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MARCH 2021

# Ground Support

WORLDWIDE  
EQUIPMENT – SERVICES – HANDLING



## THE TECH THAT TRACKS ULDs

**GROUND SERVICE PROVIDERS**

**Pandemic Protection**

**INTERNATIONAL**

**The Factors Faced by Eastern  
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**INDUSTRY EXPERT COLUMN**

**A Plan for the Unexpected**

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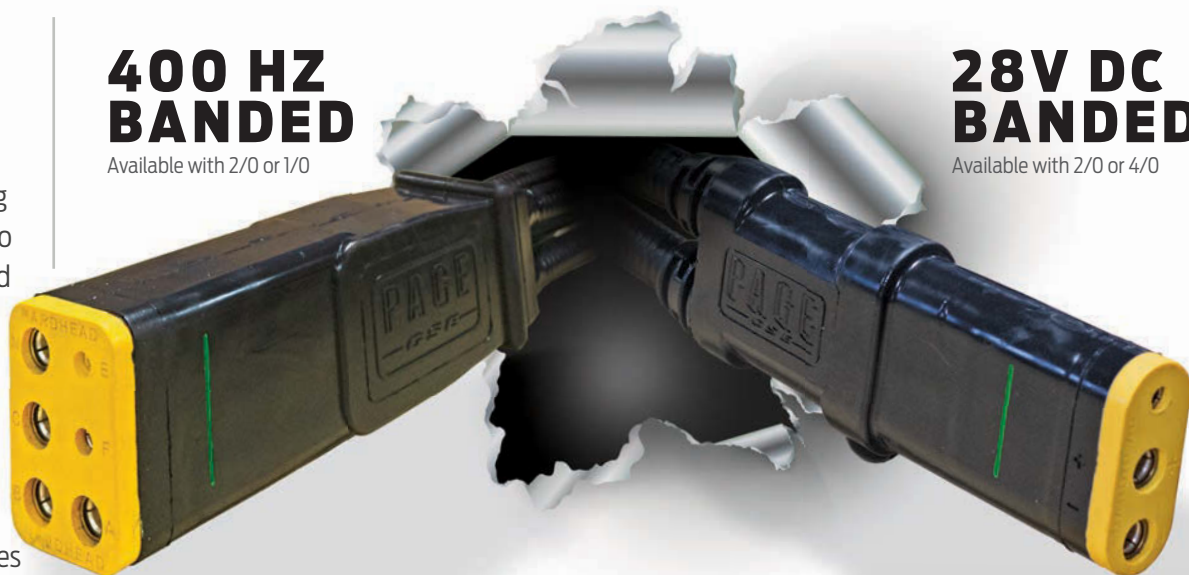
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More than ever, cargo airlines and ground handlers are playing a key role in keeping the world running. As a result, advancements in how cargo shipments are tracked have taken on more importance.

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Cover photo courtesy of Jettainer

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By Sara Davis

Today's fabric airport buildings are engineered to keep maintenance to an absolute minimum.

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VIDEOS



## ThorDrive's Autonomous Vehicles Provide Cargo & Baggage Services at Airports Using Velodyne Lidar

ThorDrive is using Velodyne's lidar sensors to power its cargo and baggage ground support tractors in a groundbreaking autonomous vehicle program at the Cincinnati / Northern Kentucky International Airport.

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PODCASTS

## Beverly Regional Airport's Growth Spurt

Gloria Bouillon, airport manager for Beverly Regional Airport, discusses the airport's growth.

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ARTICLES



## How Forging Extends Component Life and Alleviates Supply Chain Bottlenecks in Aerospace

By Kerry Kubatzke

Research conducted by members of the Mechanical, Industrial, and Manufacturing Engineering Departments at the University of Toledo found that using forged components provides a substantial extension in the lifespan of given parts.

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## Temperature Tracking in the Palm of Your Hand

By Walker Jaroch

The Cargo Service Center Group has released an industry first temperature monitoring and cargo tracking app for their Pharma Excellence Center at the Mumbai airport.

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## U.S. Travel Association Lays Out Needs to Revive Air Travel

By Walker Jaroch

In his annual address, Roger Dow, president and CEO of the U.S. Travel Association, laid out what the association sees as the path forward for air travel and tourism.

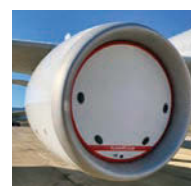
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## ► TOP NEWS

### WFS Opens New Cargo Terminal at Brussels Airport

Worldwide Flight Services (WFS) has future-proofed its growing handling operation at Brussels Airport with the opening of a modern 250,000-tonne capacity cargo terminal, designed to optimize speed and deliver self-service and real-time information for airlines and freight forwarders.



The new 25,000 sq. m. facility is in addition to WFS' 11,000 m. warehouse and office operation at the airport which opened in the Brucargo West development zone in 2019.

"Brussels Airport and its cargo community are very progressive," said Marc Claesen, senior vice president commercial EMEAA at WFS. "WFS is taking the leading role in providing the market with a product and digital tools which meet the requirements of modern-day cargo handling, and which gives us the capacity to grow. We believe more airlines will choose to partner with us."

The new cargo terminal incorporates a dedicated pharma zone, which will become both IATA CEIV Pharma and GDP certified in 2021. It also combines a perishables handling facility and will house a new EU Border Inspection Post and is fully equipped with state-of-the-art security access controls and cargo screening technologies in compliance with WFS' global commitment to deliver the highest standards of safety and security.

The new facility is part of a €100 million investment by Brussels Airport in the cargo zone at the airport.

### ISAGO Aligns with ICAO Ground Handling Manual

The International Air Transport Association (IATA) announced that the 10th edition of



the IATA Safety Audit for Ground Operations (ISAGO) Standards Manual is now available. The standards and recommended practices contained in the latest edition have been updated to align fully with corresponding guidelines issued by the International Civil Aviation Organization (ICAO).

ISAGO is a standardized and structured audit program for ground service providers that aims to improve ground safety by reducing ground damage and accidents/incidents.

"Fully aligning the ISAGO Standards with ICAO's Manual on Ground Handling (ICAO Doc 10121) ensures that GSPs on the ISAGO registry apply the same global best practices in ground operations, including at the same level required of airlines and airports for the management of safety," said Catalin Cotrut, IATA's director audit programs.

ISAGO now includes the audit of passenger, employee health and other requirements that reflect the new operational circumstances brought about by the COVID-19 pandemic. This also includes state- and industry-developed best practices and guidelines so that GSPs can specifically address these pandemic related issues/requirements.

### dnata Adopts IATA's DG AutoCheck Platform for Dangerous Goods Handling

dnata became the first global air services provider to adopt IATA's Dangerous Goods AutoCheck (DG AutoCheck) platform for the acceptance of dangerous goods shipments. IATA's solution will help dnata further enhance safety and improve the handling of dangerous goods at over 20 airports globally.

"We are delighted to deliver this innovation to our customers. DG Auto-

## ► Upcoming Events

### Postponed Events

**International Aviation Snow Symposium**

### Canceled Events

**NBAA Maintenance Conference**

### March 24-25

**NBAA Leadership Summit**  
Virtual Event

### April 20

**European Business Aviation SAF Summit**  
Virtual Event

### April 20-21

**inter airport CONNECT**  
Virtual Event

### April 25-27

**CNS Partnership Conference**  
Miami, FL

### April 27-29

**MRO Americas**  
Orlando, FL

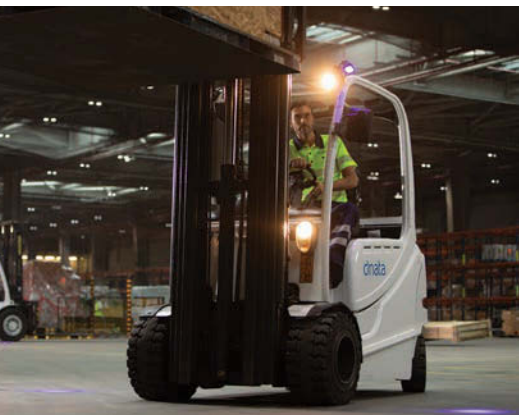
### May 18-19

**EBACE Connect**  
Virtual Event



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Check offers an innovative solution to digitally transform and automate dangerous goods acceptance checks, enabling us to ensure the highest level of safety, compliance and efficiency throughout the handling process,” said Stewart Angus, dnata’s divisional senior vice president for international airport operations. “In addition, the platform will help us access and effectively manage valuable data which will support us in further optimizing our operations.

“dnata’s decision to adopt IATA’s DG AutoCheck is great news for their customers and the cargo industry. It reinforces dnata’s commitment to operating with the highest levels of safety and efficiency, particularly in relation to the carriage of dangerous goods,” added Muhammad Al Bakri, IATA’s regional vice president for Africa and the Middle East.

DG AutoCheck is a digital solution that facilitates the acceptance of Dangerous Goods by checking the compliance of the Shipper’s Declaration for Dangerous Goods (DGD) against all relevant rules and regulations contained in the IATA Dangerous Goods Regulations (DGR). Optical character recognition technology transforms the paper DGD into electronic data. DG AutoCheck can also receive electronic Shipper’s Declaration for Dangerous Goods (e-DGD). This data is then processed and verified automatically using the digital version of the DGR.

## ► PEOPLE

### JBT AeroTech Announces Ahlstrom’s Retirement, Appoints Moore President of Airport Services

JBT officials announced the upcoming retirement of Brent Ahlstrom, president of airport services, planned for the 2nd Quarter of 2021.

With Ahlstrom’s planned retirement, Frank Moore, Jetway Systems VP of gate equipment, has been appointed president of airport services effective March 1.

After March 1, Ahlstrom will continue to provide transition support to Moore and the entire airport services team, reporting to David Burdakin, EVP and president, AeroTech, until his retirement in May. Brian DeRoche and the Jetway team will be working on the transition of Moore’s responsibilities during this period as well.

### Swissport Appoints Brady President and CEO

The board of directors of Swissport International AG appointed Warwick Brady as the company’s new president and CEO. He will replace Christoph Mueller, who assumed the CEO role ad-interim after he was appointed to the board of directors of Swissport in December of last year.

Brady will also join the board of directors of the company.

Brady brings a wealth of international management experience including senior roles in Europe, India and Asia. His previous roles include the posts as CEO of Mandala Airlines in Indonesia, chief operating officer at Air Deccan/Kingfisher in India and deputy operations director at Ryanair plc.

“With his industry experience and a proven track record in organizational transformation, digitalization and

operational turnarounds, Warwick is the ideal CEO to steer Swissport safely, and drive it with real ambition, as the world and the aviation sector emerge from the COVID-19 pandemic,” said David Siegel, interim chairman of the board of directors of Swissport International AG. “We expect the market recovery to present us with some challenges but also with significant strategic opportunities. I am confident that Warwick as CEO and Christoph as our future chairman will take Swissport to the next level and position the company as the first-choice partner for airlines globally.”

“I am delighted to see Warwick join and head up our executive team and look forward to working with him to bring out the best in our company,” Mueller added. “At Swissport, we have started to work on transforming the company into a more efficient, agile and digitally savvy organization. At EasyJet, Warwick was instrumental in several successful initiatives aimed at doing just that, and he will play a key role in driving Swissport’s transformation.”

