FUELING EQUIPMENT

DECEMBER 2016/JANUARY 2017

Ground Support WORLDWIDE

Supporting Aviation from the Ground Up

MAKE THE MOST OF GSE FLEET MANAGEMENT

+ **INTERNATIONAL**

Overcoming Recent Turmoil

Geopolitical instability in the Middle East has influenced the aircraft ground handling industry in the region. However, there may be reason for optimism moving forward.

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Leaders of the Year

Ground Support WORLDWIDE

***We are* accepting nominations for the *Leaders of the Year Awards* in the categories below:**

Get there quicker! Scan the QR code to access the nomination form.

Product/Service Award | Nomination Deadline: February 1, 2017

This award celebrates the products, services and manufacturers making a difference in the industry. Winner will be featued in the April issue.

Team Leader Award | Nomination Deadline: March 1, 2017

This award will go to an individual who has taken a leadership role with personnel. Winner will be featued in the May issue.

Lifetime Achievement Award | Nomination Deadline: April 3, 2017

This award will go to a person who has demonstrated commitment to the industry through numerous years of dedicated service. Winner will be featued in the June/July issue.

To nominate, visit: http://svy.mk/2f9cdyE

Winners from each category will be contacted by *Ground Support Worldwide* magazine.

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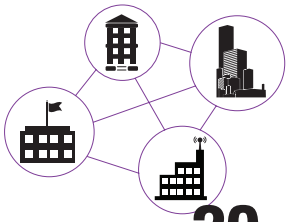

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A New Year Brings New Opportunities

Be sure to take the opportunity to submit a nomination for the Ground Support Worldwide Leaders of the Year

Goodbye 2016, and hello 2017!

I'm not sure where the time has gone. It feels like I blinked, and the year was over. But with a new year starts new opportunities, and currently we are accepting nominations for the Leaders of the Year Awards.

I hope that you all know what I am talking about, but for those of you that don't ... *Ground Support Worldwide* gives three awards to acknowledge excellence within the industry.

Product/Service Leader Award. This award celebrates the products, services and manufacturers making a difference in the industry.

Team Leader Award. This award will go to an individual who has taken a leadership role with personnel.

Lifetime Achievement Award. This award will be given to a person who has demonstrated commitment to the industry through numerous years of dedicated service.

These awards are a great way to recognize someone or something that is really making a difference or changing the way we think about things in the ground support industry.

To get to our online form, you can scan the QR code or you can go to www.surveymonkey.com/r/2017GSWLOYAwards to nominate.

The first deadline is coming up on Feb. 1, so get your nomination in!

Get there quicker! Scan the QR code to access the nomination form.

▶ Advertiser's Index

TOP NEWS

Vestergaard Company Sales Director Billi Vestergaard Passes Away at 61

Brynjolfur "Billi" Vestergaard, sales director with Vestergaard Company, lost his life in a tragic accident that occurred outside his own home Dec. 2.

Vestergaard was involved in the family-owned business since he was a child. He started as an employee with Vestergaard Company in 1980 in production and ended as an active part of both the company's management and sales department.

His vast knowledge of both Vestergaard Company's products, technology and – not least – the needs of all of the individual, international customers built him a unique reputation in the business.

Billi leaves behind his wife, four children and three grandchildren. He will be greatly missed.

Hactl First Hong Kong Handler Certified Under IGOM

Hong Kong Air Cargo Terminals Limited (Hactl) has been certified under IGOM (IATA Ground Operations Manual), signifying its full compliance with the new standardized procedures. It is the first handler in Hong Kong to achieve IGOM certification.

IGOM's goal is to establish global standardization of policies and procedures, a uniform minimum level of safety and a standard set of policies and procedures for use in ISAGO (*IATA Safety Audit for Ground Operations*).

"It's an honor for Hactl to be named as the first IGOM-certified handler in Hong Kong. This is an extension of our ISAGO compliance, for which we have consistently obtained flawless audit results," said Benny Siu, Hactl's manager – quality assurance. "We believe Hactl's IGOM certification is further evidence of its pioneering of new standards in Hong Kong and throughout the industry, and that it's yet another important differentiator for us."

Hactl Finance Director Amy Lam receives the IGOM certificate from IATA Head of Ground Operations Joseph Suidan.

e2b calibration Introduces Tronair Ground Support Equipment Training

e2b calibration announced that on-site Tronair ground support equipment (GSE) training is available for aviation businesses nationally. The new Tronair training services expand e2b's existing aviation quality services which includes accredited calibration and repair traceable to the National Institute of Standards and Technology (NIST), and on-site GSE maintenance and aircraft jack proof-load testing.

"Aviation equipment can be very expensive and critical to aircraft safety. With proper maintenance, ground support equipment can last for 20 plus years," said Mike Miner, Training Coordinator for e2b.

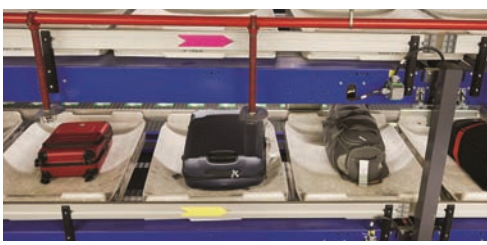
Calibration technicians were trained by Tronair GSE instructors at Tronair headquarters in Holland, Ohio. Hands-on Tronair training is provided on-site at the MRO or FBO facility covering proper equipment use, preventative maintenance schedules and techniques, detection of equipment wear-and-tear or abuse, and equipment repair processes.

BEUMER Group UK Completes EBS and Baggage Handling System at Gatwick Airport

BEUMER Group UK has completed the installation of a new CrisBag Early Bag Store (EBS) and baggage handling system as part of Gatwick Airport's £186 million redevelopment of the South Terminal Pier 1.

The CrisBag system is the first EBS to be installed at Gatwick and, the checked baggage can be viewed by passengers through a window overlooking the baggage handling system. Other viewing windows in the new passenger gate rooms provide passengers with outstanding views across the runway.

The CrisBag EBS enables Gatwick



Upcoming Events

February 7-10
NBAA Schedulers and Dispatchers Conference
Fort Worth, TX

April 22-26
International Aviation Snow Symposium
Buffalo, NY

April 25-27
GSE & Ramp-Ops Conference
Milan, Italy

April 25-27
MRO Americas
Orlando, FL

May 21-24
30th IATA Ground Handling Conference
Bangkok, Thailand

Airport to offer advance check–in of baggage up to 18 hours before departure. In addition, BEUMER Group designed and integrated a series of CrisBelt conveyors as part of the new baggage handling system in Pier 1.

"BEUMER has helped us deliver one of the largest projects this airport has ever undertaken and we are extremely proud of the new state–of–the–art baggage system and EBS," Senior EPC Manager at Gatwick Airport, Paul Morgan said. "The system will significantly enhance the baggage operation in the South Terminal as Gatwick continues to grow the number of passengers who fly from the airport."

SITA's Baggage Robot Displayed at COP22

Leo, the baggage robot developed by air transport IT provider SITA, was in Marrakech for the COP22 climate talks, assisting delegates flying Royal Air Maroc to check–in their bags.

The fully autonomous, self–propelling baggage robot has the capacity to check in, print bag tags and transport up to two suitcases with a maximum weight of 32kg. It also has an obstacle avoidance capability and can navigate in a high–traffic environment such as an airport.

"Through the innovative work of the SITA Lab we are able to tackle some of the key challenges that face airlines and airports today," said Hani El–Assaad, SITA President, Middle East, India and Africa. Leo demonstrates that technologies such as robotics can help the air transport industry manage the growth in traffic in a more sustainable way while offering passengers an unencumbered journey through the airport and onto the aircraft."

Daifuku ATec Wins Baggage Handling System Contract

Daifuku Airport Technologies (ATec) announced it has been awarded an Explosives Detection System (EDS) Retrofit contract utilizing its Baggage Tray System technology for the Montréal Pierre Elliot Trudeau Airport in Montreal, Quebec, Canada.

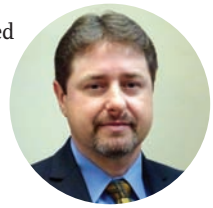
Daifuku Airport Technologies will replace the existing international departure system with an Individual Carrier System (ICS) utilizing Daifuku's Baggage

Tray System (BTS) technology to improve the tracking efficiencies and reduce in-system times. The new system will be installed over multiple phases, including the integration of Morpho CTX 9800, standard belt conveyors and the BTS to provide transportation both pre and post Explosive Detection System with delivery to final sortation and baggage makeup.

"Daifuku is pleased to continue its long term relationship with Aeroport de Montreal" said Matt Walker, Daifuku's Aeroport de Montreal account manager. "Our vast experience and expertise in providing customers with innovative and flexible solutions were key factors in winning this project. Our BTS solution is one of the most flexible products on the market and facilitates easier integration with existing baggage facilities."

