

# Ground Support

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WORLDWIDE

EQUIPMENT – SERVICES – HANDLING

# the global issue

- Strengthening the Link Between Aviation Stakeholders
- Taiwan Taoyuan International Airport in Expansion Mode
- How the IGOM Portal Improves Communication
- Germany's Ground Handlers Ready for Growth
- In the Post-Pandemic World, General Aviation is Taking Off

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**ONLINE EXCLUSIVES**



**Markey, Garcia Introduce Good Jobs for Good Airports**

By Rebecca Kanable

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By Walker Jaroch

The center will be near Toulouse-Bagnac Airport.

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**Optimizing the Use of Technology to Schedule Predictive and Preventative Maintenance**

By Phil Cole

With predictive maintenance, aircraft and their components undergo maintenance only when warranted.



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By Pedro Pinto

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Hear from Bill Moskwa, president, AERO Component Repair, and Johnny "Bump" Grant, vice president of MRO, CTS Turbines.

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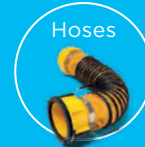
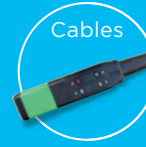
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# Avoiding Mishandled Bags

*Baggage handling is just one portion of the turnaround process, but it is key to keeping passengers happy.*

**E**ffective baggage handling is key to the passenger experience. While other tasks that make up an aircraft turnaround may go unnoticed by the flying public, all passengers have a vested interest in their luggage arriving at their destination.

The importance of baggage handling has been underscored recently as negative media attention on lost luggage has put a spotlight on the issue.

According to SITA's 2022 Baggage IT Insights report, the mishandled baggage rate has increased by 24 percent to 4.35 bags per thousand passengers in 2021. The resumption of international and long-haul flights contributed to the increase in mishandling, according to SITA's findings.

Baggage mishaps are creating frustrations for both passengers and ground handlers, alike. As passengers flock back to air travel at a high rate, members of the ground handling workforce are not returning at the same pace.

This is compounding the issue as the current workforce scrambles to repatriate bags with passengers.

The added stress is leading to burn-out. In fact, a recent survey of 1,700 airport workers in the United Kingdom conducted by CV-Library indicated as many as 40 percent of those individuals are considering resigning. Chief among their reasons is a desire to reduce stress.

Utilizing technology can relieve some of these pain points. For example, self-service bag drop solutions require



GETTY IMAGES

less airport personnel. Technology also provides more transparency for passengers as they track their bag along their journey. And the latest tech can reconnect passengers with luggage when it is mishandled.

In the executive summary of SITA's 2022 Baggage IT Insights report, David Lavorel, CEO at SITA, highlighted the investment in self-service baggage solutions in the past year.

"A large majority of airports and almost all airlines are prioritizing touchless bag tagging options that rely on kiosks and passengers' mobile

devices. Implementation of unassisted bag drop is increasing, with 90 percent of airlines and three-quarters of airports planning to make touchless unassisted self-bag drop available by 2024," he wrote.

The passenger experience through commercial airports looks very different than it did at the end of 2019. Airlines and ground service providers will need to continue adapting to changes in the industry and adopt new practices, especially considering current staffing levels across the industry. **GSW**



*Tractor Tales*

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## TOP NEWS

### Airbus, Airlines To Explore Direct Air Carbon Capture and Storage Technology

Airbus and a number of major airlines – Air Canada, Air France-KLM, easyJet, International Airlines Group, LATAM Airlines Group, Lufthansa Group and Virgin Atlantic – have signed letters of intent to explore opportunities for a future supply of carbon removal credits from direct air carbon capture technology.

Direct Air Carbon Capture and Storage (DACCS) is a high-potential technology that involves filtering and removing CO2 emissions directly from the air using high-powered fans. Once removed from the air, the CO2 is safely and permanently stored in geologic reservoirs.

As the aviation industry cannot capture CO2 emissions released into the atmosphere at source, a direct air carbon capture and storage solution would allow the sector to extract the equivalent amount of emissions from its operations directly from atmospheric air.

Carbon removals via direct air capture technology complement other solutions that deliver CO2 reductions, such as sustainable aviation fuel (SAF),

by addressing remaining emissions that cannot be directly eliminated.

As part of the agreements, the airlines have committed to engage in negotiations on the possible pre-purchase of verified and durable carbon removal credits starting in 2025 through to 2028. The carbon removal credits will be issued by Airbus' partner 1PointFive – a subsidiary of Occidental's Low Carbon Ventures business and the global deployment partner of direct air capture company Carbon Engineering. Airbus' partnership with 1PointFive includes the pre-purchase of 400,000 tonnes of carbon removal credits to be delivered over four years.

"We are already seeing strong interest from airlines to explore affordable and scalable carbon removals," said Julie Kitcher, executive vice president of communications and corporate affairs, Airbus. "These first letters of intent mark a concrete step towards the use of this promising technology for both Airbus' own decarbonization plan and the aviation sector's ambition to achieve net-zero carbon emissions by 2050."

## Upcoming Events

**Sept. 13-15**  
**GSE Expo Europe**  
Paris, France

**Oct. 18-20**  
**2022 NBAA Business Aviation Convention & Exhibition**  
Orlando, FL

**Nov. 29-Dec. 1**  
**Annual GHI Conference**  
Amsterdam, The Netherlands

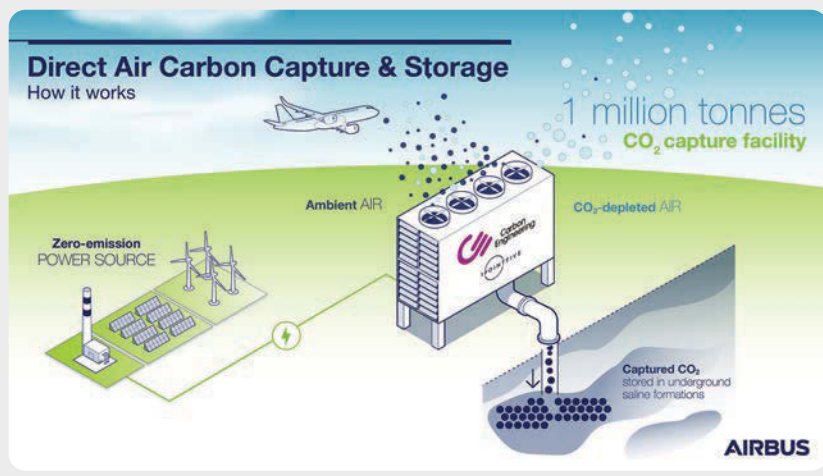


### WFS Launches 'Our Sustainable Flight Path' to Steer Responsible Growth

Worldwide Flight Services (WFS) has launched "Our Sustainable Flight Path" to steer the next level of its Environmental, Social & Governance (ESG) strategy and support the responsible growth of its global airport and aviation services operations.

WFS' environmental journey so far also incorporates collecting annual data on energy, waste and water consumption, seeking "greener" energy suppliers, reusing equipment, extending the lifecycles of equipment, and carbon footprint tracking. Solar panels have been fitted at some WFS locations and trials of further electronic ground support equipment and hydrogen-powered vehicles are ongoing. WFS is also participating in "green" projects at some of the airports where it operates.

"Our Sustainability Flight Path" contains key actions, targets and milestones to be achieved by the business from now to 2030, including achieving 75 percent electric ground support equipment, full adoption of biodegradable plastics, and signing the UN Global Compact.





## TCR Expands GSE Repair and Maintenance in North America

TCR is increasing its GSE repair and maintenance workshop presence across North America. TCR North America set up shop in Chicago O'Hare (ORD) in May and added



workshop capacity in the Canadian ports of Calgary and Vancouver. Moreover, TCR has expanded

its refurbishment capacity in Canada through the takeover of DCL Aviation Canada.

"Our repair and maintenance offering is key in order to be able to deliver a turnkey full-service lease solution to our customers," said Jan De Leeuw, managing director North America at TCR, "and we are extremely proud of stepping up our repair and maintenance offering across the U.S. and Canada thanks to our fully skilled GSE technicians that have now joined our teams in our new workshops. TCR is offering all families of GSE for lease across the continent and is unique in our combination of new, used and refurbished GSE backed by our excellent cooperation with our OEM partners and our bespoke global GSE inventory."



## Signature Aviation Finalizes Acquisition of 14 TAC Air Locations

Signature Aviation has acquired the TAC Air division of TAC – The Arnold Companies.

Through the acquisition, 14 TAC Air locations will rebrand and join the Signature network. The acquisition marks Signature's entry into 11 new markets within the heartland of the United States including Salt Lake City, Utah; Lexington, Kentucky; Buffalo, New York; and Knoxville, Tennessee. Signature's on-site presence at Denver Centennial Airport in Colorado and Dallas Love Field in Texas is

further expanded through supplemental facilities, representing the company's second and fourth FBO terminals at those airports, respectively.

In addition, Signature will assume ownership of the TAC Private Hangars complex at the Scottsdale Airport in Arizona.

"TAC Air is an example of home-grown success, and we're delighted to share in the storied heritage of TAC Air while embracing its over 600 employees within the Signature team," said Tony Lefebvre, chief executive officer of Signature Aviation. "We aim to build on the exceptional staff and impressive network of TAC Air, generating greater value and care for private aviation travelers in the most desirable locations."



## Groundforce Portugal Renews ISAGO Until 2024

Groundforce Portugal has been accredited with the IATA Safety Audit for Ground Operations (ISAGO) certification for Lisbon, Oporto and Funchal.

"We are deeply committed to providing the highest level of quality of service and safety standards to our clients and our workers. Being distinguished by this ISAGO certification is extremely important to our organization, particularly during the challenging times the COVID-19 pandemic presented to our industry and to our people," said Groundforce's process and innovation director, Paulo Colla Carvalho.

The company has been certified since 2007.

## NAS Renews ISAGO Accreditation for Kuwait Operations

National Aviation Services (NAS) successfully renewed its IATA Safety Audit for Ground Operations (ISAGO) accreditation for its Kuwait operations. In 2009, NAS was among the first ground handling companies in the world to receive an ISAGO accreditation for its operations

in Kuwait. Today, the company is also accredited for seven other locations in its network.

## World Fuel Services Expands Customer Access to SAF

World Fuel Services is now an authorized branded distributor of Neste MY Sustainable Aviation Fuel (SAF). Paris-Le Bourget Airport (LFPB/LBG) in France is the first location where the company delivered Neste's SAF as the authorized branded distributor.

"As a European airport leader for business aviation, Paris-Le Bourget airport has always been a pioneer in the aviation world; through this enthusiastic initiative led by World Fuel with Neste, we stay at the forefront of innovation and decarbonization," said Sébastien Couturier, managing director, Paris-Le Bourget Airport within Groupe ADP. "This new service will allow us to complete the biofuel offer available on our platform, putting us in a unique position in Europe. This is an excellent signal, which attests to the transition underway in business aviation."

## Gerry's dnata Recognized for Safety in Pakistan

Gerry's dnata obtained IATA Safety Audit for Ground Operations (ISAGO) Station Accreditation at Islamabad International Airport (ISB) following the successful completion of a comprehensive audit of its ground handling operations at the airport.

Syed Haris Raza, vice president of Gerry's dnata, said, "Safety continues to be at the heart of everything we do. The achievement of the ISAGO accreditation demonstrates our team's commitment and ability to consistently deliver excellence in safety. I thank my colleagues for their hard work and dedication."

Gerry's dnata has also successfully renewed its ISAGO Registration in Karachi (KHI). In 2019, Gerry's dnata became the first ground services provider to be awarded the prestigious ISAGO Registration in Pakistan.