“I am excited, and honored to be asked to lead Swissport in such unprecedented times,” Brady said. “There is some hard work ahead, but the potential of Swissport and the medium-term market outlook will certainly make this an exciting journey.”

### IATA’s Chief Economist to Retire

The International Air Transport Association (IATA) announced that its chief economist, Brian Pearce, will retire from the organization in July 2021. A recruitment process has been launched to find a successor in time for a smooth transition.

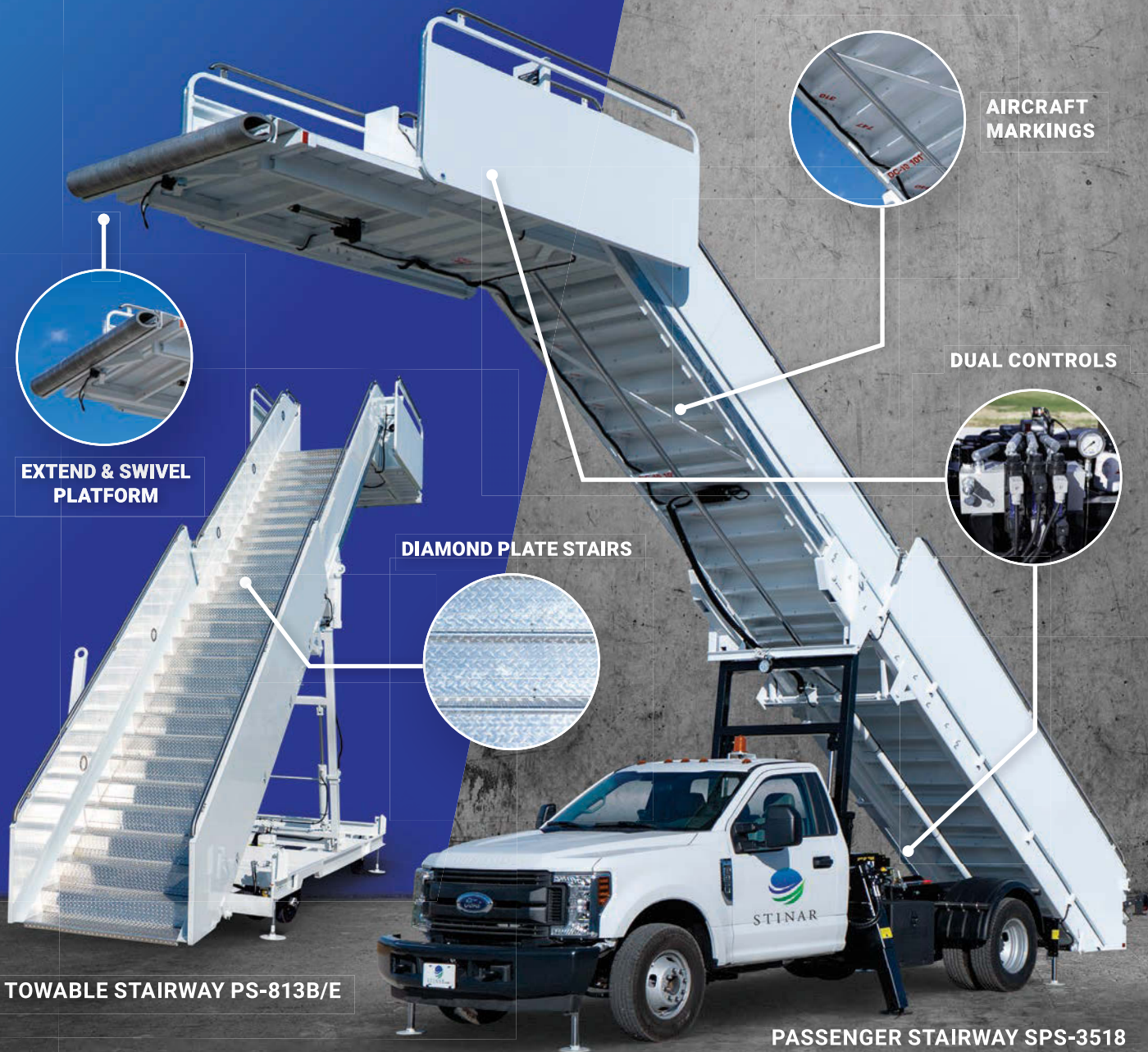
Pearce joined IATA in 2004. Since then, he has built IATA’s evidence-based economic analysis capabilities into the most authoritative source of insight on aviation’s global performance. He also serves on the association’s strategic leadership team.







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“Brian has been an amazing asset for IATA and for the entire industry. His team’s research and analysis have been powerful tools impacting how governments develop policies to realize the economic and social benefits of a successful aviation sector. And he has become the go-to commentator on economic developments in air transport,” said Alexandre de Juniac, IATA’s director general and CEO.

### Al-Idrissi Named Acting CEO of Saudi Ground Services

Raed Al-Idrissi was appointed acting CEO of the Saudi Ground Services (SGS) in January 2021.

Al-Idrissi, an alumnus of the King Fahd University of Petroleum and Minerals, holds an executive MBA and a bachelor’s degree in marketing and industrial management. He has a wide-ranging experience extending more than 20 years, varying between ground service operations and project management of complex and dynamic environments focused on aviation and energy.

Prior to his current role, he was the executive vice president for operations at SGS.

### Menzies Aviation Strengthens Cargo Team with Five New Appointments

Menzies Aviation announced five new appointments, including three new strategic hires, which will further bolster its cargo team.

Rory Fidler joins Menzies in the newly created role of VP cargo technology; Colin Baldwin is assuming the position of head of cargo Africa; and Adam Cooper joins as Air Menzies’ international head of sales from United Airlines.

Alongside these new hires, Menzies has also made two internal appointments. James Wong will assume the position of VP cargo for the Americas region, while Karl Aldwinckle will become head of cargo operations at London Heathrow Airport.

“I am delighted to welcome Rory, Colin and Adam to Menzies Aviation, who will all be huge assets to our cargo team, each bringing with them a unique skill set and significant cargo expertise. VP Cargo Technology is a brand-new position, and I have every confidence that Rory will make a success of this role,” Robert For-dree, executive vice president, cargo said. “With three new recruits and two internal appointments, our cargo business is well positioned to capitalize on new opportunities as we look to the year ahead.”

## ► NEW DEALS

### Aviator Successfully Launches SAS Start-ups in Norway

Following a previously secured agreement with Scandinavian Airlines in July 2020, Aviator Airport Alliance AB successfully launched the start-up of ground handling operations for the airline across multiple airports in Norway. Over the next five-year period, Aviator will be the provider of ground handling and deicing services for SAS at the airports in Bergen, Tromsø and Kristiansand.

“Despite restrictions limiting the possibility of my being on-site to meet the staff and monitor operations, I followed all procedures remotely. I highly commend this impressive start with Aviator, pointing out that all KPIs were met or even exceeded,” said Tomas Holm, SAS head of airport operations, East Europe, Finland, Norway, the Baltics and Russia. “Despite the current harsh winter weather conditions being experienced in Norway, it is good to report that all operations have gone particularly well.”



“The start-up with SAS in Norway is a huge part of our foundation for a profitable future going into 2021. It was of utmost importance that we executed operations perfectly,” Jo Alex Tanem, CEO of Aviator, added. “The sound preparation and effort from our Norwegian team has resulted in Aviator delivering an exceptional outcome across all Norwegian stations, reinforcing our client’s faith in our capabilities. The feedback we’ve received from SAS Group Management makes me immensely proud of our team.”



### Swissport Wins Lufthansa Cargo Contract at Heathrow

The Lufthansa Group now relies on Swissport’s air cargo handling services at London Heathrow Airport. The new contract complements the long-standing cooperation across the UK. Swissport now serves Lufthansa, Swiss and Austrian Airlines – all part of the Lufthansa Group – at all of their UK destinations.

“We are pleased to be able to offer our premium air cargo handling services to the Lufthansa Group at London Heathrow, where we handle around 11,000 tons per year for their airlines,” said Jason Gaskell, Swissport’s chief operating officer, cargo, in the UK and Ireland. “With the addition of London Heathrow, Lufthansa Group now relies on our services throughout its UK network, including trucking between all airports.”

Swissport will handle air cargo for about 30 flights per week, connecting

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the hubs of Lufthansa, Swiss and Austrian Airlines in Frankfurt, Munich, Zurich and Vienna with the UK.



### Menzies Aviation Supports WestJet at Five New Stations in British Columbia

Menzies Aviation is further developing its relationship with Canada's WestJet with the announcement of a new contract to offer guest services at five new stations in the Western province of British Columbia.

Menzies already works with WestJet at Toronto, one of WestJet's largest hubs, and other airports around the world and is now supporting their operations at Victoria (YYJ), Nanaimo (YCD), Comox (YQQ), Abbotsford (YXX), and Kamloops (YKA).

"We are currently servicing WestJet at one of their largest hubs in Toronto and various airports globally. The addition of the Canadian western stations is a testament to the ongoing trust in delivering an exceptional experience to WestJet guests," said James Wong, vice president, sales – Canada and Caribbean. "We look forward to further developing our global relationship and the opportunity to offer our services to the aviation community in Western Canada."

"For more than 15 years, Menzies has partnered with us to provide safe and caring service to millions of WestJet guests. Our long-standing relationship alongside Menzies' alignment with our service culture are two key reasons we selected them as our service partner for these Western Canadian airports," Robert Antoniuk, WestJet vice president, airports said. "We look forward to a continued healthy partnership."

### EVA Air Grows its Global Partnership with WFS with New Contract in Seattle

EVA Air has signed a new three-year cargo handling contract with Worldwide Flight Services (WFS) in Seattle, extending the two companies' more than 15 years of partnership in North America.

WFS already holds contracts with EVA Air at the airport for below-wing ramp handling services for its passenger operations as well as ramp and cargo handling of the airline's freighter flights. Overall, WFS expects to handle some 12 million kilos of air cargo annually for EVA Air in Seattle.

In addition to new business from EVA Air, WFS in Seattle has also recently won new cargo handling contracts with both Aloha Cargo and Polar Air Cargo. In total, WFS now handles more than 28 million kilos a year for eight airline customers at its two facilities at the airport.



"EVA is an important and major global customer of WFS. We are honored to be extending our relationship in Seattle and to have now earned the airline's trust to handle its entire passenger, freighter and ramp services. This reflects the strength of our partnership and the high quality of aircraft and cargo handling services being delivered by the WFS team in Seattle," Mike Simpson, EVP Americas at WFS, said. "It's a great start for us to 2021."

### Gazpromneft-Aero to Provide Refueling Services for Belavia Airlines at DXB

Gazpromneft Aero, the aviation fuel operator of Gazprom Neft, has signed a contract to provide aircraft refueling services on behalf of Belavia Airlines,



the Belorussian flagship carrier, at Dubai International Airport in the UAE.

