining staff.

Along with staffing challenges, 43 percent of survey participants said training and staying current on new technologies was the second greatest challenge – up from 27 percent a year ago.

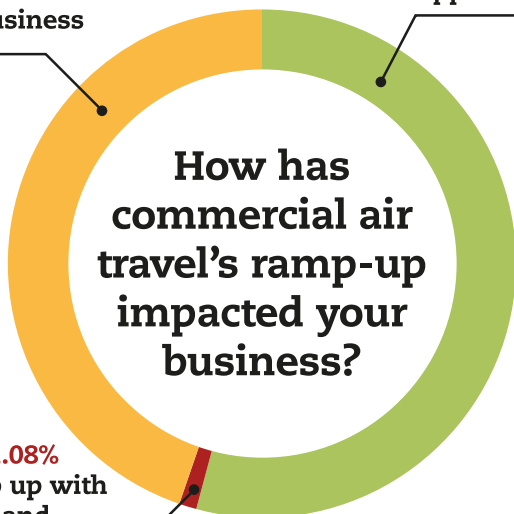
Workforce volumes decreased during the pandemic. Additionally, the ground handling environment can be challenging due to the physical requirements of the job, climate conditions and other challenges on the ramp.



Neutral 44.09%
commercial passenger
volumes do not
influence business

Positively 53.76%
more business
opportunities

Negatively 1.08%
cannot keep up with
current demand



**How has
commercial air
travel's ramp-up
impacted your
business?**

What measures is your company taking to reduce costs in 2023?

39.78% There are no budget reduction plans

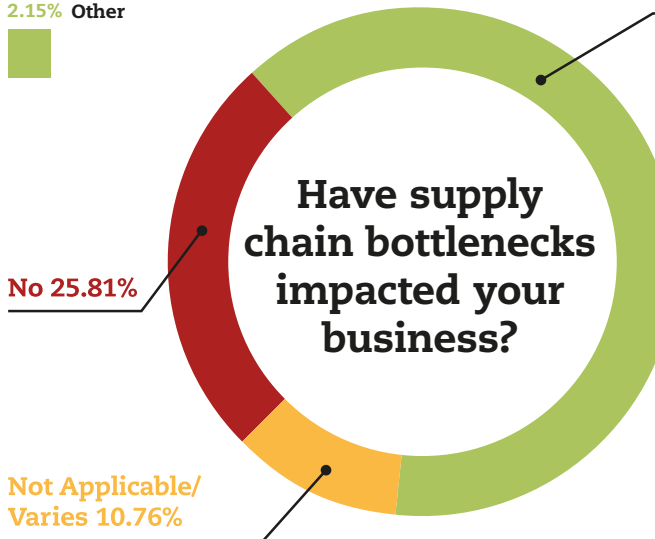
35.48% Overall budget reduction

30.11% Reducing parts & maintenance expenses

11.83% Suspending contracted services

8.60% Implementing reductions-in-force (permanent termination of employment)

2.15% Other



**Have supply
chain bottlenecks
impacted your
business?**

No 25.81%

Yes 63.44%

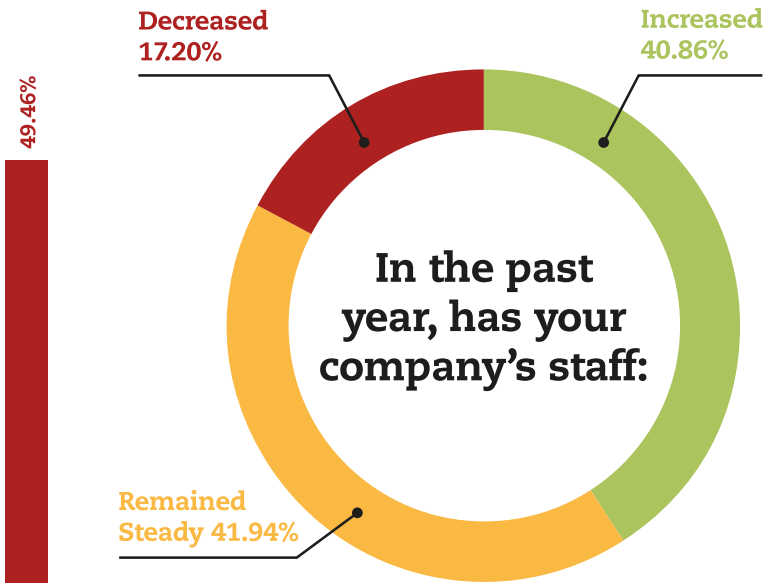
**Not Applicable/
Varies 10.76%**

“Trying to get today’s young worker to embrace that environment is really challenging. One of the best things we can do is give new employees, potential employees, a very good overview of what the work environment is going to be,” Sorrentino says, adding a career in aviation can be very exciting and rewarding.

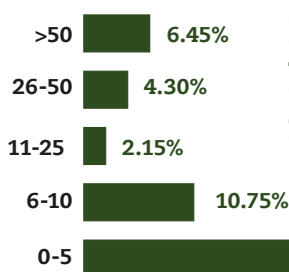
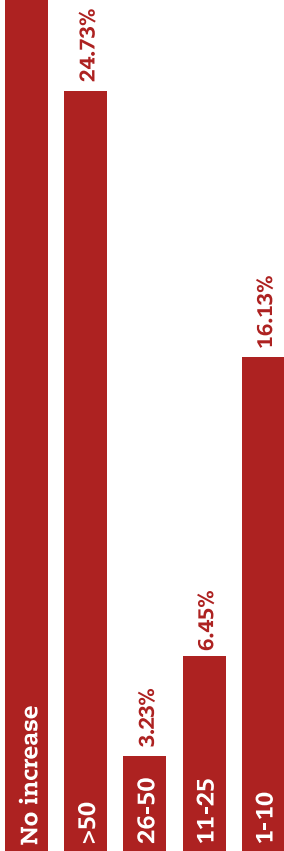
“That being said, wages have been difficult in the industry, historically. Some regions are making better strides at that, but it still remains a challenge. A decent benefits package still remains a challenge,” he continues. “I think one of the biggest mistakes we’ve done as an industry is not provide new employees with a vision of where they can go within the expanse of aviation.”

When asked about acquiring and/or maintaining equipment, approximately 35 percent of those surveyed said both were challenges facing their business, and about 41 percent said equipment puts the biggest strain on their company budget. While these are still prominent challenges, these figures are down from 44 and 50 percent, respectively, from last year’s survey.

Supply chain bottlenecks are still impacting the majority of those surveyed. However, compared to last year’s data, supply chain challenges have improved slightly.



In the past year, how many employees have you hired?



Over the past year, the size of company staffs remained mostly steady. Only 41 percent of respondents reported an increase in staff size – compared to 50 percent a year ago. Conversely, 17 percent of those surveyed said their staff decreased – compared to 22 percent polled in 2023.

“The operators I’m working with, they are seeing some stabilization of their workforce. People are coming back,” Sorrentino says. “I’m optimistic that the resource challenges will diminish.”

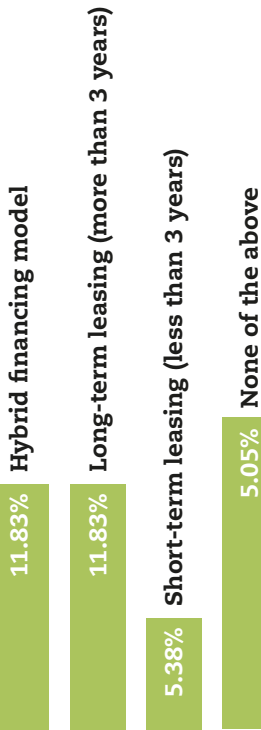
Steady employment figures may indicate an improvement in employee turnover rates. However, many companies across the ground support market still face turnover challenges. To help combat this, Sorrentino says pre-vetting potential employees is key, and scaling training programs to introduce people to ground handling can help.