## PEOPLE

### Christoph Mueller Steps Down as Swissport Chairman

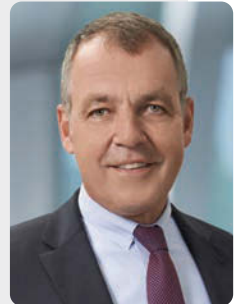
Christoph Mueller, chairman of the board of directors of Swissport International AG, intends to step down after 18 months in executive and non-executive functions.

He will remain a shareholder and continues to be available as an independent advisor.

David Siegel, an aviation industry veteran and member of Swissport's board of directors since

December 2020, will serve as interim chairman of the board until a permanent successor has been appointed.

"We would like to thank Christoph for his significant contributions to transforming Swissport into an effective and agile organization and for his stewardship over the past 18 months, both in executive and in non-executive roles," said Siegel.



Mueller

### Etihad Cargo Appoints Americas General Manager

Etihad Cargo has appointed Caroline Pappas as general manager – Americas. Pappas joins Etihad Cargo with more than 30 years' sales and commercial experience within the air cargo sector, reinforcing the carrier's commitment to the market. In her previous roles, Pappas has been instrumental in negotiating and securing

long-term contracts with global freight forwarding customers and shippers, identifying and implementing marketing and sales strategies, and identifying strategic opportunities to increase market share and revenues.

"Etihad Cargo is delighted to welcome Caroline to the team," said Tim Isik, Etihad Cargo's recently appointed vice president – commercial. "Caroline's appointment

further strengthens Etihad Cargo's commercial team in the region. I have every confidence Caroline's experience and knowledge will contribute to Etihad Cargo's long-term plans for U.S. expansion and further cement the carrier's position as the air cargo partner of choice for Etihad Cargo's customers in the Americas."



Pappas

## NEW DEALS

### Menzies Aviation Wins New Business in Indonesia and China

A new three-year contract with Indonesian cargo and regional passenger airline Rimbun Air will see Menzies handle up to six daily cargo flights for the airline's two 737-300F aircraft at Soekarno-Hatta International Airport (CGK).

Also at CGK, Malaysian cargo carrier Raya Air has selected Menzies to support its operations, starting with four weekly flights and growing. Raya Air is a new customer for Menzies.

Menzies has won new business with My Indo Airlines, providing freighter, ramp and cargo services to the airline at Macau International Airport (MFM). The initial two-year contract will see Menzies handle an additional estimated 2,000 tonnes of cargo per year.

"We are pleased to announce our recent contract wins with Rimbun Air, My Indo Airlines and Raya Air alongside the appointment of James Wong as SVP South



East Asia & China," said Alistair Reid, executive vice president – Oceania and South East Asia, Menzies Aviation. "James is based in Singapore and it's great to see he is already strengthening our existing relationships and developing new partnerships."

### Aviator Signs Partnership Agreement with Pegasus

Aviator Airport Alliance has signed a contract with a Turkish low-cost carrier Pegasus Airlines. Aviator and Pegasus have been working together at the Göteborg Landvetter Airport in Sweden for many years and this contract extends the



partnership for three more. Aviator will provide Pegasus with ground handling and deicing services.

"We are delighted to continue working with Pegasus Airlines, providing them with quality services. I trust that this new contract is just a chapter in our successful partnership story," Jonas Brundin, MD of Aviator Airport Services Sweden, said.



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# Four Keys for Beginning and Maintaining a Staffing Agency Relationship

*A key resource, treat staffing agencies as a part of an operation to scale with a trusted partner when personnel needs arise.*

BY RICH GELLER

**The need for flexible and scalable workforce, especially in the unpredictable roller-coaster of our industry, is more important than ever.**

Demand and flexibility is the most critical component for moving air cargo. Over the past several years, I have provided staffing services for several of the top 20 ground handling agents (GHAs), fixed based operators (FBOs), air carriers, freight forwarders and in large warehouse facilities surrounding the airport.

I have been supporting staffing services for customers at key air cargo hubs and there are several keys for success in choosing the “right” supplier for staffing agency labor.

## Need

Most companies have a need. Usually it is on third shift positions, finding experienced fork lift drivers, cargo agents, office agents, dock or even ramp personnel. This increases during the busy season, typically at the end of Q2 through Q4 until the Chinese New Year.

Supervisors and operations managers know what shifts and positions are lagging and where the internal HR department may need assistance or an outside company to partner with to fill the gaps.

This assistance can come from an outside labor supplier staffing agency. The staffing agency is the basic component of most successful GHAs. The staffing agency acts as an extension of your internal HR team. The staffing agency is given the directive of types and number of open positions per shift and

authority to fill those “open lines” with qualified SIDA (security identification display area) or STA (security threat assessment) cleared employees.

As a best practice, work with your team to gather all the “open lines” needs from the supervisors, operations manager and HR. Once completed, have the staffing agency create an excel sheet with time and position types. Partner with the staffing agency and set the expectation with the supervisors that each open line will be filled in with a name and start date of qualified employees over the next few weeks. Set the exchange of information with the staffing agency to share and report number of “starts” weekly. Most of the information will flow through the director of operations, supervisors, HR and, in some cases, the general manager.

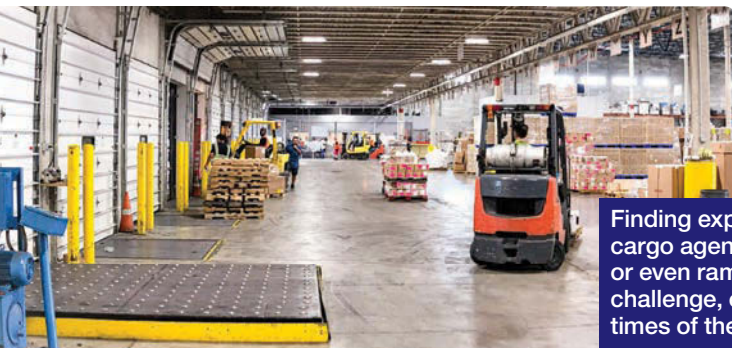
A useful tip to consider is opening all the open position lines and be competitive with the GHA's internal HR recruiting team to fill the open lines/positions. Open more positions than you need to account for normal attrition rates. If your internal HR team is confident they can fill first shift, then close those roles to the staffing agency. Let the agency focus on second and third shifts, weekends and more challenging roles to make the best use of the associated cost.

## Qualifying the Labor Supplier

Does the labor supplier in your area support any customers at the airport? Does that labor supplier support other airports?

In most cases, there are only a few staffing companies that are registered to issue badges at the airport. Many companies are not and, in turn, will not understand your specific needs. A company that has staffing experience off the airfield at a warehouse or nearby manufacturing facility, but no experience at the airport, will not have the knowledge or resources to understand the complexities of contracting, letter of intent submittal, bonding, customs, mandatory training, SIDA badging, STA clearance or staffing requirements for mail handling agents.

A best practice is to find a company that can support your company and badge employees. After finding a staffing company that is



**Finding experienced fork lift drivers, cargo agents, office agents, dock or even ramp personnel can be a challenge, especially during busy times of the year.**

AUTHOR CONTRIBUTED



qualified to work at the airport, ask how many badged employees they have out on assignments and what GHAs they have or currently service. Leverage this data; many times, if a staffing organization has several customers in the area, chances are they know your competition better than you do. Ask some questions. While the staffing company cannot violate non-disclosure agreements (NDAs), they will be able to provide an idea and data regarding competitive pay rates, ideal shift differentials, talent retention plans, benefits and best employee appreciation practices to retain talent.

A tip for ground handlers and support staff, we are all in a tight-knit community so ask around about what staffing agency is being utilized and how their experience has been. Stop by the badging office to see what posters for hiring are on the board and who the local agencies are.

### Forecasting

Plan ahead for the year. This can be difficult as flights get canceled, contracts come and go, airlines take their business to the competitors, or your operation gains new customers. But we all know from our supervisors and operations managers what shifts are short and the estimated tonnage per employees, per hour to be moved, and how many employees it takes to move that tonnage.

Once forecasting is complete, start the agency small and very early from when you need them to perform and fill many open lines. Place an order of 10-15 employees just to have the operational flow and expectations of the expected performance set. Afterwards, you can build operations correctly to rely on the agency when you need 60-80 or 100+ open positions.

As a best practice as a staffing agency representative, I always urge customers to look ahead for upcoming labor demand due to the long lag time of badging and starting employees. The typical time to have an employee from their application, to offer accepted, to badging as well as drug and background screening completed, is approximately 10 business days. This is a two-week process to start a SIDA badged or even STA cleared employee. Also allow time for attrition. The typical two week time frame to start work for the employee at most companies affects a 40-50 percent attrition rate before training even begins.

A tip to consider is asking the staffing agency to provide weekly onboarding logs and plan that 40 percent will not complete the process due to drug and background screens.

### Workforce Flexibility

If you are a large or midsized GHA/FBO, you need a staffing supplier who has a presence or an office, even if it happens to be at another GHA/FBO at the airport. This flexibility allows for scaling with your staffing needs. It also helps both customer and staffing supplier to collect badges, scale up and down quickly, manage workforce, collect, submit and approve timecards as well as understand the warehouse supervisor's needs.

The VOP (vendor on premise)/onsite provides the distinct advantage for both GHA/FBO and the staffing agency partner effectively. This onsite partnership reduces turnover and



**Demand and flexibility is the most critical component for moving air cargo.**

AUTHOR CONTRIBUTED

allows for the direct managing of the employees provided by the agency. In the staffing business, human contact/management/oversight between staffing agency and employees is essential to retention. Many times, the agency will have office hours at the GHA's warehouse to workout timecard issues, sick time, worker's comp, training, security, changing of employee schedules, badging issues and more.

A best practice, if the staffing order is 20 or more employees, arrange interviews and begin the onboarding process at your location twice a week or, in some cases, every day until the number of employees requested is fulfilled. Allow the agency to have an office space available and printer access to have candidates onboarded directly at your site. Whenever 50 or more employees are needed by the agency, it is a best to establish a VOP/onsite operation until the need is completed.

When employees have been successfully onboarded, keep in mind that each staffing contract will contain a clause regarding a number of hours or days on assignment that an employee can be transferred over to the GHA's/employer's payroll for a small fee or with zero fee conversion terms. Use this to your advantage and partner with the supervisors and staffing agency on who should be and should not be offered a permanent position directly with the GHA/FBO. Use this to retain your talent pipeline with hires from the agency. Some of the best employees and supervisors at a GHA came in as temporary labor employees who were promoted and then hired on for permanent roles.

A Tip on VOP. If the staffing ramp is over 45-50 total employees, the staffing company should have office space. This assures recruiting, retention, timekeeping workforce management of the staffing companies' employees is completed. It also creates a dedicated team for interviewing, recruiting, and overall management.

Follow these four keys and tips when beginning and maintaining the staffing agency relationship. Keep in mind that the staffing agency is hired not as a product but as a resource. Treat them as a part of your operation and form a partnership so that when needs arise, you can scale with a trusted partner. **GSW**

#### ABOUT THE AUTHOR

##### **RICH GELLER**

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# STRENGTHENING THE LINK BETWEEN

ACI WORLD

*The GHSP and Airport Operator Agreement Template, developed by ACI and ASA, aims to formalize the relationships between airport operators and ground handlers.*

BY MARIO PIEROBON

**E**arlier in this year, Airports Council International (ACI) and the Airport Services Association (ASA) released a new Ground Handling Service Provider (GHSP) and Airport Operator Agreement Template to facilitate and promote a safe and efficient aviation ecosystem.





The GHSP and Airport Operator Agreement Template is designed to maintain a safe and sustainable practice of ground handling.