Gazpromneft-Aero provides into the wing refueling at international airports in the UAE in partnership with the country's national aviation fuel company. In turn, airline customers from Dubai can receive guaranteed fuel service at the airports of Gazpromneft-Aero's presence in Russia and the CIS.

"We have been cooperating with Belavia for four years. In addition to refueling the airline's scheduled flights in Dubai, Gazpromneft-Aero provides Belavia with refueling services at the international airports of Novosibirsk, Yekaterinburg, Kaliningrad and Voronezh. As international air traffic resumes, we are delighted to expand our cooperation with Belarusian partners and provide them with high-quality services on other popular destinations in Russia and abroad," said Vladimir Yegorov, Gazpromneft-Aero's CEO.

"Our airline's specialists have been working for a long time to launch regular flights to Dubai International Airport, and we are excited to operate the first flight on Feb. 19. The quality of aircraft service, including fuel quality, has always been important for us, so we choose only reliable partners. We hope to strengthen our cooperation in the future across other destinations along the airline's route network," said Igor Cherginets, Belavia Airlines CEO.





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### ABM Works with Qatar Airways on Growing Fleet

As Qatar Airways grows its fleet of Airbus A350-1000 aircraft by three; ABM UK has been awarded a contract to provide cabin secure cleaning services at Heathrow Airport.

“Qatar Airways is one of the few global airlines to have continued flying throughout the pandemic and we are focused on helping them build on this success,” said Antony Marke, group managing director for ABM’s UK aviation business. “Ensuring passengers feel safe enough to fly again plays a major role in this and delivering clean airports and aircrafts is therefore essential.”

### Airport Handling Partners with Beta Trans to Offer Integrated Cargo Services at MXP

Airport Handling, dnata’s joint venture in Italy, and Beta Trans have inked a stra-



tegic partnership to provide a full range of cargo services to customers at Milan Malpensa Airport (MXP). The two companies’ joint offering includes high quality and safe ramp and cargo handling, warehousing and road feeder services.

The partnership will see Airport Handling and Beta Trans integrate operational processes and functions, offering customers a one-stop shop of ground handling and cargo services at MXP. The enhanced cooperation will enable the companies to leverage synergies to further optimize their operations and service offering, and deliver world-class efficiency throughout the handling process.

“We are delighted to partner with another leading, reputable industry player to jointly offer an advanced one-stop shop solution to our customers. Our world-class ground handling offering including our state-of-the-art GSE fleet and Betatrans’ ultramodern facilities will ensure that we consistently provide excellent services,” said Alberto Morosi, CEO of Airport Handling. “We are confident that this strategic partnership will deliver significant benefits for both companies and our partners.”

“This partnership enables both companies to complete their offering and enhance cooperation with customers by providing them with a single point of contact. Airline tenders often have international relevance, therefore this project also allows us to grow and refine our commercial offer,” Giorgio Bianculli, CEO of Beta Trans, added.

### BP and Qantas Partner to Advance Net Zero Emissions

Qantas and BP announced a strategic partnership to further advance their shared net zero ambitions. Through the collaboration, the companies will work together on opportunities to reduce carbon emissions in the aviation sector and contribute to the development of a sustainable aviation fuel industry in Australia.

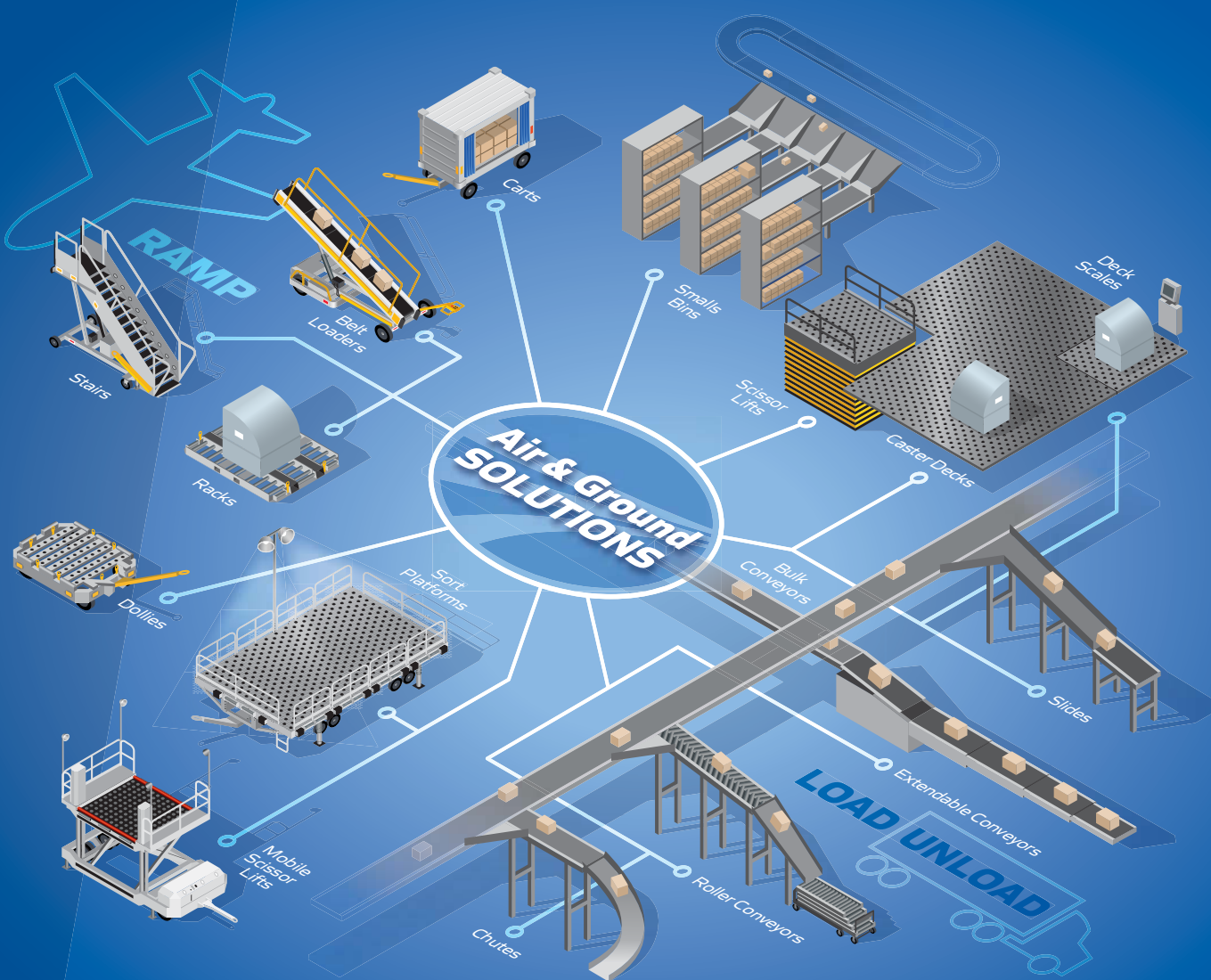


Jointly, the teams will explore opportunities and projects in areas including advanced sustainable fuels, advocacy for further decarbonization in the aviation sector, renewable power solutions and generation, carbon management and emerging technology.

“At BP, we’re focusing on working with corporates in key industrial sectors that currently have significant carbon emissions to manage and need to decarbonize – sectors such as aviation,” William Lin, BP’s executive vice president, regions, cities and solutions, said. “By bringing our complementary capabilities together, we can help each other, and our customers, move at a faster pace on the energy transition journey. We are delighted to have the opportunity to collaborate with Qantas on plans to reach net zero while continuing to deepen our existing relationship.”

“While the COVID crisis has compelled us to make many changes across the business, one thing that hasn’t changed is our commitment to minimizing the impact we have on the environment,” Andrew Parker, Qantas group executive government, industry and sustainability, added. “Even though we have been flying a lot less, we’ve actually seen the same proportion of customers choosing to offset their domestic travel during the pandemic – showing that this issue remains top of mind for people.”

BP and Qantas are working towards a low carbon future and both companies aim to increase collaboration in this area over time.



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# A Plan for the Unexpected

An effective emergency response plan informs everyone of what to do when disaster strikes at an FBO.

By Todd Thomas

When it comes to having an emergency response plan (ERP), we generally think on a larger scale such as the government, NASA, airlines, manufacturers, etc. Our thoughts may not necessarily go to a fixed base operation (FBO).

However, when it comes to an ERP, the size of the organization does not dictate who needs one. All organizations need an ERP, including FBOs.

So, why do you need an ERP? A quote by Steven Cyros answers that question, "Remember: when disaster strikes, the time to prepare has passed." It is all about knowing ahead of time what to do should a disaster occur. You have a much better chance of minimizing the effect of a disaster when you prepare for it ahead of time.

I worked for an FBO at a local airport many years ago. I performed several tasks such as marshalling aircraft, towing aircraft and fueling aircraft. We also provided aircraft maintenance and hangars for aircraft.

While all these functions come with their own hazards and risks, probably the greatest potential for a disaster came from our operation of a fuel farm and the fuel trucks.

As one would imagine, my training at the FBO included the use of all the proper safety features of the fuel farm itself, as well as all the safety features of the fuel truck I operated. It has been a while, so I do not remember having access to an ERP – or if one even existed. This, of course, is not good, especially if I had a problem and did not have a resource to consult to tell me what to do.

This highlights the importance of not only having an ERP, but ensuring your frontline personnel have access to it.

If you do not have an ERP in place already, I urge you to put one in place as soon as possible. Make it a high priority. Being prepared to the extent possible to handle emergencies must be an immediate goal.

An ERP should be developed to fit the size of an organization. It needs to be reasonable and clearly laid out. I have joined companies with existing ERPs that had programs too large for their size. There was simply no way that they could carry out all the measures they had committed themselves to do due to a lack of infrastructure.

Luckily, we never had an incident that required us to put it in to action. But, as we all should know by now, luck will only take you so far.

So, what goes in to developing a good emergency response plan for your FBO? First and foremost, do not reinvent the wheel. I have found during my time in the safety field that my fellow safety colleagues are more than willing to share things they have developed. Reach out to other FBOs in your area and speak with the person in charge of safety. Chances are if they have an ERP, they will be willing to share information that will help you in the development of yours.



Photo courtesy of Baldwin Aviation

Other resources for help with your ERP development are the internet or third-party vendors such as the company I work for, which specialize in providing safety products like an ERP manual template.

Your ERP template should include sections that will answer the questions who, what, when, where and how:

- What will each person's roles and responsibilities be?
- Who in your organization will have ERP responsibilities?
- When will the ERP be activated and when will participants begin their roles and responsibilities?
- Where will the ERP be kept and where will the command center be?
- How will each person carry out his or her roles and responsibilities?

To help answer the questions, take time to understand the hazards faced by your operation. Determine how extensive of a response will be needed for the hazards identified. Once you have this information, you can better answer each question.

With these five questions answered, you are well on your way to having a working ERP. One example of how you can organize your ERP might be:

- Overview
- Functional Areas
- Hazard Specific Sections
- Special Weather Contingencies
- ERP Checklists

At this point the goal is to not overcomplicate things. Think through each question and provide common sense answers. Do not put too many responsibilities on one individual. When possible, it is recommended to have a back-up for each primary person in the event of sickness or vacation.