PEOPLE

Helm Joins PAGE as Sales Director



Tim Helm has joined PAGE as sales director for PAGE's Western U.S. office, based in North Texas. Helm will support PAGE's existing clients, while targeting new sales opportunities in the region. For the past 17 years, Helm honed his skills as the Sales Manager for ThyssenKrupp Airport Systems, now bringing to PAGE his extensive experience and strong understanding of passenger boarding bridges and related gate equipment. His expertise, work ethics and dedication to serving customers has been recognized by industry professionals and will prove to be a valuable asset to PAGE and their clients.

NEW DEALS

Global Aviation Services Acquires D&D GSE

Global Aviation Services, LLC (Global) announced its acquisition of D&D GSE Support Inc (D&D) a ground support equipment (GSE) maintenance provider serving the Fort Lauderdale-Hollywood International Airport (FLL). The acquisition enhances Global's market position in South Florida and marks the company's first entry into the acquisition marketplace.

Effective immediately, D&D will become Global Aviation Services. Global, which was established in September 2007 and has grown to have 285 employees

at more than 75 airports in the United States, has its transition team in place. The operation will have 14–18 technicians and will serve as a primary hub for GSE Maintenance in South Florida and the Bahamas.

"I've spent nearly 50 years in the GSE maintenance business. We started D&D over 14 years ago to provide really good maintenance at a fair price. We worked hard every day to take care of our customers and to take care of our employees.

When we started thinking about selling the business we knew we had to find a company that shared those same values," said Leo Dyke, principal owner of D&D.

"We started Global in 2007 based on the same core values, do quality work with integrity, earn your customer's trust and care for your team," said Brad Osborn, CEO, president and founder of Global. "The vision and values of both companies align very well. We have a lot of respect for the work Leo has done. This should be a positive transition for D&D's customers and we'll work hard to continue to care for D&D's employees."

Textron Acquires Safeaero

Textron Specialized Vehicles Inc. has acquired, through its Swedish affiliate, Textron Sweden AB, the assets of Safeaero i Trelleborg AB, a Swedish manufacturer of premium deicers for the aviation industry. Textron Sweden AB is a subsidiary of Textron Inc.

Going forward, Safeaero's business will operate as part of Textron Specialized Vehicles' Ground Support Equipment business, which manufactures a GSE product line under the TUG, Douglas, Premier and, now, Safeaero brands. Safeaero's line of deicers includes five different models. Safeaero's business will continue to operate from its facilities in Trelleborg, Sweden.

"The Safeaero business is an important addition to our growing stable of GSE brands and product lines," said Kevin Holleran, president and CEO of Textron Specialized Vehicles Inc. "We offer a broad line of GSE products to our customers, whether they are serving passengers at an airport of the scale of London Heathrow, or a critical regional FBO."

QT POD Poised to Dispense EPIC Ground Fuels

By Josh Smith

QT Petroleum On Demand (POD) is expected to launch an updated model of its self-serve fueling system, which will be capable of dispensing multiple fuels – including the ground fuels its parent company EPIC Fuels is beginning to offer.

EPIC recently announced it would expand its capabilities by offering ground fuels for ground support equipment in addition to the company's aviation fuels.

Ground fuel products will include blended gasohol, reformulated gasoline (RFG), and both summer and winter blends of Reid Vapor Pressure (RVP) gasoline. Clear or conventional gasoline (gasoline without ethanol) is available as well. EPIC's ground fuel products also include ultra-low sulfur diesel, premium and winterized diesel blends.

"We often find that our aviation customers need ground fuels in addition to Jet and Avgas. By providing a full suite of ground fuels including all grades of gasoline, diesel and off-road diesel in addition to aviation fuels, our goal is to make it easy and efficient for our customers to get the fuels they need to help their business thrive," Lee Jones, EPIC Fuels vice president of supply, said in a press release.

Currently on its third generation of self-serve fueling systems, the M3000, QT POD is represented at more than 1,400 airports throughout the U.S. and Canada. Tentatively called the M4000, the company's upcoming model is being tested by USAirports at the Greater Rochester International Airport.

"The driving force behind the development of this new product is to expand the capabilities of our fuel management systems beyond self-serve fueling into ground fuels, marina fueling, fleet operations for municipalities and private entities," explains QT POD's sales and marketing director Matt Duncan.

The new system is capable of dispensing both fuels for ground support equipment as well as aviation fuels.

"It can do either. Our system doesn't care what fuel is being dispensed," Duncan says.

Because ground fuel is an area QT POD is looking to operate in, Duncan points out his company's system is able to track multiple accounts, provide the information collected in real time and share that information with customers through its updated software hosted in the cloud.

For more information about QT POD, please read the extended version of this article at: AviationPros.com/12283590

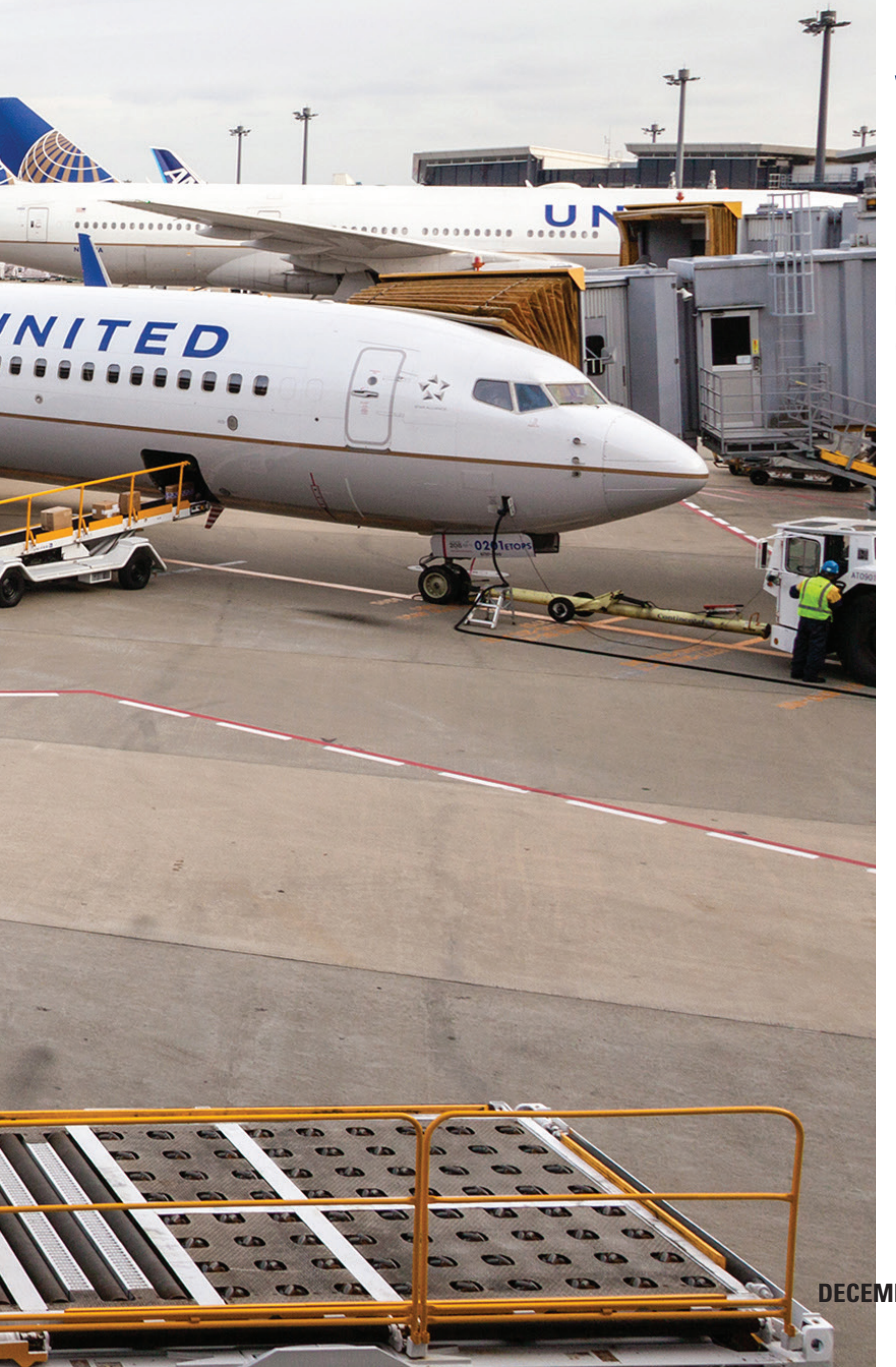
MAKE THE MOST OF GSE FLEET MAN

Photo from iStockPhoto.com

AGEMENT

How equipment is acquired, the number of units operated and how GSE is maintained can all play a role in the effectiveness of a ground handling operation

By Josh Smith



When it comes to ground support equipment, fleet management practices have evolved over the years.