# AVIATION STAKEHOLDERS

The GHSP and Airport Operator Agreement Template is a free template produced by the two industry associations to facilitate the establishment of agreements between GHSPs and airport operators. A similar template agreement exists between GHSPs and air operators, produced by the International Air Transport Association (IATA), explains Thomas Romig, ACI World's vice president of safety, security and operations.

The template is available for free from ACI's Publication Store ([aci.aero](http://aci.aero)) and can serve as a guide for organizations that decide to use it, according to Romig. The formats in which the agreement template are available are Word DOC and PDF.

"It can be edited and adapted to suit the specific requirements being established between two organizations," he says.

## Where the Need Comes From

Some years ago, the ACI Safety Technical Standing Committee identified ground handling as a domain having a significant operational safety and performance impact on airport operations, observes Romig.

"The topic was discussed and reviewed from multiple angles with multitude stakeholders. It was agreed that actions were needed both through ACI and at the global level," he says.

In 2016, a policy paper on ground handling, which called for the establishment of agreements between airport operators and GHSPs operating at airports, was published by ACI.

"This template was one of the next logical steps in achieving this strategic objective. It is purely guidance material based on best practices that airports and GHSPs are free to use," says Romig. "Many airports already have some form of agreement in place – this document was originally built on best practices from multitude airports. In its second version – produced in February 2022 – a collaborative effort between ACI and ASA was set up to create a balanced document that reflects the needs and requirements of both parties."

According to Fabio Gamba, director general of ASA, there was a need for a stronger link between the different stakeholders.

"It is a triangular situation with the airlines on one side, the airport itself on another side and then there are the ground handlers, which are the third leg of the tripod," he says.

Traditionally there has been a link between airports and airlines, observes Gamba.

"There have been, of course, links between the ground handlers and the airlines and the ground handlers and the airports," he says.

But together, Gamba points out, there had not been a link to allow harmonization between all three parties.

“An image that I like to use is that, as ground handlers, we are a bit sandwiched between the airlines and the airports,” he continues. “In the contract we have with airlines and the licenses with the airports, there can be slightly different requests, sometimes even contradictory.”

For ASA, it was necessary to address this issue.

“It obviously differs from station to station, from country to country and from region to region up to a point where sometimes there is not even a license,” says Gamba. “Together with ACI, we thought that this should not be the case. We need to provide a concrete template to the world. The template provides for what we believe is the minimum set of requirements between an airport and a ground handler, irrespective of the contracts that this ground handler has with a specific airline.”

By addressing this, the relationship is getting clearer, according to Gamba.

“We are offering to the community a set of clauses that we believe should be adopted. We believe that any relationship needs to be framed somehow, and in the template there are useful elements that anyone can use,” he says.

The template has the aim to provide a useful tool to ACI and ASA members that are seeking to establish an agreement between them, affirms Romig.

“This can be used for new agreements or when renewing existing agreements. It also aims to facilitate the dialogue between airport operators and GHSPs

### ACI POLICY PAPER ON GROUND HANDLING

The basis on which the GHSP and Airport Operator Agreement Template was developed is the 2016 ACI Policy Paper on Ground Handling.

According to Thomas Romig, ACI World’s vice president of safety, security and operations, the policy paper calls for three strategic elements that ACI has been advocating for: the establishment of agreements between airports and GHSPs, the implementation of Safety Management Systems (SMS) by GHSPs and the development of a global regulatory framework for the domain of ground handling.

“ACI has been very involved in the work around ground handling both at the International Civil Aviation Organization and European Union Aviation Safety Agency to advocate on these points and drive these strategic objectives forward,” says Romig.

when building up and formalizing their relationship,” he says.

### Scope of the Template

The template has the aim to formalize the relationships between airport operators and GHSPs, highlights Romig.

“It covers all key aspects related to both parties’ responsibilities, such as the application of local airport rules and regulations, coordination mechanisms established between the parties, liability and responsibilities, the exchange of information and data, cooperation in case of emergency or abnormal operations, insurance requirements, etc.,” he says. “Best practices are at the base of the document. They are consolidated by both ACI and ASA – with the aim of finding a common and balanced approach to the agreements that are put in place.”

According to Romig, an annex on a draft service level agreement has been added to the template agreement.

“It has been left blank – i.e., without targets – as these need to be identified and discussed at a local level,” says Romig. “There are also provisions related to airport system performance that have been added – as the performance of a GHSPs can have a significant impact on the

overall operation at an airport.”

In addition, the agreement template contains provisions related to ground damage of aerodrome infrastructure and property, adds Romig.

“The ground damage of aircraft is not covered in this document as it is already covered by the agreements with air operators,” he says.

The template has the aim to maintain a safe and sustainable practice of ground handling, observes Gamba.

“The airports need to bring this to the attention of the ground handlers and the ground handlers need to do it,” he says. “The template is a companion of best practice that in the experience of the ground handlers and the airports are the minimum to have a sustainable and safe relationship between the airports and the ground handlers and for the ground handlers to ensure a good, safe and reliable practice of their job.”

The template does not aim to become a standard but rather to provide a method of comparison, according to Gamba.

“The template provides for logical steps for the ground handlers to undertake. Most probably they are already undertaking them in some form. If that is the case, they do not have to do anything,” he says. “If they are undertaking the steps differently, they may want to ask themselves why they are doing things differently and perhaps get closer to what is proposed in the template. If the ground handlers do not undertake certain steps, then we highly suggest that they take the example of the wording that we are using in the template and try to implement accordingly.” **GSW**

### MORE ONLINE

IATA, ACA Update Standard Inflight Catering Agreement:



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### ABOUT THE AUTHOR

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## In the Post-Pandemic World, General Aviation is Taking Off

BY CURT CASTAGNA

**W**hile the COVID-19 pandemic dealt a devastating blow to aviation across the globe, it also caused a resurgence in one key sector of the industry – general aviation. In many markets, general aviation activity returned to normal by December 2020. And, at many of the nation's airports, operations are currently soaring beyond pre-pandemic levels.

According to FlightAware, a provider of real-time and historical flight information, business aviation traffic in the U.S. boomed in 2021, rising above 2019 numbers. As the general aviation industry continues to rebound from the pandemic, 2022 already shows a nearly 22 percent increase above the same time period in 2019.

What is propelling this growth in the general aviation industry? Major contributors include increased flight training,

charter activity, relocation or remote work situations and investment.

### Flight Training

First, FAA statistics indicate the number of licensed pilots in the U.S. has increased every year since 2016, with 2021 having the highest number of pilots over the past 30 years. For example, last year the FAA recorded a total of 720,605 active airmen certificates held, compared to 691,691 in 2020, 664,565 in 2019 and 633,317 in 2018.

It is important to remember that every commercial pilot, regardless of whether they are pursuing a career in the military or with an airline, begins as a private pilot.

Airlines are ramping up recruiting and training programs due to pilot shortages, and are offering attractive salary and benefits packages to

students coming out of a growing number of collegiate training programs.

Also, according to the "FAA Aerospace Forecast Fiscal Years 2021-2041," the general aviation sector was less affected by the COVID-19 crisis than the airlines. There are new entrants to the high-end business jet segment, as well as new student, private and commercial pilots joining the general aviation pilot population. Many are flying piston aircraft out of airports that do not have as many commercial flights due to the pandemic. This makes the long-term outlook for general aviation more promising than before.

### Charter Activity

Another continuing trend is for businesses to transport employees to in-person meetings and events via private aviation, by either chartering aircraft, investing in





A continuing trend is for businesses to transport employees to in person meetings and events via private aviation, by either chartering aircraft, investing in a company-owned aircraft or opting for a fractional ownership program.

Major contributors propelling the growth of general aviation include increased flight training, charter activity, relocation or remote work situations and investment.



companies investing in the space sector has not only changed the paradigm for space travel, but provided an entrepreneurial model to infuse dollars into electric propulsion and UAM projects, such as eVTOL (electric vertical take off and landing) aircraft. Aviation investment is also fueled by the drive for clean energy and environmental sustainability, and could advance investments in battery and electric motor technology for general aviation aircraft.

While many challenges exist in how to safely integrate air taxis into the national airspace system, the general aviation industry will play a major role in addressing the regulatory, safety, economic and social issues associated with making UAM a reality. Ultimately, the infusion of venture capital investment drives innovation and creates new opportunities for general aviation pilots. **GSW**

a company-owned aircraft or opting for a fractional ownership program. With the U.S. and other parts of the world moving COVID-19 from being a pandemic to an endemic, both commercial airline and general aviation activity are expected to increase.

However, flying privately in smaller aircraft continues to hold many advantages, such as presenting a lower health risk when compared to a commercial airline flight filled with hundreds of potential virus-spreading passengers. The elimination of federal mask mandates on transportation networks may also drive general aviation activity.

### Relocation and Remote Work Opportunities

Third, with many businesses providing remote work opportunities, many individuals are relocating from urban areas

to smaller communities. This trend to move away from major urban centers, and farther away from major airline hubs, increases the desirability, flexibility and freedom of mobility that come with general aviation.

Notably, this movement to suburban and rural communities is resulting in increased demand at the nation's general aviation airports – presenting the challenge of how to accommodate long-term operational and facility needs. As a result, many airport sponsors are gearing up to make major investments in infrastructure improvements and capital projects.

### Aviation Investment

Finally, the general aviation industry is attracting venture capitalists to the emerging air mobility market (UAM) at a rapid pace. The explosion of private

#### ABOUT THE AUTHOR

##### CURT CASTAGNA

Curt Castagna, president and CEO of Aeroplex Group Partners, is the current chair of the Los Angeles County Airport Commission, president of the Van Nuys and Long Beach airport associations, and immediate past board chair of the National Air Transportation Association. A certified private and instrument-rated pilot, he continues to instruct courses in aviation administration at Cypress Community College, and Calif State Los Angeles for over two decades.



dnata has increased investments in electric and hybrid GSE and forklifts.

# dnata's Vision for Environmental Efficiency

*The ground service provider plans to invest \$100 million in green initiatives over the next two years.*

BY REBECCA KANABLE

**F**rom renewable energy and green ground support equipment (GSE) to reducing food waste, dnata has recently announced it will be making a \$100 million investment in green operations in the next two years.

The global air and travel services provider aims to reduce its carbon footprint by 20 percent by 2024 and by 50 percent by 2030. Reductions will take place through ongoing investments in infrastructure, equipment and process improvement.

"We've been making great progress on reducing our carbon footprint, minimizing waste and reducing energy and water consumption across our operations," dnata Group CEO Steve Allen said when the announcement was made in June. "We will further increase our investments and efforts in strong cooperation with our partners to achieve our targets and preserve the environment for current and future generations."

To determine how the funding for green projects should be spent, dnata has established an investment review board.

"The board meets quarterly and reviews a range of proposed investments from across our businesses," says a dnata spokesperson. "Projects are selected depending on the need and potential impact based on a number of factors including environmental impact, regulatory requirements and operational needs."

Choosing green options is a prime consideration for dnata officials when fleet planning.

dnata has increased investments in electric and hybrid ramp GSE and forklifts, and refurbished existing GSE with new technologies to further decrease emissions and update them to the latest safety and quality standards.

"We have a strategy to convert light vehicles (cars, forklifts, baggage tractors) in our fleet to electric where feasible," the dnata spokesperson says. "In terms of larger equipment where the technology is less mature, we are working with manufacturers and testing and proving the effectiveness of new technologies in our operations."

In Singapore, dnata has partnered with industry leaders for the gradual replacement of old diesel equipment with a more sustainable asset base, including electric GSE (eGSE). Already in place are 44 electric baggage tractors, including 39 Charlotte T135 EVO models provided under TCR's full service GSE rental solution and five Toyota 3TE25 models via UMW.