It is usually advisable to survey your work group to see if anyone possesses any unique skills that can help during an emergency. For example, you may have workers who are already trained in emergency response. You may also have people trained as volunteer firemen, reserve police officers or in first aid. The idea is to know your work group's strengths and capitalize on that experience during an emergency.

Knowing who to reach out to and how to reach them is another critical part of an ERP. You do not need to be searching for the

number to the local hazmat response team during a hazmat incident. Take the time to research and compile your contact list ahead of time. Include a contact list of all the key emergency responders as an appendix to your ERP. This will make it easier to update should names and numbers change.

From a basic standpoint, you will need someone to coordinate the overall emergency response such as an ERP team leader. This position will usually be filled by someone in a senior management position and will oversee the Emergency Operations Center (EOC). An administrative person is helpful to document the response along the way. The other positions will be determined by the extent of the emergency and the availability of personnel.

Once you have the ERP template you want to use, conduct a gap analysis for the purposes of determining what existing policies and procedures you may already have in place to go into your ERP. After the gap analysis, you will then know what other policies and procedures need developing. As mentioned previously, an effective ERP will answer the questions who, what, when, where and how.

Now that you have an ERP crafted, your work is just beginning.

To have an effective ERP, you must first train everyone in how to use it. A training schedule will need to be created and invitations sent out. It is critical that no one is skipped and that all get their initial training completed in a timely manner. The focus must be on each person's role and his or her responsibilities.

As most of us in aviation should already know, checklists are an important tool to help us perform critical tasks safely. The pre-flight checklist that a private pilot uses before taking off is a prime example. Experience has shown that some accidents and incidents can be attributed to the pilot not performing the pre-flight check.

Depending on the size of an organization, you may choose to issue a hard copy of your ERP to each employee. For larger organizations, an electronic copy in a location with 24/7 access might suffice. You must make sure however, that everyone knows how to access the ERP at a moment's notice.

A critical final piece in your ERP is to plan regular exercises of it.

You can perform a scaled down version known as a "table-top" exercise. This is when you gather all the key players around a conference room table and walk through an emergency response. This will help everyone get used to their roles and responsibilities much quicker.

On a less frequent but a regular basis, it is advisable to hold a full-scale exercise.

This involves advanced planning to determine the scenario you will use. You will activate the EOC and your call list. Keep it as realistic as possible but ensure that the participants are told it is an *exercise* and not real world.

Always plan on a debriefing at the end of any exercise. This will be a time to gather in a conference room and go over how your team performed. You will determine any weak spots and focus on them in future training. Take all lessons learned and share with your team to help improve the response the next time.

You will benefit in several ways once you have an effective ERP in place. First, you will be better prepared to handle an emergency if one occurs. Second, you will also have peace of mind knowing that you have a plan in place. If you do not have an ERP, I again encourage you to put one in place immediately. If you do have an ERP, ensure everyone is properly trained on it and exercise it on a regular basis.

"Remember: when disaster strikes, the time to prepare has passed." Being prepared to the extent possible to handle emergencies must be an immediate goal. **GSW**



#### ► ABOUT THE AUTHOR:

**Todd Thomas** is senior safety manager at Baldwin Aviation Safety and Compliance. With more than 20 years of experience in the U.S. Part 121 Air Carrier industry, he has served in the FAA-required Part 119 position of director of safety for four U.S. Part 121 Supplemental Air Carriers, three of which were passenger carriers and one an all-cargo carrier. He is a Veteran of the U.S. Air Force, achieving the rank of Sgt. before his Honorable Discharge and holds a Private Pilot's license.

# THE TECH THAT TRACKS ULDs



More than ever, cargo airlines and ground handlers are playing a key role in keeping the world running. As a result, advancements in how cargo shipments are tracked have taken on more importance.

*By Josh Smith*

**E**ven before modern cargo trends grew along with online retail giants and e-commerce spending habits – now amplified by the COVID-19 pandemic – the need to track unit load devices (ULDs) carrying vital cargo has always been important.





But as shipping requirements become more specific, especially for time- and temperature-sensitive cargo, the way the industry traces the location of ULDs has had to evolve. As a result, the industry has tried and adopted key technologies to help ULD managers, ground service providers and airlines meet present day cargo demands.

Every airline needs to have the right number and the correct type of ULDs for every flight, at all times and every departure point, explains Frank Mühlenkamp, director of operations at Jettainer.

“The biggest challenge is securing ULD availability in the most efficient way,” he says.

But as Bob Rogers, vice president at ULD Care, points out, there has always been a challenge to record the whereabouts of ULDs. According to Rogers, at any given time approximately 5% of ULDs may be missing.

“Now, 5% doesn’t sound like a lot. But if you were trying to run a restaurant and one day 5% of your knives were missing and the next day 5% of your forks were missing and then the next day 5% of your plates were missing, you’d go out of business very quickly,” he says.

“This is the problem. It’s not the 5% that’s such an issue. It’s that you don’t know which 5% is going to be missing.”

There are different stages along a ULD’s journey that are easier to track than others. Because a ULD is moved by several involved departments, Alexander Wendorff, solutions manager at INFORM GmbH, notes this can make it difficult to locate a ULD at the airport.

“It is very easy to determine whether a ULD is on an airplane. There are loading and unloading processes,” Wendorff says. “It is getting more difficult in the warehouse. Here, ULDs can be pushed from one parking position to another.

"The apron is then the greatest challenge," he continues. "You depend on transport, but you do not know whether ULDs on dollies will be parked somewhere else than originally planned. Then there are the safety regulations in aircraft regarding communication and the lack of energy for the transmission of data."

Efficiently managing a container and pallet fleet requires a high level of accuracy and transparency, according to Martijn van Geest, managing director of digital solutions at Unilode.

"Both airlines and ULD management providers are faced with the challenges of data quality and delivery as they depend on data provided by third parties outside of their organization," van Geest says. "This process usually has a low level of automation that negatively affects the data quality, and this is one of the key areas where ULD trackers can help as they decrease manual and error-prone data entry, which results in more accurate and immediately accessible data."

ULD tracking, and the resulting efficiency gains, also enables ULD managers to use fewer units and thereby saves significant costs for airline customers.

## Tracking Advancements

The cargo industry had high hopes that radio frequency identification (RFID) technology could assist with ULD location services in the same way it has assisted with passenger baggage tracking.

But, according to Rogers, RFID ultimately never became a viable option – in part because of the cost and infrastructure needed to deploy it.

"You need an awful lot of physical infrastructure in the form of scanners," he says, noting range and frequency of the scanners caused issues. "The frequencies that give the biggest range are the ones that are not acceptable for use in an airport ramp because of interference with other radio transmissions, and the frequencies that are acceptable on a ramp have a range of about three feet. You'd be practically standing on top of the pallet before you could identify it with RFID."

Arnd Trapp, director of IT at Jettainer, adds that global positioning systems (GPS) and global system for mobile communications (GSM) networks are other examples of technology that did not transfer to ULDs well.

"The main reason why these technologies have not been convincing is that the power

supply cannot be guaranteed for a sufficiently long period of time," he says.

"Generally speaking, power consumption, in particular, is a major challenge for tracking technology," Trapp continues. "ULDs are normally in constant circulation and are only sent for repair if they are damaged, so the batteries have to be very durable. Taking the ULDs out of circulation at short intervals to change the batteries is not a viable option with our fleet size of 100,000 units."

According to Rogers, Bluetooth Low Energy (BLE) – which previously had been applied to tagging air mail, has begun being used to tag ULDs. Meanwhile, companies like Sigfox have started utilizing unused bandwidth from mobile phone networks to assist in tracking cargo containers.

"They both have their pros and they both have their cons. BLE is simple in that you have to put readers in. The readers can read up to something in the range of 50 meters, but it's growing all the time. There's even this thing called BLE Mesh, where the tags talk to each other and finally reach a reader," Rogers says. "The interesting thing on both of these, particularly BLE, is Bluetooth is consumer electronics. So, it's growing at a huge pace and its cost is constantly being driven down."

Wendorff adds that BLE is currently the only medium that can transmit information over a short distance in such a way that no extremely expensive antennas are necessary for detection.

The development of the Internet of Things (IoT) and the possibilities of active tracking provides a huge field of new opportunities.

"The key however is the transparent and smart use of available data," Trapp points out. "Based on our high-quality data and the use of artificial intelligence, we have developed a decision support system for our steering and control solutions. This enables us to understand ULD movements better and predict ULD imbalances to act rather than react."

With the spread of IoT, and with it the combination of different data, tracking ULDs at reasonable costs is possible, Wendorff adds.

"The possibility of localizing dollies plays a particularly important role for us," he points out. "We are now increasingly relying on the combination of process data and telemetry data. Manual entries are almost only used for confirmation. We use the fact that a ULD –







Photo courtesy of Jettainer

once it is integrated in the process flow, does not just stand somewhere on the floor.”

Using tracking technology in the aviation industry requires special criteria and considerations. Additionally, van Geest says, solutions must be reliable in service while meeting aviation certification requirements.

“Devices that are loaded in the hold of an aircraft cannot carry large power packs, tags should have a substantial lifetime beyond five years and there is clear limitation on energy consumption. Furthermore, the radio transmitting technology must meet requirements to avoid interference with aircraft systems,” he says. “At Unilode, we were looking at many technologies and have found Bluetooth Low Energy to be the most suitable to serve our purposes.”

Perceived advantages and disadvantages can depend on the purpose the technology serves. For example, van Geest says Unilode needs data most importantly on geo location, temperature, humidity and light.

“Given the rough environment ULDs are exposed to, Bluetooth serves our purposes the best. However, we are aware technology evolves and we are capable to let our solution also evolve in this process,” he notes. “We have put a lot of efforts on the back-end solution so that we can accommodate any new emerging technologies that would further improve our digitalization goals.”

According to Trapp, Jettainer works closely with scientific institutes and IT experts to keep up with new innovative and efficient solutions.

“We are keeping a particularly close eye on the development of 5G, Sigfox and LoRaWAN and see great potential here,” he says.

“The low-power wireless network protocol Long Range Wide Area Network (LoRaWAN) has particular potential for ULD tracking. LoRaWAN meets both critical challenges for tracking technologies: high network connectivity range and low power consumption,” Trapp adds. “However, further developments are needed here to catch up with BLE technology.”

Trapp also notes it is important that any new solutions introduced to the industry are rolled out as widely and quickly as possible, so that they can be used efficiently.

“However, this is where many new developments fail, as tracking regulations vary from country to country. There is a risk that new technology will be obsolete by the time it is globally available on the market,” he says.

According to Rogers, ULD Care is working to integrate a blockchain platform into current systems to assist tracking transfers of ULDs between airlines.

“Our ambition is wherever a ULD is transferred from any party to any party, it will be possible to record the transfer using a

handheld device – a mobile phone – and that data will then be used to update our common neutral platform,” Rogers says.

## Technology’s Role Amid the Pandemic

In addition to logistic challenges faced with distributing vaccines, the COVID-19 pandemic has tested the industry in other ways, including limited repositioning capabilities, staff reduction and unbalanced flows.