“Once you see that they’re committed and can work in these environments, then transition them to full-time and additional training,” Sorrentino says.

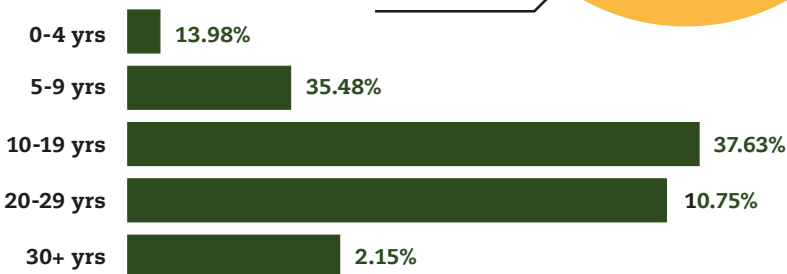
Data collected for the 2024 survey shows a rise in safety management system (SMS) adoption, climbing from 83 percent last year to nearly 90 percent. Companies that reported 10 workplace accidents or fewer remained steady from last year’s survey results.

55.91%

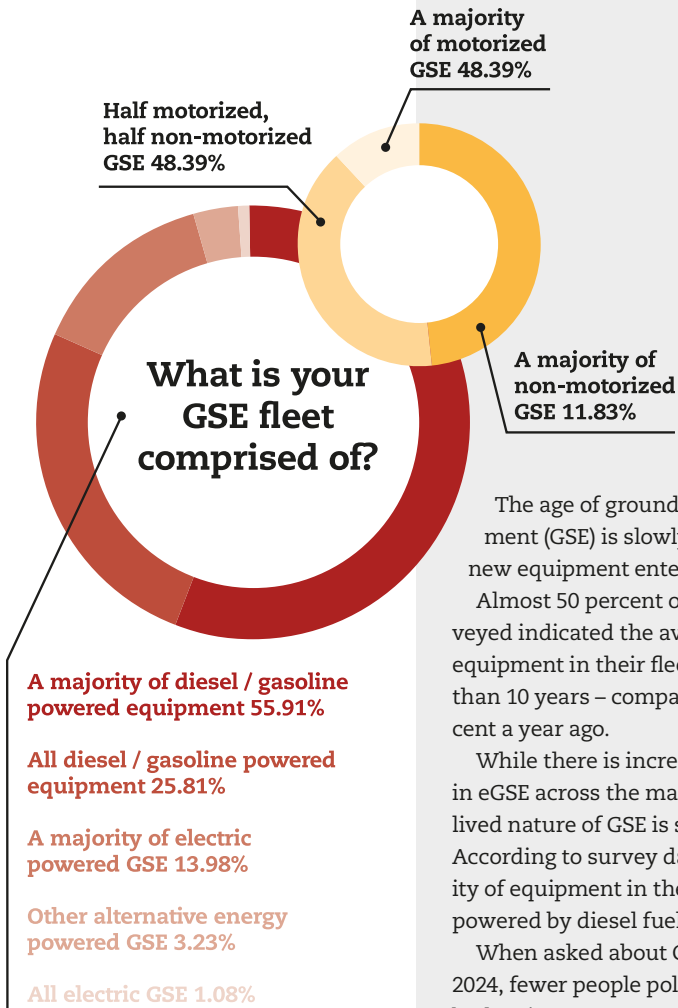
How do you finance the equipment in your GSE fleet?



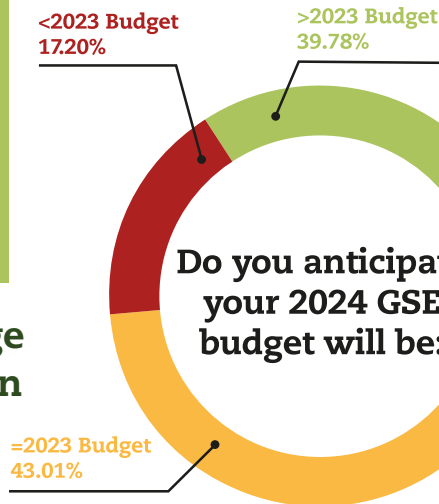
What is the average age of equipment in your GSE fleet?



What is your GSE fleet comprised of?



Do you anticipate your 2024 GSE budget will be:



The age of ground support equipment (GSE) is slowly decreasing as new equipment enters the market. Almost 50 percent of those surveyed indicated the average age of equipment in their fleet was less than 10 years – compared to 43 percent a year ago.

While there is increasing interest in eGSE across the market, the long-lived nature of GSE is still prevalent. According to survey data, the majority of equipment in the field remains powered by diesel fuel or gasoline.

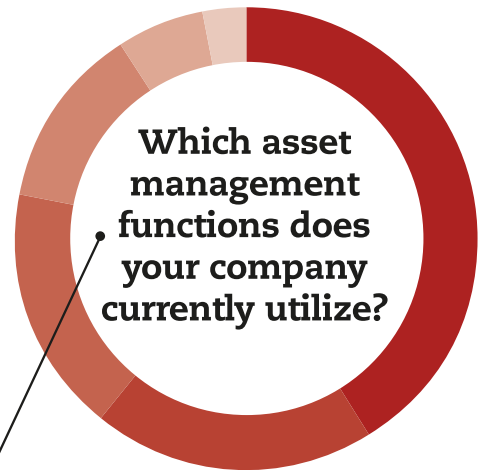
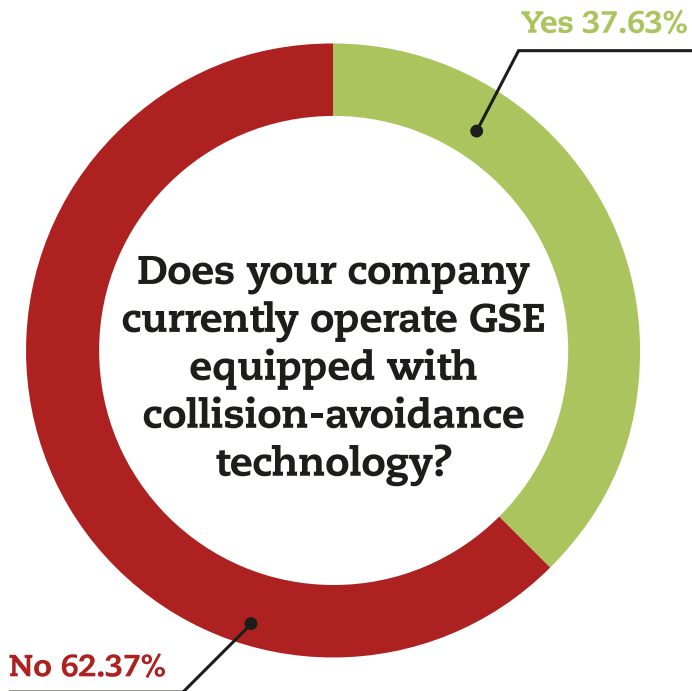
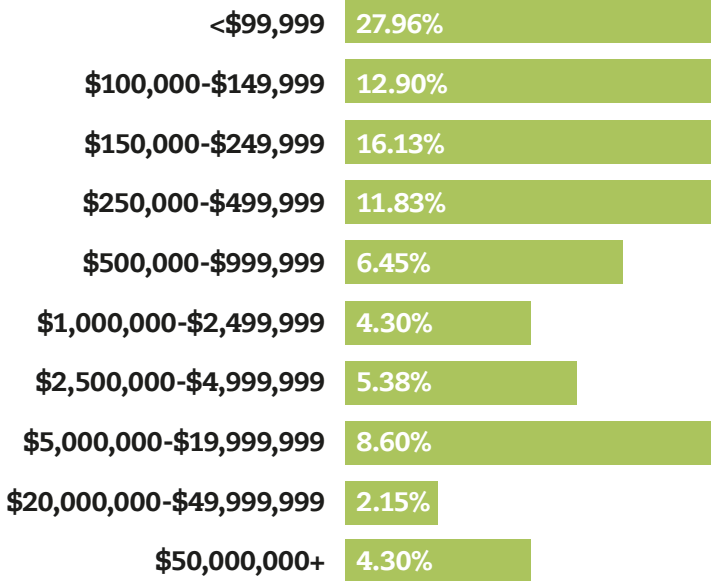
When asked about GSE budgets in 2024, fewer people polled expect a budget increase. However, 43 percent of respondents anticipate their budget would remain steady.