Across the company's operations, its forklifts for cargo operations are predominantly electric. Light vehicles used as support vehicles for various operations are also electric, as well as some of the larger power equipment, including electric trucks in dnata's UK cargo operations and pushback tractors used in UAE airport operations.

At dnata facilities, recent investments have advanced technologies to optimize resources and improve operational efficiency.

In Singapore, the company has installed a 3.5 megawatt-peak rooftop solar power system across its operations, including its cargo and catering facilities, at Changi Airport.



dnata has installed renewable energy features, such as solar panels, at its existing facilities



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dnata has been working closely with airlines to analyze consumption trends and use predictive data to optimize the loading of food and beverage for flights.

## GREEN TURNAROUNDS

In 2020, dnata became the first ground handler to complete a green aircraft turnaround in the United States. A Viva Aerobus Airbus A320 used zero-emission GSE at JFK's Terminal 1. During the green turnaround, dnata's team transported baggage with electric baggage tractors to the aircraft and applied electric conveyor belts to offload and load baggage and cargo. dnata's professionally trained staff pushed the aircraft back from the gate with a Mototok electric, remote controlled towbarless pushback tractor, positioning it ready for taxi and departure.

In 2019, dnata ensured smooth and safe turnaround of a flydubai Next-Generation Boeing 737-800 aircraft using only zero-emission ramp ground support equipment (GSE) at Dubai International's (DXB) Terminal 2. During the green turnaround, dnata's team transported baggage with electric baggage tractors to the aircraft and applied electric conveyor belts to offload and load baggage and cargo. The passengers of the airline's Karachi and Faisalabad flights were disembarked and boarded through towable passenger stairs. After the boarding had been completed, the ground handler's staff pushed the aircraft back from the gate with an electric towbarless pushback tractor, positioning it ready for taxi and departure. Throughout the turn, the aircraft ground power was provided by Dubai International's FEGP (fixed electrical ground power).

The rooftop power plant is comprised of more than 6,500 individual solar panels and will generate more than 4,300 megawatt hours of green power a year, enabling dnata to reduce its electricity-related carbon emissions by 20 percent annually in Singapore.

In London, a new cargo center near London Heathrow Airport is part of the company's "dnata City East" complex. dnata City East incorporates the latest carbon reduction initiatives in design and operation, including the use of solar PV panels, air-source heat pumps and electric vehicle charging. dnata City East has achieved a BREEAM "Excellent" environmental rating for its design and the same status is expected to be achieved for the construction process.

The company will also incorporate carbon reduction initiatives in the construction and operation of its recently announced new cargo centers in The Netherlands and Iraq.

A cargo warehouse, expected to open at Erbil International Airport, in 2023, will include environmentally sustainable features such as water harvesting, low energy lighting and an all-electric forklift fleet.

In Amsterdam, a fully automated cargo center, dnata Cargo City Amsterdam, at Amsterdam Airport Schiphol (AMS) will make use of seven intelligent

automated guided vehicles (AGV) to enable flexible and scalable ULD transport within the terminal. These AGVs, which represent a recent product innovation of Lödige Industries, will be applied here for the first time on a large scale.

Another special feature will be the implementation of smart gates, which automatically record the volume and weight of all incoming consignments by scanning them in 3D, thus significantly speeding up handling and improving the quality of service.

## Food Waste

The worldwide focus on reducing carbon emissions doesn't necessarily bring to mind food waste. But with approximately 30 percent of all food produced globally going to waste, dnata is focused on reducing food waste through process improvement.

"We do this through a variety of strategies including food donations, product design (using whole product/byproducts), reducing waste to landfill through on-site processing and introducing pre-ordering to optimize loading for in-flight catering services," a dnata spokesperson said.

Increasingly, dnata is working with many of its airline customers to analyze consumption trends and use predictive data to optimize the loading of food and beverage for in-flight retail catering.

"We have seen food waste reduce by as much as 50 percent in one of our operations following the introduction of weekly, and sometimes daily optimizations from understanding trends. Analysis of on-board sales data not only reduces waste but also fuel burn associated with carrying excess weight," the spokesperson says.

"We recognize our responsibility in preserving our planet's resources and are committed to minimizing the environmental impact of our operations across all our businesses and activities, including our supply chain, as outlined in our environmental policy." **GSW**



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SWISSPORT

# How the IGOM Portal Improves Communication

*The online platform enables airlines and ground service providers to exchange information regarding ground handling requirements.*

BY MARIO PIEROBON

**T**he IATA Ground Operations Manual (IGOM) has established itself as a global industry standard for ground handling operations worldwide. Recently, the International Air Transport Association (IATA) has launched the IGOM Portal as a further enabler of IGOM adoption.

“The IGOM Portal is an online platform where, with IGOM as the primary reference, airlines and ground service providers (GSPs) can exchange information, including any variations, on their ground handling requirements,” say IATA officials.

### Adoption Status

According to Swissport, airlines have indeed started to adopt IGOM widely.

“We have adopted the IGOM for ground handling procedures. Industry wide adoption of IGOM is a key driver to standardization and simplification of

procedures which, in turn, supports the drive for a safer work environment,” officials at Swissport say.

Before the launch of the IGOM Portal, conformance to IGOM was tracked for IATA Operational Safety Audit (IOSA) airlines and for ground handling service providers (GHSPs) through recommended practices that are part of the audit standards during IOSA and IATA Safety Audit for Ground Operations (ISAGO) audits.

“The audit results statistic showed that 131 airlines implemented IGOM” say officials at IATA, noting 92 airlines were IATA members. “In terms of GHSPs – 172 stations confirmed following the IGOM. In 2022, we started tracking the adoption of the IGOM procedures via the Portal, presently we have over 60 airlines that joined the platform and are working on the gap analysis. We will be able to share more details of the adoption rate and variations by the end of 2022.”

### Added Provisions

Concerning the provisions that have been added to IGOM most recently, according to Swissport IGOM is at a point where it is undergoing smaller changes as improvement and alignment opportunities present themselves.

“We are an active member of the IATA group that develops the IGOM,” Swissport officials say.

IATA representatives observe that a number of changes in IGOM have been triggered by the current changes in the industry.

“One is IGOM 1.1.5 dealing with the enhancement for documents required for travel to include health documents as per regulatory framework set by ICAO Annex 9 and WHO [World Health Organization],” say IATA officials. “Another one is IGOM 1.4.4 dealing with the alignment of industry terminology for passenger with disabilities (PWD) from passengers with reduced mobility (PRM) in line with the





Industry alignment to IGOM is continuing to improve.



A number of changes in IGOM have been triggered by current changes in the industry.

SWISSPORT

UN Convention on the rights of persons with disabilities and ICAO Annex 9.”

Changes have concerned also IGOM 3.3 referring to the enhancement of the

aircraft cleaning section and the introduction of aircraft disinfection section triggered by the pandemic, IATA representatives observe.

Many of these changes were done in alignment with International Civil Aviation Organization (ICAO) Safety Health corridor, Federal Aviation Administra-

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## Ground Service Providers

tion (FAA), European Union Aviation Safety Agency (EASA) and Civil Aviation Administration of China (CAAC) regulatory requirements, according to IATA officials.

“Changes to IGOM 4.10 have concerned the introduction of a section

on long-term parking of aircraft due to the large fleets that were parked during the pandemic period. As an additional change, IGOM chapter 6 is a new section that enhances and promotes the importance of operational oversight,” IATA officials add.

All changes are always discussed and agreed with the industry task forces, points out IATA representatives.

“These changes are applicable to the current Edition 11 of IGOM, there are more changes coming for next year,” they say.

With the IGOM Portal, there is an opportunity for users to communicate relevant safety and operational topics.



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## Industry Alignment

Swissport officials point out that industry alignment to IGOM is continuing to improve.

“We do still see differences among airlines when it comes to coning requirements around aircraft, but most differences are as a result of national requirements,” say officials at Swissport. “Differences exist across customers with regard to pushback phraseology. We also see some differences linked to load control, but these are manageable.”

IATA has just started to collect assessment (gap-analysis) data from its members.

“We do not have yet a relevant number of variations to run statistics,” IATA officials say. “As of now we have 70 percent of airlines that have implemented IGOM without variations and 30 percent that have some variations.”

## Benefits of the IGOM Portal

The IGOM Portal is an important novelty of the IGOM program.

According to IATA, there are various benefits that recently launched IGOM Portal provide to its users.

“Among these benefits there is standardization and simplification from having the IGOM as the industry base procedure to be followed,” affirm IATA officials. “The portal also provides for facilitation in the identification of variations from IGOM, for the connection of airlines and ground handlers by having all information in one place, and for insight on company conformance, with customizable reports and charts.”

With the IGOM Portal, there is an opportunity for users to communicate relevant safety and operational topics.

“There is a notification tool that enables direct communication between parties. There is also an IGOM change request form that can be used if someone wishes to share with us a request for content review/modification or if someone needs some interpretation,” IATA representatives conclude. **GSW**

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Officials at Taiwan Taoyuan have an eye on cargo operations and intend to turn the airport into an important transshipment, logistics and added-value base in East Asia.



# Taiwan Taoyuan International Airport in Expansion Mode

*Driven by the need to meet demand growth, TTIA is upgrading existing facilities for future challenges.*

BY MANIK MEHTA

**S**ituated in the vast expanse of water called the Taiwan Strait in the East Asia region, the planners at the Taiwan Taoyuan International Airport (TTIA), located in Taoyuan County in the northwestern area of Taiwan and some 25 miles from the downtown area of Taipei City, have gone on an expansion course to meet the anticipated demand growth and also the ensuing infrastructure upgrading that will be required.

Aviation experts, closely monitoring the airport's expansion, have been talking about its new Terminal 3 (T3) which airport officials say "simply elevates its prospects of becoming a hub" in the region. The airport's traffic will be considerably boosted and provide new levels of service, enhance operational efficiency and convenience to passengers. It is also the single largest public engineering project currently underway in the island nation.

According to the airport planners, the new T3 is set to open in three stages, starting in 2024. The \$3 billion terminal is "badly needed," according to Lin Kuo-Shian, the chairman of the Taoyuan International Airport Corp. (TIAC), a government-owned corporation responsible for the management of the TTIA. The airport had already exceeded in 2019 its annual capacity of the existing terminals at the airport when it handled more than 48.6 million passengers.

Lin explains that the sharp drop in passenger traffic during the pandemic caused major airports around the world to suffer large losses.

"Many international airports have stopped operation, or have even closed. Taiwan Taoyuan International Airport also ran a deficit in these two years. However, TTIA's progress has not

stopped, because passenger and cargo traffic of the country rely on air transportation: Taiwan's exports are still growing and therefore boost the freight during the pandemic. This is critical to the national economy. What we hope is that more people and goods in neighboring countries can transfer or process at TTIA. The higher density will make it more convenient for people to enter and exit," Lin says.

## Cargo Warehousing and Transport Facilities Expansion

Lin says that the 2040 cargo traffic at the airport is expected to exceed 4.02 million metric tons; the airport plans to develop a new 100-hectare air cargo park and the second free trade port in the airport northeast.

"These projects, scheduled to be completed in 2030, will be the twin engines powering TTIA's future air cargo growth. The entire area has adopted a design ethos that emphasizes 3D warehousing, smart technology and automation, with central management replacing the current decentralized model," he says.