“The temperature sensor and the location-tracking device in ULDs enable 24/7 monitoring, which is especially important for effective vaccine distribution as they enable to check for unwanted deviations and take appropriate actions to prevent loss or damage of shipments,” van Geest points out. “We prioritized the tagging of special temperature-controlled cool containers in our fleet so that we can offer the benefits of the ULD tracking technology to our ULD management airline customers and contribute to their COVID-19 vaccine distribution efforts.

“We have also noticed an increased interest in digital ULD tracking as pallets have become scarce assets and tracking helps utilize them in a much more efficient way with enhanced availability and much faster turnaround times.”

“When it comes to COVID-19, we are talking more about new ULD types, which



in turn are placed differently on dollies and which deliver different telemetry data – such as monitoring the cold chain,” Wendorff points out.

“Tracking COVID-19 ULDs even makes it very easy, since the vaccines must be trans-

ported in a cooled manner and the dollies therefore must have their own energy supply. This is usually also used to record and transmit the position of the dollies.”

The availability of cool containers can present a challenge.

According to Mühlenkamp, the overall number is limited and positioning and return of these units is challenging, as freighter and belly capacity remain limited.

“Consequently, efficient cool container management and monitoring is crucial. Within Jettainer we do not rely on ULD tracking technology as an only source, we offer our customers a comprehensive service. cool&fly is our solution comprising full cool ULD order management, steering, positioning and monitoring of the cool chain as well as after-service management,” he says.

“Due to the already established information and data flow, airlines and ground service providers know which ULDs arrive and depart at their stations, irrespective of tracking technology.”

## Future Developments

Digital ULD tracking has fundamentally changed – and will continue to change – how fleets are managed.



Photo courtesy of Fraport

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"It further increases pooling synergies, thus accelerates our goal of supporting the sharing economy. But the impact will be significant for all actors along the supply chain as it will create a new level of transparency," says van Geest.

"Moving forward, Unilode will make relevant data available through a blockchain, offering access to non-manipulatable data," he continues, noting Unilode's FAST Solution Suite helps airlines and customers avoid making significant IT investments to their existing systems as the FAST mobile app for iOS and Android converts mobile phones and tablets into reading devices that considerably increases the reader infrastructure.

The major challenge in using tracking technology is still improving energy efficiency and the global network coverage of reading infrastructure, Trapp says.

"Further developments are also welcome in the area of reader technologies," he adds. "Because of the relatively short range, a

number of readers are needed for seamless tracking.

"Cost also plays an important role. But in just the last few years, we have seen huge progress made in these areas. For example, batteries now last for much longer and are cheaper, and network coverage is also increasing."

Rogers notes expertise in the field is being stripped away as members of the workforce retire or have left the industry through layoffs and redundancies. Better tracking solutions could help overcome that hurdle.

Good tracking of ULDs means an increase in service quality, which Wendorff says should be considered first and foremost.

"Furthermore, the detailed information enables the utilization of the dolly fleet to be better determined, which in turn leads to a sustainable reduction in the size of the



fleet and thus also to a reduction in costs," Wendorff says. "Aviation is a time-sensitive business – we talk everywhere about time slots. The better the tracking option, the better time slots can be kept and the better it is possible to react to irregularities in the process flow." **GSW**



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# Pandemic Protection

COVID-19 has put a spotlight on personal protective equipment and has introduced new gear and practices that are now part of ramp workers' daily lives in the pandemic-era.

By Walker Jaroch

A year ago, COVID-19 turned the world on its head overnight. What was the “new normal” is now just normal as the world enters the second year of the crisis.

Part of that normal is personal protective equipment (PPE), which has become a household term.

For those who make their living on the ramp, PPE is nothing new – from hearing protection to high visibility vests – the gear has always been there. What wasn't there before were

the masks, electrostatic sprayers and more that will likely continue to be utilized long after the pandemic is gone.

Before COVID-19, Mary Marietta, executive vice-president of human resources for GAT Airline Ground Support, says workers utilized PPE within the scope of their jobs, with lavatory agents having the most extensive equipment – face shields, gloves and jackets and coats that repel waste. Now, the scope's grown for everyone.

“We've significantly changed our approach, our metrics,” Marietta says of their post-COVID

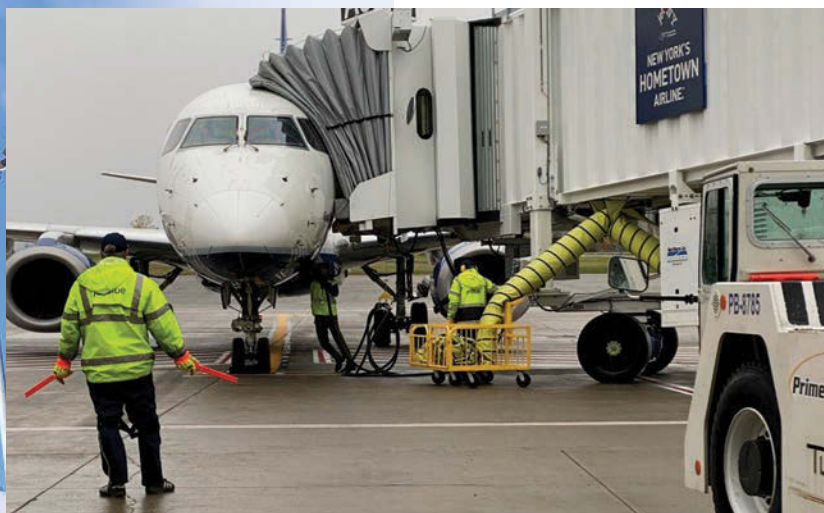


◀ **Masks have become a must for all members of PrimeFlight's staff.**  
Photo courtesy of PrimeFlight Aviation Services



◀ **PrimeFlight workers wearing a number of PPE, including high visibility gear and hearing protection.**

*Photos courtesy of PrimeFlight Aviation Services*



changes. “We have masks that have been sent out to all of our frontline agents, every single operator within the field – we have 47 locations within the US and 3,000 employees. We provided two washable masks that can be used that are required for all of our agents in the station. We have disposable gloves for all of our agents, as well.”

Wayne Ingle, VP of safety and operational support at PrimeFlight Aviation Services, says they too have mandated face coverings for all staff.

“We have seen an increased consumption with team members changing them approximately every four hours. In addition, we have seen an increased consumption of anti-absorption gloves. Use has skyrocketed with employees changing them more frequently between tasks to prevent inadvertent face touching. There has been a drastic increase in consumption of vapor masks, N95/P95, which includes

the introduction of new tasks that require respiratory protection such as air ionization,” Ingle says.

Like GAT, PrimeFlight also had assigned PPE based on job responsibilities before the pandemic, including vests, hearing protection, protective work gloves, safety shoes, knee pads, face and eye protection, aprons and disposable coveralls, fall protection and welding protection.

In addition to masks, there are new day-to-day sanitization and disinfection protocols employees are following.

“When our cabin cleaners are going through and sanitizing the plane, they have disposable gloves that they have to wear. There are specific temperature check policies that we put in place, symptom checking policies that we have for all of our agents, that we’re tracking and monitoring on a regular basis. For the cabin cleaners, the disposable gloves, hand sanitizer at every open location for them, we have a very strict handwashing policy for all those folks,” Marietta says.

“We have also added hand sanitizer to all work areas for immediate cleansing after glove removal and any surface contact. The same can be said for use of disinfectants, with use skyrocketing for more frequent wipe-downs of all surfaces in work and common areas as well as shared equipment,” echoes Ingle.

## Protection on Another Level

As Al Mantilla, project manager at Accu-Fleet International, Inc., describes, COVID-19 hasn’t just changed PPE requirements, but it has changed the whole way ground service providers think about personal safety.

“Virus protocol is now added to the list of issues to be mindful of on the ramp. We value being a safe organization and beyond preventative measures this also includes the mindset of our team,” he says, adding that there’s been a heightened awareness around face coverings.

Ingle says the pandemic has “absolutely” changed the way they think about PPE and hygiene practices, in general.

“We have seen this particularly with our below-the-wing team members. There is an increased awareness related to germs and bacteria not only in the workplace, but in all aspects of life,” Ingle adds. “The pandemic has raised an overall awareness, for the public at large, of the need for better hygiene practices.”

With this new focus, personal protection is extending beyond just what an employee can wear but is taking the fight to the virus with disinfectants. GAT’s cabin cleaners have been employing an electrostatic sprayer to disinfect aircraft cabins. The sprayers are also employed in general and common areas.

“When they go into these aircraft and there’s been an exposure, we have electrostatic foggers that they would use to sanitize the aircraft and the cabin. Same in any of our general areas. When they use that, there are jackets and pants that are protective, and also, again, repel any type of fluids or liquids that they would potentially be exposed to. They have face shields for the cabin cleaners that they use on a regular basis, plus the masks that they would use as well. That’s a little bit different than the normal day-to-day ramp agent, cargo agent, etc., because they’re more exposed to the risk of contracting the illness,” says Marietta.

Ingle adds that PrimeFlight has seen an increase in aircraft and facility fogging and says the company is also introducing a line of UV surface disinfection units tailored to the aviation industry.

"As a service company, our goal has continued to be to get our employees back to work," Ingle says.

"Our patent-pending PrimeFlightUV units, ranging from wheelchair and security bin disinfection units to aircraft sprayers are aimed at giving passengers peace of mind and helping to protect front line workers as we all work to get the industry back to pre-COVID levels," he adds.

▼ **An AccuFleet cabin cleaner in full PPE disinfects an aircraft.**

*Photo courtesy of AccuFleet*



Marietta points out that it's important for employees to take protection measures when off their worksite as well. Given the virus' easily transmissible nature and despite the best worksite efforts, it can be easy for an employee to be lax with personal hygiene and pandemic best practices. Likewise, an employee may encounter someone else who is lax, and bring in the virus from the grocery store or their home.

"I would say that, just in general life, people who are not working aviation, people who aren't working as ground handlers, PPE in our daily lives with COVID is just so essential right now. We know COVID is not done yet. We're hoping that with continued, as they say, herd immunity and continued vaccinations, we're going to be able to see a decrease here, but we're in the throes of it right now so everyone has got to social distance, wash hands, wear your masks out in public every time, no exceptions. These are critical components right now that are going to help us to defeat this and help minimize the cases that are happening right now," she says.

"It may be uncomfortable and it may not be something that everyone wants to do or enjoys doing right now, but it's essential for us to get past this."

## The Not so New Normal

The big question, of course, is what is here to stay? Ingle says that it's still too early to say for certain what practices and equipment will remain mainstays of the industry post-pandemic, though he guesses many are going to stay permanent fixtures.



◀ **An electrostatic sprayer utilized by AccuFleet.**  
*Photo courtesy of AccuFleet*

"It may be **uncomfortable** and it **may not be** something that everyone wants to do or enjoys doing right now, but it's **essential** for us to **get past this**."

— Mary Marietta

"We expect that some of these changes in PPE and cleaning practices to remain for some time, if not indefinitely. However, it is still too early to gauge the long-term effects that COVID-19 will have on our industry and workplace practices," he says.