The U.S. Federal Reserve has announced its intention to lower rates in 2024 and 2025. While consumer spending may increase, it could take some time before the GSE market sees the same shift in spending, according to Jason Gendron, CEO at Mercury GSE.

“Interest rates have a lag effect, with about a six-month lag, to what the Fed does. What we are seeing now is the effects of raises in interest rates that happened last summer,” Gendron says. “The effect of interest rates being lowered may not be seen in 2024.

“I think it is a wait-and-see approach for aviation,” he continues, adding he is not certain the U.S. economy has hit peak inflation, nor a peak in rates. “There has been a lot of purchasing that has happened post-COVID, and this is the year it may slow down.”

For 2024, what is your forecasted GSE budget?



Preventative maintenance 79.57%

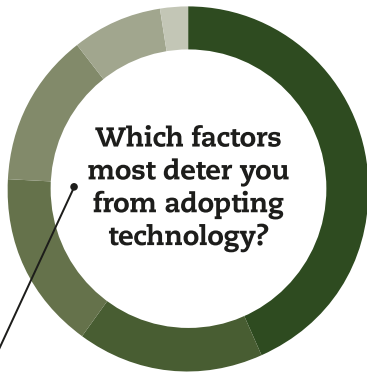
User accountability 37.63%

Security 33.33%

Geofencing / location 24.73%

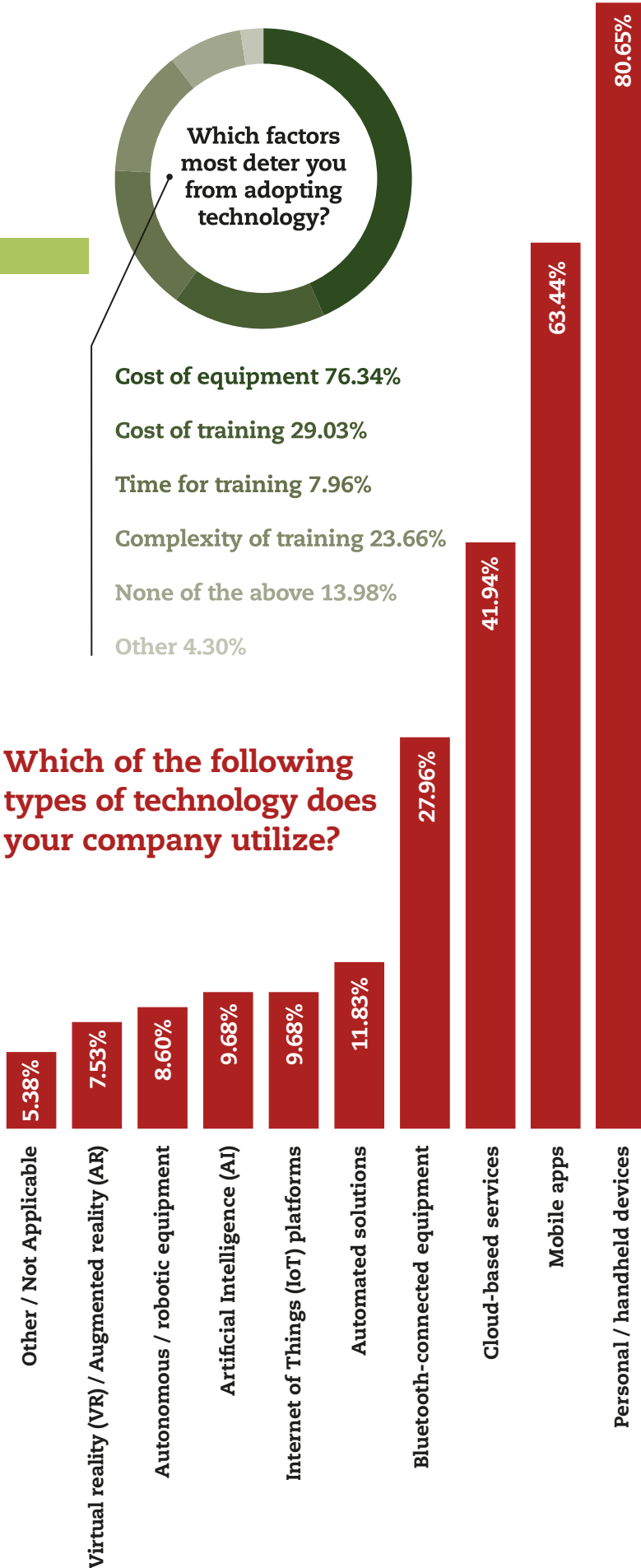
GSE pooling 11.83%

Other / Not Applicable 5.38%



- Cost of equipment 76.34%
- Cost of training 29.03%
- Time for training 7.96%
- Complexity of training 23.66%
- None of the above 13.98%
- Other 4.30%

Which of the following types of technology does your company utilize?



Technology continues to play a vital role in aviation, and the ground support sector, specifically. GSE manufacturers are incorporating more tech into their equipment and ground handlers are relying on technology to increase efficiency.

Data collected in this year's survey support this, as those polled indicated a steady increase in technology adoption. Specifically, those polled reported increased adoption of personal / handheld devices, mobile apps, cloud-based services, Bluetooth-connected equipment and virtual / augmented reality.

"The old-school SMS is a manual on the shelf and a form that you would fill out," Sorrentino says. "The old-school paper, it's done.

"If you address a hazard, and don't write it down, you lose that institutional knowledge of that hazard ever occurring," he continued. "Technology enables you to track and trap that information."

The cost of equipment remains the top factor deterring more technology adoption. However, fewer survey respondents said the cost of training was a deterrent. The time it takes to train and the training's complexity remain key factors when considering adopting new technology solutions.