Acquisition options, vehicle technologies and maintenance practices and tools have all shaped the way companies look at the GSE in their fleets.

"We've gotten a lot smarter," says Steve Leonard, senior vice president at PrimeFlight Aviation Services. "I think back to the beginning of my career. You would kind of put a piece of equipment out there, and it seemed to me like it never got paid much attention to."

Now, equipment is treated – as it should be – like a valuable asset to help make ground handling operations more efficient.

"The industry has changed so much that you have to watch every particular portion of your operation from a cost management standpoint," Leonard says. "Making sure that preventive maintenance checks are done completely – all of those kinds of activities, right down to fluid level management, makes such a huge difference.

Building a Fleet

In order to make the best decision regarding equipment acquisition, ground handlers and service providers should consider the length of their contract with a customer as well as the size of the station they're operating at.

If a contract term is set for a longer period of time, or if the operating site is larger, purchasing equipment may be more attractive than leasing.

Similarly, explains Peter Stearn, vice president at Fortbrand Services, the size of the ground handling company matters too.

"If the ground handler is a nationwide provider, then they might be more inclined to purchase because if they lose a contract in Station A, they can redeploy that equipment to Station B," Stearn says.

Shorter contracts or limited capital capabilities may steer ground handlers toward leasing equipment.

"They can match the term of the lease to the term of their contract with their customer, and keep their upfront cash requirements to a minimum," Stearn says. "That way if they lose the contract at the end of the term, they are not obligated to keep the equipment. They can return it to the lessor."

A similar line of thinking can be used when determining whether to acquire new, used or refurbished equipment. Ground handling companies can weigh the size of their budget with the length of time the GSE is needed and the location where it will be used.

William Long, president at Xcēd Aviation Services explains making that decision between new, used or refurbished GSE is no longer simply an economical choice.

"Today the ground handler's decision is more related to the choice of the service provider," he says. "Bottom line, flexibility and the scope of services are the key elements driving that decision today. It is no longer a pure financial decision."

Ground handling companies also may find that having access to trade-in and refurb options adds further flexibility to their operations.

In addition to the financial impact on the company, PrimeFlight's Leonard says it is crucial to establish what tasks a piece of GSE will be required to perform, so that an accurate request for proposal (RFP) can be drawn up.

Once quotes are received, he suggests weighing the competitiveness of pricing, warranty options and previous real-world experience with that type of equipment.

"We might even take the step of going to visit the company if they have a new piece of equipment that we think could be really good for us – just to be sure we put our hands on this asset that becomes critical in an airport operation," Leonard explains.

Maintaining a Fleet

Similar to acquisition decisions, several factors can help determine the proper size of a GSE fleet, according to Bill Brooks, vice president of operations at Xcēd Aviation Services. Questions to consider may include:

- How many flights will be serviced, and how many flights will be handled at once?
- How far will bags be traveling?
- Are there peaks and valleys in the schedule?
- Will there be enough equipment to handle aircraft at peak times?
- Have spares been factored in for each equipment type to cover for scheduled and unscheduled maintenance?

Factoring how frequently a specific piece of equipment is used is also crucial to properly managing a GSE fleet.

Pieces of GSE that are used constantly, and endure the most wear and tear, will often require more preventative maintenance. Whereas equipment that is used less often will see a lower duty cycle.

Frequently used equipment may require more unexpected repairs or need to be replaced sooner.

Seasonal equipment can pose challenges as well. Aircraft deicers, for example, can sometimes be difficult to manage because they are specialized and used only during cold months of the year.

"You need to have good training to maintain and keep on top of them," Stearn of Fortbrand Services explains. "They're only used seasonally, so that makes them

DEGREE OF DIFFICULTY

Some GSE units can be more difficult to manage, while others are often straight forward.

Although many of the same principles can be applied to managing various pieces of ground support equipment, certain items can be more labor intensive than others. Therefore, additional attention should be to paid these items.

Any GSE that has intricate or complicated hydraulic systems can present issues, explains Steve Leonard, senior vice president at PrimeFlight Aviation Services.

"When you get into those much more complicated systems, those do drive an awful lot more man-hours in terms of maintenance," he says. "More moving parts means you're going to have more unscheduled downtime."

Every system, Leonard explains, has key points that wear more quickly than others.

"If you pay a little more attention to points of wear, where there is a criticality to the piece – for example the hydraulic pumps or hoses and the lift cylinder itself on a lift truck – if you service those and check them with more regularity, you get much better results," he says. "You really have to setup a schedule and stick to it to make sure you're staying on top of all those sorts of things."

Bill Brooks, vice president of operations at Xced Aviation Services, says when he thinks of difficult-to-manage GSE, airstarts come to mind because they are a high-cost item that can go long periods of time without being used.

"These units are essential when the aircraft APU is unavailable. New units tend to be highly complex and parts can be costly to purchase. And lead times for delivery can be lengthy," Brooks explains.

However, bag tugs, belt loaders, cars, trucks and non-motorized equipment can require less management.

"The OEMs have done a good job of keeping these units relatively simple to diagnose and repair," Brooks says. "Parts are usually readily available locally, and the cost is reasonable. They do not require any special tooling or test equipment to diagnose problems."

more of a challenge because they tend to get forgotten when it's summertime."

Personnel turnover also can play a role in properly maintaining seasonal equipment. If new employees are not trained properly to use and maintain GSE, the equipment's lifespan can be reduced.

Regardless of usage frequency, a GSE planning tool for normal maintenance cycles can help companies keep equipment in service and increase its lifecycle.

Leonard of PrimeFlight explains these tools can help adjust routine and preventative maintenance (PM) based on the location of equipment, noting GSE that is used in harsher, colder climates has different requirements than equipment operated in milder temperatures.

"The weather patterns in these locations really drive what you plan in terms of PMs and that frequency of PMs and the types of PMs that you complete," Leonard says.

"The next step for us is always daily inspection," he continues. "We know that this is the industrial side of the airline, and, like any sort of industrial equipment, things are going to wear out or they're going to break in an unscheduled way.

"It's important that we touch the equipment every day – sometimes a couple times of day, depending on the location – for things like fluid checks, fueling, tire pressure and those types of things."

Leveraging Technology

The use of GPS tracking and computerized maintenance systems are making it easier for ground handlers and service providers to better manage their GSE fleets today.

"These have been around for some time, but now we see more of these units speaking to each other," explains Xcēd's Brooks. "Some GPS systems now download data directly to the maintenance systems. This allows maintenance technicians to spend more time turning wrenches rather than going around to each unit collecting data, such as hour meter readings.

"Also from an operator standpoint, we can now message drivers in real time to reroute them directly where they are needed," he continues. "Daily operator checks can be done from a screen on the vehicle and automatically uploaded to the maintenance system. If defects are found, they can now email designated technicians who can respond quickly to increase uptime of all units."

With GPS data logging systems that are currently available, fleet managers can see what each piece of equipment is doing and how it is performing for the entire life of that unit.

"Before this technology, we managed fleets by what we could physically see. Once a vehicle left our sight, all information on that vehicle was usually passed on through personnel driving the equipment," says Brooks. "With current engine and drive train monitoring capabilities

many functions can be monitored remotely to aid in timely repairs if a unit breaks."

Additionally, Brooks points out that GPS data logging systems can help companies determine how long specific tasks should take.

"We can watch things like routing from aircraft to bag room, choke points along a route at certain times of day," he says. "This allows us to plan better for more efficient service to the customer and save on maintenance, by completing the task without unnecessary hours being added to the unit's run time."

Decreased run times reduce the amount of required maintenance

Recalling the days of using physical sheets of paper, before the advent of computer spreadsheets, PrimeFlight's Leonard says automated maintenance systems are often worth the investment.

"We can schedule out our preventive maintenance checks by piece of equipment and see how it has actually performed," he says. "Based on that, we can get a pretty good idea if we're being as effective as we want to be."

Being able to track and compare a piece of equipment's relative performance compared to other GSE units is valuable. With many options available, with varying features at a number of different price points, Leonard says it's worth "kicking the tires" to see what automated management systems or other diagnostic tools work best for a specific service provider.

Tooling up

No matter if ground support equipment is new or used, ground handling companies must evaluate whether they can provide the proper level of maintenance in the station, says Xcēd's Brooks.

"This is often the biggest and hardest problem to solve. I feel that the more training and tooling we give to the technicians in the field, the easier it becomes to get the life and performance we expect from the vehicle," he says. "This also applies to the operators of the vehicles. The better trained the operators are, the less likely they will be to ask the vehicle to do something it was never designed to do. This will lead to a longer life and lower maintenance costs."