Mantilla estimates that COVID-19 has changed the aviation industry forever, with the focus on hygienic best practices and preventative measures now part of its foundation – if even just to ease passengers' fears.

"I would imagine that the effects will stick with the industry for some time. As a company we emphasize safety for our team members. We anticipate that aviation, as a whole, will require PPE and preventative measures to collectively increase the visibility of efforts being made to our passengers and customers," Mantilla explains.

"From our perspective, we plan on implementing this going forward indefinitely. Even with the vaccine, which we're of course thrilled about and we're encouraging as many team members as possible to get vaccinated to keep them and their fellow team members safe, we still don't foresee this completely going away for months and months and months," says Marietta. "In our minds, there's going to be no changes in the near future or the distant future. We plan on implementing these practices going forward, period." **GSW**

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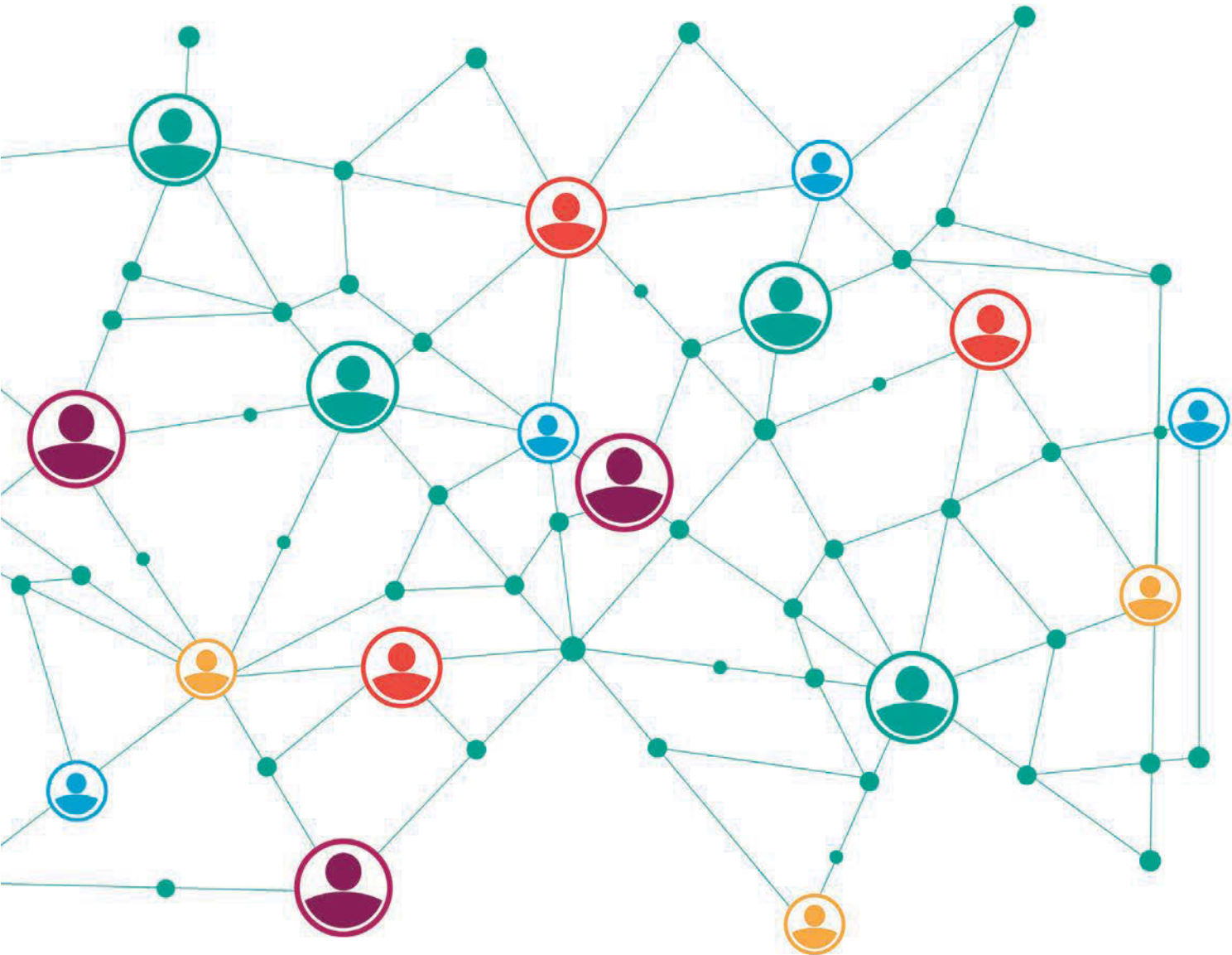
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# The Factors Faced by Eastern Europe's GHSPs

Specific features in the region compounded by a drop in air traffic have posed certain challenges for ground handlers.

By Mario Pierobon

**T**he aviation industry was impacted in an unprecedented way by the COVID-19 pandemic, which was entirely unexpected and has specifically affected aircraft ground handling.

Ground services in the eastern part of Europe have some defining features,

including the fact that airports often own the ground handling companies and the eminent role played by the low-cost carriers (LCCs) in the business, which have a different approach to ground handling compared to legacy carriers.



## Business Environment

In Eastern Europe there is the trend of airports which tend to own the ground handling subsidiaries.

"This phenomenon is mostly in Central Europe rather than the whole Eastern European continent, but it is an aspect that perhaps is more prominent than it is in Western Europe, where airlines have long ago decided to outsource ground handling and airports as well. So, whereas in Western Europe there is a clear triangular relationship between the airline, the airport and the ground handler. In Eastern Europe, and especially with smaller airports, this is often not the case," says Fabio Gamba, director general of the Airport Services Association (ASA).

In relation to the specific requirements of LCCs, several airlines accomplish the ground handling themselves and often do not require the use of independent ground handlers.

"Another aspect is that they are extremely focused on turnaround time. They often require the minimum service because they need to be able to take-off in 20-25 minutes," says Gamba. "The network carriers have hubs and spokes and short haul flights, which are often used to feed the longer haul flights. This does not exist with low-cost carriers and therefore it changes quite considerably the nature of the relationship that ground handlers may have with LCCs."

Czech Airlines Handling (CSAH) provides a combination of services for the ground handling of passengers, aircraft, cargo and post, including aircraft refueling responsibilities, for more than 40 air carriers at Václav Havel Airport (PRG) in Prague.

"In the wake of the pandemic, we had to face frequent changes in flight schedules of air carriers and to cope with new traveling conditions, as well as implement new measures to protect the health of our employees and passengers. CSAH also played a significant role in handling repatriation flights and special cargo flights with medical supplies arriving in the Czech Republic in spring, during the first wave of the pandemic," says Tomas Svoboda, chairman of the board of directors of CSAH.



"Responding to the uncertainty on the part of our customers and the drop in air traffic to a minimum which went hand-in-hand with it, has not always been easy. Thanks to cost optimization, business activities and the good economic results of previous years, we were able to overcome this difficult period, to gain new customers as well as prepare for the gradual resumption of operations."

With the help of legal options and official state support programs, CSAH was able to keep most of its employees.

"Our motivation was to maintain the opportunity to respond flexibly to the operational needs of airlines as our valued customers and at the same time be able to participate in new tenders called by potential clients," says Svoboda. "In October 2020, we established a coopera-

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tion with the Smartwings Group and we now provide ground handling services to all flights of both airlines based at Prague Airport – Czech Airlines and Smartwings. We have also started new cooperation with other air carriers who arrived in Prague for the very first time because there is the potential for possible future cooperation.”

### European Directive

Directive 96/67 EC applies to Eastern European countries that are part of the European Union. The directive requires that above a threshold of 2 million passengers a year, there is the need to have at least two ground handling companies. But ground handlers might as well be kept at two only, observes Gamba.

“Currently, the situation with COVID-19 does not call for newcomers to try their chance at new airports. Many are struggling and finding it extremely hard

to survive at this stage, let alone trying to venture into new territories,” says Gamba. “At this stage, the situation is a bit frozen due to the large number of withdrawals. It is not a good moment for people to take risks. They want to make sure that they can still make a business out of what they have established.”

With regulation 696/2020 (EU), there is now an exemption that allows airports that have lost one of the handling companies to go for a quick call to tender, and within a matter of days, they can have or attract a newcomer.

“Normally these airports have to go through a comprehensive call for tenders, make sure that those who do respond to the call respect a certain number of safety aspects and do their due diligence before they can award a license to the company. Within the pandemic this is not required, although the validity of the license is only

“It is not a **good moment** for people to take risks. They **want to make sure** that they can **still make a business** out of what they **have established**.”

— Fabio Gamba

for six months and renewable if necessary,” says Gamba. “ASA has also asked for the prolongation of the licenses that were due to expire by 2021 until 2022. This means that the licenses that have been awarded to companies five, six, seven, eight years ago would still hold valid for another year and a half.”

### Training, Qualification and Safety

One domain where ASA is currently concentrating efforts to implement changes in the ground handling business at both EU and ICAO levels is the recognition of the worker's background.

“If a worker or an employee has gone through several training sessions and she or he is moving from company A to company B for whatever reason, the training she or he has undergone is currently not recognized and then she or he would have to go through all the training again. This is an extra cost for the new employer and obviously a loss of time for the employee itself,” says Gamba.

“We are trying to think of ways to have a universal – or at least to start with a European – recognition of the backgrounds of the employee with sort of a personal training passport. This would benefit the employers throughout Europe, and this makes sure that we have a follow-up and an understanding of who we are confronted with.”



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Ground handling is known for being a domain of the aviation industry of a certain importance that has not traditionally been subject to thorough safety regulations.

"There are safety obligations for every domain ranging from the OEMs, the airports and the airlines themselves. Until recently, from a regulatory point of view, ground handling was not considered as an essential element to the value chain," explains Gamba. "This has changed since 2018. With the new role of EASA, ground handling has finally been identified as one of the major key players in terms of safety. In this context, making sure that workers have the right training and are recognized as having the right training can provide a significant benefit."

"Quality and safety are part of our daily routine, as confirmed long-term by the ISAGO international certification of handling services, of which we are a holder and which we are going to renew in 2021," adds

Svoboda. "We have also used the current decline in traffic to analyze and launch more efficient processes, as well as other options for implementing modern aircraft handling technologies. Because the current supplier of the ... check-in system is terminating its support this year, a tender for a new system is currently underway, from which we expect further contributions to the optimization of our operations."

### Looking Ahead

CSAH is ready for a gradual resumption of operations in 2021.

However, the number of flights and handled passengers will primarily depend on

the development of the epidemiological situation, the demand and travelling conditions applied.

"The vaccination of the population and the uniform set of rules for flying will, most certainly, serve as a positive impulse for the entire tourism segment," says Svoboda.

"Until then, we will continue to flexibly respond to the requirements of airlines to which we already provide our handling services. We want to remain their key partner, offer them the best and highest quality handling services available on the market and help them reach their goals, including greater customer satisfaction." **GSW**



#### ▶ ABOUT THE AUTHOR:

**Mario Pierobon** is a safety management consultant and content producer. He currently is working on a research project investigating aircraft ground handling safety. You may reach him at [marioprnb@gmail.com](mailto:marioprnb@gmail.com).