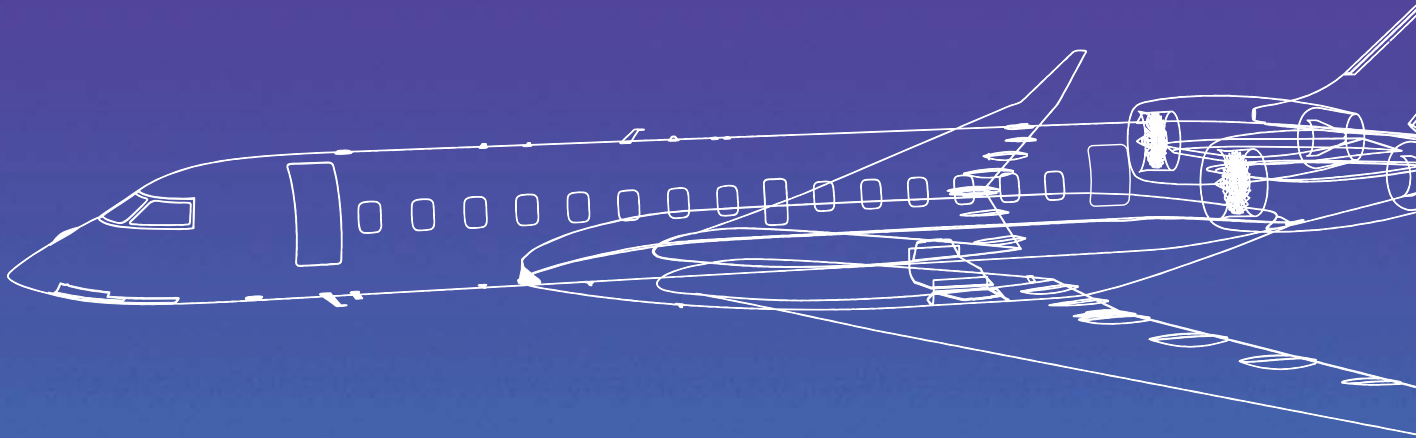
TIAC, which plans to put all future air cargo entrepots and warehousing facilities in the air cargo park, will draft management norms and standards that regulate personnel management, vehicle connections and each point of cargo facilitation, such as entering and exiting warehouses and loading docks. In response to the ever-growing demand for cross-border and cold chain logistics, TIAC will install equipment such as express storage facilities and temperature controlled warehouses, and will urge incoming businesses to acquire relevant international certification.





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## Airports

The TIAC chairman also points out that the planned National Freeway 1A on the east side of the airport would connect to the National Freeway No. 1 at one end, and Taiwan Provincial Highway No. 61 at the other, thus enabling vehicles to reach the Port of Taipei in as quickly as 15 minutes. This connection would form what Lin calls the “sea-jet-one” (combined sea and air transport) service that shortens cargo transport time and raises efficiency.

The objective, he adds, is to turn Taiwan into an important transshipment, logistics and added-value base in East Asia.

In 2020, the TTIA processed 2.34 million tons – a year-over-year growth rate of 7.35 percent, and 2.81 million in 2021 – a year-over-year growth rate of 20.03 percent. Through the first quarter of 2022, the airport has processed 238,251 tons of cargo.

### GSE Requirements for TTIA's Modernization

Lin says that the ground handling needed for TTIA's overall modernization program will focus on building a net-zero emission airport by 2050.

The Airports Council International (ACI) has been globally promoting the “net zero carbon emissions by 2050” campaign to

TIAC



Cargo traffic at TTIA is expected to exceed 4.02 million metric tons by 2040.

achieve environmental sustainability in the aviation industry. The TTIA, Lin says, is supporting the ACI's initiative by taking a proactive approach to climate change mitigation.

“We encourage ground handlers to replace diesel engine vehicles with electric vehicles. TTIA has also accelerated the electrification of infrastructure by increasing charging piles in both the airside and landside to 180 sets. We meet regularly with ground handlers and around 70 stakeholders to review energy consumption and carbon emission patterns,” Lin explains, adding that the airport's efforts have been recognized by the ACI Green Airport Recognition (GAR) for four consecutive years since 2019.

## Smart overview

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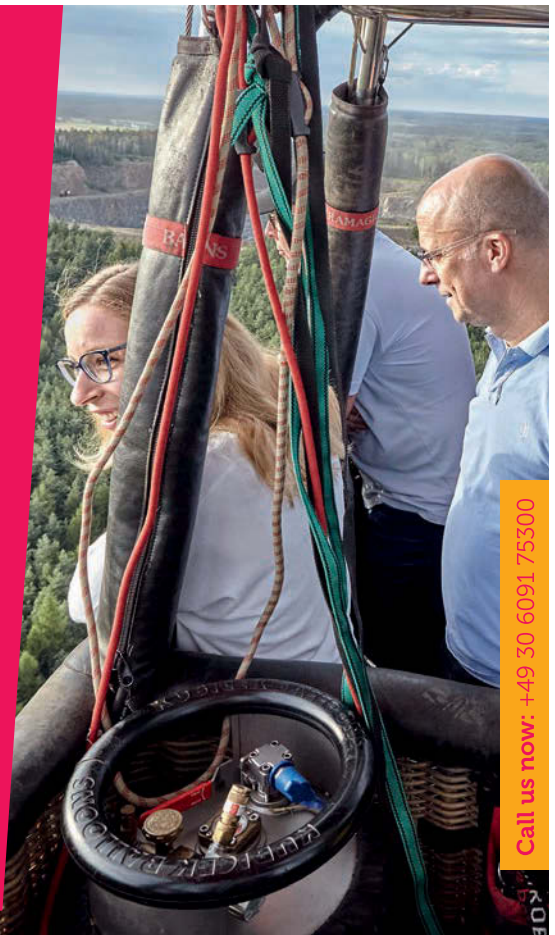
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## The Present and Future

As has been the case with many airports around the world, the sharp drop in passenger traffic during the epidemic caused huge losses. Indeed, a number of international airports stopped their operation, or even closed.

The pandemic was used by the TTIA to push the progress of various renovation projects, including the replacement of facilities and equipment in Terminal 1 and Terminal 2, as well as resurfacing the south and north runways. Lin emphasizes that the airport's goal "is to become an important hub in East Asia."

"And our development plan is not stopped by the pandemic," he continues. "The construction of T3, which will give us an annual capacity of 45 million passengers, is in full swing. T3 is expected to open in three phases from 2024 to 2026, offering a refreshing experience in terms of terminal building, space, facilities and services."

The north side expansion of the airport, including the construction of the third runway (R3) that will increase the capacity for takeoff and landing, is to prepare TTIA for the next level of development. R3 will enable TTIA to meet the needs of future traffic growth. The air cargo park and the



TTIA encourages ground handlers to adopt electric equipment and has accelerated the electrification of infrastructure by increasing charging abilities for airside and landside operations.

TIAIC

second free trade port will expand the processing capacity of air logistics. TTIA continues to provide a high-quality and convenient environment for the circulation of passenger and freight, in order to boost tourism, industry and economic development in Taiwan.

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## Building TTIA as an East Asian Hub

TTIA officials point out that the airport's growing importance can easily be seen from its ranking on the ACI list of top 10 airports for international freight (the 6th in 2019, 4th in 2020 / 2021). The 2021 top five are all East Asia airports, including Hong Kong International Airport, Incheon International Airport, Shanghai Pudong International Airport, Taiwan Taoyuan International Airport and Tokyo Narita International Airport – in ranking order.

"TTIA's advantage over the other four is its central location in the region connecting East-North Asia, East-South Asia and the Oceania. On top of that, our home carriers developed dense routes to China, Europe and North America," the TTIA chairman maintains.

Since the outbreak of the pandemic during 2020-2021, TTIA has continued to operate as a hub in East Asia because, as airport officials emphasize, "Taiwan managed the pandemic effectively."

TTIA not only maintains its already ample cargo volumes, but has also obtained additional international cargo traffic from nations whose capacities were affected by the pandemic.

Also, thanks to TTIA's promotion of IATA's CEIV Pharma program four years ago, by March 2021 three domestic carriers and

a ground handler, including Eva Air, China Airlines and Evergreen Airline Services Corp., had obtained the CEIV Pharma certification, which raised TTIA's ability both to handle cargo that requires controlled temperatures and to garner market share of the cold-chain logistics market.

"Finally, lock-downs and working-from-home lifestyle brought by the pandemic have boosted the importance and export volumes of Taiwan's semiconductor and 3C industries," Lin says.

The island's strategists say that Taiwan's geographical position as "the heart of East Asia" has also helped the airport benefit from the global development. R3 will enable TTIA to meet the needs of future traffic growth. Besides, the air cargo park and the second free trade port are expected to expand the processing capacity of air logistics. **GSW**

### ABOUT THE AUTHOR

#### MANIK MEHTA

Manik Mehta is a New York-based journalist, who specializes in all the aspects of aviation and logistics, including airlines, aircraft leasing, airports, infrastructure, cargo and ground-handling, as well as global markets, trade and business.



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# Germany's Ground Handlers Ready for Growth



*Despite massive staff shortages and skyrocketed energy prices, the ground handling sector is poised to improve.*

BY EUGENE GERDEN

**The German ground handling sector is steadily growing this year despite the existing threat of a new wave of pandemic in Germany and an acute shortage of staff in the industry, caused by its massive cuts during the peaks of COVID-19 in 2020-2021.**

The ongoing recovery of the German aviation sector from the pandemic lockdowns and the increase of the number of flights and tourist flows in the country's airports this year led to the massive staff shortages in the aviation and related sectors, with the ground handling sector being amongst the most impacted from this. The situation is complicated by the increase in COVID infections in July in Germany, as members of the existing staff are having to call in sick to quarantine.

Since the beginning of the pandemic, the number of jobs in the German ground handling industry has been significantly cut. This year many of industry players hope to fill their positions. However, the number of potential workers is significantly

A study conducted by the German Economic Institute found German airports were short of 7,200 ground staff and flight attendants. However, the federal government is considering solutions for the existing problem.

lower than existing needs. The pandemic led to the fact that many of ground workers left the industry to join other employers. It is suspected that many of these members of the workforce currently have no plans to return to their previous job.

The seriousness of the problem is confirmed by recent statistics and a study, conducted by the German Economic Institute (IW), the German analyst agency and a think tank, which found German airports were short of 7,200 ground staff and flight attendants.

In the meantime, the German federal government, is aware of the existing problem, considering ways of its solution. One such solution involves easing rules to allow both airlines and ground handlers to recruit temporary workers from abroad.

## Ground Handling

That means the provision of quick special permits from the authorities for the deployment of about 2,000 workers from Turkey at the country's airports.

According to German news outlet *Bild*, the move would allow German airport service providers to recruit several thousand temporary workers from Turkey for several months already from the middle of July. However, it will take a number of weeks for the workers to be recruited and trained.

In the meantime, in addition to staff shortages, another problem for the industry this year is related to the ongoing military conflict between Russia and Ukraine, which has led to serious interruptions of gas supplies to Germany from Russia – with the possibility of their complete suspension – as well as its ever-growing prices.

According to analysts, that puts an additional pressure on the German aviation and ground handling sectors, as the cost of energy grows. That leads to the growth of overall costs in the German ground handling sector, par-

ticularly for labor, despite the fact that salaries in the industry have always been among the highest in Europe.

In the case of fuel, as of now, its global prices have already reached historical highs and there is a possibility that their growth will continue in the second half of the current year. High energy dependence of Germany from Russia, according to some local analysts, will restrict the growth of the German aviation/aircraft engineering as well as ground handling sector for the next several years.

Still, despite the current geopolitical uncertainties and record energy prices in Germany, the ground handling sector of the country remains traditionally within the interests of global majors, while many of them consider their more active expansion in the industry already this year. This is despite a traditionally high level of competition and saturation of the industry and its maturity.

One of such majors is dnata. In May, the company officially entered the Ger-



The labor market has been the main challenge for the ground handling industry since 2021.

man market through the acquisition of Wisskirchen Handling Services – the exclusive operator of the Cologne Bonn Cargo Centre, a 12,000 square meter facility at Cologne/Bonn Airport.