Leonard of PrimeFlight notes that some maintenance may be outsourced if a ground service provider cannot perform certain tasks itself, or if it needs to increase productivity.

He suggests inquiring with maintenance facilities near a ground handling operation to learn if outsourcing routine repairs, unplanned fixes or other heavy work like an engine rebuild is a viable option.

End of Lifecycle

If planned equipment is being removed from service with increasing frequency, or if repair costs are mounting, it may be time to decommission that piece of GSE.

Brooks of Xcēd points out that the decision to replace equipment has always been a question of cost and timely completion. To determine if GSE should be replaced, ask:

- Will an engine and transmission be replaced with the same component, or will an upgrade be needed to meet emissions standards for the area the unit will be operating in?
- How old is the unit that requires repairs? Is the unit already 20 years old?

MAXIMIZE BATTERY POWER

To get the most out an electric GSE fleet, battery management is paramount.

For some ground support equipment fleets, battery-powered vehicles are becoming an increasingly attractive option for providing required services while keeping operation costs down – all while reducing a company's environmental impact.

But in order for a company to reduce its expenses and increase its return on investment, proper battery management is key, says Jonah Teeter-Balin, director of product marketing at AeroVironment.

AeroVironment's line of PosiCharge products, including its Battery Rx device, helps fleet managers track critical battery data.

Photo courtesy of AeroVironment

"Some of the factors include weekly equalization, watering, overheating prevention and use of a proper charging algorithm," Teeter-Balin explains, noting that correctly maintaining these aspects can dramatically increase the life of a battery.

When installed, the Battery Rx identifies the battery, then tracks and stores battery health and charge data. Coupled with the company's PosiNET software, that information is relayed back to fleet managers to be analyzed so the company can make informed decisions regarding battery maintenance.

"The system communicates with the battery and provides useful information to make operations smarter," says Teeter-Balin.

Actionable data is crucial to any person responsible for getting maximum production out of its fleets – whether the fleet is powered by electricity or a traditional fuel like gasoline or diesel.

In the case of battery-powered GSE fleets, capturing and analyzing operational energy usage and charging data can help fleets get the most life out of batteries and reach peak operational efficiency.

"Our system will help you monitor and maintain battery health so you can defend warranty claims and, ultimately, buy less batteries," Teeter-Balin adds.

Proper battery management can save ground support equipment fleets significant amounts of money annually. The key to lowering annual costs is minimizing downtime and reducing battery replacements through preventative maintenance scheduling and addressing real-time alerts about battery-related issues.


Photo from iStockPhoto.com

- Can the work be done locally, or will shipping charges be added to get it done elsewhere?
- What is the timeline for delivery of all parts and components? Does it fit the needed completion date?
- What is the warranty on new components versus the OEM warranty on new equipment?
- If the equipment is repaired or rebuilt, will it be suited to complete the service that it will be put into?

Reselling equipment being taken out of service may be an option for some companies. PrimeFlight's Leonard says his company typically puts a six to nine year life cycle on a purchased piece of equipment with the hopes of reselling it to recoup some of the initial expense.

"We know that we can resell between those six to nine years at a pretty darn good rate," he says. "Sometimes that calculation, that portion of the calculations, is something you give as much consideration as what the lease rates are."

GSE Fleet Management Will Continue to Evolve

GSE fleet management has change significantly over the years and will continue to do so. New opportunities – electric/battery–powered ground support equipment, for example – may offer ground handlers an opportunity to decrease its operating costs further.

Using sound practices to manage a fleet, and being opened to new possibilities, will help companies keep their fleets at peak operation. **GSW**

Overcoming Recent Turmoil

Geopolitical instability in the Middle East has influenced the aircraft ground handling industry in the region. However, there may be reason for optimism moving forward.

By Mario Pierobon

During the past few years, the Middle East region, as well as parts of North Africa, has gone through a significant deal of geopolitical instability. Some governments have been overthrown and some countries, namely Syria, are the theatres of war.

Prior to the more recent geopolitical issues, the aviation and the aircraft ground handling industries had been booming. In this month's regional update, we will discuss the challenges of the handling business in the context of geopolitical instability in the Middle East; how authorities and service providers have responded and are responding to it; and how the future looks for the business.

The recent geopolitical issues in the Middle East have had an impact on the handling business from a commercial point of view.

"Clearly, in countries where there is active conflict or major instability and related security concerns, the major airports have been subject to significant declines in activity. Many international carriers are – rightly – reluctant to operate in this environment. The knock on commercial effect on the ground service provider is self-evident. In the major Middle Eastern hubs – Dubai, Abu Dhabi, Doha – traffic growth remains robust, driven primarily by the inexorable expansion of Emirates, Etihad and Qatar Airways", says Jon Conway, a consultant with several years of experience in the aircraft ground handling business in the region.

"It is worth remembering perhaps that most Middle Eastern airports operate on a sole ground handler model," he continues. "Arguably the commercial – and related business – implications are rather different than a multiple handler competitive scenario, in which a decline in overall air-

Photo from iStockPhoto.com

port traffic can create major problems for all GSPs, not just one."

According to Mohamed Hanno, executive chairman of the ASE Group, an aircraft ground handling company headquartered in Egypt and with operations in Egypt, Morocco and the United Arab Emirates (UAE), the geopolitical instability of the region is affecting the volumes of the handling business in a mixed way.

"There are places, like the UAE, which are quite far from any tension area and are therefore not that affected. Egypt was, and still is, affected, but not as much as it was the case some years ago. The situation here is getting more stable. People are now coming back and tourism is peaking up again in touristic areas like the Red Sea," he points out. "Traffic at airports is peaking up again, slowly but truly."

Indeed, at Middle Eastern airports there is an increased security threat, both on the ramp and in the terminal, and ground handling companies are involved in mitigating this threat by complying with the instructions of the security agencies.

"I can speak for Egypt and what I can say is that there is a strong cooperation between AP Police and other authroized agencies and ground handling companies, because in the end security and safety affect the ground

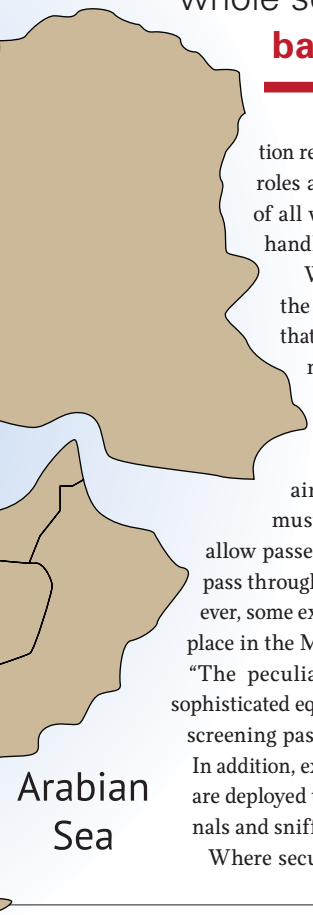
handling business. I think nobody from the ground handling business would oppose anything that concerns safety and security measures at airports," says Hanno.

"We do abide with the regulations enforced by the local authorities (the airport police and the civil aviation authority) regarding safety and security and we do make sure that our staff and team members also conform to what we are supposed to comply with, in particular, with regard to security, that if anything looks suspicious it has to be reported immediately," he adds. "Maintaining safety and security standards is a matter of image at the very end, it is not just the image of the ground handling company but it is also the image of a whole country. It can also affect the image of the airlines, these are our customers and if, for safety or security reasons, our customers stop coming to a destination that we – as a ground handling company – serve, then we are out of business, it is as simple as that".

The standard practice is that the aviation threat level is determined by the authorities.

"This threat level is communicated to ground service providers and the carrier community and 'commensurate' measures are adopted both within the terminal, on the ramp and in the cargo facilities. It would be fair to say that many of the security measures – certainly in the UAE – take the form of covert operations although there are, of course, highly visible measures in place," says Conway. "Airport security in the Middle East is typically the remit of the police and/or the military. The role of the handler is to follow the requirements of the National Civil Aviation Security Programme (NCASP). This outlines baggage reconcilia-

> My hope is that within a couple of years the whole security situation will be **100 percent back to normal** and this is achievable.



tion requirements and the roles and responsibilities of all within the airport/handling chain."

When it comes to the security standards that airports are implementing, these are the international security standards that any airport in the world must have in place to allow passengers and goods to pass through the airport. However, some extra measures are in place in the Middle East.

"The peculiarity is that more sophisticated equipment is used for screening passengers and goods. In addition, extra K9 (police dogs) are deployed to go around terminals and sniff bags," says Hanno.

Where security is being managed is not only because of a more active role of airports and security agencies. Some ground handling companies are being proactive at managing security threats, while at the same time maintaining safety and other business priorities.