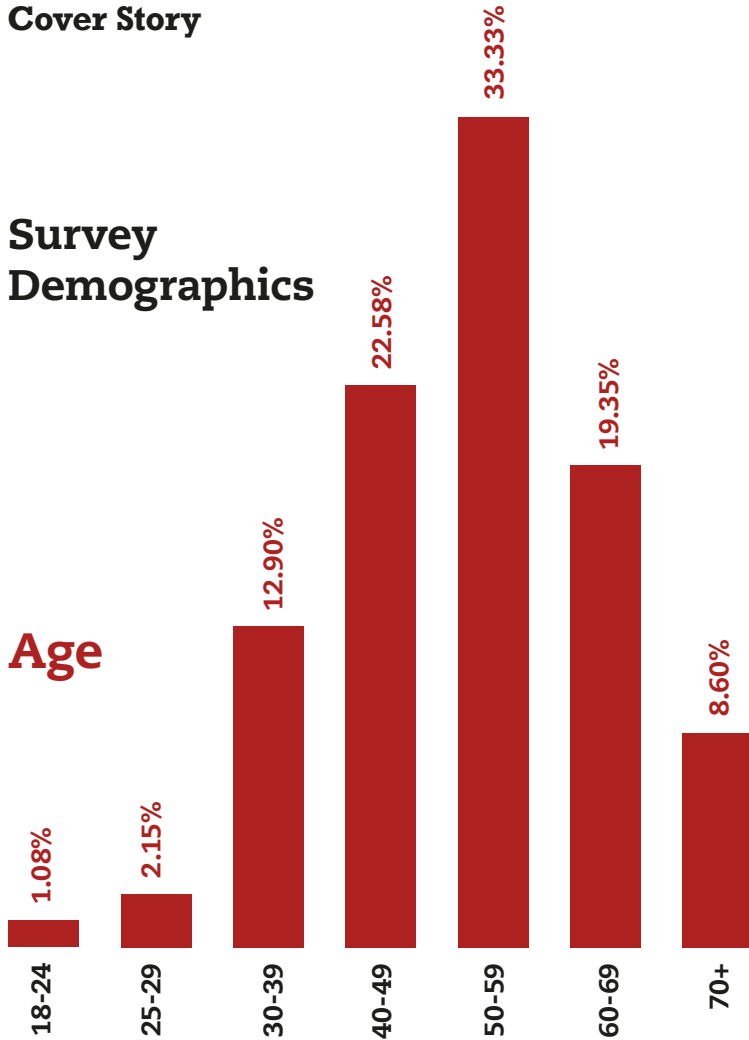
Technology, like anything, must be scaled so it can be utilized appropriately for a given operation, Sorrentino advises.

"Some make an investment in a product that's too complicated for their operation, and they never end up using it effectively," he says.

"It has to be cost-effective to what the outcome is," Sorrentino continues. "And it has to be trained."

Survey Demographics

Age



While the COVID-19 pandemic devastated the aviation industry, many of its impacts have subsided. According to the International Air Transport Association (IATA), air travel demand in November 2023 surpassed 99 percent of 2019.

“We are moving ever closer to surpassing the 2019 peak year for air travel. Economic headwinds are not deterring people from taking to the skies. International travel remains 5.5 percent below pre-pandemic levels but that gap is rapidly closing. And domestic markets have been above their pre-pandemic levels continuously since April,” said Willie Walsh, IATA’s director general.

As the ground support sector is closely tied to other segments of aviation, including commercial travel, cargo and more, more positive trends may be on the way. **GSW**

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How Ground Handlers are Contributing to Aviation's Sustainability

In the Asia-Pacific region, and around the world, ground service providers are taking steps to reduce their environmental impact while increasing operational efficiencies.

BY MARIO PIEROBON

Sustainability is an important subject in the aircraft ground handling industry. As a result, ground handling companies are increasingly promoting or being involved in sustainability initiatives.

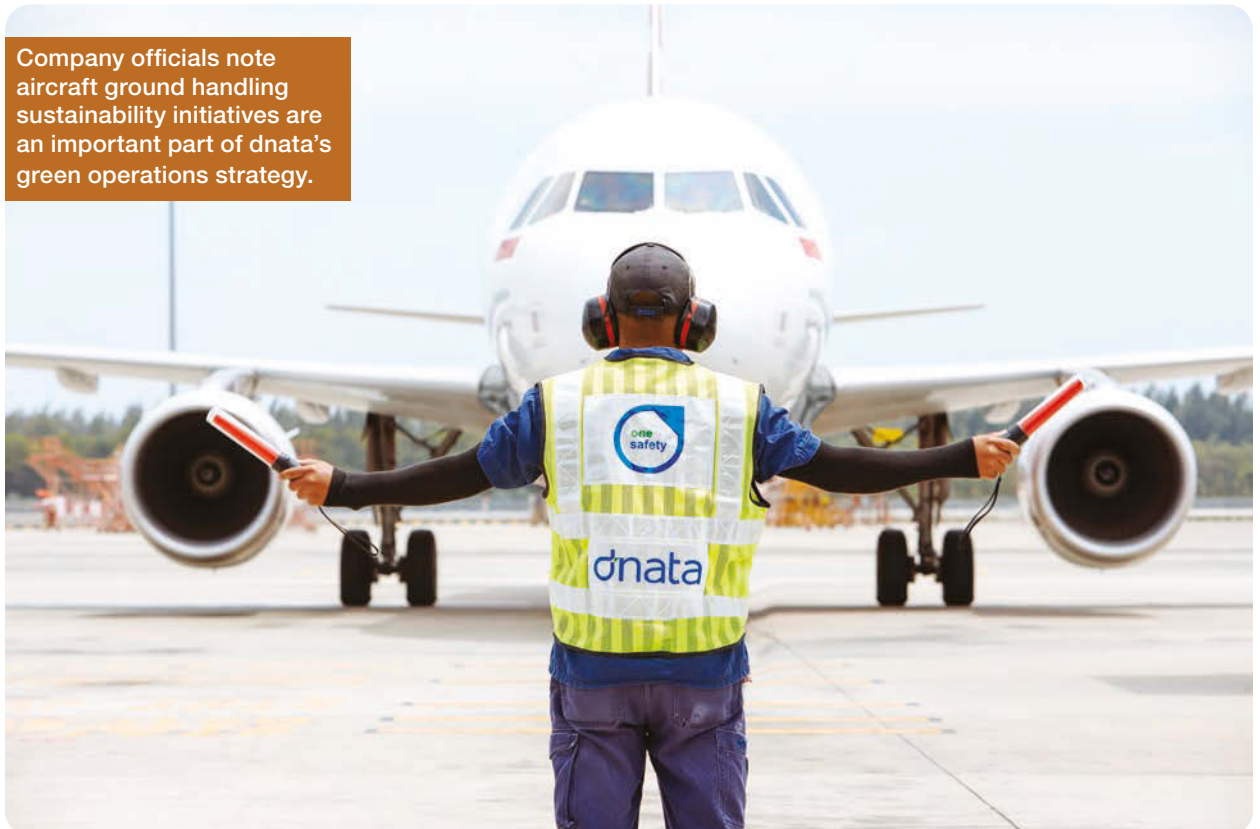
Across the Asia-Pacific region, there are many leading examples of sustainability projects being implemented.

Parties Involved

There are multiple parties leading sustainability initiatives in aircraft ground handling. This varies from airport to airport, but in general it is the airports, airlines and ground handling companies that are leading the green initiatives, observes Steven Ng, sales director at ITW GSE Asia-Pacific.

“Airports all over the world are beginning to think greener and almost half of global passenger traffic passes through airport carbon-accredited airports,” he says. “To date, more airports are showing greater interest in reducing their environmental impact. Often large airports are located close to major

Company officials note aircraft ground handling sustainability initiatives are an important part of dnata's green operations strategy.



cities, meaning cities and airports are coming into ever-closer contact. This leads to stricter requirements in terms of acceptable emissions levels, resulting in a growing interest in electrically powered ground power units (GPUs) and pre-conditioned air (PCA) units, which effectively address the airports' sustainability goals."