The company considers the German ground handling sector as one of the most promising for its growth at least in the EU. This has been recently confirmed by Stewart Angus, dnata's regional CEO for Europe.

"We currently offer quality and safe cargo services at Cologne/Bonn Airport (CGN) with a team of 180 highly-trained employees. Our 12,000 square meter cargo facility, Cologne Bonn Cargo Centre, is equipped with the latest technologies and complies with the highest industry standards ensuring efficient and safe handling of a broad range of cargo, including general cargo, perishables, pharmaceuticals, dangerous goods, electronics and fast-moving consumer goods," Angus says.

Angus also adds the company sees great business opportunities in the Ger-

The ongoing military conflict between Russia and Ukraine has led to serious interruptions of fuel supplies to Germany from Russia.







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lenges in the overall market (with airlines, airports and servicing companies),” says Philipp Frech, head of Germany and Austria at Swissport International.

As Frech adds that the recovery of the German aviation sector has contributed to good results of the company in the second quarter of 2022.

“Our first half results in the German GH market were impacted on the one hand by the volume reduction of our airline customers in Q1 2022, mainly due to the Corona Omicron variant. On the other hand, our results were positively impacted by the enormous flight ramp up in Q2. This month, we successfully started our operations at Cologne Bonn Airport for our customer Eurowings. Our focus this year is further growth,” says Frech.

As for existing challenges, Frech and other local ground handlers believe

the labor market has been the main challenge for the industry since 2021. They also believe that an additional pressure on the industry and its resourcing and quality standards will be put by a high volume of cancellations and flight irregularities from other airports and countries, that will probably continue to be observed throughout the current year. **GSW**

**ABOUT THE AUTHOR**

**EUGENE GERDEN**

Eugene Gerden is an international freelance writer, who specializes in covering the global aviation and ground handling industries. He has worked for several industry titles and can be reached at [gerden.eug@gmail.com](mailto:gerden.eug@gmail.com).




man market of ground handling services. According to him, CGN is already the third largest airport in Germany in terms of cargo operations with significant capacity for a further growth.

“It operates 24 hours a day and is ideally located in the heart of Northwest Europe with excellent road connections. In 2021 cargo handled at CGN increased by 14 percent year over year, marking a new annual record for the airport,” Angus says.

According to Angus, a particular attention of the company this year will be to integrate its new investment in Germany into its global network and to develop its business by attracting customers to operate at Cologne Bonn Airport.

In the meantime, other global ground handlers also consider the German market a priority for their development this year. Most of them expect a further growth of the industry in the second half of the current year, although believing that its growth rates will be lower those initially expected by most operators and analysts.

“The German market will grow, but at a slower pace than expected. Main drivers are the capacity and slot restrictions at airports as well as resourcing chal-




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## Passenger Handling



OLIVER SORIG

From left: Burkhardt Höfer, managing director of HAM Ground Handling; Kevin Fischer, Innovation Manager GATE; Miriam Schönrock, PR manager GATE; and Laila Engler, sales manager and head of marketing, COBUS Industries.

# Hamburg Airport Striving for Climate Protection

*With carbon-reduction identified as a top priority, the German airport tests an all-electric bus in its airside operations.*

BY REBECCA KANABLE

**N**early 100 percent of the vehicles on the apron at Hamburg Airport (HAM) run on alternative fuels, including synthetic diesel. Its focus on alternative fuels, along with a diversity of the drive types make the airport a reference for the mobility of the future.

For more than five years, the airport has operated without fossil-derived diesel. Since the end of 2016, all diesel-powered vehicles at Hamburg Airport use a synthetic, zero-emissions fuel. Hamburg was the first international airport in the world to make this switch.

According to the airport, its green fleet is comprised of a luggage tractor fleet operating on 100 percent natural gas – and soon hydrogen drive; a diesel fleet running on 100 percent synthetic fuel; solar-powered passenger stairs

for aircraft boarding; and passenger cars with electric and hydrogen fuel cell drive.

Earlier this year, the airport received an all-electric e.COBUS from COBUS Industries for test operation on the apron. The company and the airport teamed with GATE, an association of the airport supply industry, and used the InnoAirport platform to test the forward-looking and sustainable technology in a real airport operation.

“At Hamburg Airport, we are always open to new technologies. We support the further development of powertrains that make air traffic and ground operations quieter and more environmentally friendly. That’s why we are pleased to be able to offer the new e.COBUS a real test environment on our apron,” Burkhardt Höfer, managing director of HAM ground

handling in a GATE, said in news release announcing the trial.

According to Kevin Fischer, innovation manager at GATE, the test with the e.COBUS was primarily intended to illustrate that an electric bus is capable of running a normal shift and thus replacing a diesel model.

Hamburg Airport in 2019 purchased 12 diesel COBUS vehicles and has expressed interest in either electric or hydrogen drive technology for the future.

“We offer our customers a free-of-charge testing of the e.COBUS for future requirements,” says Andreas Funk, CCO/sales director for COBUS Industries GmbH in Germany.

The e.COBUS used in Hamburg was a demo bus, which came from Lisbon. It was trialed during regular shifts, temporarily replacing a diesel bus in Hamburg,





then headed to Germany and Italy for additional tests.

Funk points out the e-COBUS was the first low-floor electrically driven airport bus in the market and is based on the well-known diesel COBUS product.

Since 2016, nearly 100 e-COBUS vehicles have been delivered to customers in the United States, Canada, Europe, Middle East, Hong Kong and China.

"We are the only manufacturer who

offers several types of battery technologies, such as LTO (lithium titanate) and LFP (lithium ferrophosphate) batteries in order to cope with the operational requirements best," Funk says.

The e-COBUS 3000 holds 110 passengers, the e-COBUS 2700 carries 96 and the e-COBUS 2700S transports 77. The busses have a Mercedes Benz chassis and aluminum body along with a Siemens ELFA Electric Powertrain. Complete charging

typically takes one to two hours.

"A very interesting offer from COBUS is our conversion program known as e.START, where we electrify diesel COBUS. We have also done that for customers in England, Switzerland and Austria," Funk says.

While the diesel engine is removed and an electric drive train and battery packs are added, more than 80 percent of the material is repurposed.



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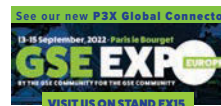
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## Passenger Handling

Through the e.START project, Funk says, “a diesel COBUS can have a second life and is therefore real sustainable.”

To fulfill future further alternative drive demands, Funk reports COBUS is working to develop the first hydrogen fuel cell-driven bus, which is expected to be available in 2023.

Hamburg Airport was certified Level 3+ by the Airport Carbon Accreditation (ACA), retroactively for 2021. The Airport Carbon Accreditation is an independent certification process specially developed for airports to record and reduce greenhouse gas (GHG) emissions.

At the end of 2021, the airport became the first major commercial airport in Germany with CO<sub>2</sub>-neutral operations.

“We have thus satisfied the strict demands of Airports Council International Europe (ACI) for certification of

CO<sub>2</sub> neutrality,” Michael Eggenschwiler, chief executive officer of Hamburg Airport, says.

The building blocks of CO<sub>2</sub>-neutral airport operations are reduced energy consumption, innovative technologies, conservation projects and high-quality offset certificates.

Since 2009, Hamburg Airport has reduced its annual CO<sub>2</sub> emissions by almost 80 percent, from 40,000 to 8,700 tonnes. In order to fully compensate for the remaining CO<sub>2</sub> emissions, Hamburg Airport currently has to invest in high quality offset certificates. With these certificates, in collaboration with FirstClimate, ecological projects are supported to verifiably reduce CO<sub>2</sub> emissions within the global cycle. By achieving further CO<sub>2</sub> reductions through our own actions, the proportion of offset certificates purchased will be reduced step by step.

The long-term goal is now to go without CO<sub>2</sub> emissions entirely by 2035.

“Despite the economic difficulties arising from the coronavirus pandemic, we have pursued our climate protection goals as a top priority. We are thrilled to be the first major airport in Germany to achieve CO<sub>2</sub> neutrality,” Eggenschwiler says. “Today, we are reaping the rewards of the innovative environmental work that our committed team has undertaken over more than three decades. We would never have achieved CO<sub>2</sub> neutrality so soon had we not started working consistently towards that goal more than ten years ago. As a municipal corporation, we are leading by example and making our contribution to achieving Hamburg’s climate protection targets.” **GSW**



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# 2022 GSE Expo Europe Preview

Ground support equipment exhibitors are preparing for the new event, which is scheduled to take place this autumn in the City of Lights.

**The GSE Expo Europe will take place this September in Paris, France. The event, which is being organized by the International Airport Equipment Manufacturers' Association (IAEMA) and the Mark Allen Group, will be held at the Paris Le Bourget Exhibition Centre.**

Show hours will be held from 9 a.m. to 5 p.m. on Sept. 13 and 14 and from 9 a.m. to 4 p.m. on Sept. 15.

As the inaugural GSE Expo Europe approaches, take a look at a sampling of the equipment exhibitors will be displaying.

## MOTOTOK INTERNATIONAL GMBH (EX23)

### Spacer 8600 NG



The Mototok Spacer 8600 NG is the second generation of the company's successful electrical pushback concept, which offers savings, more safety, fewer delays and one-man operation. Additionally, Mototok's new Spacer 200 is an ideal tool for all MROs. The aircraft mover is designed for wide-body aircraft but offers small dimensions and power. Its new technology brings big advantages.

## DEKAL LOAD BANKS (B55)

### ALB-I-56DW Unit



The reactive ALB-I-56DW unit is unique testing equipment for civilian and military applications. It allows an operator to perform an extensive load test and capture a real-time PDF data table to verify values

simultaneously. It has been engineered by a new patented concept with a slide-in option to simply attach resistive 400 Hz AC. The unit has been engineered in accordance with STANAG 3456(7) and MIL-STD-704F standards and is intended for testing and diagnosing various 400Hz AC power sources with lagging power factor. All of the 400 Hz load banks are capable of running the GPU at full-load for an extended time period (max. 600 A load for 28.5 V DC versions). And in case of diesel driven GPUs, it is possible to run the GPU at full load for an extended time period, thus decarbonizing the engine. In addition, Dekal has also developed portable load banks for UPS systems and gensets for multiple applications. These models are rated either at 50Hz or 60Hz AC and may be further customized to requirements.

## ADVEEZ (A24)

### FAMA lite – Real-Time Data with GSE Plug-and-Play Solution



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of the current motorized GSE range in any brands. Real-time data available on the Localeez mobile application or web platform includes location, working, moving, in use, idle time, shock detection or the hour-meter. Easy and fast to install, maintenance is minimal and can be managed over the air. Access control or speed control via geofence features are options to choose. FAMA lite enhances safety during apron operations. Adveez is also launching its OTM GSM, a new outdoor tracking module (OTM). Its OTM can communicate with any GSM gateway on industrial sites. It benefits from the GSM technology available all over the world. The connected device is dedicated to non-motorized assets such as stairs, tripods, tow-bars, trailers, containers, ULDs and more. The ADVEEZ device is easy to install and maintain. The battery is replaceable and optimized to last up to five years.