"The quality providers certainly do proactively manage security threats. My former company certainly had a whole range of additional measures, which would be introduced dependent on the assessed threat level. These would be implemented in conjunction with the customer airline, but could include secondary document checks, restrictions on the carriage of rush bags, restrictions on the acceptance of standby cargo; secondary baggage/cargo screening, etc. Of course the carriers expect an on-time departure as well," says Conway.

The recent geopolitical turmoil in the Middle East has been dampening the aviation and handling business, which had otherwise been booming before then.

According to Hanno, however, there is room for moderate optimism.

"The whole security issue is very much a political one. There have been bombings in France, the UK, the USA, Germany and Belgium. It is happening all over the place. My hope is that within a couple of years the whole security situation will be 100 percent back to normal and this is achievable," he says. "Egypt – like many other parts of the world – is passing through a bad economic situation, but this is being improved and a lot of quality infrastructure has been put in place. For this I am optimistic as to the future of the handling business in the region." **GSW**

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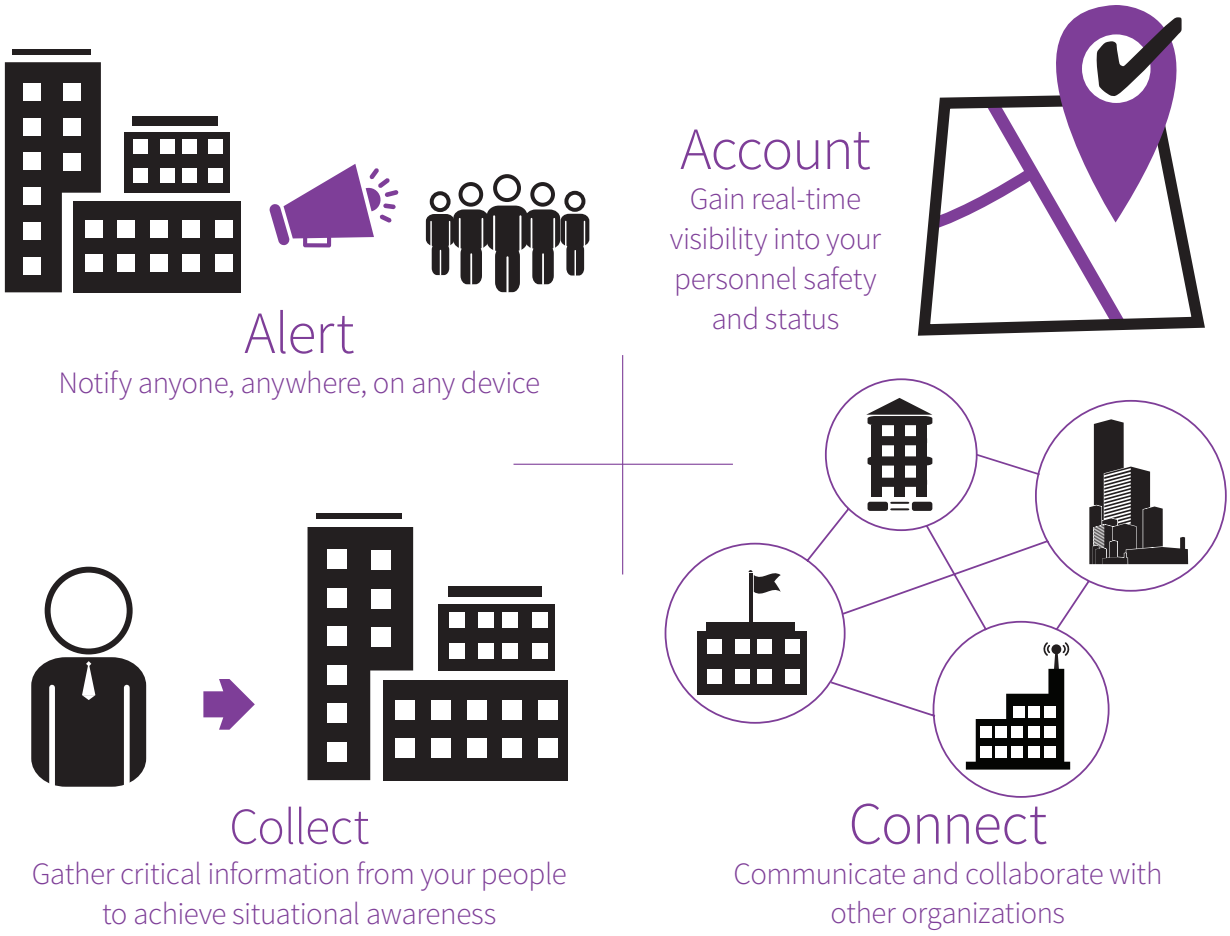
Overcome Complex Communications with Networked Crisis Communication

Emergency communications can be a difficult task to handle, but proper implementation can build robust networks for safety.

By John Linstrom

Ensuring public safety on airport properties across the globe requires a complex coordination of emergency response services, advanced alerting systems and tightly integrated operations. Airport leaders and emergency managers understand how difficult it is to communicate with the people and organizations you care about. Not only are millions of passengers transiting through terminals, but airports also host different organizations using multiple communication solutions. Combined with crews working in noisy environments where audible communication is a non-starter, managing a diverse set of people and organizations that range from commercial enterprises to federal authorities is an enormous challenge.

Communicating critical information during an emergency event as soon as possible is one of the most important capabilities necessary for effective emergency response and recovery. Airports are



dependent on a wide range of organizations and agencies to assist them in times of crisis and disruption. These partnerships and networks rely heavily on the timely sharing of accurate information with each other, stakeholders, passengers, and the general public.

As with the transitory system that aviation presents, airport leaders are always searching for ways to improve the coordination of emergency responses to better protect passengers, staff members, vendors at an airport, plus organizations and businesses in their nearby communities, including the public officials who will judge an airport's emergency response leadership and efficacy.

Today, integrated safety and security solutions have grown from stand-alone, hard to manage physical systems to sophisticated communication networks that support an effective, real-time emergency response.

Complicated Notification Systems Delay Response and Add Complexity

Today many airports rely on aging technology and antiquated systems. Paging infrastructures are not integrated with other communication modes, including phones, public address (PA) systems and other alerting mechanisms. Each system is managed separately. Travelers in noisy terminals and staff personnel working on the tarmac or baggage stations rely heavily on displays (i.e., FIDS and RIDS) to get necessary communication. Managers have to oversee the flow of information for all the separate communication components. It can be total chaos when the operations center sends out an alert to the entire facility.

Then comes the challenge of managing an accurate list of external contacts. Airports may use pagers and phones to send alerts, but distribution is difficult. Emergency managers must maintain a distribution list of airport employees and contacts at external organizations, including federal and regional first responders, airlines, ground service crews, retailers, fuel suppliers, cargo companies, general aviation services and other personnel who worked in – but not for – the airport. Keeping the distribution list current is a huge ongoing burden that requires countless hours to manage, and the results are never fully accurate. Additionally, when notifications are sent, there is no way to ensure that they are reaching the intended audience.

A Brief History of Emergency Communication

The first technological attempts to notify people en masse were called Emergency Mass Notification Systems (EMNS). These basic systems utilized physical wire-based hardware, such as telephones, fire annunciators, two-way radios and PA systems, to alert response personnel in a command center. First responders relied on public safety communicators to sort out the various types of input and recommend appropriate action.

In 2005, the speed, ubiquity and robust nature of Internet Protocol (IP) networking enabled some of those uncoordinated systems to be connected to each other, and to laptop and desktop computers. Rather than having to listen to a cacophony of audio and visual signals during a crisis, operators could see alerts on a central screen with minimal distraction.

Moving to IP-based emergency communications allowed existing physical systems to be integrated into a broader response infrastructure, without having to completely replace older legacy technology. These cost savings became critical, as airports sought new ways to upgrade safety, security and emergency response, while maximizing return on investment (ROI) and doing the best with limited financial resources as a result of 9/11 and the economic downturns.

For example, passengers and airline personnel depend on flight information display systems (FIDS) for departure and arrival times, gate assignments, baggage claim deliveries and other travel-related information. FIDS are supplemented by ramp information display systems (RIDS) that allow ground

personnel and flight crews to dock aircraft at gates, move baggage and aircraft, refuel planes and provide on-ground maintenance and inspection.

In order to maximize efficiency and minimize aircraft turnaround times, the two systems in this example need to be connected to each other, along with the emergency response system, so that any threat to operations is communicated as accurately and quickly as possible. Ground personnel should be notified immediately if severe weather is in the area, or if they need to be aware of an inflight emergency on final approach. Inside the terminal, airline staff must be advised that ground crews may not be available until a situation has been resolved, and that flight delays are imminent.