According to Wilson Kwong, chief executive of Hong Kong Air Cargo Terminals Limited (Hactl), the fragmented and multifaceted nature of the sector does imply that any sustainability direction must be undertaken by multiple interest groups such as airport authorities, ground handling groups and airlines.

"This inevitably slows progress. On the other hand, we are seeing evidence of increasing interest in sustainability in the area of cargo handling, which has long been held

back because of limited options for eco-friendly GSE," he says. "In our own case, our initial interest had to face the limited availability of top-end electric GSE, capable of coping with the heavy weights and intensive use cycles we need. That is now changing, but we are meanwhile focusing on areas which are potentially more productive: such as the use of biodiesel in existing internal combustion engine- (ICE-) powered equipment, and our latest move to autonomous electric tractors to tow cargo dollies – helping to solve the challenge of recruitment as well as reducing our carbon footprint."

Sustainability Initiatives

Within Malaysia's AeroDarat, ground handling sustainability initiatives mostly come from the collaborative effort between the project management office and the aircraft services

and ground support equipment business unit.

"The industry and its people are becoming more aware on the impact of sustainability; thus, spark of interest was seen in last few years to embark on sustainability journey. In our context, we are committed in supporting the sustainability mission of our parent company, Malaysia Aviation Group (MAG), to achieve net zero carbon by 2050. Hence, business entities across MAG are coming out with multiple initiatives to ensure the target is achievable," explains Mohamad Khairi Ngadiran of AeroDarat's project management office.

Charles Galloway, dnata's regional CEO, airport operations – Asia-Pacific, highlights that aircraft ground handling sustainability initiatives are an important part of dnata's green operations strategy.



Hactl officials are seeing increasing interest in sustainable cargo handling, which has long been held back because of limited options for eco-friendly GSE.

HACTL



Airports, airlines and ground handling companies are leading green initiatives across the aviation landscape.

HACTL

“This is reflecting our pursuit of the highest standards of environmental efficiency throughout our operations. We are steadfast in our dedication to achieving a 20 percent reduction in both carbon footprint and landfill waste by 2024, followed by a more ambitious 50 percent reduction by 2030,” he says.

data is continuing to drive digitalization efforts across cargo operations in both Australia and Singapore.

“This allows for improved oversight on a local and global level. It also supports enhanced customer engagement and service excellence, elevating data sharing with all our stakeholders in the air cargo ecosystem and provides enhanced transparency across the cargo handling processes to extend life cycles, reduce waste and update them to the latest safety and quality standards,” affirms Galloway.

Airport Developments

According to Ng, in the Asia-Pacific region there is an increase in new airport developments showing increased demand for more environmentally friendly solutions, particularly in countries like Thailand, Hong Kong, Philippines, Vietnam and Singapore.

“One noteworthy project showcasing a strong commitment to sustainability is Bangkok Suvarnabhumi Airport, which has equipped its satellite terminal with electric ground support equipment (eGSE),” he says. “For this project, ITW GSE supplied 36 PCAs, 72 GPUs and 72 hose retrievers, making a substantial impact on reducing carbon emissions. These fixed ground services have the potential to cut carbon emissions by nearly 90,000 metric tons of CO₂ annually at this airport. Additionally, with no need for tractors to tow GPUs and PCAs on the apron, ground safety is also enhanced.”

Understanding the influence business has on the environment and communities, SATS has incorporated sustainability to strengthen long-term value creation and make a positive



In the Asia-Pacific region, there is an increase in new airport developments showing increased demand for more environmentally friendly solutions, particularly in countries like Thailand, Hong Kong, Philippines, Vietnam and Singapore.

ITW GSE

impact today and in the future, affirms Tan Yen Ling, head of group sustainability at SATS.

“While the board makes certain that sustainability goals are integrated into all programs and business imperatives, executive management at SATS provides stewardship and ensures that our business and strategy are aligned with our sustainability goals,” she says. “To provide a dedicated focus on sustainability, our chief sustainability officer has set up an ESG Steering Committee comprising members from our senior leadership team to establish greater alignment on ESG-related matters and ensure we invest appropriately in critical initiatives to achieve our goals.”

A notable milestone achieved by SATS has been the conversion of 298

tractors, 150 forklifts, three vans and two air tugs in Singapore to electric variants, making a significant stride in increasing the electrification of GSE from 8 percent in the financial year 2020 to 38 percent this year.

“In terms of public interest, according to studies, 2 in 3 UK employees, and 3 in 4 US employees want to work for a company that has a positive impact on the world. More than 50 percent of Gen Z and Millennials research a company’s environmental impact and policies before accepting a job. More than half of respondents

said they are ‘really worried’ about climate change, and that aviation should become carbon neutral in the future,” says Tan.

“We also see increasing importance placed on sustainability amongst our key stakeholders such as investors, customers and regulators,” Tan continues. “In Singapore, for example, the Ministry of Transport announced cleaner energy vehicle targets for Changi airside in March 2023, setting a clear direction for all ecosystem stakeholders to work towards to.” **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@alphaomega.dev.



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ULD: The Oil that Keeps the Gears of Air Cargo Turning

Digitization is an irreversible trend, and ULD operations cannot afford to be left behind.

BY BOB ROGERS

We are already well into the sixth decade of unitized air cargo operations, and just like other transport industries, the day-to-day operation of air cargo are totally dependent on having readily available unit load device (ULD) equipment at the right place and time.

When things are running smoothly, this is all very much taken for granted by the multiple players along the air cargo ecosystem, but is this the end of the story?

As is common these days, we turned to artificial intelligence (AI) asking the question: Describe in 100 words or less the top challenge facing a ULD manager in their day-to-day job of running ULD operations. A couple of seconds later, we get the response:

“The top challenge facing a ULD manager in their day-to-day job of running ULD operations is optimizing ULD utilization and availability. It involves efficiently allocating ULDs to meet flight demands, cargo volumes and aircraft compatibility while adhering to weight and balance restrictions. Balancing these factors can be complex, requiring coordination with multiple stakeholders and accurate forecasting. ULD managers must possess strong organizational and analytical skills to ensure the right ULDs are available at the right time and place, maximizing cargo capacity and operational efficiency. Addressing this challenge contributes

Date	Time	Location	Transfer Type	Control #	Opposing Party	Demurrage Code
2023-12-29	10:16:08	Amsterdam	Outgoing	074-0000038	Korean Air	DEF
2023-12-10	10:57:53	Amsterdam	Outgoing	074-0000038	American Airlines	DEF
2023-10-12	10:57:23	Dubai	Outgoing	176-0000054	Aeronet Dubai	DEF
2023-10-05	12:56:15	Auckland	Incoming	008-0000028	DEF Pacific forwarding	DEF
2023-10-03	19:14:06	New York	Outgoing	176-0000053	Aramex	DEF

Research carried out by ULD CARE reveals that around 10 percent of an airline’s ULD will be off airport.

to the smooth flow of cargo and reduces costs in logistics operations.”

As a trade association dedicated to the interests of the ULD community, ULD CARE continuously seeks to apply its resources to addressing such challenges. And front and center of such initiatives is the newly released ULD CARE Digital ULD Control Receipt, or E-UCR.

To those not familiar with the intricacies of ULD operational management, this may seem like just another airline industry acronym. But, the UCR is one of the foundations of effective ULD management as it is the document used to record the transfer of a ULD asset between parties as it moves along the air cargo chain from shipper to consignee, passing through a significant number of different parties along the way.