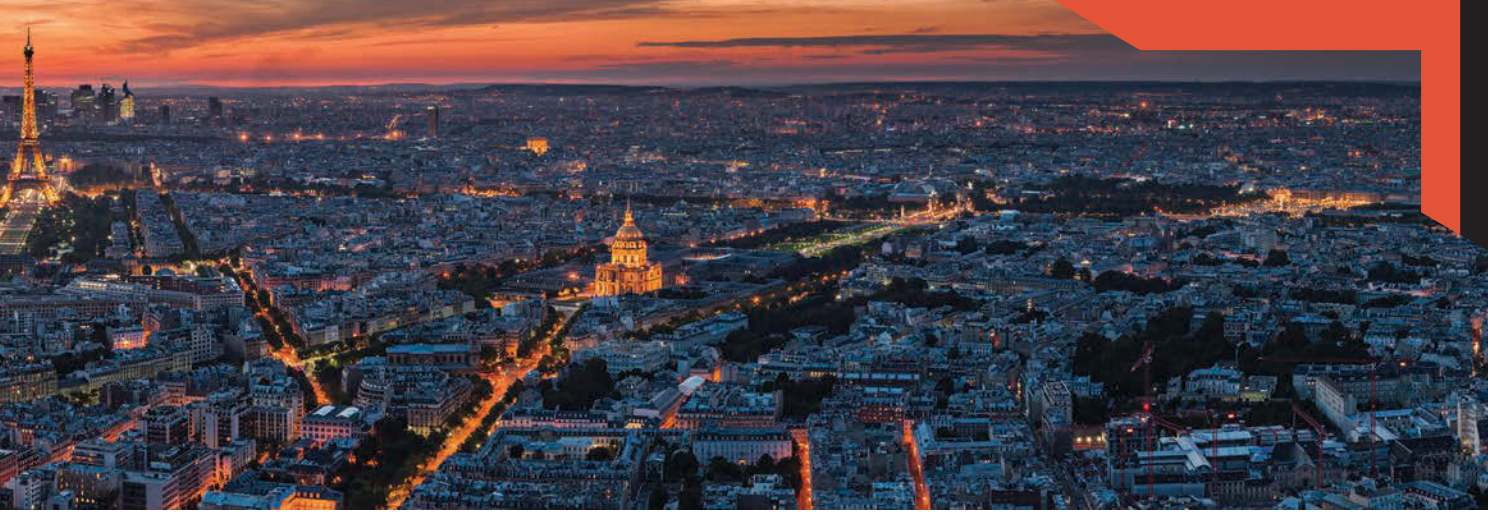
## RAMPER INNOVATIONS (C52)

### TISABAS



TISABAS is a compact, motorized folding conveyor system that goes into the aircraft belly and mechanically moves baggage and cargo. It eliminates the need to throw heavy baggage, mail and





freight the length of the aircraft. This reduces time and operational costs while making ramp agent jobs safer, easier and more efficient. Approved applications for TISABAS include, but are not limited to, loading and unloading narrow-bodied aircraft and cargo-in-cabin (CIC) operations.

**HALL TECHNICAL SERVICES, LLC (C05)**

*PCAT Load Bank*



The PCAT Load Bank is a maintenance testing device designed to help determine end of hose discharge status on any PCA unit. It can be used without the aircraft present.

**TBD OWEN HOLLAND (A06)**

*Material Handling and Access Equipment*



TBD is a UK-based manufacturer of specialist material handling and access equipment. Its dependable industry solutions and bespoke engineering

projects streamline operations, protect employees and deliver cost efficiencies.

**EBIS (A23)**

*EBIS Enterprise Asset Management (EAM) for GSE Operations*



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### GOLDHOFER AKTIENGESELLSCHAFT (EX07)

#### Emission-Free GSE



Goldhofer will be presenting its latest solutions for emission-free ground handling with the electrically powered PHOENIX E towbarless tractor, SHERPA E cargo tractors and BISON E conventional aircraft tractors plus the Goldhofer LINK IoT platform. Together with their partners, Goldhofer will be underscoring its claim as a full service provider for electric ground handling. ABB E-mobility will be present at the joint booth with a DC fast charger, EFM will be demonstrating the capabilities and benefits of its pushback and towing training simulator and Rheinmetall will be showcasing its emission free eMSU.

### SM RENTAL FENWICK (EX48)

#### P250 Electric Tow Tractor



The P250 Electric Tow Tractor ensures fast and safe transfer of heavy loads over short and medium distances. This is made possible by powerful electric motors as well as easy-to-use hydraulic steering. The turning radius of the P250 is also very short. Hydraulic elements are located between the cabin and the frame. This design prevents uneven ground from leading to excessive vibrations in the cab. The solid one-piece frame surrounds the entire cart and is designed for the high demands of intensive environments. The P250 pulls a maximum towed load of 25 tonnes and reaches a top speed of 25 km/h. The P250 has three independent braking systems that ensure safety in all driving situations.

### EINSA - EQUIPOS INDUSTRIALES DE MANUTENCIÓN S.A. (EX13)

#### SELT-7000



The SELT-7000 is the new EINSA single-platform container loader. It is fully electric and designed to lift, lower and transport LD-2/3 containers up to 7 tons. The SELT-7000 provides efficient loading and transporting of containers to and from all lower decks of commercial aircraft. Its combination of transport and loading capabilities allows the SELT-7000 to minimize turnaround times and reduce the number of vehicles needed to service an aircraft. The SELT-7000 can be equipped with an anti-collision system that complies with AHM 913 and the current European standards. EINSA is also extending its electric fleet of products with a new electric pallet/container transporter. The fully electric pallet/container transporter, model TEA-15, offers an improved design that enables efficient transport and transfer of containerized and palletized cargo loads weighing up to 7 tons to and from container/pallet loaders, dollies and racks.

### RESONATE MP4 (C06)

#### XOPS Smart Dispatching and XOPS Intelligent Speed Assist



XOPS Smart Dispatching provides ground handlers the ability to automate scheduling of daily aircraft turnaround tasks or missions to achieve greater efficiency, productivity and on-time performance. Using profile of tasks, GSE, human resources and airline/aircraft requirements, XOPS software algorithms automatically manage assignment of GSE and drivers/operators to meet task timelines/SLAs while optimizing staff and vehicle utilization. XOPS Intelligent Speed Assist ensures

that GSE will automatically and safely reduce speed levels to the required limits (e.g. baggage tractor in a baggage hall) without any driver action. All XOPS functionality is displayed on digital screens for monitoring, and alarm management. In addition to new advanced XOPS features, Resonate MP4, which leads the development of XOPS, will announce its partnership with SmartWitness/Sensata Technologies to deliver integrated in-vehicle XOPS CCTV offering. The user experience is a seamless, one touch, telemetry data and video incident analysis capability with defined and controllable costs.



### PAGE GSE (EX15)

#### P3X Global Connector

PAGE GSE will introduce its most advanced molded connector ever made, the P3X Global Connector. The P3X has molded-in LEDs that allow operators to verify when the plug is 90-percent inserted visually, when aircraft

E&F is present, and when 400Hz electrical power is on. The P3X Global Connector is installable onto all 400Hz solid state frequency converters or mobile GPUs.

### MALLAGHAN (EX04)

#### Electric Ground Support Equipment



Mallaghan will launch its latest electric GSE model at the GSE Expo Europe.

### TIMSAN (EX67)

#### EBC7500 Electrical Belt Conveyor



Timsan will exhibit its EBC7500 Electrical Belt Conveyor at the GSE Expo Europe.



## MISCO

### Palm Abbe Refractometer



The Palm Abbe is a fourth-generation digital handheld refractometer. Offering laboratory precision, the Palm Abbe refractometer is fast, convenient and easy to use. Users place a drop or two of fluid in the well and press a button on the keypad. The custom-designed micro-processor delivers a nearly instantaneous readout in refractive index, degrees Brix or any one of a thousand different units of measure, allowing users to read directly in the units desired. Nonlinear temperature compensation is automatic and insures that fluids read between 0 and 50 degrees C (32 to 122 degrees F) are measured accurately.

## HISERV (EX17)

### Smart Dollies and Baggage Carts

# HISERV

HiSERV's latest development on smart solutions will be presented, bringing together Inform and Blumenbecker

under the umbrella of HiSERV. The latest development of smart dollies and baggage carts will be shown along with tracking solutions and information on the loading status with a direct feed into dispatch systems. This development will give every category of GSE the potential for becoming smart.

## TEXTRON GSE (EX36)

### Safeaero Intellimix



Safeaero Intellimix, which is designed to maximize efficiency, reduce waste and deliver the perfect blend of heat and fluid to deicing operations. Designed as a standard feature for the Safeaero 220 one-man deicer, Intellimix delivers precise mixing at nozzle, eliminating the need to flush fluids, resulting in lower operational costs and reduced environmental impact. Intellimix continuously circulates at-temperature fluids and blends them at nozzle, once ready to deice, simplifying the

spraying process. Textron GSE will also exhibit its aftermarket lithium repower kit from TUG, which is designed to transform existing internal combustion TUG M1A tractors into sustainable technology that adds years of performance to operations. TUG repower kits incorporate all the benefits of lithium technology, the kit installs in approximately 10 hours, offers rapid charging and can tackle two standard shifts on a single charge. **GSW**

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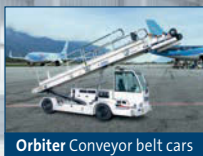
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Wilcox aluminum carts offer a tubular structural design and a peaked roof with drip rails to channel water to the ends of the cart.

WILCOX GSE



# Aluminum's Benefit to Baggage Handling

*Wilcox GSE is using the lightweight material in its carts to offer operating and maintenance advantages and to minimize the equipment's impact on the environment.*

BY JOSH SMITH

**W**ith an eye on reducing its environmental impact, Wilcox GSE began manufacturing aluminum baggage carts two years ago. In addition to environmental benefits, the aluminum carts weigh less and can reduce the cost to operate and maintain the equipment.

"The inspiration behind that aluminum baggage cart came from the need for all of us to help combat global warming," says David Dick, vice president at Wilcox GSE.

"It is our responsibility as a company to design products which not only reduce our carbon footprint during the manufacturing process but as well as the carbon footprints of our customers using the product."

Available in two models – a closed baggage cart and an open baggage cart – the main structure of the unit, including the floor, sides and roof, are all manufactured from previously recycled aluminum.

"The cart is left in its natural aluminum state and not





WILCOX GSE

painted,” he adds, noting the carts can be purchased with non-reinforced or reinforced side curtains in a variety of colors.

According to Dick, no paint is needed because aluminum does not rust. As a result, no volatile organic components (VOCs) are released into the environment from the painting/powdercoating process.

“There will be no scratched paint, there will be no rusting floor or sides,” Dick says. “They will virtually always look new and fresh. The passengers in the aircrafts or terminals will look out and see clean fresh baggage carts loading the planes.”

Wilcox GSE’s closed baggage cart is 5 feet by 10 feet and fully enclosed with curtains on both sides of the cart, while the open baggage cart is 5 feet by 10 feet and half height sides on both ends of the cart.

Utilizing a tubular structural design, additional features of the aluminum baggage carts include a peaked roof with drip rails to channel water to the ends of the cart; top corner bumpers; outside rub rail bumpers; and e-hitch. The closed cart baggage cart includes anti-clock curtain rail system.

Since the aluminum baggage carts were initially designed, officials at Wilcox GSE have changed the initial rear axle from aluminum to steel and added rubber shock absorbers between the axles and the main structure.

“This design change was to reduce road vibration, reducing the wear and tear on the overall structure,” says Dick. “By bolting the axles into place, it allows for very quick axle repairs if needed. Continuous improvement remains one of the most important factors of our quality and product development.”

Like with its steel carts, Wilcox GSE aluminum baggage carts have an integrated parking lock for when the cart is not in use.

“When the tow-bar is in the up position, the front wheels are locked and the cart cannot move,” Dick says.

“Further, for operators, the Wilcox GSE Aluminum Baggage Cart is 500 pounds lighter than the Wilcox GSE steel baggage cart. With the lighter weight, they are easier and safer to manually move.”

Advantages of the lighter weight carts include reduced fuel usage of the tractor and less wear on tires.