With the next step in the evolution of EMNS, innovative airports were able to move to a facility-wide, enterprise approach for governing emergency management. Increasing numbers of network-capable devices meant more data could be brought into the command center to provide improved situational awareness. Airport operations could be monitored from multiple remote locations, and could connect large numbers of mobile personnel via smartphones or tablets.

Using alert templates, pre-defined response scenarios and employee profiles, airports could centrally manage mass notification and control "sub-systems," which eliminated redundancies and errors in data management across the enterprise.

Future technology advances are now expanding communications beyond airport management to vendors, communities and other entities directly affected by airport operations. These connections need to bridge a much wider range of communications technologies, while providing the real-time response and secured flow of information that, up until now, had only been possible inside the physical and networked perimeter of the airport property.

Interoperable Communication: Next Frontier of Crisis Communication

Aging communications infrastructure, legacy technologies and incompatible systems are challenges for many airports. Additionally, a large number of these legacy systems are proprietary, with minimal levels of technological support threatened by attrition of employees and technology products experiencing end-of-life issues.

The difficulty lies in economically transitioning these stand-alone systems into a single unified experience, which allows operators to control all inputs and outputs, and extend rapid response capability beyond the airport property. History has shown that airport operators need to inform their tenants, surrounding infrastructure and even the broader community, to coordinate an effective response.

Communication Needs to Extend Beyond Four Walls

Most major airports with domestic and international traffic have to accommodate passenger, freight and other ancillary operations that maintain these services. Beyond the airport itself, each airline, cargo company, maintenance business and vendor has its own organizational processes, procedures and cultures.

These challenges can be overwhelming. Each entity maintains a workforce of great diversity with regard to language, size, role, disability, security level and access level. The entire aviation system must be considered, because it is an interconnected network where an individual airport does not operate in isolation.

Airport managers typically know how to handle internal communications within their physical grounds. True interoperability, however, has to include collaboration with a broader range of public and private stakeholders, including:

- Federal and state government authorities: Federal Aviation Administration (FAA), Transportation Security Admin-

istration (TSA), National Transportation Safety Board (NTSB), Federal Bureau of Investigations (FBI), Centers for Disease Control (CDC), Immigration and Customs Enforcement (ICE) and Customs and Border Protection (CBP).
- Public and private security and protective service organizations: Law enforcement, fire, paramedics, and ambulances
- Airport and contract employees, including full– and part–time, on– and off–site: Retail vendors, supply chain providers, aerospace services companies, fueling and maintenance.
- Geographic and functional neighbors: Industrial, supply chain, hospitals, schools, hotels, rental car, air freight facilities and food vendors.

It is difficult to coordinate the interactions of these entities on a daily basis. Emergency situations put these relationships under tremendous strain, precisely when seamless communications are most urgent. While some essential stakeholders may be part of the airport's communications infrastructure, most of the ecosystem remains outside these frameworks.

Contact List Management: Exchanging One Problem for Another

Some airports and emergency management organizations have tried to establish interoperability by including external emails and contact lists within their own information distribution lists. While logical and laudable, these efforts are counterproductive in practice, for four reasons:
- Contact lists must be constantly updated to ensure that critical information is sent to the appropriate personnel.
- Email and other passive communications rely on someone to open and read the message. Critical information may not reach essential external personnel simply because that person is not online.
- List–based contact management is both time and resource–intensive. Staff must work diligently to confirm information about thousands – or tens of thousands – of individuals. A more intuitive, automated solution frees staff for higher priorities.
- Airports do not control the level of security and access to the external emails and servers.

Social Media is Not the Answer for Interoperability

Many emergency notification systems allow surrounding organizations and the general public to sign up for email alerts via social media without permission or vetting by the originating authority.

This open–access approach makes it difficult for safety and security personnel to isolate the communications they need from the inevitable noise that arises during an emergency. More significantly, these notification systems are not secured, which creates a major risk when proper control of information is critical.

The lack of a true, interoperable system means that subscription services via social media offer no practical interoperable value other than getting the word out. Social media produces unreliable information from unknown sources that cannot be relied upon to make informed decisions during an event.

Control and Security Are Mandatory, Not an Afterthought

Control is another major concern of interoperability. Enterprise businesses expect their systems to grant them the ability to adjust roles and permissions across their organization to ensure individuals see only what they need to see, at the times they need to see it. These controls should also extend to customers, external partners, stakeholders and the general public.

Security, likewise, needs to be inherent to the system, and is especially relevant for interoperability. By statute and as a business

practice, personally identifiable information (PII), confidential operational information and other critical data need to be protected and stored in secure failover systems, especially when essential details must be revealed on very short notice and to specifically targeted populations.

Using Networked Crisis Communication to Address Interoperability Needs

Internal alerts through multiple systems and devices are becoming more prevalent as many airports develop stronger communication programs to alert their employees. The ability to communicate with other organizations, however, is still a critical need, and must be achieved just as quickly to protect the airport ecosystem.

The first requirement is to develop the Airport Emergency Plan and protective measures that can either execute – or prevent – a mass, uncontrolled movement of travelers, or make shelter available to those who may be stranded.

Next, a community approach would suggest a phased response that includes the organizations and people located closest to the incident, followed by a reinforced response with those farther away. Mutual aid relationships must be nurtured, practiced and maintained at local and regional levels.

Typical interoperable communication scenarios encompass:

- Emergency events that require stakeholder notification (workforce, customers and partners).
- Public alerting, 911 reverse dialing and enhanced 911 (if available).
- Business operations notifications, such as workforce management roll call or mustering, callouts, severe weather and important meeting reminders.
- Context-based alerting triggered by a process or event, such as a flight delay, work availability options by locale or incoming injured patients.
- Potential public alerting and emergency warnings of an impending emergency by local, regional or national authorities.

At the forefront, two-way interactive alerting is an essential element to begin responding to any incident. Targeted recipients who receive alerts can respond with their status. They can, in turn, equip their own decision-makers with the information necessary to protect people and facilities, and then focus on arranging assistance for those impacted.

Next, airport operations need to reliably and rapidly send an alert that can reach all of its personnel across all personal and mass communication devices to ensure both visual and audio alerts are received within the ecosystem.

As the situation unfolds, airport responders need to notify on-site tenants, as well as the extended community and political authorities about the event and its level of emergency. A true state-of-the-art solution empowers each subscribing organization to create a unique, customized network of people and groups, so that the quality and fidelity of the information remains high and actionable as it is disseminated by member organizations, while maintaining their own operational protocols.

Finally, given that most commercial and certificated airports are owned or operated by local, state and national jurisdictions, emergency response requires expanding networks of shared information and intelligence to include federal, state and regional agencies.

Networked crisis communication should support collaboration among different functions, so responders can neutralize the event, while maintaining situational awareness among all responding entities. The system should also have a sophisticated reporting capability to capture all the system and personnel activities for post-event assessment and compliance requirements.

Outcome: Secure, Interoperable Airport Crisis Communication Network

Airports are hubs for more than aircraft. They offer a centralized point of interaction for people, organizations, technology and communities. Airports are also an integral part of our national security. Given the unique position of an airport within its geographic and economic surroundings, it is critically important for aviation facilities to deploy secure crisis communications systems that deliver essential information, situational awareness and real-time alerts and warnings during emergency situations.

Internal communications within airport perimeters have histor-

ically been systems of stand–alone modalities, using mobile fire and police radios, PA systems, fire annunciators and strobe lights, with little coordination among the individual elements. The growing need to deliver alerts and warnings to external organizations and governmental agencies has only served to show how existing communications at airports are ready for an upgrade.

Airport executives often regard EMNS as a commoditized service where inexperienced vendors compete on price, using limited feature sets that inadequately address the full range of airport requirements. However, networked crisis communication already delivers secure, cost–effective communications platforms that streamline internal communications, empower people and enable emergency communication and collaboration to an entire airport ecosystem.

Secure, scalable networked communication transcends devices, firewalls, radio frequencies, channels, jurisdictions and talk groups. As the ability to share important information about an incident is enhanced, people and organizations gain the knowledge and perspective to respond appropriately. Credibility is increased for airport operators and responding partners, demonstrating that they are capable of acting in a highly coordinated manner. Synchronization must take place across a broad geographical area – with the airport at the center.

Airport authorities need to protect passengers, employees, vendors and surrounding neighborhoods, as well as their reputations. A carefully researched investment in networked crisis communication is central to safety and security for each of these constituencies. **GSW**

▶ ABOUT THE AUTHOR:

John Linstrom, Retired Assistant Fire Chief, serves as business development manager at the AtHoc Division of BlackBerry, for Public Safety and Aviation. He has 30 years of experience in municipal, special district, state, military and federal government agencies as an emergency manager, fire chief and mass fatality team commander.