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# From Cooking Oil to Renewable Fuel

DFW's goal to reduce carbon emissions includes partnerships to advance renewable fuels in the aviation industry.

By Jen Bradley

**C**ooking oil as a fuel source? It's a growing trend at airports, one likely to continue advancing in coming years.

Dallas Fort Worth International Airport (DFW) is a carbon-neutral airport today, with a goal to be a net-zero carbon airport by 2030. It has partnered with Neste to recycle waste cooking oil, which Neste uses to produce low-emissions renewable diesel fuel. The cooking oil is the raw material for the fuel, and DFW has been collecting more than 2,000 gallons per month.

"You can imagine the amount of waste cooking oil acquired with more than 57 concessionaires participating in our program throughout the airport terminals," says Kris Russell, environmental program manager at DFW. "Whoever has a fryer in their kitchen has oil to replace."

## A Plan with a Purpose

In April 2019, DFW launched the initiative to consolidate and recycle waste cooking oil from each of its five terminals – more than 6 million square feet of space – and then hired a vendor for the recycling task. The contract was given to Mahoney Environmental, a subsidiary of Neste, to provide a consolidated collection area at each terminal and collect the oil as needed, whether once a week or more.

There is now a location in each terminal where the oil can be taken and the team with Mahoney arrives to pick it up. Russell says part of the project was providing a safe and simple way for concession workers to transport the oil from their kitchen

throughout the terminals. It used to be collected in a large drum barrel, put on a dolly and wheeled through the terminal out onto the curb and loaded onto a truck, he explains.

"This is now all happening back-of-house, not in front of the customers," Russell explains. "There's a 'caddy' we call it, parked right at the fryer, providing a direct connection to safely be emptied and then wheeled to the collection tank."

Mahoney actually supplies this new collection system, then comes and collects the oil, processing it to remove impurities. The treated oil is sent to a Neste renewable refinery, of which there are three worldwide – in Singapore, the Netherlands and Finland.

Russell says the results have been great. The working conditions are safer, cleaner and simpler. The end product of renewable fuel aligns perfectly with the airport's larger goals of reducing waste in all areas.

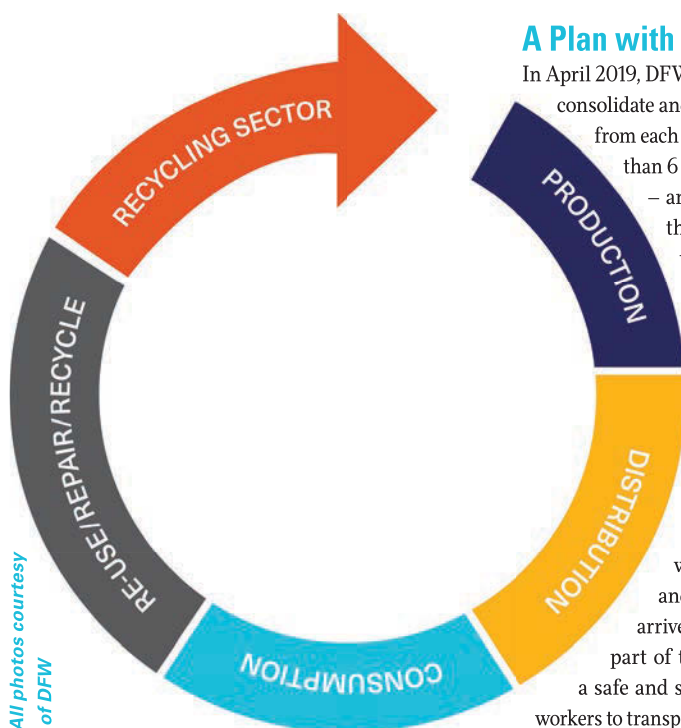
"The other nice thing is that the process is consistent in each terminal," he adds. "It's a very simple operation for the staff; no one has to manually heave heavy drums of oil around and the customer experience has also been improved."

He explains that there is less noise, odor, chance for spills and just a nicer aesthetic for passengers, as well as employees. It all fits nicely into the EONS (Economic, Operational, Natural Resources, Social Responsibility) framework DFW uses to look for sustainability solutions.

This project checked all the boxes and in addition to cleaning up a messy oil process, has contributed to a fuel source that can be used like any other, a "drop-in" solution, according to Russell.

## Cooking Oil to Fuel

Raquel Silverberg, Neste's head of feedstock growth at Americas, says Neste and Mahoney offer a one-stop shop for airports through





their kitchen services, the renewable diesel for ground vehicles and also sustainable aviation fuel for aircraft.

She explains that waste materials are being sourced from more than 40,000 airports, hotels, restaurants and other venues across the United States.

"Neste can trace all raw materials to their point of origin, which allows us to ensure all suppliers meet our sustainability standards," Silverberg notes.

The renewable fuel supply chain starts where the used cooking oil is collected and for airports, this includes DFW and Chicago O'Hare International Airport (ORD).

"Airports can transform their waste management challenges into a sustainability and cost-reduction opportunity," she explains. "At DFW, they were able to achieve their climate goals faster and boost efficiency."

Customers around the world can use the fuel made by Neste to immediately replace fossil fuels, bringing the cycle full circle. In 2018, Silverberg says Neste signed a memorandum of understanding with San Francisco International Airport (SFO) and a number of leading airlines to accelerate the use of sustainable aviation fuel.

"Two years later, we made good on this promise," she says. "Neste is now providing a continuous supply of sustainable aviation fuel to the airport with offtake agreements in place with Alaska Airlines, American Airlines, DHL and JetBlue."

The company also is partnering with the Port Authority of New York and New Jersey, increasing its fleet's use of sustainable transportation fuels for aircraft and ground vehicles.

The benefits have already been documented. Neste says that over the last five years, these renewable products have prevented nearly 40 million tons of CO<sub>2</sub> equivalent from entering the air.

## Other Good News

There is a lot of good news in this all for ground handlers. The process provides zero disruption to the ground handling crews at an airport, as sustainable aviation fuel can

function simultaneously in place of traditional fuel. It requires no special handling, storage or engines.

"For example, Neste is providing sustainable aviation fuel to San Francisco International Airport using an existing pipeline and the airport's fuel hydrant system," Silverberg says.

While DFW comes up on its two-year anniversary of working with Neste on cooking oil collection, Russell says that the process as a whole has been successful and a learning experience.

One benefit for the concessionaires is the cost factor.

"There's no cost to them to do this," he explains. "They didn't have to buy the cad-dies or anything. For them, it was simply a new process, and we had to communicate the details and educate them on the system."

Other than some time requirements and learning curves to overcome, Russell says the operation has been smooth and, above all, a great story of making something that worked well, even better. In 2019, its first year, the five terminals collectively gathered 30,000 gallons of cooking oil and in 2020, 25,000 gallons.

"Neste and Mahoney have educated me that this is really an ideal waste oil for them to use for their process," he explains. "It's efficient and makes a truly drop-in fuel for any piece of ground support equipment."

"Any company that wanted to switch to a renewable fuel, could, and not have to make any new equipment investment," Russell adds. "We continue to look for ways to reduce waste and are glad this option exists for that reason, but also has a climate action benefit to it."

## Advice for Air Professionals

Silverberg says airports, airlines and ground handlers should first set bold climate goals, then learn from those who are doing well.

"San Francisco International Airport and DFW have expertise that can make developing a climate plan much easier," she adds.

Neste officials say that conservatively: "The volume of used cooking oil generated by the largest 25 airports in North America is 9,600,000 pounds per year – enough waste to

generate nearly 1 million gallons of advanced biofuels and, ultimately, prevent more than 7,831 metric tons of CO<sub>2</sub> equivalent from entering the atmosphere."

Russell says it is important when working on projects like this to build a solid stakeholder group at the beginning. The customer experience team was vital in this specific project, as they were aware of what was happening in the terminals and specifically, with concessions.

"They gave us a good understanding of the challenges the concessions operators were dealing with," he explains, and says that together, the solution was developed which was good for everyone.

Neste officials say that when using waste and residue-based raw materials for the production of sustainable aviation fuels, it is possible to reduce life-cycle carbon emissions of flying by up to 80 percent. Silverberg encourages airports to think about waste management challenges as an opportunity to improve operational efficiency, but also reduce emissions, as DFW has realized firsthand, and shared.

For the ground support industry, this story is a positive one and something many airlines and ground service companies will be pursuing in coming years. The trends to lower emissions and recycled fuel are only increasing, and the opportunities to be a part of this are growing as well.

"There are wider benefits for airlines and communities surrounding airports," Silverberg concludes. "Increased use of sustainable aviation fuel also translates to cleaner air for communities and directly reduces emissions and pollution from aircraft, enabling airlines to achieve their climate goals."

As long as people love their french fries and flying, the two can go hand-in-hand in ways many have yet to experience, but is changing the world for good. **GSW**



### ▶ ABOUT THE AUTHOR:

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# The Reason Behind Resin

With a rotomolded body, FAST Global Solutions' AlphaCart offers a lightweight baggage cart solution designed to outsmart the elements.

By Jessica Purgett

With several baggage carts on the market made of steel, ground service providers are often working with a heavy material that can corrode when exposed to the elements.

Because ground handlers and airlines must be able to rely on their equipment in a variety of climates and companies are looking for ways to reduce their overall carbon footprint, FAST Global Solutions sought a way to replace heavy steel carts that require a high amount of fuel use during towing.

After completing testing in 2019, FAST introduced the AlphaCart – a lightweight baggage cart that better endures the elements, has a long lifespan and reduces ground support equipment's fuel use.

"Most baggage carts are manufactured with heavy-duty steel, which makes them heavy to pull or manually move around the ramp by

operators," says Barbara Ostrander, marketing communications director at FAST Global Solutions. "These steel carts are also susceptible to rust and corrosion, in particular in climates with harsh weather. We set out to develop a new baggage cart to outsmart the elements while decreasing the overall weight of the unit."

The AlphaCart is made from a co-polymer resin. This allows the baggage cart to be lighter than its steel counterparts, reducing wear and tear and fuel use – an important consideration for companies trying to lower their ground handling equipment's energy consumption.

"Its rotomolded body is significantly lighter than the steel baggage carts seen all over the world, yet able to take the same weight of load," Ostrander says. "Also, the AlphaCart can take bumps and blows and rebound, unlike steel that readily dents."

The cart weighs between 1,489 and 1,650 pounds but can move up to 8,000 pounds of cargo. According to FAST engineers, three to four AlphaCarts are usually towed in a train, allowing cargo payloads ranging from 24,000 to 32,000 to be towed at once. The length of the baggage cart train



All photos courtesy of FAST Global Solutions



depends on the towing vehicle and what the airport authority or end user allows.

The co-polymer resin requires less upkeep than traditional steel baggage carts, as well.

"It doesn't require painting, and the body doesn't rust," Ostrander points out.

What's more, the AlphaCart has an interlocking framework design, allowing for easy repairs or replacements should the cart become damaged on the job. The damaged panel can simply be removed and replaced, eliminating the need to buy a completely new unit.