The UCR is an International Air Transport Association (IATA) recommended practice (RP), issued way back in the 1970s when ULD very rarely moved off airport and when controlling these assets was a great deal easier.

Today, a very significant amount of air cargo operations takes place off airport in the premises of freight forwarders and shippers/consignees. In fact, ULD can even find themselves hundreds of miles away from an airport.

Extensive research carried out by ULD CARE during 2021 and 2022 reveals that, at any one time, around 10 percent of an airline’s ULD – particularly pallets – will be off airport and that a large proportion of these units will not be returned in a timely fashion.

ALL PHOTOS COURTESY OF ULD CARE

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<input type="checkbox"/>	ULD Air 1	ULD Air 1 Amsterdam	Amsterdam	AMS	View	Edit	Duplicate & Reassign	Delete
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<input type="checkbox"/>	ULD Air 1	ULD Air 1 Edinburgh	Edinburgh	EDI	View	Edit	Duplicate & Reassign	Delete
<input type="checkbox"/>	ULD Air 1	ULD Air 1 Hong Kong	Hong Kong	HKG	View	Edit	Duplicate & Reassign	Delete
<input type="checkbox"/>	ULD Air 1	Auckland Airport	Auckland	AKL	View	Edit	Duplicate & Reassign	Delete
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The day-to-day operation of cargo is dependent on having readily available ULD equipment at the right place at the right time.

A major factor enabling this situation lies in the use of paper and pencil processes to record the transfer of the ULD from a cargo terminal to a freight forwarder's truck and the subsequent delays and inaccuracies in providing that information back to the airline's ULD management team.

It is this shortcoming that ULD CARE seeks to address through the creation of a modern digital electronic UCR, running as an app on both iOS and Android, or for that matter on an in-house system and feeding the information in real time to all related parties: the airline, the freight forwarder and the cargo terminal via an online platform.

This industry solution is a win-win situation for all players, as the efficient utilization of the world's roughly 1 million ULD assets can only benefit the entire industry.

It is only a couple of years since, during the COVID-related surge in air cargo demand, that everybody suffered from ULD asset shortages.

The solution then by the airlines was to simply go out and purchase or rent more and more equipment as a Band-Aid solution, which provided some short-term relief but, of course, at significant cost to the airlines. No sign of efficiency or sustainability there.

ULD CARE considers itself well qualified to be undertaking this project, as for the past five decades it has operated the interline ULD user group system (IULDUG), a platform that provides its member airlines with real-time information of ULD

assets transferred between themselves in the course of interlining. It is therefore not a huge leap to expand this capability to include transfers between the airline's agents (cargo terminals) and off-airport agents.

Furthermore, digitization is absolutely at the forefront of any discussion about air cargo operations. Actually, from about five or six years ago, we started to see some interesting initiatives bringing tagging of ULD into the discussion and we even saw the term "Smart ULD" entering the air cargo lexicon.

However, the rollout of such systems has not been as fast as hoped and the need to not only fit tags to very large numbers of ULD but also establish a widespread network of readers remains a significant challenge to the industry.

Drilling down on the AI response to our question – "Balancing these factors can be complex, requiring coordination with multiple stakeholders and accurate forecasting." A key component of achieving such balance is having real-time accurate information 24/7, and this is where the E-UCR comes into the picture. And it is not unreasonable to expect that when a costly and operationally essential piece of equipment is transferred from one party to another, that there be a digital record of the transfer.

ULD CARE operates as a not-for-profit trade association for this very specialist segment of the air cargo industry and has the ambition to operate this expanded system along its traditional community lines

providing the service on an affordable cost-plus basis to its members.

Furthermore, beyond digitalizing the basic ULD transfer information, there are very significant opportunities to bring efficiencies to the entire ULD operational workspace, enabling airlines to take control of not only their ULD but also accessories such as pallet nets, cargo straps and fire containment covers – the vast proportion of which are treated in an extremely wasteful manner, requiring airlines to continuously replace losses with new nets, straps and covers.

Then there is the sustainability angle, which cannot be ignored by any participants in the air cargo industry.

When it comes to the use of ULD across the industry, there is a staggering amount of unnecessary waste which is not appropriate in today's world – and is not sustainable in the long term.

As ULD CARE enters 2024, we have the technology ready to go. We have successfully conducted real-time live trials with a couple of major airlines, and are in discussion with a number of cargo terminal operators.

The use of paper and pencil recording of ULD transfers is long overdue for a digital rebirth.

The only question is if not now, then when?

Digitization is an irreversible trend, ULD operations cannot afford to be left behind. **GSW**

ABOUT THE AUTHOR

BOB ROGERS

Bob Rogers has spent most of his working life in Asia-Pacific, residing in Hong Kong and for many years running the Asia-Pacific operation of Nordisk Aviation Products. Mostly retired from a demanding "day job," these days he remains actively involved in promoting and supporting a wider understanding of ULD through his involvement with IATA and ULD CARE.



The Do's and Don'ts of Fuel Spill Prevention and Mitigation

Training, situational awareness and a preventative safety culture are critical components to fueling operations.

BY REBECCA KANABLE

A fuel spill of any size is a problem, and regardless of size, a spill should be cleaned up immediately.

“When loss of containment occurs and fuel escapes into the environment, that is when spills can escalate exponentially, and mitigation can cost millions of dollars and can take years to clean up,” says Lee Scott, systems fuel manager with the Inland Group of Companies.

Spills can also lead to environmental issues such as contamination of waterways, wetlands or soil.

The Inland Group of Companies is a multinational collective of aviation services providers. One of these companies is Inland Technologies International/Canada (Inland), specializing in aviation environmental services. On-site training is offered through Inland’s aircraft fueling and fuel farm management services.

According to Scott, the first lesson when learning about fuel spills is recognizing the hazard.

“Fuel transfers always come with a certain element of risk,” he says.

Fuel and fuel vapors can be dangerous to human life and property. Keeping that in mind, Scott says in the event of a fuel spill, consider the following do’s and don’ts.

Do's

- Protect yourself and your co-workers. If you can help with a situation, stop and risk assess – do not become a casualty.
- Stop the fuel flow, if possible.
- Notify air crew immediately.
- Call for help and emergency response services, if required.
- Protect equipment and assets. Shut down all engines and all possible sources of ignition.
- Protect the environment by preventing fuel from entering drains as it can contaminate waterways, leading to the destruction of wildlife, vegetation and crops.
- Consider the possibility of evacuating the area as a precaution, depending

on the size of a spill, and if a building or an aircraft is in a danger zone.

- Understand risks increase in higher temperatures due to being closer to the flash point. Some fuels are higher risk such as Avgas, with a flash point that can ignite easily compared to Jet A1 or diesel. Commingled fuel such as a gas/diesel mix can have a lower flash point.

Do Nots

- Do not use a cellphone around fuel. It is dangerous.
- Do not walk through fuel.
- Do not smoke near fuel vents. It is dangerous and extremely unsafe.
- Do not get fuel in your eyes – fuel burns may cause blindness.
- Do not get fuel on your hands. It can cause dermatitis or other skin conditions.
- Do not stand downwind in fuel vapors. Fuel vapors that travel downwind may accumulate in low points on the ground in a no-wind environment.
- Do not expose yourself to possible respiratory conditions.

While spill response is of critical importance, Scott emphasizes no one should rush in without first assessing risk.

Since the potential of fuel spills cannot always be eliminated, David Deveau, vice president of environmental, health and safety with the Inland Group of Companies, says it is vital that comprehensive spill response procedures and training be part of a risk management approach. A comprehensive approach also should include situational awareness,

After a spill, spill kit contents should be restocked, as needed.