A Streamlined Fueling Process

QT Technologies says its Fuel Ticket Automation system simplifies fueling events, reducing the risk of mistakes and improving the likelihood of on-time departures.

By Josh Smith

With numerous factors to weigh, fueling an aircraft quickly and accurately to get it ready it for departure can be a complicated process.

Between tracking flight schedules, anticipating proper fuel loads, identifying correct fuels and dispatching people with fuel tickets, there is a lot of information to keep organized. Then, if a change is made, that fueling event becomes even more complicated.

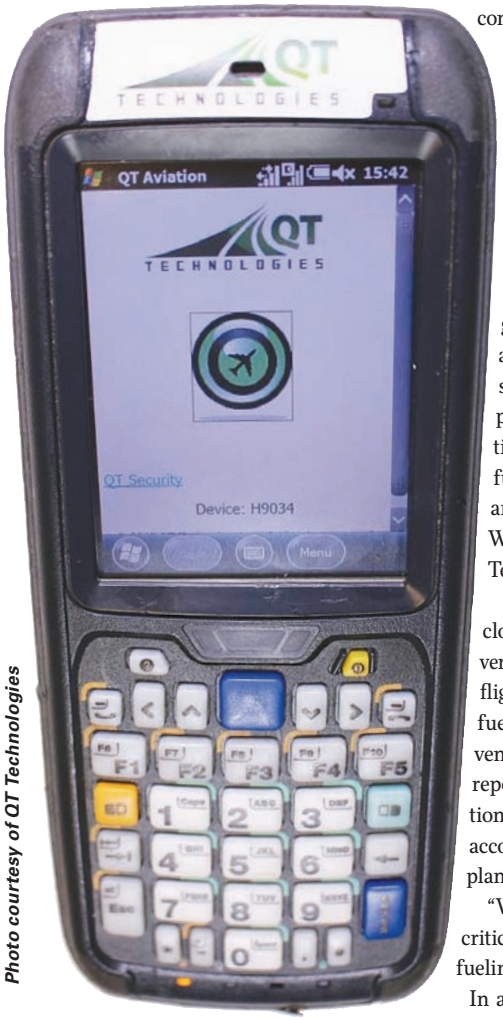


Photo courtesy of QT Technologies

So the idea behind the Fuel Ticket Automation (FTA) system from QT Technologies is to simplify the process for fuel suppliers, into-plane providers and airlines, and in the process, eliminate costly mistakes like mis-fuelings and over-fuelings.

"While one of QT's primary goals is removing paper – it's about interacting with the airlines' systems to try and do as much as possible in terms of data integration and automation through the fueling event to improve accuracy and reduce costly delays," says Wade Conley, president at QT Technologies.

The FTA system provides a cloud-based portal, which a fuel vendor is able to access and dispatch flights out to fuelers and manage the fueling operation, itself. Fueling vendors have access to tickets and reports about their fueling operation to confirm fuelings were done according to the request of a flight planning group.

"We have a ton of reports and very critical information we display to the fueling staff involved," Conley says.

In addition to the portal, FTA utilizes a non-incendiary mobile device that provides the most current flight data and fuel information to workers on the ramp. This allows an airline to select the aircraft it is going to use, assign a proper fuel load based on the weather patterns, determine the weight of the aircraft and ensure the wing balance is accurate based on the fuel tanks of the plane – then relay the information to the fuelers quickly.

"Airlines are continuously issuing distributions of planned fuel loads prior to departure. And there might be 10 different distributions that lead up to the final one that generally comes in about 60 minutes in advance of the time of departure," Conley says. "So the fueling operation, without QT, is relying on querying data from each airlines' different systems.

"QT gathers that information and displays it down to the fuelers and the fueling organizations so there's not somebody at the local level responsible for doing that," he continues. "So when you're servicing the aircraft, you always have the latest data to use to appropriately and accurately complete the fueling event."

Changes to the information are displayed as an alert to the fueler. The flow of fuel can actually be stopped, requiring the fueler to acknowledge a change has been made before fueling can resume.

A barcode is associated with every piece of fueling equipment – whether it's a tank truck, fuel cart or hydrant – to ensure fuelers are attaching to the correct truck or cart and using the appropriate fuel. The fueler then uses the handheld device to scan the barcode to let the system know what equipment is being employed, which also allows fuel usage to be tracked.

When a fueling event is complete, FTA electronically sends a fuel ticket to the pilot, eliminating the need to physically deliver a ticket to the cockpit.

Also during fueling, airlines can stay in tune with the status of fueling and when the event is going to be completed based on flow rates of that equipment. Airlines can use that information to recognize if there may be a delay and move an incoming aircraft to another gate, so that they're not wasting time

leaving that plane on the ramp and delaying turnaround.

In addition to simplifying the fueling process and providing maintenance data, a number of safety measures are implemented through the FTA system, including overfill protection and fueler certification verification.

"Not over–fueling is a very important part of this," Conley says. "We deploy a device that goes on the fueling equipment called a Fuel Data Unit."

The Fuel Data Unit connects with its own valve to act as a secondary dead–man to control the flow of fuel. It also communicates to the handheld, mobile device to inform the fueler how much fuel has been pumped. Avoiding over–fueling situations elimnates the defueling process and keeps departures on time.

The system prevents fuelers from being assigned tasks they are not certified for, helping airlines reduce risks and potential fines.

"In the U.S., many times fuelers are not fuelers for their career. So it is a very short–term position for folks, in general," Conley explains, adding QT Technologies will interface on a direct basis with an airline's certification system to ensure a dispatcher doesn't erroneously assign a flight to somebody who isn't certified.

"It tells the dispatcher this person is no longer certified for this type of aircraft," he says. "It forces them to dispatch it to a fueler that is certified."

The FTA system provides benefits to suppliers, delivering pre– and post–reconciled data and sharing that information with into–plane companies and airlines. QT Technologies provides its services to commercial aviation operations, primarily, but also works with general aviation companies and, recently, FBOs.

Conley says the biggest operation is in Atlanta, where 1,100 flights per day at Hartsfield International Airport are fueled. But he says there are also operations utilizing FTA where only five flights per day take place.

The system, which has been deployed globally, requires a subscription to use the service in addition to equipment that needs to be deployed.

Conley says QT Technologies can help fueling events be as efficient as possible by reducing trips between the ramp and the shop, avoiding mistakes and making fuel operations safer.

"We're trying to do as much as possible to get rid of paper and this inefficient process, as it exists today, and migrate to having everything done electronically – having the last good data and having our device read automatically from the fuel equipment so somebody's not responsible for getting things right, calculating numbers and filling out forms." **GSW**

SPRING RETRACTABLE FUEL DELIVERY HOSE REELS

Reelcraft Industries Inc.

Reelcraft's spring retractable, fuel delivery reels, equipped with Viton seals, incorporate metal forms to insure the greatest possible strength and are ideal for mobile and permanent–mount applications. These rugged, corrosion–resistant reels are suitable for a wide variety of fuel applications including E85. Series F/FD/FE/FSD reels are all supplied with its ball–bearing style swivel.

AviationPros.com/12140589

INTELLITROL2 CONTROLLER

Scully Signal Company

The Scully Signal Company Intellitrol2 controller is designed for fueling safety. It provides overfill prevention, ground verification, vehicle identification and terminal automation communication all in one compact unit. Coupled with a trailer/refueler system consisting of an onboard monitor, sensors, ground bolt and vehicle identification module, it provides a fail–safe solution to petroleum fueling safety.

AviationPros.com/12284423

NARROW BODY CART

BETA Fueling Systems, LLC

BETA Fueling Systems offers the aviation industry the only green narrow body cart designed to operate in any weather. It is equipped with an advanced, interactive monitoring system that provides the user with precise metering and safety. The overall design saves time in operation, gives the equipment longer life with less maintenance, and is able to uplift fuel in any weather condition. The cart can be specified to be either JIG or A4A compliant.

AviationPros.com/12134120

500-GALLON JET A REFUELER

Jet Fleet Management LLC

The Jet A Refueler features: single wall aluminum baffled tank, 12–volt 25–gpm pump and mechanical meter 50–foot spring–loaded assist hose reel; 50–foot aviation grade hose overwing type fuel nozzle with .05 micron cartridge type fuel filtration system; a 12–volt AGM battery with shut–off switch and 12–volt battery tender/charger; lockable battery box; pintle hook or 2 5/16 ball coupler; 50–foot static line reel; lockable aluminum bright tread toolbox; 10–pound BC type fire extinguisher; drain valve bottom tank ball type for fuel sampling/top tank filler location; at glance fuel gauge; electric brakes, two axles with break–away switch, safety cones and holder.