According to Ostrander, the interlocking framework design also makes it easier to ship large numbers of the cart to FAST Global Solutions' customers.

The cart is used in locations with varying climates, which means it must be able to withstand a variety of weather conditions. Ostrander notes FAST Global Solutions' customers, which consist mainly of airlines and ground handlers, helped refine the AlphaCart design through rigorous testing before it was introduced to the market.

The AlphaCart has been tested in temperatures ranging from -40 degrees to 110 degrees Fahrenheit. FAST Global Solutions monitored the wear and tear on the AlphaCart in these locations and then refined the design before it fully went into production. The cart has been purchased or tested in more than 15 locations in the US and Europe.

"In addition to the company's high level of product quality testing during the manufacturing process, FAST partnered with a number of airlines in real-use trials of the AlphaCart – with a particular focus on areas with extreme climates, to be able to evaluate the cart's durability in challenging temperature and weather conditions," Ostrander says.

"Feedback from ground handling teams at each airline provided FAST with valuable insight as to how the AlphaCart performed in situations of rigorous daily use, monitoring any signs of wear, tear or corrosion. Input from the airline partners, especially

those focused on product features intended to help improve operations and team member safety, was then utilized to refine the design prior to full-scale production," adds Ostrander.

The AlphaCart has a variety of features designed to help ground handlers perform their jobs more efficiently, according to Ostrander.

"The FAST team is always keeping the operator in mind with new product design and the AlphaCart is loaded with specific features to help the ground handling teams on the ramp perform their jobs faster and safer," she says.

The AlphaCart's floor is channeled, allowing rainwater to drain away easily. This reduces baggage drag when workers are moving cargo in and out of the cart.

FAST Global Solutions also integrated side-pull handles into the design to further increase maneuverability.

Vinyl curtains with webbed reinforcements protect baggage from the elements. FAST Global Solutions partners with Quadro Inc., a Glenwood Minnesota manufacturer, to make the AlphaCart curtains. FAST Global Solutions carries replacement curtains should they become damaged on the job.



The AlphaCart features a number of optional add-ons, including an interior light, color choice, a bolt-in middle shelf and advertising/branding space.

The optional interior light is powered by a battery located underneath the unit, which harnesses energy via a solar panel located on the side of the cart.

Customers can customize the color of the rotomolded structure and choose an optional bolt-in middle shelf to manage baggage placement.

The top panel can be branded with the customer's logo or used as an advertising space, if desired.

Ostrander says when purchasing a baggage cart, customers must consider its compatibility with existing fleets.

The AlphaCart uses common FAST running gear, according to Ostrander. The running gear can be either rigid mount or four-wheel independent rubber torsion axles.

"The AlphaCart was designed with the objective to keep the importance of commonality of parts a high priority," Ostrander notes.

"The ability to ensure that those parts most often needing replacement, such as tires, bearings, tow-bars and hitches, can be interchanged between units provides cost savings and improved ROI," she continues. "In addition, the replaceable panels on the AlphaCart present a significant improvement over legacy carts." **GSW**

## ROLLERTRACK CONVEYOR Power Stow Americas, Inc.

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## PD-8010 CARGO DOLLY Par-Kan Company

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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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## RAMPTECH BELT LOADER SAFETY HANDRAIL SYSTEM Sage Parts

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## GS350 Ground Support Specialist LLC

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## P6000 BAGGAGE CHUTE PAGE GSE

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## FALCON AIRCRAFT CARGO LOADER JBT Corporation

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## ▶ TUG 660 BELT-LOADERS Textron GSE

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## ▶ RIP-STOP BAGGAGE CART CURTAINS Estex Manufacturing Co. Inc.

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## ▶ PALLET RACK Wilcox Ground Services

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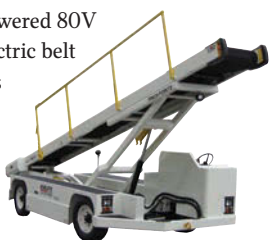
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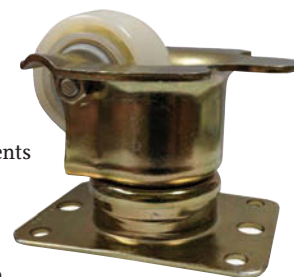
The Power Pusher with Freight Attachment improves operator safety, reduces manpower and increases ground support productivity with less downtime by transporting heavy loads fast without excess exertion or muscle strain. It enables a single person to maneuver from 500 to 50,000 lbs. with total control. The electrically powered, compact tug replaces large, expensive material handling equipment moving bag carts, mobile air conditioning units, air starters, lavatory carts and more.



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## GSE BAGGAGE CART CURTAINS QUADRO, Inc.

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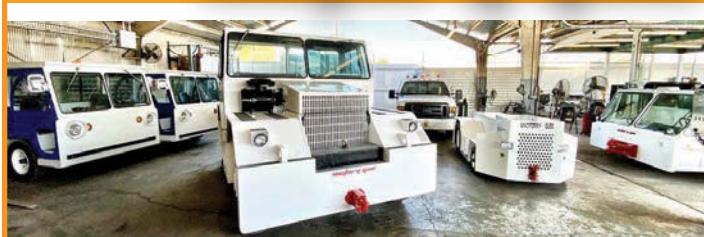
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## BELT LOADER

### Aviramp

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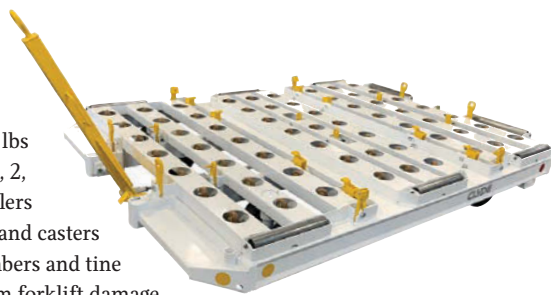
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## PALLET TRAILER

### Clyde Machines Inc.

Clyde Machines's pallet trailer offers a cargo capacity of 15,000 lbs and trailer capacity includes LD1, 2, 3, 4, 5, 6, 7, 8, 10, 11, and 29. Trailers feature protected lead on rollers and casters mounted in protected cross members and time way openings protect casters from forklift damage, along with recessed side frame to protect customer markings. Trailers are also stackable for shipping and storage. Other features include: Tow-bar actuated, self-adjusting rear brakes, 4.00 x 8, 3-stage solid tires on 7 ga. rims., dual front wheel swivel casters with rigid dual rear wheels, E-type spring loaded hitch, and max. tow speed of 20 mph (32 kph).

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## BAGGAGE CART COVERS

### Canvas Plus

Canvas Plus offers quality, waterproof baggage cart covers and other GSE protection, which can be customized to suit a user's requirements.

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## HEAVY DUTY AIR CARGO/CONVEYOR CASTERS

### Casters In Motion

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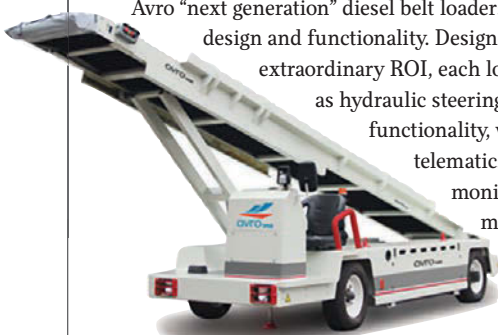


## DIESEL BELT LOADER

### Avro GSE

Avro "next generation" diesel belt loaders offer leading edge performance, design and functionality. Designed to exceed expectations and deliver extraordinary ROI, each loader features standard functionality such as hydraulic steering, Curtis controller with self-diagnosis functionality, vacuum assist hydraulic brakes, complete telematics (Avro Tracker) for remote diagnostics and monitoring, along with the (Avro Care) managed maintenance program.

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## BENDIBELT

### Mallaghan Engineering

The Mallaghan Bendibelt is an aircraft baggage loading system which enables baggage to be loaded and unloaded in a safe, efficient and expedient manner with the operator in control from within the baggage hold. With a unique curvature design and key safety features, it can deliver a number of significant benefits, including turnaround efficiencies, reduction in manpower costs and manual handling. Through automation, it reduces the risk of manual handling injuries and ground damage to aircraft.

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## FLEET

### Vanderlande Industries, Inc.

Vanderlande's FLEET is a flexible logistics solution. By utilizing intelligent automated guided vehicle (AGV) technology, FLEET replaces the need for fixed conveyors and sorting systems. Each individual vehicle within the fleet carries a single bag and determines the most optimal route through an airport. In addition, a vehicle can be given priority, which helps to safeguard the delivery of bags on time.

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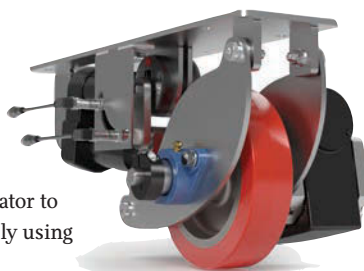


## DRIVE CASTERS

### Caster Concepts Inc.

Drive Casters from Caster Concepts, can ramp up productivity and prevent employee injury simply by automating the process. Drive Casters are easy to install and fit on just about any piece of equipment, and allow a single operator to start, maneuver and stop a heavy load effortlessly using a control panel and tank steering.

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# A Goodbye, and a Hello

We'd like to welcome a new face to the industry following the retirement of our friend and colleague.

**T**he sales team at *Ground Support Worldwide* has some updates to share with you.

First, I can share the bittersweet news that our friend and national account representative Michelle Kohn has retired.

Michelle spent more than 20 years with our company, forging lasting relationships within the industry. She worked energetically to support the efforts of our group's three magazines, our portal website AviationPros.com and the International GSE Expo. You don't have to look far to see the impact she's made here, and we're grateful for her dedication.

While we're sad to see her go, we are thrilled for her and the opportunity she has to spend more time with her husband and their families. We wish her the absolute best!

For those who worked regularly with Michelle, I'd like to introduce you to the newest member of our team, Melissa Dargis. In addition to some other responsibilities, Melissa will be overseeing the majority of Michelle's accounts.

With more than 13 years of experience, Melissa is an award-winning

business development manager, and is sure to be an excellent member of the Endeavor Aviation Group.

"I have a deep understanding of clients' businesses and industries, with a focus on the client relationship built on integrity and accountability, and a keen ability to navigate from the strategic to the tactical to deliver solutions," she says, noting her end-to-end marketing solutions and agency sales experience.

I'm sure many of you will have the opportunity to meet Melissa soon. In the meantime, feel free to introduce yourself and welcome her to the ground support industry by emailing [mdargis@aviationpros.com](mailto:mdargis@aviationpros.com).

We're excited to welcome Melissa!



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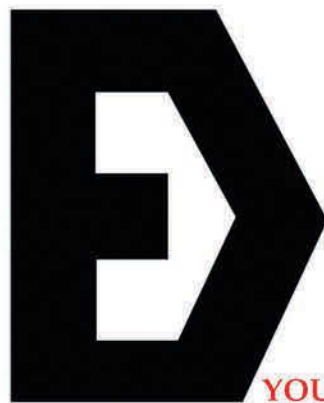
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