“Over the lifespan of the unit, the operating cost will be lower when using aluminum baggage carts. Tires will last longer, hubs will last longer, they will never need to be repainted,” Dick says. “When it comes time for the cart retirement, the cart can be sent to be recycled and turned into another new product.”

Aluminum baggage carts won’t be for everyone, according to Dick. However, he says ground handlers and airline personnel who are in high salt level areas – near oceans, in cold climates, etc. – may benefit more. Currently Wilcox GSE has carts being used in Salt Lake City and Toronto with more units destined for Alaska in the near future.

“The operators love them, and the companies love how they continue to look new after many uses,” says Dick.

“It’s important for us all to do what we can to help the environment – to make green choices,” he adds. “Utilizing baggage carts manufactured from aluminum is a step to reduce your carbon footprint.” **GSW**



# Product Hangar



## COMMANDER 30i E CARGO LOADER

JBT

JBT Commander 30i E Electric Cargo Loaders offer configurability, an intelligent power system and accessible components. The Commander 30i uses the latest construction methods and materials; is available with iOPS monitoring and diagnostic capabilities and can be tailored to customer

needs. The cargo loader requires less training; is quicker to deploy; has greater longevity; and includes JetDock operator assist automated docking options.

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## P6000 BAGGAGE CHUTE

PAGE GSE

The PAGE GSE P6000 Baggage Chute utilizes modern manufacturing techniques making this a reliable chute and easy to install. The P6000SP Service Platform can be mounted to any baggage chute for storage of chocks, safety cones, wands and includes a secure FOD bin.

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## PD-8010 CARGO DOLLY

PAR-KAN COMPANY



Par-Kan's PD-8010 Cargo Dolly can handle two LD-1 containers, one LD-39 and many other sizes of ULDs and pallets in between. The dolly's drop-in casters, with a rating of 440 pounds each and the capability of swiveling 360 degrees, move easily under the weight of ULD containers. It can be configured for side or end loading with a roller deck or all-direction loading with a caster deck. Additional

features include a heavy duty pallet stop and VR locks, while fork pockets protect the undercarriage. The unit also offers solid tires, a spring-loaded e-hitch and a torsion relief tow-bar with a tow-bar-activated braking system.

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### TC-999 MOBILE BELT LOADER

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### GS350

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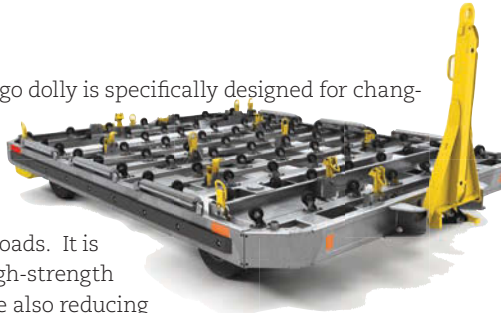
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## Product Hangar

### M-SERIES CARGO DOLLY FAST GLOBAL SOLUTIONS

The FAST M-Series caster deck cargo dolly is specifically designed for changing ramp operations, to easily transport variable size pallets and containers. Multiple position pallet stops and restraints provide versatility for ever changing workloads. It is engineered with lighter-weight, high-strength steel for increased durability, while also reducing fuel use and wear and tear.



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### SHERPA GOLDHOFER AIRPORT TECHNOLOGY

The Sherpa family was developed under modular aspects for high efficiency. The Sherpa D and Sherpa E offer reliable support for a wide range of tasks on the airport apron, not only be used as a cargo tractor, but also for moving aircraft up to 50 t MTOW.



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### RIP-STOP BAGGAGE CART CURTAINS ESTEX MANUFACTURING CO. INC.

Estex Manufacturing's FR700 Rip-Stop Bag Cart Curtains dramatically increase the life of the curtain while decreasing the repair/replacement expense and labor cost. The unique nature of this material prevents punctures from spreading and provides handlers the opportunity to repair the curtain as opposed to replacing it like traditional curtains.



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### INTELLIDRIVE DRUM MOTOR VDG (VAN DER GRAAF)

The IntelliDrive Drum Motor is a conveyor drive designed for longevity and reliability. All drive components, including the electric motor and gear reducer, are enclosed inside the drum, increasing workforce safety. It has a permanent magnet electric motor that uses 40-percent less energy than a standard induction motor, as well as variable belt speed without torque reduction. The IntelliDrive has a service life of 80,000 hours of continuous operation before scheduled maintenance, which reduces maintenance costs. The drum motor features hardened and ground helical gears and operates at a low 46 decibel noise level. The optional Iron-Grip lagging increases belt traction by 40 percent, improves belt tracking, and extends the service life of the lagging.

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## TUG 660 LI TEXTRON GSE

The TUG 660 Li helps make light work of ramp operations. With standard features designed to enhance performance like its AC drive and regenerative braking, this vehicle offers reliability flight after flight. A maintenance-free battery offers smooth, consistent operation, more range and faster charging. And a full complement of options include Smart Sense anti-collision technology, and CE certification to boost productivity and safety of crews.



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## RAMPTECH BELT LOADER SAFETY HANDRAIL SYSTEM SAGE PARTS

The Ramptech Belt Loader Safety Handrail System from Sage Parts meets or exceeds OSHA requirements. The fixed rail system is designed to optimize operator safety by assuring that the rails are always engaged. Safety is further enhanced by numerous other key features including single-hand-operated auto-lock handle mechanism with over-engage protection; double weld construction; reinforced stainless-steel tubing; textured powder coat paint for improved operator grip; non-slip surface walkway with Rhino Linings; and an ergonomic rear grab bar.



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## TBC 6000 TOWABLE BELT CONVEYOR TIMSAN

The Timsan TBC 6000 Towable Belt Conveyor offers a tow-bar, provided by a fifth wheel system mounted to the chassis for easy steering and a brake system. The belt forward/reverse movements are provided by hydraulic motor and the height and angle adjustment are provided by hydraulic cylinders. The electrical system is powered by a standard battery of 12 V DC.



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## CARGO PALLET TRAILER CLYDE MACHINES INC.

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# What We've Learned from the Past

As *Ground Support Worldwide* continues to celebrate its 30th year, we would like to reflect on lessons from history to get a sense for what's next for aviation.

BY JOSH SMITH

**T**hrough the first half of the year, we've used our publication's 30th anniversary as an opportunity to look back fondly at the people, ingenuity and events that have shaped the ground support industry into the one we know today.

During the second half of the year, we'll continue to digest ground handling history and then take lessons learned from past events to get an outlook at what the future could look like.

Of course, the aviation industry is facing a significant issue at the moment. Will passenger air traffic recover from the COVID-19 pandemic? And how quickly can we expect things to return to pre-pandemic levels?

The answers seem to be a resounding "yes" and "very fast."

Recent figures from the International Air Transport Association (IATA) indicated that international air traffic during May 2022 was up 325.8 percent from May 2021 as more borders, particularly in Asia, continue to open.

The May 2022 international travel figures, measured in revenue passenger kilometers (RPKs) represent 65.1 percent of traffic levels in May 2019.

Those international figures factored into total global air traffic in May 2022 rising 83.1 percent compared to the same month last year. IATA's data suggests global traffic is now at 68.7 percent of pre-crisis levels

The airline industry's recovery may not be a shock, as it has previously weathered catastrophes like the September 11th terrorist attacks, previous health emergencies like SARS and Avian flu outbreaks and financial recessions.

I spoke with Warwick Brady, CEO and president at Swisport, during the IATA Ground Handling Conference this spring. Through all of these crises, he noted a parallel between all these events – the industry bounces back.

"All of those times, the learnings there is that this industry is very resilient, and people are never going to give up travel," Brady said.

However, despite the ability to overcome previous trials, the current challenge is unprecedented. The industry went from nearly zero flights in 2020 to soaring demand just two years later.

"We've never seen such a high growth," Brady noted.

As was the case following previous crises, creative solutions from airlines, airports and ground handlers are required to help commercial aviation continue its recovery.

"There's been an enormous acceleration of digital adoption," Brady pointed out. "The businesses that have adapted quickest have done better."

Embracing new technology and implementing updated processes won't slow down as the industry gets back on its feet. Digitization and automation are becoming increasingly prevalent in all facets of life, and it is proving its value within ground support activities, too.

How has your business evolved during the pandemic? What steps have you taken and what changes have you made to become stronger following the events of the last two years?

*Ground Support Worldwide* would like to share these success stories and offer real-world examples on how we can bolster the industry moving forward.

I welcome your thoughts on the topic. Please email me at [jsmith@AviationPros.com](mailto:jsmith@AviationPros.com). **GSW**



Warwick Brady





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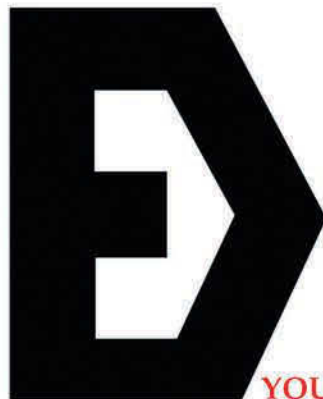
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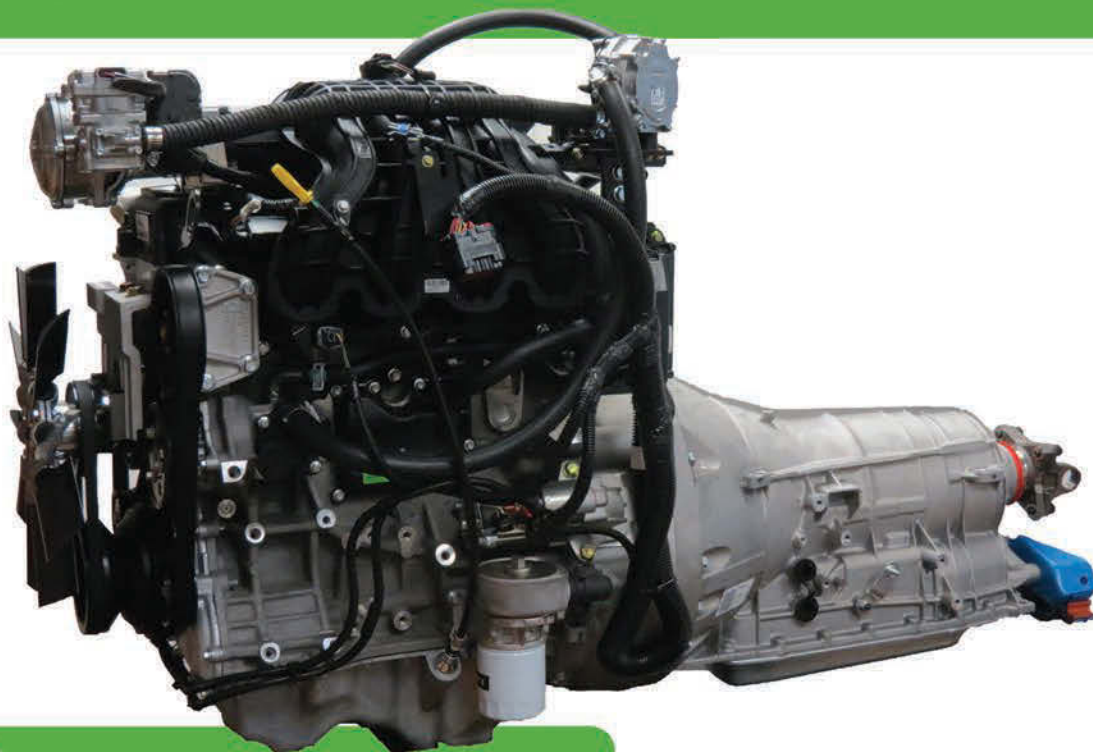
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