ONE LESS THING TO WORRY ABOUT



and a robust preventive safety culture in the workplace is critical, Deveau emphasizes.

“Maintaining focus while transferring fuel is vital,” Scott adds.

Anything that’s done frequently can lend itself to complacency, Scott warns, adding continued vigilance is key to mitigating a possible fuel spill.

“We fuel our cars and other equipment on a daily basis and treat it, in some cases, the same as transferring water into a glass,” he says. “We must always consider the worst-case scenario, what would happen if the nozzle trigger lock didn’t close and the fuel tank overfilled? What if a hose disconnected? What if a fuel connection point parted or an aircraft fuel tank vented? What if the fuel caught fire?”

Risk assessing and knowing the worst-case scenario, identifying when and where it is more likely to happen and what to do if it does can help prevent risk.

In addition, Scott says regular equipment maintenance inspections and toolbox talks on fuel handling procedures are invaluable tools. As best management practices (BMP), Scott says limit the number of hose connections, maintain a clean workplace and ensure that proper personal protective equipment (PPE) is worn.

Inland Technologies takes a proactive approach to workplace safety and believes everyone plays an active role in spill prevention and mitigation.

“We empower our teams to use our electronic safety management system (SMS) tools to report hazards, ‘eye-openers,’ near misses or incidents directly to our EHS team,” Deveau says. “Through daily safety discussions, monthly safety meetings and proactively addressing hazards, we strongly believe our culture is key in spill prevention. Always maintaining a safe workplace, free of hazards, and protecting the environment.”

Spill training is usually company specific and can include fire extinguisher training; spill kit familiarization; notification and response; and live spill response training by utilizing spill kits, boom socks and fuel absorbent materials such as granules and spill pads. There are also many external fuel handling and spill response action courses available online.

“We do annual training and spot training as needed,” Scott says.

Spill response for smaller spills is different than it is for larger spills.

For smaller spills, various products are available such as fuel spill kits which include boom socks, absorbent granules and spill pads.

“It is also good practice to have granular absorbent and spill pads near all fuel transfer points. When fueling ground support equipment (GSE), spill trays can be used and eliminate nozzle locks so there is no unattended fueling,” Scott says.

After a spill, he says remember to restock the fuel spill carts and ensure the supplies are in good working condition.

Larger spills are defined differently depending on the province or state, airport or customer, but a larger fuel spill can involve the use of a specialized clean-up provider with equipment such as vacuum trucks and operators trained to deal with fuel spill clean-up and monitoring activities.

“Protect people, property and the environment at all times. Stay vigilant, do not become complacent. Maintain situational awareness, it may be others that create a dangerous situation. Always remember your Notification Procedures. Don’t be afraid to ask for help,” Scott emphasizes.

“Focus on prevention but always be prepared to respond to spills, mitigating the impacts,” he adds. “Come home safe.” **GSW**

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Diagnostic Software to Simplify the GSE Repair Process

JPRO helps all skill levels increase efficiency and prevent wrong repairs.

BY REBECCA KANABLE

When ground support equipment (GSE) is not working properly, JPRO Professional or “JPRO,” a diagnostic application from Noregon, is designed to simplify the diagnostic process for personnel of any skill level.

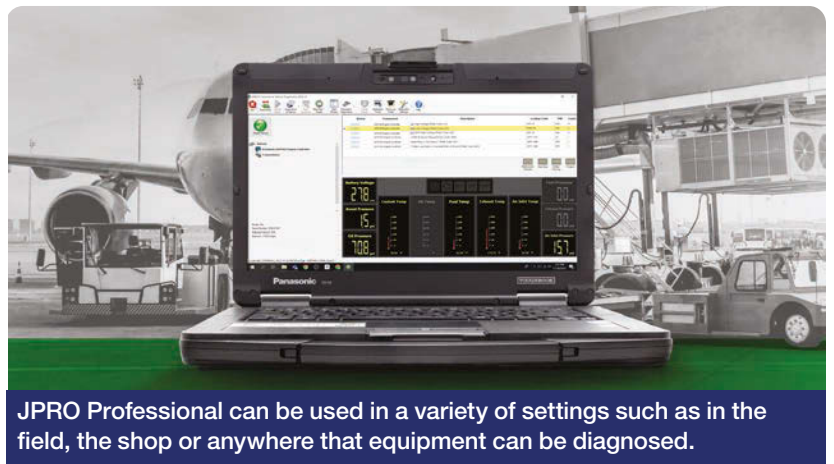
“In ground support, anyone can use JPRO since it is user-friendly. It does not require an advanced mechanic. The benefit of JPRO is that it has built-in educational features, meaning that non-advanced mechanics can learn how to use the equipment without pulling away and relying on advanced technicians,” says Jason Hedman, Noregon product manager. “With this in mind, master level technicians also greatly benefit from some of JPRO’s advanced features for diagnosing tricky issues.”

With its user-friendly interface, guided diagnostic features and troubleshooting steps/diagrams, Hedman says JPRO assists in identifying, repairing and troubleshooting issues for both commercial vehicles and heavy duty equipment.

Diverse types of GSE can benefit from JPRO. Specific examples include, but are not limited to baggage tractors, deicers, belt loaders and ground power units (GPUs).

In addition to simplifying the repair process, JPRO can increase the efficiency of GSE maintenance.

“Unlike other diagnostic software that requires multiple tools to meet on- and off-highway needs, JPRO



JPRO Professional can be used in a variety of settings such as in the field, the shop or anywhere that equipment can be diagnosed.

ALL IMAGES COURTESY OF NOREGON

offers broad coverage,” Hedman says.

The original JPRO was launched in the diesel diagnostics market in 2007. The version known today as JPRO Professional and shortened to “JPRO” was introduced in 2016.

“Since its first launch, each version has undergone continuous improvements, such as the expansion into the off-highway market and the addition of a Road Worthiness feature in our latest update JPRO Professional 2023 v4,” Hedman says.

Coverage for GSE became available in JPRO Professional 2023 v1, but each version since has remained applicable by improving the features and coverage available for that type of equipment. Noregon releases three or more major updates each calendar year, aiming to continually improve the benefits for GSE and other types of diesel equipment, Hedman says.

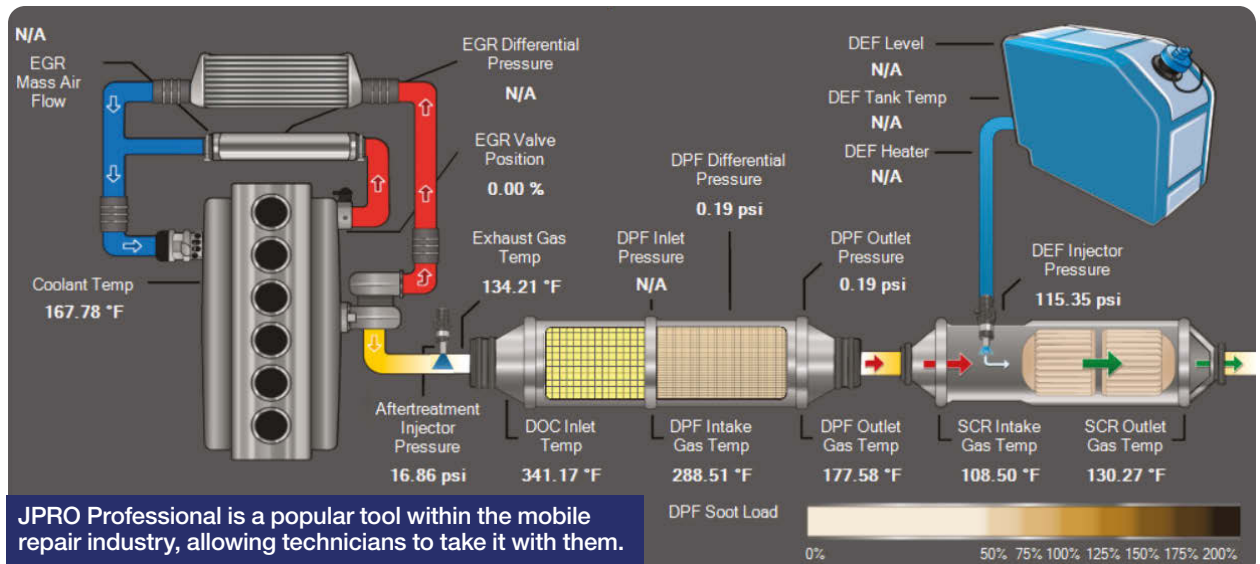
One recent example is the ECM (engine control module) Update Alert, which allows JPRO to alert users