AviationPros.com/12224508

INTEGRATED FUELING SYSTEM

Cavotec Ground Support System

Cavotec has launched a new fueling element to its innovative E3 Gate. Cavotec's E3 Gate – so called because it is designed to deliver optimal performance in Ergonomics, Economy and the Environment – supplies parked aircraft with 400Hz power, PCAir, blue and potable water and sewage – and now fuel – via underground pit systems.

AviationPros.com/11251115

RPD AVGAS TRUCK

RPD Services

RPD Services offers an aviation refueler for the discerning aviation market. The company's Isuzu avgas truck has a 750 gallon, aluminum tank, a gas engine and automatic transmission. The 40 GPM pump is hydraulic driven with a vertical filter/monitor. The piston meter has a mechanical register and ticket printer. The hose reel is a multi–wrap style for 1" x 50' overwing hose. These trucks are designed and built to be the most reliable, durable refuelers found on the market today.

AviationPros.com/12242599

FLEXIBLE FUELING HOSE

Hewitt, A Husky Company

Designed to carry aviation fuel to movable service platforms and lift decks, the Hewitt 5500 Premium JacRiser has twice the flexing durability and is much easier to use than competing products, making it ideal for any application where flexible hose is needed to load or unload petroleum products.

AviationPros.com/11111578

GAMMON TECHNICAL PRODUCTS

Gammon Technical Products Inc.

Gammon Technical Products is a manufacturer and distributor of aviation fuel (Jet and Avgas) equipment for quality control, handling and sampling, additive injection, static reels and cable, differential pressure gauges, overwing "Skyhawk" nozzle, bonding and grounding.

AviationPros.com/12013911

PILOT/ACTUATOR ASSEMBLY

Eaton

Eaton's Carter product 47900 pilot/actuator assembly will eliminate fuel moving into hydrant servicer air systems and reduce piston seal damage due to debris entering through the pilot vent. Easily installed on all existing 60554 and 61654 hydrant valves, it will soon be offered as Option "V" on new valves.

AviationPros.com/12038598

REFUELING PUMPS

Gorman-Rupp Company, The

Gorman–Rupp's complete line of ground service pumps and related equipment have met the challenge of accelerated aircraft refueling and defueling requirements for over 50 years. Whatever your aircraft fueling requirements, Gorman–Rupp ground service pumps and related equipment can do the job.

AviationPros.com/12020697

FUEL SERVICE CART

Par-Kan Company

The Par-Kan FSC-300 X2 GSE Fuel Service Cart offers 600 gallons of total capacity, 300 gasoline and 300 diesel. With two hand pumps with meters, two fuel filters, static grounding reel and fire extinguisher, the equipment is mounted on a four-wheel product containment trailer.

AviationPros.com/12274802

FUEL TRANSFER CARTS

Tronair Inc.

Tronair's Fuel Transfer Carts are equipped with two static discharge reels and are shop-air operated to eliminate spark hazards. In addition, the units filter 98% of particles up to ½ micron. Tronair also offers a variety of Fuel Sample Test Tools that quickly check fuel for contamination.

AviationPros.com/12020704

FUELING/DEFUELING HOSE

Continental ContiTech

Platinum JAC Riser is Continental ContiTech premier aircraft fueling/defueling hose. Specifically designed for fueling vehicles with a lift deck, Platinum JAC Riser meets API 1529 and EN1361 type E standards and provides a secure, reliable connection. Get the hose you need from the brand you trust.

AviationPros.com/10950417

FUELING MATS

AERO Specialties

AERO Specialties urethane fueling mats are the best solution for over-the-wing aircraft fueling. Used as a protective layer between the fuel pump and the fuel access panel on the wing, our fueling mat will prevent scratches and damage from fuel spills. Available in a bright, safety orange color, the fueling mat is made of heavy-duty, high-grade materials and is built to withstand tough conditions.

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ENGINE MANAGEMENT SYSTEM

Rampmaster

Rampmaster, a manufacturer of aircraft refuelers for the worldwide aviation market, has received the final testing report from West Virginia University's Center for Alternative Fuels, Engines and Emissions (CAFEE) confirming that an aircraft refueling vehicle outfitted with the company's patented Engine Management System (EMS) consumes up to 78 percent less diesel fuel while pumping its jet fuel.

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MOBILE FUEL TESTING SYSTEM

Westmor Industries, LLC

Westmor Industries, a manufacturer of fuel and liquid-handling systems and components, offers its Aviation division the Mobile Fuel Testing System. The system provides aviation refueling personnel the opportunity to sample, filter and return fuel with an easy-to-use closed-loop system, virtually eliminating jet fuel sampling waste. Quick payback should be possible as all clean and dry fuel utilized in filter changes, delivery samples and sump samples can be returned to inventory rather than being discarded. Westmor also offers an online calculator to provide an estimate of how quickly the new test system will pay for itself in annual fuel savings.

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HYDRANT SYSTEM DISPENSER

Esterer GmbH & Co.

The Beta dispenser by Esterer is engineered for quick turnaround time of aircraft fueling from a hydrant system. While developing the Beta dispenser, Esterer focused on the optimization of the overall fueling process, making each step faster, easier and safer. As a result, getting the dispenser ready for operation takes only few minutes.

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SPRING REWIND REELS

Hannay Reels Inc.

Hannay Reels 900 Series features a roll-formed channel frame construction. The 900 Series spring rewind reels are ideal for bulk transfer, fuel dispensing, suction or discharge operations. A declutching arbor prevents damage during reverse winding. Temperatures from -60 F to +175 F (-51 C to +79 C) can be accommodated.

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JET AND AVGAS REFUELERS

ProFlo Industries LLC

ProFlo Industries custom manufactures a complete line of new Jet and Avgas refuelers with tank sizes ranging from 500 US gallons (1,890 Liters) to 10,000 (38,500 Liters) US gallons. Units are available for domestic and export use with many chassis options available. Units comply with NFPA, ATA and JIG guidelines.

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AVIATION FUELING HOSE

PEAR Corporation

PEAR Hose utilizes Contitech AEROPAL aviation fueling hose in all its aviation hose assemblies. Also every PEAR hose assembly comes with the company's exclusive five-year warranty.

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HIGH-PRESSURE AVIATION REFUELING SYSTEM

SEI Industries LTD

Originally designed for use by military forces, SEI Industries' High-Pressure Aviation Refueling System (HPARS) is now available for commercial use. Best defined as a durable, portable method of fueling and de-fueling jet fuel to and from aircraft and fuel tanker trucks, the HPARS is ready for deployment anywhere in the world. Since many companies require jet fuel for their commercial enterprises, this new model offers an advantage that previously was only available to military forces.

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10,000 GALLON JET REFUELER

SkyMark Refuelers

The SkyMark 10,000 Gallon Jet Refueler features a stainless steel tank with an 800 GPM pumping system. The 10,000 Gallon Jet Refueler also features a front-mounted lift deck with dual fueling hoses and a special purpose airport chassis with rear engine.

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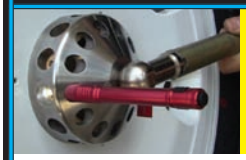

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A Raise in Pay for an Increase in Production?

Demonstrations across the U.S. have put a spotlight on airport workers' salaries. Would increasing wages lead to better ground support service?

In my brief time as editor of *Ground Support Worldwide*, numerous news stories about airport worker labor negotiations have come across my desk.

Strikes and other demonstrations in several major cities have made it clear that this is a critical topic facing the industry today.

Although contracted workers' desire to earn higher salaries came as no surprise to me, I was caught off guard by a report, cited by the Service Employees International Union (SEIU), which stated 42 percent of airport workers live below the poverty line.

The report, published by Lake Research Partners, states a majority of the 599 workers surveyed across targeted airports make less than $12 an hour and a majority lives in a household making less than $25,000 annually.

And with one-third of the participants having been at the airport for less than a year and more than half being on the job for less than three years, the report suggests there are not many long-term workers being employed.

Without diving into the politics of organized labor and minimum wage standards, I can see some benefits to increasing salaries for ramp and cargo agents, baggage handlers, fuelers, lavatory service personnel, tug drivers and other ground service providers.

Simply put, an increase in wage could reduce employee turnover.

As a result, more satisfied workers may be more inclined to stay in a position for a longer period of time, gather valuable on-the-job experience and impart their years of knowledge on new employees.

Moreover, employees with years of experience may be less prone to mistakes and accidents, helping create safer working conditions.

Safer working conditions could mean quicker turnarounds on the ramp and more productivity.

Without a doubt, a company needs to look at all areas of its budget, not just employee salaries, to make sure it is profitable while keeping rates competitive in the market. But if an increase in wage could encourage more employees to do a better job for a longer period of time, is it worth considering?

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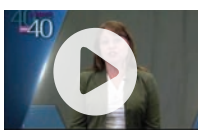

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