when a firmware update is available.

When the release was announced in August 2023, Hedman said one of the first troubleshooting steps a technician should check is whether the ECM’s firmware is up to date.

“Outdated firmware can cause all sorts of issues that can lead techs down a time-consuming rabbit hole, when the solution is as simple as flashing the ECM,” he says. “JPRO now alerts users when a firmware update is available for major component manufacturers like Cummins and Detroit.”

JPRO Professional utilizes the same standards for GSE that it does for on-highway vehicles. Hedman says this is because GSE has the same types of engines, transmissions, brakes and standard communications that on-highway vehicles use. Therefore, many common GSE issues and needs are similar to on-highway vehicle issues and can include emission system issues, diesel



particulate filter (DPF) issues, regen resets and more.

“Technicians simply connect the vehicle or equipment to their PC or device via an adapter and JPRO translates the information from the connected asset to make it usable for the technician,” Hedman says. “The connection to the GSE should take about a minute to fully read from the time they hit ‘connect’ to the time they start working on the GSE equipment.”

Key data points (KDPs) from each component are shown on the main screen.

“JPRO reads all vehicle systems at once, pulls in the pertinent data points from the ECM so you can understand what faults are across each system, and shows KDPs across the bottom of the screen,” Hedman says.

Instead of taking a manual approach, JPRO guides the user through the ideal diagnostic and troubleshooting steps.

Guided diagnostic features and troubleshooting features are used when one or more faults are active, and technicians must uncover the cause of the faults to repair the issue.

For example, JPRO Repair Mentor

is an assisted diagnostics tool. Current vehicle issues affecting vehicle health are listed in preferred diagnostic order. The user selects “Begin Diagnostics” to begin. JPRO then opens the applicable feature, such as fault guidance, which focuses on troubleshooting assistance.

Fault guidance shows the fault code as well as items to verify and check. Depending on the fault, the user may need to perform tests to narrow the search. Bi-directional tests can be accessed from fault guidance.

Based on the fault selected, the tabs change. Tabs include Overview (a detailed synopsis of the selected fault and the affected vehicle systems), Wiring (shows diagrams with wires, components or connections to test) and Troubleshooting Tasks (physical and electrical inspections to be performed). A locator tab shows detailed photos or illustrations to locate components such as sensors.

Inspections and reports can be saved and accessed in JPRO, which has custom reporting capabilities. Hedman says this feature is useful across an organization to help ensure that each user is using the same preventive maintenance or vehicle

inspection standards.

In addition, a recording feature is used throughout every connection to create a snapshot of the state of the vehicle, creating a log file. There is also a manual record feature that can be used throughout particular sessions for users to see how data values respond while they are driving or performing another procedure, to verify issues and determine the root cause of issues.

Additional resources available through JPRO include: OEM Applications, which allows use of any manufacturer software installed on the computer; definitions of unfamiliar industry terms; and JPRO Resource Portal, which offers self-paced training opportunities for techs to learn on their own schedule.

Noregon offers a variety of options from a la carte software to a complete diagnostic service kit with JPRO, NextStep Repair (a product focused on service information), and Technician as a Service (TaaS), which provides technicians with the ability to speak with a master technician who can remotely assist with a diagnostic or repair procedure; a Panasonic Toughbook; adapter; and vehicle cables. **GSW**



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Spotlight on: Stavros Hatzioannou

The vice president of sales and service at Goldhofer shares how his interest in specialized vehicles and aviation led to a career in the GSE industry.

BY JOSH SMITH

Ground Support Worldwide:
How many years of experience do you have in ground support industry?

Stavros Hatzioannou: I have been with Goldhofer AG for 11 years in total. My former employer Schopf GmbH, whom I worked for seven years, was taken over by Goldhofer in 2013. During these 11 years, I gained my expertise in the GSE vehicle range, especially aircraft tow tractors, cargo lifters, baggage and cargo tractors. However, my first contact with the GSE industry came with my seven years' employment at Neoplan/MAN and their airport apron buses.

GSW: What attracted you to a career in the ground support industry?

SH: Personally, my eight years' older brother is captain on the 747 freighter, and he took me flying since I was 10 years old. I loved flying, but my major interest was the vehicle industry, where I was working for Neoplan/MAN buses and had my first contact to the GSE industry with airport apron buses. Joining a manufacturer of tow tractors seemed to be a perfect combination of a special vehicle industry in the environment of the aviation. After so many years, this has proven to be true.

GSW: What has kept you engaged in the industry?

SH: For me, the products and the technology development are fascinating. Seeing the technical progress within the last decade,

working for a GSE manufacturer keeps my fascination and commitment. Also, the people working in the industry are like a family. We know and care about each other, which makes the industry special to me. Finally, I really appreciate the fact that I work in a global business, where I can learn from different countries and cultures.

GSW: What's the best advice you've been given while working in this field?

SH: Be honest and authentic.

GSW: How have you seen the ground support industry change the most during your career?

SH: A major impact indeed was the electrification of GSE. This trend changed the industry a lot and led, not only to highly sophisticated products, but also did set a trend for other industries as well.

GSW: Has this change been to the benefit or detriment of the industry?

SH: Absolutely a benefit. Electrification led operational and energy cost savings which are beneficial for every airport worldwide. But also lower downtimes and lower cost for maintenance should not be underestimated as a result for GSE.

GSW: What's the next big thing coming to the ground support industry?

SH: I think, the automation of equipment at the airport as well as



Job Title: Vice president of sales and service

Company: Goldhofer AG

Location: Memmingen, Germany

Years of Experience in Ground Support: 18 years

Years with Current Company: 11 years

Previous Employers in the Industry: Schopf GmbH, Neoplan/MAN

autonomous or remote operation of GSE will be the next big blow for the industry.

GSW: What type of an impact will it make?

SH: Automation and autonomous operation will enable the aviation to grow, as qualified employees are increasingly hard to find. It will increase safety on the ramp and reduce accidents caused by human failures.

GSW: What would you say to encourage someone to join the ground support industry?

SH: In GSE, anyone can gain more global experience than in other industries in the same time. Finally, the products and the technology development are simply captivating. **GSW**

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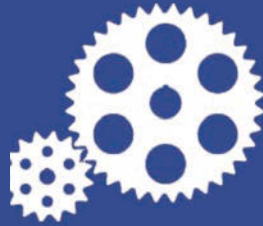
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